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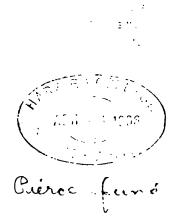
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(c) A Subject Catalogue.

The Subject Catalogue is divided into sections, each of which is denoted by a four-figure number between 0000 and 9999 called a Registration number.

In order to find the papers dealing with a particular subject the reader may either consult the Schedule or the Index to the Schedule. The numbers given in the index are Registration numbers, and can be used at once for turning to the proper page of the Subject Index. This is done by looking at the numbers at the outer top corners of the pages.

If the reader remember the name of the author of a paper on a given subject, he will probably find it convenient to refer to the Author Catalogue rather than to the Subject Catalogue.

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In case the abbreviated titles of Journals are not understood, a key to these is provided at the end of the volume.

The literature indexed is mainly that of 1903, but includes those portions of the literature of 1901 and 1902 for which the date on which the index slips were received by the Central Bureau was too late for inclusion in the previous volumes.

#### TOPOGRAPHICAL SYMBOLS.

Many of the sections are sub-divided into a number of sub-sections by means of topographical symbols. These symbols are letters printed in italics. They are explained in the topographical classification. The topographical symbols are not intended to be used instead of registration numbers.

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## SUBJECT CATALOGUE.

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#### HYPERZOOLOGY.

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**Camerano**, Lorenzo. Contributo alla storia delle Teorie Lamarckiane in Italia : 11 corso di Zoologia di Franco Andrea Bonnelli. Torino, Atti Acc. sc., **37**, (1901-1902), 1902, (311-320).

Glard, Alfred. Les idées de Lamarck sur la métamorphose. Paris, C.-R. soc. biol., 55, 1903, (8-9).

Hickson, S. J. [Presidential address.] Nature, London, 68, 1903, (452-458).

Joseph, Heinrich. Der Begriff des Individuums in der Zoologie. Wien, Schr. Ver. Verbr. Natw, Kenntn., 43, 1903, (305-345).

Lamarck, Jean. Zoologische Philosophie. Nebst einer biographischen Einleitung von Charles Martins aus dem Franz. übersetzt von Arnold Lang. 2. unveränd. (anastat.) Abdruck. Leipzig (J. A. Barth), 1903, (LII + XXIV + 512). 22 cm. 10 M.

Lodge, Sir O. J. Interaction between the mental and the material aspect of things. Nature, London, **67**, 1903, (595-597). [Discussion by Hobson, Minchin, McDougall and others follow, *ib.*, (611) and **68**.]

**Metchnikoff**, E. The nature of man. Studies in optimistic philosophy. Translated by P. Chalmers Mitchell. [Only zoological to a slight extent.]. London, 1903, (xviii + 309). 8vo.

Mochi, A. La legge di Goethe. Firenze, Archivio Soc. ital. antrop. etnol., 32, 1902, (176-183).

(n 2-9053)

Morgan, Thomas Hunt. Darwinism in the light of modern criticism. Harper's Monthly Magazine, New York and London, **106**, 1903, ([476]-479).

Timiriaseff, C. The cosmical function of the green plant. Croonian lecture. [Transmutation of light into bodies. London, Proc. R. Soc., 72, 1903, 1 4 461).

Wallace, A. R. Hitherto unpublished letters of Charles Darwin. Pop. Sci. Mon., New York, N.Y., 62, 1903, (387-414, with portr.).

Yule, G. U. Notes on the theory of association of attributes in statistics. Biometrika, Cambridge, 2, 1903, (121– 134).

#### 0010 HISTORY. BIOGRAPHY.

Bericht über die wissenschaftlichen Leistungen in der Naturgeschichte der niederen Thiere, begründet v. R. Leuckart. (N.F.) Bd 12. Berichte von v. Linstow, Maxim. Meissner, Ant. Collin, Oskar Carlgren, W. Weltner, S. Prowazek. Berlin (Nicolai), 1903, [IV + 290]. 24 cm. [Arch. Natg., Berlin, 62, Bd 2, H. 3, 1896 [1903].]

Jahresberichte über die Fortschritte der Anatomie und Entwicklungsgeschichte. In Verbindung mit Bardeleben [u. A.] . . hrsg. v. G[ustav] Schwalbe. (N.F.) 8. Literatur 1902. Abt. 1-3. Jena (G. Fischer), 1903, (XVIII + 256 + 304 + 927). 24 cm. [0020].

ADAMS, Charles Baker v. Seely, H. M.

Albert I., Fürst von Monaco. Eine Seemanns-Laufbahn. Autorisierte Uebersetzung aus dem Französischen v. Alfred H. Fried. Berlin (Boll u. Pickardt), [1903], (VII + 367). 22 cm. 6 M.

Aldrich, J[ohn] M[erton]. Garry de N. Hough, M.D. [with bibliography]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (245-248, with portr.).

Baer, W. Dr. Hinrich Nitsche<sup>†</sup>. Ornith. Monatschr., Gera, **28**, 1903, (55– 56).

Baker, Ray Stannard. The search for the missing link, with an account of the work of Professor Ernst Haeckel. McClure's Magazine, New York and London, 17, 1901, (328-337, with text fig.).

[Baldner, Leonhard]. Das Vogel-, Fisch- und Thierbuch des Strassburger Fischers Leonhard Baldner aus dem Jahre 1666. Hrsg., mit e. Einleitung u. erläut. Anmerk. versehen v. Robert Lauterborn. Ludwigshafen a. Rh. (A. Lauterborn). 1903, (LXVI + 179). 25 cm. 4,50 M.

Bardeleben, Karl von. Julius Victor Carus †. Anat. Anz.. Jena, 23, 1903, (111).

BARLOW, Chester v. Taylor, Henry Reed.

BASSETT, Homer Franklin. Obituary. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc, **13**, 1902, ([203]-205, with portr.).

BASSI, Agostino v. Calandruccio.

BATES, Frederick. Ent. Mag., London, **39**, 1903, (286).

----- v. Donisthorpe.

BENNIE, v. Horne, J.

Berlese, Antonio. Adolfo Targioni Tozzetti. Necrologia. Bollettino di Entomologia agraria, Padova, 9, 1902, (217-227).

BLAKE, Charles Alfred. Biography, [with bibliography]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (212-215, with portr.).

Blastus, Rudolf. Gustav Radde<sup>†</sup>. Nachruf. Ornith. Monatschr., Gera, **28**, 1903, (399–404, mit Portr.).

Alexander von Homeyer<sup>†</sup>. Nachruf. Ornith. Monatschr., Gera, **28**, 1903, (404–411, mit Portr.). BLUM, Isaak v. Reichenbach, H.

BOARDMAN, G. A. v. Boardman, S. L.

Boardman, Samuel Lane. The naturalist of the Saint Croix. Memoir of George A. Boardman. A selection from his correspondence and published writings, notices of friends and contemporaries with his list of the birds of Maine and New Branswick. Bangor (Privately printed) 1903, (xi + 351, with portr.). 24.3 cm.

Bonney. Review of: More letters of Charles Darwin, by Francis Darwin and A. C. Seward. Nature, London, 67, 1903, (529).

Bottarri, F. Leonardo da Vinci filosofo-naturalista e fisiologo. Firenze, Archivio Soc. ital. antrop. etnol., 32, 1902.

Bougon. Les animaux de nos régions au vi<sup>•</sup> siècle. Naturaliste, Paris, 24, 1902, (267-268).

BUCKLEY, Thomas Edward v. Harvie-Brown, J. A.

Calandruccio, S. Agostino Bassi. Notice biographique. Arch. parasit., Paris, 6, 1902, (42-53).

**Camerano**, Lorenzo. Contributo alla storia delle Teorie Lamarckiane in Italia: Il corso di Zoologia di Franco Andrea Bonelli. Torino, Atti Acc. sc., **37**, (1901-1902), 1902, (311-320).

CANESTRINI, Giovanni v. Lioy, P.

Capobianco, F. L'autodifesa dell' organismo. Incurabili, Napoli, 17, 1902, (321-346).

CARUS, Julius Victor v. Bardeleben, Karl von.

----- v. Hanstein, R. von.

- v. Taschenberg, O.

Canllery, M. et Mesnil, F. Revue annuelle de Zoologie. Rev. gén. sci., Paris, 14, 1903, (608-624).

**Clodius**, G. Carl Wüstnei. Ornith. Monatsber., Berlin, **11**, 1903, (17-18).

COLLETT, O. v. Dautzenberg, P.

COOPER, J. G., M.D. v. Raymond, W. J.

Cossmann, M. [Nécrologie de] R. Tate. J. conchyliol., Paris, 51, 1903, (92-94).

CROTCH, William Duppa. Ent. Mag., London, 39, 1903, (256).

Dals, Edmond Bobert by C. W. Dale. Ent. Mag., London, 39, 1903, (255).

DARWIN, C. v. Darwin, F.

---- v. Wallace, A. R.

Darwin, Francis and Seward, A. C. More letters of Charles Darwin : a record of his work in a series of hitherto unpublished letters. Edited by Francis Darwin and A. C. Seward. 2 Vols. London, 1903, (xxiv + 494; vi + 508; 14 portr.). [Review] by Bonney, Nature, London, 67, 1903, (529). Svo.

Dautzenberg, Ph. [Nécrologie de] . Collett. J. conchyliol., Paris, 51, 0. Collett. 1903, (94–95).

[Nécrologie de] A. Wetherby. J. conchyliol., Paris, 51, 1903, (95-96).

DAVID, Armand, l'abbé v. Oustalet, E. DEBEAUX, G. v. Fischer, H.

Dennert, E. Die Wahrheit über Ernst Haeckel und seine "Welträtsel". Nach dem Urteil seiner Fachgenossen beleuchtet. 4. Tausend. Volksausg. Halle (C. E. Müller), 1903, (IX + 143). 20 cm. 0,75 M.

DOHERTY, William v. Holland, W. J.

Domisthorpe, Frederic Bates. Ent. Rec., London, 15, 1903, (347-349).

DTBOWSKI, B. v. Znatowicz, B. et Tur, J.

Eckstein, [Karl]. Hinrich Nitsche. Zs. Forstw., Berlin, 35, 1903, (1-3).

Turner on birds: a Evans, A. H. short and succinct history of the principal birds noticed by Pliny and Aristotle, first published by Doctor William Turner, 1544. With introduction, translation, notes and appendix. Cambridge, 1903, (xviii + 223). 8vo.

FAUST, J. Ent. Mag., London, 39, 1903, (71).

v. Semenov, A. P.

FACST, Johannes K. E., with portrait and list of writings by Heller. D. ent. Zs., Berlin, 1903., (401-410).

- v. Heller, K. M.

FILHOL, Henri v. Pettit, Auguste.

Fischer, H. [Nécrologie de] H. Gandion. J. conchyliol., Paris, 51, 1903, (91-92).

Fishe, John. Reminiscences of Huxley. The Atlantic Monthly, Boston and New York, 87, 1901, (275-287).

(n 2-9053)

FOWLER, J. H. Entomologist, London, 36, 1903, (272).

Fürbringer, Max. Carl Gegenbaurt. Anat. Anz., Jena, 23, 1903, (589-608).

Heidelberger Professoren aus d. 19. Festschr. d. Univ. Bd. 2.] Jahrhundert. Heidelberg (C. Winter), 1903, (389-466). 27 cm.

GAETKE, Heinrich v. Herman, O.

GANDION, H. v. Fischer, H.

GEGENBAUR, Carl v. Fürbringer, M.

- v. Hanstein, R. von.

v. Palmén, J. A.

v. Toth, Zsigmond.

Giard, Alfred. Les idées de Lamarck sur la métamorphose. Paris, C. R. soc. biol, 55, 1903, (8-9).

Gill, Theo[dore] [Nicholas]. The first edition of Holbrook's North American Herpetology. Science, New York, N.Y., 17, 1903, (910-912).

GRAAF, Reynier de, v. Meunier, L.

Greshoff, M. 'Kuhl und van Hasselt, eine Episode der niederländisch-indischen Naturforschung. (Holländisch) Album der Natuur, Haarlem, 1903. (1-22, 60-88).

The ornithological Grinnell, Joseph. writings of Chester Barlow. Condor, Santa Člara, Cal., 5, 1903, (8-10).

GROTE, Augustus Radcliffe. Ent. Mag., London, 39, 1903 (206).

[Biography ] Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (277-278, with pl.).

Briefwechsel HAECKEL. zwischen Ernst Haeckel und Friedrich von Hellwald. Mit Vorwort von Ernst Haeckel. Ulm (H. Kerler), 1901, (IV + 32). 23 cm. 1 M.

#### --- v. Baker, Ray S.

Hansen, H. J. Emil Adolf Lövendal<sup>†</sup>. Entomol. Tidskr., Stockholm, 22, 1901, (177-183, with photogr.).

Hanstein, R. von. Julius Victor Natw. Rdsch., Carust. Nachruf. Braunschweig, 18, 1903, (245–246).

Karl Gegenbaur<sup>†</sup>. Nachruf. Natw. Rdsch., Braunschweig, 18, 1903, (478-479, 490-492).

HABTLAUB, Gustave v. Oustalet, E.

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в 2

Harvie-Brown, J. A. Thomas Edward Buckley. In Memoriam. Ann. Scot. Nat. Hist., Edinburgh, 1903, (1-4).

HASSELT, [Alexander Willom Machiel] van v. Leesberg, A. F. A.

HASSELT, Johan Coenraad von v. Greshof, M.

Heller, K. M. Nekrolog. [Johannes K. E. Faust. Mit Schriftenvorzeichnis]. D. ent. Zs., Berlin, **1903**, (401–410, mit Portr.).

------ Hinrich Nitsche<sup>†</sup>. Dresden, SitzBer. Isis, **1902**, 1903, (V-XI).

HELLWALD, F. von. Briefwechsel zwischen Ernst Haeckel und Friedrich von Hellwald. Mit Vorwort von Ernst Haeckel. Ulm (H. Keiler), 1901, (IV + 32). 23 cm. 1 M.

HELVICUS DIETERICUS r. Landau, [Richard].

Herman, Otto. Heinrich Gaetke zur Ehre. Ornith. Monatsber, Berlin, 11, 1903, (35-38).

HEUDE, P. Petrus, S. J. v. Wasmann, E.

HOLBBOOK, John Edward v. Gill, T. N.

Holland, W. J. [Obituary notice of Mr. William Doherty]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (64).

HOMEYER, Alexander von v. Blasius, Rudolf.

Hough, Garry de N. v. Aldrich, J. M.

Howes, G. B. The morphological method and recent progress in zoology. London, Rep. Brit. Ass., **1902**, (618-635); Nature, London, **66**, 1902, (522-530); [reprint], Washington, D.C., Smithsonian Inst., Rep., **1902**, 1903, (11. + 581-608). Separate 24.5 cm.

Hubrecht, A. A. W. Emil Selenka, 27. Febr. 1812-21. Jan. 1902. Ein Lebensbild. [In: Studien über Entwickelungsgesch. d. Tiere, hrsg. v. E. Selenka, H. 10 = Menschenaffen, hrsg. v. E. Selenka, Lfg 5.] Wiesbaden (C. W Kreidel), 1903, (1-14, mit Portr.).

HUXLEY, T. H. v. Fiske, J.

------ v. Routh, J. E.

HYATT, Alpheus v. Packard, A. S.

Jacobi, Arnold. Gustav Radde<sup>†</sup>. Nachruf. Natw. Rdsch., Braunschweig, 18, 1903, (309-311).

Jäger, Franz. [Gustav] Jägers volkstümliche zooligische Werke. G. Jägers Monatsbl., Stuttgart, **21**, 1902, (89-92).

Jäger, Gustav., *jun.* [Gustav] Jägers ältere zoologische Arbeiten. G. Jägers Monatsbl., Stuttgart, **21**, 1902, (85–89).

JAGER, Gustav v. Jäger, F.

----- v. Jäger, G.

**Elunsinger**, O. B. Zum Gedächtnis an Obermedizinalrat Dr. Ernst v. Zeller. Mit Angabe seiner zoologischen Forschungen. Stuttgart, Jahreshefte Ver. Natk., **59**, 1903, (XXXVI-XLIII).

------- Ernst von Zeller. Halle, Leopoldina, 38, 1902, (121-122).

Kobelt, [Wilhelm]. Otto Franz von Moellendorff. Frankfurta. M., NachrBl. D. malakozool. Ges., **35**, 1903, (161– 167).

Koeppen, Th. P. Gustav Radde. Bemerkungen über sein Leben und seine wissenschaftliche Tätigkeit. (Russ.) St. Peterburg, Zurn. Min. Narodn. Prosvěšč., 1903, (109-128).

KOOREVAAR, P. v. Markus, H.

**Eraats**, G. Nekrolog [F. A. Clemens Müller]. D. ent. Zs., Berlin, **1903**, (173– 174, mit Portr.).

[Paul Weise†.] D. ent. Zs., Berlin, 1903, (174).

KRIECHBAUMER, Joseph v. Taschenberg, O.

KUHL, Heinrich r. Greshoff, M.

KUPFFER, Carl von v. Voit, C.

Kuznecov, N. I. Sophie Mich. Perejaslavceva<sup>†</sup>. (Russ.) Rev. Russ. Ent., Jaroslavl<sup>\*</sup>, **3**, 1903, (422).

Lampa, Sven. Eleanor Anne Ormerod<sup>†</sup>. (Swedish) Entomol. Tidskr., Stockholm, **22**, 1901, (183-186).

Landau, [Richard]. Ein deutscher Vorläufer Harvey's [Helvicus Dietericus]. Janus, Amsterdam, 7, 1902, (60-63).

Landois, H[ermann]. Dr. Bernard Vormann<sup>†</sup>. Münster, Jahresber. Prov-Ver. Wiss., **30**, (1901–02), 1902, (35–37).

———— Dr. Adolf Morsbach<sup>†</sup>. Münster, Jahresber. ProvVer. Wiss., **81**, (1902–03), 1903, (144–148, mit 1 Taf.).

Leesberg, A. F. A. In memoriam [Alexander Willem Machiel van Hasselt]. 's Gravenhage, Tijdschr. Ent., 46, 1903, (71-77).

1407, Paolo. Commemorazione di Giovanni Canestrini. Venezia, Atti Ist. ven:, 62, (Ser. 8, 5), 1902, (45-67).

LÖVENDAL, Emil Adolf v. Hansen, H. J.

MACGILLIVRAY, J. v. MacGillivray, W.

MACGILLIVRAY, William v. MacGillivray, W.

MacGillivray, W. A memorial tribute to William MacGillivray, M.A., LL.D. Ornithologist; Professor of Natural History, Marischal College and University, Aberdeen. Edinburgh (privately printed), 1901, (xvi + 203). 8vo.

------ Professor MacGillivray of Aberdeen. Scottish Art and Letters, 1903, (349-371).

MAETERLINCK, M. v. Rod, Edouard.

Markus, H. In memoriam [P. Koorevaar]. (Holländisch) Tijdschr. Veearts., Uurecht, **31**, [1903], (1-3, mit Portr.).

Mariatt, C[harles] L[ester]. Japan's foremost entomologist [Y. Nawa]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, ([65]-68, with pl.).

MARSHALL, Rer. Thomas Ansell. by R. McL. Ent. Mag., London, 39, 1903, (152).

------ Ent. Rec., London, 15, 1903, (190).

MARSTON, George Terence. [Obituary.] Nautilus, Boston, Mass., 17, 1903, (47).

Martin, L. Lionel de Nicéville<sup>†</sup>. D. ent. Zs. Iris, Berlin, **14**, (1901), 1902, (381-386).

Méhely, Lajos. Julius Szakáll's Andenken. Állatt. Közlem., Budapest, 2, 1903, (191–193).

MEHNERT, Ernst v. Schwalbe, G.

Meunier, L. Reynier de Graaf, 1641-1673. L'ovulation démontrée au XVII siècle par l'anatomie normale, par l'anatomie pathologique et par l'expérimentation. Janus, Amsterdam, 6, 1901, (524-530).

MILNE EDWARDS, E. A. v. Oustalet, E.

MOELLENDORFF, Otto Franz von v. Kobelt, W.

MORSBACH, Adolf v. Landois, H.

Moschen, [Lamberto]. Discorso letto . . . in occasione dell'inaugurazione del monumento a Canestrini a Trento.

14 Settembre 1902. Tridentum, Trient,

5, 1902, (VII-VIII, 337-343).

MÜLLER, F. A. Clemens v. Kraatz, G.

NAWA, Y. v. Marlatt, C. L.

NICÉVILLE, Lionel de v. Martin, L.

NILSSON, Sven v. Retzius, G.

NITSCHE, Hinrich v. Baer, W.

----- v. Eckstein, K.

----- v. Heller, K. M.

----- v. Taschenberg, Otto.

ORMEROD, Eleanor Anne v. Lampa, S.

Oustalet, E. A. Milne-Edwards. Ornis, Paris, 11, 1900-1901, [1902], (465-475, av. portr.).

\_\_\_\_\_ L'abbé Armand David. Ornis, Paris, 11, 1900-1901, [1902], (475-482).

Le docteur Gustave Hartlaub. Ornis, Paris, 11, 1900–1901, [1902], (482–485).

Le baron M. Edmond de Sélys Longchamps. Ornis, Paris, 11, 1900-1901, [1902], (485-487).

Packard, A[lpheus] S[pring]. Alpheus Hyatt. Boston, Mass., Proc. Amer. Acad. Arts Sci., 38, 1903, (715-727).

Palmén, J[ohan] A[xel]. Carl Gegenbaur. Luonnon Ystävä, Helsingfors, 1903, 11-12, (264-272).

PEREJASLAVCEVA, Sophie Mich. v. Kuznecov, N.

Pettit, Auguste. Le professeur Henri Filhol. Autun, Bul. soc. sci. nat., 15, 1902, (415-463).

PRICE, Miss S[adie] F. [Biography.] Nautilus, Boston, Mass., 17, 1903, (71).

PRIME, Temple v. Roberts, S. R.

PYETT, Claude A. Entomologist, London, 36, 1903, (296).

RADDE, Gustav v. Blasius, Rudolf.

----- v. Jacobi, A.

v. Koeppen, Th.

**Baymond**, William J. Writings of James G. Cooper, M.D., on conchology and palaeontology, with list of species described by him. Nautilus, Boston, Mass., **17**, 1903, '6-12). Beichenbach, H[einrich]. Isaak Blum<sup>†</sup>. Frankfurt a. M., Ber. Senckenb. Ges., **1903**, Tl 1, (160-164, mit 1 Portr.).

**Betzius**, Gustaf. Sven Nilsson. Commemorative sketch. . . . (Swedish) Stockholm, 1901, (43). 26 cm.

**Bhoads**, S. N. Auduboniana. Auk, Cambridge, Mass., (N. Ser.), **20**, 1903, (377-383).

Roberts, S. Raymond. Temple Prime. Nautilus, Philadelphia, Pa., 16, 1903, (138-139).

Rosa, Daniele. Il rev. padre Kircher trasformista. Torino, Boll. Musei zool. anat., **17**, N. 421, 1902, (5).

Routh, James E. Huxley as a literary man. The Century Magazine, New York, N.Y., 63, (N. Ser., 41), 1902, (392-398).

**Bozan**, C. Les animaux dans les proverbes. 1<sup>re</sup> et 2<sup>e</sup> parties. Paris (Ducrocq), [1902], 1<sup>re</sup> partie, (384), 2<sup>o</sup> partie, (381). 18 cm.

**Say,** Thomas. Letters . . . to John F. Melsheimer, 1816–1825, 10, 11. Philadelphia, Pa., Ent. News, Acad. Nat. Sci., **13**, 1902, (9–11, 38–40).

SCHNEIDER, Oskar v. Heller, K. M.

Schwalbe, G[ustav]. Ernst Mehnert<sup>†</sup>. Anat. Anz., Jena, **22**, 1903, (387-392).

**Seely**, Henry M[artyn]. Sketch of the life and work of Charles Baker Adams [with bibliography]. Amer. Geol., Minneapolis, Minn., **32**, 1903, (1-12, with portr.).

SELENKA, Emil. v Hubrecht, A. A. W.

Sélys Longchamps, Edmond de, le baron v. Oustalet, E.

Semenov, A. P. Notice nécrologique sur J. Faust (Russ). Kev. Russ. Ent., Jaroslavlí, 3, 1903, (419-421, av. portr.).

SWITH, Bernard, Canon. Ent. Mag., London, 39, 1903, (304).

SPENCER, Herbert. Nature, London, 69, 1903, (155, 156).

STEVENS, John Saunders. Ent. Mag., London, 39, 1903, (229).

STRECKER, Ferdinand Heinrich Herman. [Biography]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (1-4, with portr.). Sugurov, A. M. I. M. Widhalm<sup>†</sup>. [Necrolog.] (Russ.) Rev. Russ. Ent., Jaroslavli, **3**, 1903, (421).

SZAKÁLL, Julius v. Méhely, Lajos.

TABGIONI-TOZZETTI, Adolf. Ent. Mag., London, **39**, 1903, (20).

v. Berlese, A.

----- v. Todaro, F.

Taschenberg, O[tto]. Zur Erinnerung an Julius Victor Carus. Zool. Anz., Leipzig, 26, 1903, (473-483).

Dr. Joseph Kriechbaumer, Nekrolog. Halle, Leopoldina, **38**, 1902, (60-70).

Hinrich Nitschef. Nekrolog. Halle, Leopoldina, 38, 1902, (136-144).

Julius Victor Carus<sup>†</sup>. Ein Nachruf. Halle, Leopoldina, **39**, 1903, (50-64, 66-73).

TATE, R. v. Cossmann, M.

Taylor, Henry Reed. In memoriam: Chester Barlow. Condor, Santa Clara, Cal., 5, 1903, (3-7, with portr.).

Todaro, F. Adolfo Targioni Tozzetti: Commemorazione. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1902.

Töply, Robert *Ritter von*. Geschichte der Anatomie. [In: Handbuch der der Geschichte der Medizin. Bd 2.] Jena, 1903, (155-326).

Tóth, Zsigmond. Alegenbaur's, Karl, Andenken. Állatt. Közlem., Budapest, 2, 1903, (188-191).

Trotter, Spencer. Notes on the ornithological observations of Peter Kalm. Auk, Cambridge, Mass., (N. Ser.), 20, 1903, (249-262).

Voit, C[arl]. Carl v. Kupfier<sup>†</sup>. München, SitzBer. Ak. Wiss., math.-phys. Cl., **38**, 1903, (492-511).

VORMANN, Bernard v. Landois, H.

Wallace, A. R. Hitherto unpublished letters of Charles Darwin. Pop. Sci. Mon., New York, N.Y., 62, 1903, (387– 414, with port.).

**Wasmann**, E[rich]. P. Petrus Heude S. J.<sup>†</sup>. Ein französischer Naturforscher in China. Natur u. Offenb., Münster, **48**, 1902, (625–627).

WEISE, Paul v. Kraatz, G

WETHERBY, A. v. Dautzenberg, P.

WIDHALM, I. M. v. Sugurov, A. M.

WILKINSON, Samuel James. Ent. Mag., London, 39, 1903, (256).

Wirén, A[xel]. On the history of zoology. (Swedish) Uppsala, 1901, (28). 21 cm.

WÜSTNEI, Carl v. Clodius, G.

ZEILER, Ernst V. v. Klunzinger, C. B.

**2natowicz**, Bronisław et **Tur**, Jan. Biographie du prof. B. Dybowski. (Polish) Wszéchświat, Warszawa, **22**, 1903, (113-143).

#### 0020 PERIODICALS, REPORTS OF INSTITUTIONS, SOCIETIES, CONGRESSES, Etc.

Archiv für mikroskopische Anatomie and Entwicklungsgeschichte, hrsg. v. O. Hertwig, v. la Valette St. George u. W. Waldever. Namen- u. Sachregister zu Bd 51-60. Bonn (F. Cohen), 1903, (83). 25 cm.

Compte-rendu du Conseil de la Société entomologique russe pour l'année 1901. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (LXIII-XCVI).

Compte-rendu du Conseil de la Société entomologique russe pour l'année 1902. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (CLXIX-CCIII).

Compte rendu du Musée zoologique de l'Académie Imperiale des Sciences pour l'année 1902. (Russ.) St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (1-52).

Congrès international d'aquiculture et de pêche. Mémoires et comptes-rendus des séances publiés par J. Perard et Maire. (Exposition universelle de 1900). Paris (Challamel), 1901, (XLIII + 602). 25 cm, 5. [0060 5403].

Entomological News. [Published monthly except during July and August]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (251).

Fifteenth annual meeting of the Association of Economic Entomologists. Washington, D.C., Bull. U. S. Dept. Agric., Div. Ent., No. 40, 1903, (124). 23.3 cm.

Jahresbericht des Naturhistorischen Landesmuseums von Kärnten, 1900. Carinthia II, Klagenfurt, 91, 1901, Beilage (7).

Jahresbericht des Naturhistorischen Landesmuseums von Kärnten für 1901. Carinthia II, Klagenfurt, **92**, 1902, Beilage (9).

Jahresbericht über Veröffentlichungen und wichtigere Ereignisse im Gebiete des Forstwesens, der forstl. Zoologie, der Agrikulturchemie, der Meteorologie und der forstl. Botanik für das Jahr 1902. Hrsg. v. Karl Wimmenauer. Allg. Forstzig, Jg 1903, Supplement. Frankfurt a. M. (J. D. Sauerländer), 1903, (109). 28 cm.

Jahresberichte über die Fortschritteder Anatomie und Entwicklungsgeschichte. In Verbindung mit Bardeleben [u. A.] . . hrsg. v. G[ustav] Schwalbe (N.F.) 8. Literatur 1902. Abt. 1-3. Jena (G. Fischer), 1903, (XVIII + 256 + 304 + 927). 24 cm. [0010].

Jahresbericht der Wolga biologischen Station der naturforschenden Gesellschaft zn Saratow. [Ежегодникъ Волжской Біологической Станціи Саратовскаго Общества Естествоиспытателей и Любителей Естествознація.] [Erscheint in Lieferungen seit 1903 in Saratow. 22 cm.]

List of Bird Skins offered in Exchange by the Philippine Museum. Manila, Bull. Philippine Mus., 2, 1903, (1-8). Geparate 22.8 cm.

Proceedings of New York entomological society. Meeting of May 19 [1903]. New York, N.Y., J. Ent. Soc., 11, 1903, (249).

Rapport du jury chargé de décerner en 1902 le prix décennal des sciences zoologiques (période 1892-1901). Bruxelles (Polleunis et Ceuterick), 1903, (48). 8vo.

Records of Meetings of the American Academy of Arts and Sciences. Boston, Mass., Proc. Amer. Acad. Arts Sci., 38, 1903, (691-709).

Résultats scientifiques de l'expédition envoyée par l'Académie Impériale des Sciences pour le déterrement du corps d'un mammouth trouvé en 1901 au bord du fieuve Berezovka. (Russ.) St. Peterburg, I, 1903, (152, av. 33 pls. and 4 figs.). 35 cm. [6003]. The Nautilus. [Place of publication thanged from Philadelphia to Boston.] Nautilus, Boston, Mass., **17**, 1903, (1).

The society for the advancement of the Norwegian fisheries. Report for 1902. (Norw.) Bergen, 1903, (51). 24,5 cm.

Zoologica. Original - Abhandlungen aus dem Gesammtgebiete der Zoologie. Hrsg. v. Carl Chun. H. 35 IV (= Bd 14, Lfg 4), 1902, (289-384, mit 9 Taf.). 31 cm. H. 38 (= Bd 15, Lfg 4-6), 1902, (11 + 34, mit 5 Taf.). H. 39 (- Bd 16), 1903, (XI + 168, mit 52 Taf.). Stuttgart (E. Nägele). 31 cm.

Zoologische Jahrbücher. Abt. f. Systematik, Geographie u. Biologie der Thiere. Hrsg. v. J. W. Spengel. Bd 18, H. 2. Jena (G. Fischer), 1903, (155-350, mit 5 Taf.). 24 cm.

Zoologische Jahrbücher. Hrag. v. J[oh.] W[ilh.] Spengel. Abth. f Anatomie u. Ontogenie der Thiere, Bd 17, H. 3. Jena (G. Fischer), 1903, (481-618, nit 12 Taf.). 25 cm. Dasselbe. Abth. f. Systematik, Geographie u. Biologie der Thiere, Bd 17, H. 4-6; Bd 18, H. 1. Ebenda, 1903, (I-III, 585-660, mit 12 Taf.; 1-154, mit 11 Taf.).

Zoologischer Jahresbericht für 1901, hrsg. v. d. zoologischen Station zu Neapel. Red. v. Paul Mayer. Berlin (R. Friedländer u. S.), 1902, (VIII + 16 + 6 + 16 + 70 + 2 + 67 + 72 +5 + 219 + 25). — Desgl. für 1902. Ebenda, 1903, (VIII + 29 + 28 + 25 + 81 + 72 + 62 + 236 + 32). 26 cm. Je 24 M.

BUREAU OF ANIMAL INDUSTRY, U. S. Department of Agriculture. Niueteenth annual report . . for the year 1902. Washington, 1903, (651, with pl.).

COLLEGE VOOR DE ZEEVISSCHERI, KN. Jahresbericht über die Nieden. Seefischereien im Jahre 1901. (Holländisch) Versl. Staat Ned. Zeevissch., s' Gravenhage, 1902, (1-408).

CONNECTICUT STATE COMMISSIONERS OF FINHERIES AND GAME. FOURTH biennial report . . for the years 1901– 1902. State of Connecticut. Public document No. 19. Hartford, 1902, (115, with pl.). 23 cm.

NEW YORK, AMERICAN MUSEUM OF NATURAL HISTOBY. Annual report of the president, treasurer's report, list of accessions, act of incorporation, constitution, by-laws and list of members for the year 1902. New York, 1903, (96, with pl.). 24 cm.

NEW YORK FOREST FISH AND GAME COMMISSION. Sixth annual report of the Forest, fish and game commission of the State of New York. [1900.] Albany, N.Y., 1901, (532, with col. pl., text fig. and map). [0227 gg].

U. S. DEPARTMENT OF AGRICULTURE. Seventeenth annual report of the Bureau of animal industry for the year 1900. Washington, D.C., 1901, (642, with text fig., maps and pl.). 23.5 cm.

Agrassiz, Alexander. Preliminary report and list of stations. With remarks on the deep-sea deposits by Sir John Murray. (Reports on the scientific results of the expedition to the tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer "Albatross" from August, 1899, to March, 1900. Commander Jefferson F. Moser, U.S.N., commanding. 1.) Cambridge, Mass., Mem. Mus. Comp. Zool. Harvard Coll., **26**, 1902, (21, + 1-114, with 21 charts). Separate. 28.8 cm.

**Birulia**, A. A. Compte-rendu du zoologue de l'expédition sur les travaux scientifiques en été 1902 pendant sa vie sur l'île Nouvelle-Sibérie. Rapports sur les travaux de l'Expédition Polaire Russe dirigée par le baron Toll. V. (Russ.) St. Peterburg, Bull. Ac. Sc., (5 Sér.), **18**, No. 3, 1903, (91-94).

**Bowers**, George M[eade]. Report of the Commissioner for the year ending June 30, 1902. Washington, D.C., Rep. U. S. Com. Fish, pt. 28, **1903**, (11. + 160 + iv with pl.). 23 cm.

**Clarke**, John M. Report of the state paleontologist, 1902. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (849– 1311). Separate. 23 cm.

**Davydov**, K. N. Rapport préliminaire sur un voyage à l'ile Java et aux autres îles de l'archipel Malais. (Russ). St. Peterburg, Bull. Ac. Sc., (5 Sér.), **18**, No. 1, 1903, (25-32).

**Dollfus**, Gustave. Les Sociétés malacologiques (suite). J. conchyliol., Paris, 51, 1903, (48-60).

Durham, H. B. Report of the Yellow Fever Expedition to Para. Liverp. Sch. Trop. Medicine, Mem. VII. London (Longmans, Green & Co.), 1902, (79, 1 pl.). [Important remarks on Lankesterella.]

Dutton, J. L. Report of the Malaria Expedition to the Gambia, 1902. Liverp. Sch. Trop. Medicine, Mem. X. London, (Longmans, Green & Co.), 1903, (46, 5 pls.). [Review], Nature, London, 68, 1903, (429).

and Todd, J. L. First Report of the Trypanosomiasis Expedition to Senegambia (1902) of the Liverpool School of Tropical Medicine and Medical Parasitology. London (Longmans, Green & Co. for the University Press of Liverpool), 1903, (50 + VII, 5 pls. and numerous charts). 4to. Review, Lancet, London, 1903, 2, (1727-1728).

**Farran**, G. P. Record of the Copepoda taken on the mackerel fishing grounds off Cleggan, Co. Galway in 1901. Report on the Sea and Inland Fisheries of Ireland for the year 1901 [1903]. Part II, Appendix, No. VII, (105-120).

French, C. Report of the Entomologist [Victoria]. Vict. Journ. Dep. Agric., Melbourne, 2, 1903, (245-249).

Langley, S[amuel] P[ierpont]. Report of . . . Secretary of the Smithsonian institution, for the year ending June 30, 1902. [With appendices.] Washington, D.C., Smithsonian Inst., Rep., 1902, 1903, (11. + 1-115, with pl.). Separate. 24.5 cm. [Appendix 4. Report of the Superintendent of the National Zcological Park.]

**Rathbun**, Richard. Report upon the condition and progress of the U.S. National museum during the year ending June 30, 1901. [With 3 appendices including Bibliography]. Washington, D.C., Smitheonian Inst., Nation. Mus. Rep., **1901**, 1903, (1-174).

**Ravenal**, W[illiam] de C[hastignier]. The Pan-American exposition—report of the representative of the United States fish commission. Washington, D.C., Rep. U. S. Com. Fish, **1901**, 1902, (**291**-351, with pl.).

Redeke, H[einrich] C[arl]. Die zoologische Station der "Nederlandsche dierkundige Vereeniging". [Jahresbericht über 1902]. (Holländisch) Semon, Richard. Zoologische Forschungsreisen in Australien und dem malayischen Archipel. Mit Unterstützung des Herrn Dr. Paul von Ritter ausgeführt i. d. J. 1891–1893. Bd 5: Wirbellose Tiere, Lfg 6. Jens, Denkschr. med. Ges., 8, 1903, (643–778, I-VI, mit 16 Taf.).

Steindachner, Franz. Jahresbericht [des K. K. Naturhistorischen Hofmuseums] für 1900. Wien, Ann. Nat-Hist. Hofmus., 16, 1901, (Notizen 1-59).

Jahresbericht [des K. K. Naturhistorischen Hofmuseums] für 1901. Wien, Ann. NatHist. Hofmus., 17, 1902, (Notizen 1-58).

Jahresbericht [des K. K. Naturhistorischen Hofmuseums] für 1902. Wien, Ann. NatHist. Hofmus., 18, 1903, (Notizen 9-69).

Taylor, L. Second Progress Report of the Campaign against Mosquitoes in Sierra Leone. Liverp. Sch. 'Trop. Medicine, Mem. 5, pt. 2. Liverpool (University Press), 1902, (13).

**True**, Frederick W[illiam]. Report on the department of biology for the year 1900-1901. Washington, D.C., Smithsonian Inst., Nation. Mus. Rep., **1901**, 1903, (63-91).

Weir, J. R. Report of the Chief Inspector of Stock [Victoria]. Vict. Journ. Dep. Agric., Melbourne, 2, 1903, (242-244).

Woodworth, W. McM. Annual report of the keeper of the museum of comparative zoology at Harvard college, to the president and fellows of Harvard college for 1902-1903. Cambridge, Mass., 1903, (35). 23 cm.

#### 0030 GENERAL TREATISES, TEXT-BOOKS, DICTIONARIES, BIBLIOGRAPHIES, TABLES.

Bibliographie [de travaux anatomiques en langue française pour 1901-1902]. Bibliogr. anat., Nancy, **10**, 1902, (97-120, 287-303); **11**, 1902, (149-168).

Bibliotheca zoologica II. Verzeichniss der Schriften über Zoologie, welche in den period. Werken enthalten u. vom J. 1861-1880 selbständig erschienen sind. Mit Einschluss der allgemeinnaturgeschichtl., period. u. paläontolog. Schriften. Bearb. v. O[tto] Taschenberg. Lfg. 15. Leipzig (W. Engelmann), 1901, (I-VI, 4529-4844). 8vo. 7 M.

Eijkjes in de dierenwereld. [Etwas ans der Tierenwelt.] Brugge (A. J. Witteryck-Delplace), 1903, (28 non paginées, grav. hors texte). 4to. 1 fr.

Entomological Literature. Philadelphia, Pa., Ent. News, Acad. Nat. Sci., 14, 1903, (306-307).

Ergebnisse einer zoologischen Forschungsreise in den Molukken und Borneo, im Auftrage der Senckenbergischen naturforschenden Gesellschaft ausgeführt von Dr. Willy Kükenthal. Tl 2: Wissenschaftl. Reiseergebnisse, Bd 3, H. 4. Frankfurt a. M., Abh. Senckenb. Ges., **25**, 1903, (5 Bl., S. 932-988, m. 1 Taf.).

Fauna chilensis. Abhandlungen zur Kenntniss der Zoologie Chiles nach den Samnlungen von Dr. L. Plate. Bd 3, H. 1. Zool. Jahrb., Jena, Suppl. 6, 1903, (1-214, mit 13 Taf.). 24 cm. [0227 hk].

Les animaux sauvages. Description concise et intuitive. Von A. W. Bruges (A. J. Witteryck-Delplace), 1901, [32], non paginées, av. figs.). 12mo. 0.15 fr.

Nachtrag I zum Bücher-Verzeichnis der Bibliothek des entomologischen Vereins zu Berlin. . Zusammengestellt v. H. Stichel. Berlin (Druck v. C. Fromholz), 1902, (VIII + 48, nebst 2 Bl.). 21 cm. Auch als Beilage zu: Berliner ent. Zs., 47, 1902, [1903]. [2403].

Printenboek. De wilde dieren. [Die wilden Tieren]. Bruges (A. J. Witteryck-Delplace), 1901, (24, non paginées). 12mo. 0 fr. 15.

Allen, J[oel] A[saph]. The A. O. U. check-list—its history and its future. Auk, Cambridge, Mass., (N. Ser.), 20, 1903, (1-9).

Banks, Nathan. An index to bulletins nos. 1-30 (New series) (1896-1901) of the division of entomology. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **36**, 1902, (64). 23 cm.

**Bedford**, the *Duke* of. The Woburn Library of Natural History. [A work on British Zoology of a comparatively elementary nature. Two vols. have been at present issued. Mammals by Sir Harry Johnston; Butterflies and Moths by F. L. Hulme.]

Bogdanovič, E. A. Conspectus der i. J. 1902-1903 an dem Moskauer landwirthschaftlichen Institute abgehaltenen Vorlesungen über allgemeine Zootechnik. (Russ.) Moskau, 1903, (197). 23 cm.

Brehm, A. Thierleben. Bearbeitet nach der neuesten deutschen Ausgabe für die Jugend von A. M. Nikolskij. (Russ.) St. Peterburg (Verl. von Soikin), 1903. I, (Mammalia : 520 + XII mit fig. i. T.); II, (Aves : 324 + XVII mit fig. i. T.); III, (Reptilia, Amphibia, Pisces et Evertebrata : 459 + XXXIV mit Fig. i. T.). 30 cm.

Bronn, H. G. Klassen und Ordnungen des Thier-Reichs, wissenschaftlich dargestellt in Wort und Bild. Bd 2, Abt. 2 (Coelenterata), Lfg 18-21; Abt. 3 (Echinodermen), I.fg 41-64; Bd 3, (Mollusca), I.fg 62-65; Bd 3, Suppl. (Tunicata), Lfg 31-43; Bd 4, Suppl. (Nemertini), Lfg 18-22: Bd 5 (Arthropoda), Abt. 2, Lfg 63-68; Bd. 6, Abt. 1 (Pisces), Lfg 2-12; Abt. 5 (Mammalia) Lfg 61-64. Leipzig (C. F. Winter), 1901-1903. 26 cm. Die Lfg 1,50 M.

**Burroughs**, John. Real and sham natural history. The Atlantic Monthly, Boston and New York, **91**, 1903, (298– 309).

Caullery, M. et Mesnil, F. Revue annuelle de Zoologie. Rev. gén. sci., Paris, 14, 1903, (608-624).

**Cogniaux**, Alfred. Eléments des sciences naturelles à l'usage des écoles moyennes et autres établissements d'enseignement élémentaire. 2 vols. Bruxelles (J. Lebègue et Cie), 1901, Chaque vol. 1 fr. 85.

**Colton,** Buel P[reston]. Zoology; descriptive and practical, [with bibliography]. Boston (Health), 1903, (iii + 52). 18.5 cm.

**Cornish**, Charles. The living animals of the world; a review of the animal kingdom for all, treated in an entirely new manner and edited by C. J. Cornish in co-operation with the most celebrated zoologists of the world. The Dutch edition undertaken by Dr. J. Buttikoffer through Dr. J. McLeod, professor in Ghent. Brief description of quadrupeds, birds, fishes, insects, &c. (Dutch) Parts 11 and 12. Antwerp, Gent (Ds nederlandische boekhandel), 1903, (321-384). Vol. II, Parts 15-17, (65-160); Parts 22-24, (289-384). 4to. Fr. 0.90.

**Couns.** Elliott. Key to North American birds. Containing a concise account of every species of living and fossil bird at present known from the continent north of the Mexican and United States boundary, inclusive of Greenland and Lower California, with which are incorporated general ornithology . . . and field ornithology . . . The 5th ed. (entirely rev.) exhibiting the nomenclature of the American ornithologists' union. 2 vols. Boston (D. Estes & Co.), 1903, (zli + 535 with pl.; vi + [537]-1152 with pl.). 26 cm.

**Dardenne**, Jean. Scènes de la vie des animaux. Lectures sur la zoologie. Recueil de morceaux choisis. Bruxelles (J. Lebègue et Cie), 1902, (368, av. figs). 8vo., fr. 2.50.

Darwin, F. and Seward, A. C. More letters of Charles Darwin; a record of his work in a series of hitherto unpublished letters, ed. by Francis Darwin . . . and A. C. Seward . . . New York (D. Appleton & Co.), 1903, (2 v. front., portr.). 22 cm.

**Darwin**, F. A Naturalist's Calendar kept at Swaffham Bulbeck, Cambridgeshire, by Leonard Blomefield (formerly Tenyns). Cambridge, 1903, (XVIII + 84). [Review] by R. L., Nature, London, 68, 1903, (389).

Davis, J. R. Ainsworth. The Natural History of Animals. The Animal Life of the World in its various Aspects and Relations. 5 vols. London, 1903. 8vo.

**Dewar**, D. Animals of no importance. Calcuta and London, 1903, (113). 8vo. Reprint of 20 smart newspaper articles. Noticed, Nature, London, **69**, 1903, (172).

Dollfus, G. Les Sociétés malacologiques (suite). J. conchyliol., Paris, 51, 1903, (48-60).

Dubois, Alphonse. Synopsis avium. Nouveau manuel d'ornithologie. Fascicule X-XII. Bruxelles (H. Lamertin), 1902, (689-914, pls. XII-XIV). 6 fr.

Felt, E[phraim] P[orter]. The literature of American economic entomology, Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., No. 40, 1903, (7-25). Field, Hefbert Haviland. New departures in the Concilium bibliographicum. II. The supplementary bibliography. Science, New York, N.Y., (N. Ser.), **17**, 1903, (1014–1016).

Forel, F. A. Le Léman. Monographie limnologique. Vol. 11I., pt. 1. Lausanne (F. Rouge), 1902, (411, textfigs. 167-227). [Review], Nature, London, 67, 1903, (411-412).

Godman, F. D. Biol. Central Amer., Parts clxxvi to clxxx.

Goods, G[eorge] Brown. American fishes; a popular treatise upon the game and food fishes of North America, with especial reference to babits and racethods of capture. New ed., completely rev. and largely extended by Theodore Gill. . . Boston (D. Estes & Co.), [1903], (viii + [ix]-lxviii + 562, with illustr). 24 cm.

Grinnell, Joseph. The ornithological writings of Chester Barlow. Condor, Santa Clara, Cal., 5, 1903, (8-10).

**Guppy**, H. B. Observations of a Naturalist in the Pacific between 1896 to 1899. Vol. I. Vanua Levu, Fiji. A description of its leading physical and geological characters. London, 1903, (xx + 392, with 1 pl., 2 maps). 8vo.

Heflich, Aleksander et Michalski, Stanisław. Guide pour les autodidactes. V Partie, I Livraison: L'univers et l'homme. Principaux problèmes de la Science au point de vue de la théorie de l'évolution. 1. S. Kramsztyk: L'évolution de l'univers.—2. W. Nałkowski: L'évolution de la Terre.—3. J. Nusbaum: Le développement de la vie organique. —4. J. Eismond: Le généalogie des animaux.—5. L. Krzywicki: L'évolution anthropologique de l'homme. — 6. I.. Krzywicki: Le développement de la culture. (Polonais) Warszawa (Kasa Mianowskiego, Gebethner i Wolff), 1903, (558). 25 cm, 2 ruble.

Hertwig, Richard. Lehrbuch der Zoologie. 6. umgearb. Aufl. Jens (G. Fischer), 1903, (XIV + 624). 25 cm. 11,50 M.

Translated from the fifth German edition, by Kingsley, J. S. London, 1903, (xi + 704). 8vo.

------ Lehrbuch der Zoologie. Uebersetzt mit Abänderungen und Zusätzen von W. Zalenskij. 3-te Ausgabe, nach der 5-ten deutschen Ausgabe. (Russ.) Odessa, 1903, (XIV + 769, mit 621 fig.).

Howe, Reginald Heber, jun. A North American faunal index to the "Ornithologist" and "Oölogist." Part III. Cont. N. Amer. Ornith., Longwood and Concord, Mass, 1, 1903, (45-51). Separate. 24 cm.

Huxley, T. H. [the late]. The scientific memoirs of Thomas Henry Huxley. Edited by Sir Michael Foster and Prof. E. Ray Lankester. Supplementary volume. London, 1903, (90). 8vo.

**Ivancov**, N. A. Handbuch der Zoologie für mittlere Lebranstalten. (Russ.) Odessa, 1903, (X + 336, mit 372 fig.). 24 cm.

Kükenthal, W[illy]. Schlusswort [zu: Ergebnisse einer zool. Forschungsreise in den Molukken u. Borneo]. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (969-988).

Lankester, E. R. [and others]. A treatise on Zoology. Part I. Introduction and Protozoa second fascicle. London, 1903, (vi + 451). 8vo.

Catalogue of the books, manuscripts, maps and drawings in the British Museum Natural History. With an introduction by B. B. Woodward who is responsible for the preparation of the work. To be completed in about 4 volumes. Vol. I, A-D. London, 1903, (viii + 500). 4 to.

Manson, P. Tropical Diseases. A Manual of the Diseases of Warm Climates. New and Revised Edition. London (Cassell & Co.), 1903, (XXIV + 756, 2 pls. and 130 text-figs.). [Contains a general account of malarial and other Protozoan parasites.] 8vo.

Marshall, M. and Hurst, C. H. A Junior Course of Practical Zoology. (Russ.) Uebers. a. d. Englischen von N. Bogojavlenskij. Moskva, 1903, XII + 220). 24 cm.

Miller, Gerrit S[mith], jun. and Rehn, James A. G. Systematic results of the study of North American land mammals during the years 1901 and 1902. Boston, Mass., Proc. Soc. Nat. Hist., **31**, 1903, (61-145). Separate. 24.3 cm.

Minot, Charles Sedgwick. A laboratory text-book of embryology. Philadelphia (P. Blakiston's Son & Co.), 1903, (xvii + 17-380, with illustr. and pl.). 26 cm.

Mudge, G. P. A text-book of Zoology. London (Edward Arnold), 1901, (viii + 416).

**Oels**, W. Lehrbuch der Naturgeschichte. Tl 1: Der Mensch und das Tierreich. Braunschweig (F. Vieweg & S.), 1903, (XIX + 470, mit 36 Taf.). 24 cm. 4,50 M.

**Orton**, [James]. General zoölogy, practical, systematic and comparative; being a revision and rearrangement of Orton's Comparative Zoology, by Charles Wright Dodge . . . New York, Cincinnati [etc] (American Book Co.), 1903, (512, with illustr.). 20.5 cm.

Orborn, Henry Fairfield. Progress of the Concilium Bibliographicum. Science, New York, N.Y., (N. Ser.), 17, 1903, (951-952).

Poppe, S. A. Zoologische Litteratur über das nordwestdeutsche Tiefland von 1892–1902. Bremen, Abh. natw. Ver., 17, 1903, (306–335).

**Baquet**, Hector. Notes du cours d'anatomie des animaux domestiques. Bruxelles (H. Lamertin), 1902, (203). 10 fr.

**Baymond**, William J. Writings of James G. Cooper, M.D., on conchology and palaeontology with list of species described by him. Nautilus, Boston, Mass., **17**, 1903, (6–12).

**Saitta**, E. Pesci e Molluschi dei Mari della Sicilia, con aggiunta dei più comuni Crostacei ed altri animali d'acqua salsa, e vocabolario siciliano-italiano e italiano-siciliano. Messina (tip. del Progresso), 1902, (99).

**Schilling**, Samuel. Grundriss der Naturgeschichte. Tl 1: Das Tierreich. Mit Berücksichtigung der Naturgeschichte des Menschen und Hinweisen auf die Gesundheitspflege. 20. Bearb. v. H[einrich] Reichenbach. Breslau (F. Hirt), 1903, (464, mit 1 Karte u. 3 Taf.). 23 cm. Geb. 4,20 Mk.

Schläpfer, Rudolf. Naturwissenschaftliches Repetitorium umfassend Zoologie, Botanik, Mineralogie, Physik & Chemie. 2 verm. & verb. Aufl. Davos (Richter) 1903, (IV + 291). 8vo. **Sharp.** D. The Zoological Record, Vol. XXXIX. Being records of Zoological literature relating chiefly to the year 1902. London, 1903, [numerous paginations].

**Sheppard**, W. F. New tables of the probability integral. Biometrika, Cambridge, **2**, 1903, (174-190).

**Sherborn**, C. D. Index Animalium. sive index nominum quae ab a. d. MDCCLVIII Generibus et Speciebus Animalium imposita sunt. Sectio prima a kalendis Januarius, MDCCLVIII usque ad finem Decembris, MDCC. Cambridge, 1902, (LIX + 1195).

Stiles, Ch[arles] Wardell and Hassall, Albert. Index-catalogue of medical and veterinary zoology. Parts 1-5 "[Authors: A to Eyssel]." Washington, D.C., Bull. U. S. Dept. Agric., Bur. Animal Ind., No. 39, 1902, (1-435). Separate. 23 cm.

**Struska**, Johann. Lehrbuch der Anatomie der Hausthiere. Wien (Braumüller), 1903, (XVI + 828). 24 cm.

**Studer.** Rapport annuel de la Société suisse de Zoologie (l'enumératiou des travaux publiés). Arch. Sci. Phys., Genève, (sér. 4), **16**, 1903, (588-590).

**Sallady**, Zoltán. Bericht über die ungarische Literatur III. 1891-1900. (Ungarisch) Budapest, 1903, (VI + 505). 26 cm.

Thomson, J. A. and Bennie, J. Outline of special course in natural history for Training College and King's students. Summer Session 1903. University of Aberdeen, 1903, (68). 8vo.

Van Hauwaert, P. Die Riesen der Wald. Nach der Natur beschrieben für die Erheiterung und Unterrichtung der Jugend. (Holländisch) Gent (I. Vanderpoorten), 1902, (64). 8vo. fr. 0.75.

Die grosse Tierenwelt. Naturtafel fur die Jugend. (Holländisch) Gent (I. Vanderpoorten), 1902, (64). 8vo. fr. 0.75.

(Holländisch) Bilder aus der lebenden Natur. Gent (Vanderpoorten), 1903, (64, av. figs.). 8vo. fr. 0.75.

Weed, C. M. and Crossman, R. W. A laboratory guide for beginners in Zoology. London, 1903, (xxiv + 105). [Review], Nature, London, **67**, 1903, (318).

Wettstein, H[einrich]. Leitfaden für den Unterricht in der Naturkunde an Sekundar- und Bezirksschulen, sowie unteren Gymnasien 7. Aufl. 2 Teile, Teil 1: Botanik, Anthopologie, bearb. v. R. KELLER, Zoologie bearb. v. G. STUOKI. Zürich, 1902, (VIII + 380, mit 467 Ill. and 5 Taf.). 8vo.

Windle, B. C. A. Thirteenth report on recent teratological literature. J. Anat. Physiol., London, 17, 1903, (298– 313).

**Woods**, H. Palaeontology. Invertebrata. Ed. 3. Cambridge, 1903, (360, with figs.).

Zittel, Karl A. von. Grundzüge der Paläontologie (Palöozoologie). Abt. 1: Invertebrata. 2. verb. u. verm. Aufl. München u. Berlin (R. Oldenbourg), 1903, (VIII + 558). 24 cm. Geb. 16,50 M.

**Zscholke**, F[riedrich]. Fauna helvetica. Heft. 8: Parasitische Würmer. —Bibliographie der schweizerischen Landeskunde. Fascikel IV 6. Bern (K. I. Wyss), 1902, (IV + XII + 39). 8vo.

#### 0040 ADDRESSES, LECTURES.

Banti, G. L'evoluzione nella materia e nella vita. Discorso inaugurale. Firenze (tip. Galletti e Cocci), 1902, (31).

Brunts, L 'Thèses présentées à la Faculté des sciences de l'Université de Nancy pour obtenir le grade de docteur ès sciences naturelles. Liége (Imprimerie H. Vaillant-Carmanne), 1903, (207, et pls. hors texte). 8vo.

**Camerano**, Lorenzo. Ricerche somatometriche in Zoologia. [Conferenza]. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (13-15).

Hickson, S. J. [Presidential Address] Nature, London, 68, 1903, (452-458).

Howes, G. B. The morphological method and progress. London, Rep. Brit. Ass., **1902**, 1903, (618-638); Nature, London, **66**, 1902, (522-530); [reprint], Washington, D.C., Smithsonian Inst., Rep., 1**902**, 1903, (11. + 581-608). Separate. 24.5 cm. Nutting, Charles C[leveland]. The perplexities of a systematist, (address by vice-president and chairman of section F for 1902). Proc. Amer. Ass. Adv. Sci., Washington, D.C., **52**, 1903, (439-454); Science, New York, N.Y., (N. Ser.), **17**, 1903, (63-72).

Perrier, E. Le Muséum d'Histoire naturelle et les Colonies françaises. Rev. gén. sci. Paris, 14, 1903, (696-700).

Ricci, O. Una pagina di evoluzione: conferenza. Gazz. med. lomb., Milano, 61, N. 3, 4, 5, 1902.

**Busso**, Achille. Gruppi di Echinodermi viventi e fossili e loro filiazione. Conferenza. (Sunto). Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (54-58).

**Sciater**, P. L. Chairman's Address to the B. O. C. at the opening of the twelfth Session of the Club. London, Bull. Brit. Ornith. Cl., **14**, 1903, (2-6).

Timiriaser, C. The cosmical function of the green plant. Croonian lecture. [Transmutation of light into bodies.] London, Proc. R. Soc., 72, 1903, (424-461).

Todaro, F. Sopra il movimento scientifico della Zoologia: Discorso inaugurale del III Congresso dell' Unione zoologica italiaua tenuto in Roma. Nuova Antologia, Roma, 1902; Mon. zool. ital., Firenze, **13**, 1902, Supplemento, (2-8).

Woodward, H. The President's Address. Some ideas on life. London, J. R. Microsc. Soc., 23, 1903, (142-157).

#### 0050 PEDAGOGY.

Boletín de Instrúccion Pública. Organo de la Secretaría del Ramo. [Bulletin of Public Instruction.] Mexico, 1, 1903, (1-676); 2, 1903, (1-336).

Naturgeschichte nach Lebensgemeinschaften. Für die Volksschule bearb. v. mehreren Lehrern. H. 4.: Der Wald. 5. verb. Aufl. Langensalza (F. G. L. Gressler), 1903, (IV + 84). 18 cm. 0,60 M.

[R. Leuckart's] Zoologische Wandtafeln, hrsg. v. Carl Chun. Serie 11: Wirbelthiere, Taf. 12: H. E. Ziegler, Skelett d. Knorpelfische. Cassel u. Leipzig (Th. G. Fisher & Co.), [1903]. 4 Bl. zu je 106 × 67 cm, mit 2 S. Text in 4°. 12 M.

Ball, Th. Grundriss der Naturgeschichte aller drei Reiche für den methodischen Unterricht bearb. 6. verb. Aufl. Leipzig (O. R. Reieland), 1903, (VIII + 312, mit 2 Taf.). 22 cm. 2,30 M.

Neuer methodischer Leitfaden für den Unterricht in der Zoologie einschliesslich der Grundbegriffe der Tiergeographie und Unterweisungen über die Gesundheitspflege 10. verb. Aufl. Leipzig (O. R. Reisland), 1903, (X + 277). 22 cm. Geb. 2,20 M.

Bohn, Heinrich. Die geographische Naturaliensammlung des Dorotheenstädtischen Realgymnasiums und ihre Verwendung beim Unterricht. Schluss. (Wissenschaftliche Beilage zum Jahresbericht des Dorotheenstädtischen Realgymnasiums zu Berlin. Ostern 1903.) Berlin (Weidmann), 1903, (29). 25 cm. 1 M.

**Bolton**, G. A book of beasts and birds, written and illustrated with photographs from life. London, 1903, (xi + 132, with 69 pls.). 8vo.

**Davis**, J. R. Ainsworth. The Natural history of animals. The animal life of the world in its various aspects and relations. 5 half-vols., illustrated. (Incomplete.) London, 1903. 8vo. Review by R. L. Nature, London, **69**, 1903, (11).

**Ebeling**, Max. Modelle für den naturwissenschaftlichen Unterricht. Natur u. Schule, Leipzig, **1**, 1902, (430–434).

Emery, Carlo. La Zoologia secondo il nuovo Regolamento della Facoltà di Scienze. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1902, (503-504).

Hanstein, R. von. Die Zoologie als Lehrfach der höheren Schulen. Natw. Wochenschr., Jens, **18**, 1903, (409–412).

Die bildliche Ausstattung zoologischer Schulbücher. Natur u. Schule, Leipzig, **1**, 1902, (216-222).

Heffich, Aleksander et Michalaki, Stanisław. Guide pour les autodidactes. V Partie, I Livraison: L'univers et l'homme. Principaux problèmes de la Science au point de vue de la théorie de l'évolution. I. S. Kramsztyk: L'évolution de l'univers.—2. W. Nałkowski: L'évolution de la Terre.—3. J. Nusbaum: Le développement de la vie organique.—4. J. Eismond: Le généalogie des animaux.—5. L. Krzywicki: L'évolution anthropologique de l'homme. —6. J. Krzywicki: Le développement de la culture. (Polonais) Warszawa (Kasa Mianowskiego, Gebethner i Wolff), 1903, (558). 25 cm. 2 ruble.

Hixon, Kate B. Field work in zoology. J. Appl. Microsc., Rochester, N.Y., 6, 1903, (2400-2402).

Hoffer, Eduard. Lehrbuch der Tierkunde für Lehrer- und Lehrerinnen-Bildungsanstalten. 2., nach biologischen Grundsätzen bearb. Aufl. Leipzig (G. Freytag), 1903, (IV + 315, mit 1 Karte). 23 cm. Geb. 3,50 M.

Hoyle, W. E. The use of Museums in teaching. Manchester, Notes Mus., No. 13, 1903, (8).

**Eudson**, W. H. The Naturalist in La Plata. [Fourth edition.] Letterpress as in previous editions, plates different. London, 1903, (ix + 394). 8vo.

**Erass.** M. und **Landots**, H[ermann]. Der Mensch und die drei Reiche der Natur. Tl 1: Der Mensch und das Tierreich in Wort und Bild für den Schulunterricht in der Naturgeschichte. 13. verb. Aufl. Freiburg i. B. (Herder), 1903, (XIV + 256). 22 cm. 2,20 M.

**Krasuskaja**, A. A. Die Technik der Corrosionspräparate. (Russ.) St. Peterburg, Bull. labor. biol., **6**, 3, 1903, (42– 46).

Lehmann, Ad. Zoologischer Atlas. Tafel: Equus zebra. Leipzig (F. E. Wachsmuth), [1903]. 67 × 89 cm.

Zoologischer Atlas. Tafel: Psittacus erithacus. Tafel: Ocneria monacha. Leipzig (F. E. Wachsmuth), [1903]. 89 × 67 cm. Je 1,40 M.

Linville, Henry R. Laboratory work in zoology in the De Witt Clinton high school, New York City. J. Appl. Microsc., Rochester, N.Y., 6, 1903, (2301-2309).

Lippitsch. Studien über den Prüfungsstoff des naturgeschichtlichen Unterrichts im Untergymnasium. [Säugetiere.] (Jymnasium, Paderborn, 21, 1903, (194-199).

**Eagg1**, Leopoldo. La tachigenesi e gli studi universitari. Milano, Rend. Ist. lomb., (Ser. 2), **35**, 1902, (819-834).

Matsdorff, C[arl]. Tierkunde für den Unterricht an höheren Lehranstalten. Ausg. für Realanstalten, auf Grund der preussischen Lehrpläne von 1901 bearb. In 6 Teilen. TI 1-4. Lehrstoff der Sexta bis Unter-Tertia. Breelau (F. Hirt), 1903, (IV + 64; 78; 136; 164, mit 2 Taf.). 22 cm. 'TI 1-4 geb. 4, 15 M. TI 5: Lehrstoff der Ober-Tertia. TI 6: Lehrstoff der Unter-Sekunda. Breelau (F. Hirt), 1903, (171, mit 1 Karte; 127, mit 3 Taf. u. 1 Karte). 21 cm. Cart. TI 5: 1,50 M., TI 6: 1,30 M.

Paust, J. G. Naturgeschichte für Mädchenschulen. Mit Berücksichtigung des Haushaltungsunterrichtes bearb. (F. Hirts Realienbuch, Nr 35.) 3. erw. u. verm. Aufl. Breslau (F. Hirt), 1903, (248). 21 cm.

und **Steinweller**, F. Pflanzen- und Tierkunde. 4. verb. u. verm. Aufl. (Der Unterricht in den Realien.) Bearb. v. Nowack [u. A.]. Tl 3. Breelau (F. Hirt), 1903, (119). 22 cm. 1 M.

**Pokorny.** Naturgeschichte des Tierreiches. Für höhere Lehranstalten neu bearb. von Robert Latzel. 26., nach biologischen Gesichtspunkten umgearb. Aufl. Leipzig (G. Freytag), 1903, (V + 233, mit 24 Taf. u. 1 Karte). 24 cm. Geb. 4 M.

**Pongs**, W. Der grüne Armpolyp (*Hydra*). Beispiel für engere Lebensgemeinschaft (Symbicse). Aus der Schule, Leipzig, **15**, 1903, (267-271).

**Přerovaky**, Richard. Beiträge zur Lehrmittelfrage des botanischen und zoologischen Mittelschulunterrichtes. Jahresbericht der K.K. II. deutschen Staate-Realschule in Prag-Kleinseite, **30**, (1902), 1903, Prag, 1903, (17-41).

**Scherren**, H. Popular natural history of the lower animals (invertebrates). London, 1903, (288, with illustr.); [Review] Nature, London, **69**, 1903, (178).

**Schilling**, Samuel. Kleine Schul-Naturgeschichte. Bearb. von R. Waeber. Auf Grund der preussischen Lehrpläne von 1901 umgearb. durch J. Seiwert. Tl 1: Der Mensch und das Tierreich. 22. Bearb. Breslau (F. Hirt), 1903, (232, mit 4 Taf.). 23 cm. 2 M.

geschichte. Tl 1: Das Tierreich. Mit Berücksichtigung der Naturgeschichte des Menschen und Hinweisen auf die Gesundheitepflege. 20. Bearb. v. H[einrich] Reichenbach. Breslau (F. Hirt), 1903, (464, mit 1 Karte u. 3 Taf.). 23 cm. Geb. 4,20 Mk.

Schmeil, Otto. Grundriss der Naturgeschichte. Unter besonderer Berücksichtigung biologischer Verhältnisse bearb. H. 1: Tier- und Menschenkunde. 2. Aufl. Stuttgart u. Leipzig (E. Nägele), 1903, (VIII + 126 + 32). 22 cm. Kart. 1 M.

Lehrbuch der Zoologie für höhere Lehranstalten und die Hand des Lehrers. Unter besonderer Berücksichtigung biologischer Verhältnisse. 7.Aufl. Stuttgart u. Leipzig (E. Nägele), 1903, (XV + 464). Geb. 4,20 M.

Schröder und Kull. Biologische Wandtafeln zur Tierkunde. Taf. 7: (iemeines Eichhörnchen (Sciurus vulgaris). Taf. 11: Wildschwein (Sus scrofa). Taf. 17: Mäusebussard (Buteo vulgaris). Taf. 32: Grüner Grasfrosch (Rana esculenta). Taf. 37: Maikäfer (Melolontha vulgaris). Berlin (P. Parey), [1903]. 86 × 107 cm. Die Taf. 2,50 M.

Seidel, L. E. Das Leben der Tiere in Charakterbildern und abgerundeten Gemälden. Ein naturhistorisches Lesebuch für Schule und Haus. 3. Aufl. Langensalza (F. G. L. Gressler), 1902, (VIII + 479). 23 cm. 3,50 M.

Sohmidt, Theodor und Drischel, Friedrich. Naturkunde für höhere Mädchenschulen und Mittelschulen. Tl 3: Der naturkundliche Stoff für 80 Lehrstunden des 6. Schuljahres in höheren Mädchenschulen und Mittelschulen, bearb. v. Friedrich Drischel. 2. verb. Aufl. Brealau (M. Woywod), 1903, (246). 24 cm. Geb. 1,50 M.

**Silloway**, Perley Milton. How to study a bird. Nature-study lesson. Missoula, Bull. Univ. Mont., No. **17**, Biol. Ser. No. 5, 1903, (204-209).

**Stenhouse,** E. An introduction to Nature study. London, 1903, (x + 422). [Review], Nature, London, **68**, 1903, (546).

Thomson, J. A. and Rennie, J. Outline of special course in natural history for Training College and King's students. Summer Session 1903. University of Aberdeen, 1903, (68). 8vo. Vogel, O. und Ohmann, O. Zoologische Zeichentafeln. Im Anschluss an den Leitfaden für den Unterricht i. d. Zool. v. O. Vogel, K. Müllenhoff u. P. Röseler. H. 2: 7. verb. Aufl. (24 Taf., 17 S. Text); H. 3: 5. verb. Aufl. (16 Taf., 25 S. Text). Berlin (Winckelmann & S.), 1903. Taf. 22 × 32 cm. Text 22 cm. 1,80 M.

Wächter, Christian. Methodischer Leitfaden für den Unterricht in der Tierkunde. 4. verb. Aufl. Tl 2: Dio wirbellosen Tiere. Braunschweig (F. Vieweg & S.), 1902, [Umschlagtitel 1903], (VIII + 150, mit 4 Taf.). 24 cm. 2 M.

Walther, Ernst. Der Unterricht in der Naturkunde nach biologischen Gesichtspunkten bearb. Abt. 1: Unterstufe. Leipzig (A. Hahn), 1903, (VIII + 160). 22 cm. 2 M.

Wossidio, Paul. Leitfaden der Zoologie für höhere Lehranstalten. Tl 2: Der Mensch. Beschreibung des Baues und der Verrichtungen seines Körpers nebst Unterweisungen über die Gesundheitspflege. 10. verm. u. verb. Aufl. Berlin, (Weidmann), 1903, (VI + 105). 23 cm. Geb. 1,20 M.

# 0060 INSTITUTIONS, MUSEUMS, COLLECTIONS. ECONOMICS.

#### GENERAL.

Čičerin, T. Einiges über lateinische Transscription russischer Namen. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (228).

# INSTITUTIONS, MUSEUMS, AQUARIA.

BUREAU OF ANIMAL INDUSTRY, U. S. Department of Agriculture. Nineteenth annual report . . . for the year 1902. Washington, 1903, (651, with pl.).

List of Bird Skins offered in Exchange by the Philippine Museum. Manila, Bull. Philippine Mus., 2, 1903, (1-8). Separate. 22.8 cm.

Agassis, Alexander. Preliminary report and list of stations. With remarks on the deep-sea deposits by Sir John Murray. (Reports on the scientific results of the expedition to the tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer "Albatross" from August, 1899, to March, 1900. Commander Jefferson F. Moser, U.S.N., commanding.) Cambridge, Mass., Mem. Mus. Comp. Zool. Harvard Coll., 26, 1902, (21 + 1-114, with 21 charts). Separate. 28.8 cm.

17

Bohn, Heinrich. Die geographische Naturaliensammlung des Dorotheenstädtischen Realgymnasiums und ihre Verwandung beim Unterricht. Schluss. (Wissenschaftliche Beilage zum Jahresbericht des Dorotheenstädtischen Realgymnasiums zu Berlin. Ostern 4903.) Berlin (Wiedmann), 1903, (29). 25 cm. 1 M.

Bolau, Heinrich. Der zoologische Garten [in Hamburg]. [In: Hamburg in naturwissenschaftl. u. medizin. Beziehung]. Hamburg, 1901, (249-251).

Breitfuss, L. L. Liste des stations dans la Mer de Barents et des travaux de l'Expédition pour l'exploration industrielle et scientifique des côtes de Murman, faites en ces stations 1902. (Russ.) St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (VIII).

Bureau, Edouard. Collections entomologiques, botaniques et géologiques, offertes au Muséum d'histoire naturelle de Nantes, Bul. soc. sci., (sér. 2), t. 3, 18, 1903, (VI-XII).

Cori, Carl I[sidor]. Anregung und Vorschlag zu einem Zusammenschluss der zoologischen und biologischen Meeresstationen, insbesondere zum Zwecke gemeinsamer Erforschung des Meeres. Verh. Ges. D. Natf., Leipzig, 74, (1902), II, 1, 1903, (149-151).

Dexler, Hermann. Bericht über eine Reise nach Australien zum Zwecke der Erwerbung anatomischen und entwicklungsgeschichtlichen Materials vom Dugong. Ditsch. Arbeit, Prag, 1, (1901), 1902, (552–562).

Hennicke, Carl R. Biologische Museen. Natur u. Haus, Dreeden, 11, 1903, (225-226).

Lankester, E. Ray. Catalogue of the books, manuscripts, maps and drawings in the British Museum Natural History. With an introduction by B. B. Woodward who is responsible for the preparation of the work. To be completed in about 4 volumes.] Vol. I. A-D. London, 1903, (VIII + 500). 4to. McFarland, F. M. The Hopkins seaside laboratory. J. Appl. Microsc., Rochester,

N.Y., 5, 1902, (1869-1875, with text fig.). Separate. 24 cm. Mayer, Alfred Goldsborough. A labo-

mayer, Alfred Goldsoorougn. A laboratory for the study of Marine Zoology in the tropical Atlantic Pop. Sci. Mon., New York, N.Y., 64, 1903, (41-47).

**O[sborn]**, H[enry] F[airfield]. The Cope Pampean collection [representing the Pleistocene fauna of South America, American Museum of Natural History]. Science, New York, N.Y., (N. Ser.), **17**, 1903, (157–158).

**Peel**, C. V. A. The zoological gardens of Europe, their history and chief features. London, 1903, (xiv + 256, with pls.). 8vo.

Perrier, E. L. Muséum d'Histoire naturelle et les Colonies françaises. Rev. gén. sci., Paris, 14, 1903, (695-700).

Praibram, Hans. Die neue Anstalt für experimentelle Biologie in Wien. Verh. Ges. D. Natf., Leipzig, 74, (1902), II, 1, 1903, (152–155).

Reh, L. Provincial-Museen als Volksbildungsstätten. Bilder aus der zoolog. Abteilung des Altonaer Museums. Natur u. Schule, Leipzig, **2**, 1903, (263– 271).

**Ritter**, William Emerson. Marine biology and the marine laboratory at San Pedro. Berkeley, Univ. Cal. Chron., 5, 1903, (222-230).

Woodworth, W. McM. Annual report of the keeper of the museum of comparative zoology at Harvard College, to the president and fellows of Harvard College for 1902-1903. Cambridge, Mass., 1903, (35). 23 cm.

Wortman, J. L. Studies of Eccene Mammalia in the Marsh collection, Peabody museum. [Harvard univ.] [Primates]. Amer. J. Sci., New Haven, Conn., (Ser. 4), **16**, 1903, (345–368, with 2 pls.).; Part 2. Primates [with discussion of the phylogeny and classification of the order]; *ib.*, **15**, 1903, (163–176, 399–414, 419–436).

#### COLLECTIONS\_

Austen, E. E. A monograph of the Tsetse-flies (genus Glossina Westwood) based on the collection in the British

(x 2-9053)

Museum. With a chapter on the mouth parts by H. J. Hansen. Loudon, (British Museum), 1903, (IX + 313, 9 pls.). [Reviews], Zoologist, London, 1903; Nature, London, **69**, 1903, (123).

**Clarke**, John M[ason] and **Buedemann**, Rudolf. Catalogue of type specimens of Palaeozoic fossils in New York state museum. Albany Univ., N.Y., Bull. St. Mus., No. **65**, 1903, (847). 23 cm.

**Coulon,** L. Un séjour à Dieppe au point de vue de l'histoire naturelle. Elbeuf, Bul. soc. étud. sci. nat., **20**, 1901, [1902], (109-128).

Dahl, Friedrich. Winke für ein wissenschaftliches Sammeln von Thieren. Berlin, SitzBer. Ges. natf. Freunde, 1903, (444-475).

Ehrenbaum, [E.]. Biologische Meeresstation für Canada und das Studium der Sandmuschel (*Mya arenaria*). Berlin, Mitt. D. Seefischereiver., **18**, 1902, (454– 457).

Grevé, C. Der Tierbestand des zoologischen Gartens zu Moskau. Zool. Garten, Frankfurt a. M., 44, 1903, (6-13).

Hennicke, Carl R. Biologische Museen. Natur u. Haus, Dresden, 11, 1903, (225-226).

Lankester, E. R. Handbook of Instructions for collectors, issued by the British Museum (Natural History). London, 1902, (vi + 137).

Lebedincev, A. Die Hydrobiologie auf den internationalen Ausstellungen für Fischereigewerbe in St. Petersburg (1902) und für Hydrobiologie der Fischerei und Fischzucht in Moskau (1903). (Russ.) St. Peterburg, 1903, (81, mit 7 fig.). 25 cm.

Meyer, A. B. 3. Bericht über einige neue Einrichtungen des kgl. zoologischen und anthropologisch - ethnographischen Museums in Dresden. Dresden, Abh. zool. Mus., **10**, (1902-1603), 1903, Nr. 5, (VI + 25, mit 20 Taf.).

**Oates**, E. W. Catalogue of Birds' Eggs. Vol. II. 1902. (400, 5 pls.). [Review], Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (133).

[assisted by Capt. Saville G. Reid]. Catalogue of the collection of Birds' Eggs in the British Museum (Natural History), Vol. III. Carinatae. (Psittaciformes-Passeriformes). London, 1903, (XXIV + 352, with X coloured pls.). 8vo.

**O[sborn]**, H[enry] F[airfield]. The Pope Pampean collection [representing the Pleistocene fauna of South America, American Museum of Natural History]. Science, New York, N.Y., (N. Ser.), **17**, 1903, (157–158).

Pettit, Rufus H. Instructions for collecting insects. J. Appl. Microsc., Rochester, N.Y., 6, 1903, (2363-2364).

**Plate**, L[udwig]. Beiträge zur Technik des Sammelns, der Konservierung und der Aufstellung biologischer Gruppen mariner Tiere. Verh. D. zool. Ges., Leipzig, **13**, 1903, (143–158).

**Bavenel**, W[illiam] de C[hastignier]. The Pan-American exposition--report of the representative of the United States fish commission. Washington P.C., Rep. U. S. Com. Fish, **1901**, 1902, (291-351, with pl.).

**Sanson**, Louis et **Lecomte**, L. Les oiseaux remarquables du musée d'Elbeuf. Elbeuf, Bul. soc. étud. sci. nat., **20**, 1901, [1902], (77-85).

Schaffer, Josef. Versuche mit Entkalkungsflüssigkeiten. Zs. wiss. Mikrosk., Leipzig, **19**, 1903, (308-328, 441-463).

**Skorikov**, Aleksandr Stepanovič. Bericht über die Thätigkeit der Biologischen Wolga-Station während des Jahres 1902. (Russ.) Saratov, Ježeg. Volžskoj biol. st., **1903**, 1, (3–18).

**Smith**, E. J. Pests and grease. [Criticism of paper by F. W. Dod]. Philadelphia, Pa., Ent. News, Acad. Nat. Sci, **13**, 1902, (244-246).

**South**, R. Catalogue of the collection of palaearctic butterflies formed by the John Henry Leech, and presented to the Trustees of the British Museum by his mother Mrs. Eliza Leech. London, 1902, (vi + 228, 2 pls.). 4to. [Review], Aun. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (526).

**Theobald**, F. N. Report on a collection of mosquitoes and other flies from equatorial East Africa and the Nile provinces of Uganda. Reports Sleeping sickness Comm. No. 3, London (Royal Society), 1903, (33-42, with map), 19

Williamson, Mrs. M. Burton. On estaloguing a collection of shells. Nautilus, Boston, Mass., 17, 1903, (39-41).

Zacharias, Otto. Ein Wurfnetz zum Aufischen pflanzlicher und thierischer Planktonwesen. Zool. Anz., Leipzig, M. 1903, (201-203); [abstract], London, J. R. Microsc. Soc., 1903, (167).

Kummermann, Hans. Eine neue Montierangsmethode kleiner und kleinster Sammlungsobjekte für Schausammlangen. Zool. Anz., Leipzig, 27, 1903, (46-17).

#### ECONOMICS.

L'avenir du mouton. Paris, Bul. soc. nat. acclim., **50**, 1903, (113-133). [6019 6031].

Congrès international d'aquiculture et de pêche. Mémoires et comptes-rendus des séances publiés par J. Perard et Maire. (Exposition universelle de 1900). Paris (Challamel), 1901, (XLIII + 602). 25 cm. 5.

État de la question piscicole en 1902. Par M., V. Nature, Paris, (ler sem.), **31**, 1903, (330-332, av. fig.). [5415].

L'écaille (suite). Naturaliste, Paris, (ser. 2), 24, 1902, (122-123). [5631].

Le chien de Saint-Bernard. Par Jean-Pierre M. Eleveur, Paris, 19, 1903, (197-199, 233-234, 248-249, av. fig.). [6023 6031].

Les migrations de la sardine et la crise sardinière. Par M., P. de. Nature, Paris, (ler sem.), **31**, 1903, (138-139). [3419 5431].

Les races espagnoles. La Castillane et la Castalane. Par N. Aviculteur, Paris, 23, 1903, (30-32). [5823 5831].

Lotta contro gli insetti che danneggiano il grano. Da N. N. Bullettino di Entomologia agraria, Padova, 9, 1902, (206-209).

Races anglaises (poules). Par M. d'H. Eleveur, Paris, 19, 1903, (224–226, 235– 238, 245-246, av. fig.). [5823 5831].

Races de poules espagnoles. Par M. d'H. Eleveur, Paris, 19, 1903, (53-54, (x 2-9053) Races de poules italiennes. Par M. d'H. Eleveur, Paris, **19**, 1903, (113-115, 125-126, av. fig.). [5823 5831].

Race Dorking. Par M. d'H. Eleveur, Paris, 19, 1903, (211-213). [5823 5831].

FOREST, FISH AND GAME COMMISSION [of New York]. Seventh annual report . . Albany, 1902, (93, with pl.). 23 cm. [0227 gg].

U. S. DEPARTMENT OF AGRIGULTURE DIVISION OF ENTOMOLOGY. [Leland Ossian Howard, Entomologist.] Some miscellaneous results of the work of the division of entomology. 5. Washington, D.C., Bull. U. S. Dept. Agric., Div. Ent., (N. Ser.), No. 30, 1901, (98, with pl.); 6, ib., No. 36, 1902, (110, with pl.);

Annett, H. E., Dutton, J. E. and Elliott, J. H. Report of the Malaria Expedition to Nigeria. Liverp. Sch. Trop. Medicine, Mem. 3. London (Longmans, Green and Co.), 1902, (68, 2 pls., besides charts and illustrs.).

Balfour, A. Mosquitoes and Steamers. J. trop. Med., London, 6, 1903, (253).

**Bandi**, I. Yellow fever and mosquitoes. J. trop. Med., London, **6**, 1903, (254–256).

Banks, Nathan. Principal insects liable to be distributed on nursery stock. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 34, 1902, (46). 23 cm.

Barpi, U. L'Istituto di anatomia normale della R. Scuola superiore di Medicina veterinaria di Napoli e Catalogo dei preparati del Museo. Napoli (tip. Guerrera), 1902, (54).

Beardaley, A. E. The destruction of trout fry by hydra. [Hydra pallida n. sp.] Washington, D.C., Bull. U. S. Fish Com., 22, (1902), 1903, (155-160).

Berlese, Antonio. Contro la Cochylis. Bollettino di Entomologia agraria, Padova, 9, 1902, (82–86 con fig.).

Breitfuss, L. I. Liste des stations dans la Mer de Barents et des travaux de l'Expédition pour l'exploration industrielle et scientifique des côtes de Murman, faites en ces stations 1902. (Russ.) St. Peterburg, Ann. Mus. zool Ac. Sc. 8, 1903, (VIII). Bruce, D., Nabarro, D. and Greig, E. D. W. Can the Uganda Tsetse fly (Glossina palpalis) carry the Trypanosoma found in sleeping sickness cases to healthy animals? London (Royal Soc.), Rep. Sleeping-sickness Comm. No. 4, (56-64, map).

Buccolini, T. Su alcuni insetti nocivi al tabacco. Bollettino di Entomologia agraria, Padova, 9, 1902, (56-59).

**Busck**, August. Notes on enemies of mushrooms [Snails, roaches, Diptera and mites] and on experimenta with remedies. Washington, D.C. Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (32-35).

**Castellani**, A. Researches on the etiology of sleeping-sickness. J. trop. Med., London, 6, 1903, (167-171, 1 pl. and 2 text-figs.).

------ Presence of *Trypanosoma* in Sleeping Sickness. Rep. S. S. Comm. (Royal Society) **1**, (1-10, 2 tables.) [Identical with preceding].

Adult forms and developmental forms of the Trypanosome found in sleeping sickness. Rep. S. S. Comm. H, (9-13, pls. 1, 2).

Some observations on the morphology of the *Trypanosoma* found in sleeping sickness. Brit. Med. J., London, **1903**, 1, (1431, 1432, 1 text-fig.).

On the discovery of a species of *Trypanosoma* in the cerebrospinal fluid of cases of sleeping-eickness. London, Proc. R. Soc., **71**, 1903, (501-508, 2 tables); Lancet, London, **1903**, 1, (1735, 1736); [abstract], Nature, London, **68**, 1903, (116).

Candell, A. N. Notes on Colorado insects. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 38, 1902, (35-38).

**Chapman**, Frank M[ichler]. The economic value of birds to the State. New York, Rep. Forest Fish Game Com., Albany, **7**, 1903, (1-66, with pl.). Separate. 28.4 cm.

**Chittenden**, F[rank] H[urlbut]. Some insects injurious to the violet, rose and other ornamental plants : A collection of articles dealing with insects of this class. [Rev. Ed.] Washington, D.C., Rull. U. S. Dept. Agric. Div. Ent, (N.

Ser.), No. 27, 1901, (114 with pl.). 23 cm.

**Chittenden**, F[rank] H[urlbut]. Some insects injurious to vegetable crops. A series of articles dealing with insects of this class. Washington D.C., Bull. U. S. Dept. Agric, Div. Ent., (N. Ser.), No. **33**, 1902, (117). 23 cm.

Some insects recently injurious to truck crops. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (113-120.).

**Chobaut**, A. Les insectes du biscuit de troupe. Moyen de préservation. Paris, C.-R. cong. soc. sav. en 1902, **1903**, (102-107).

**Christy**, C. Malaria: the mode of entry of the spore into the red bloodcorpuscie. Brit. Med. J., London, **1903**, 2, (645, 1 text fig.).

**Clarke**, J. J. Protozoa and Disease. Part I. London (Baillière, Tindall & Cox), 1903, (xiv + 177, 91 figs. in text). 8vo. [Review], Lancet, London, **1903**, 2, (891-892).

**Crepin**, J. Observations sur les meilleures races de chèvres. Paris, Bul. soc. nat. acclim., **49**, 1902, (413-421); **50**, 1903, (33-46).

Contribution à l'étude zootechnique de la chèvre alpine. Paris, Bul. soc. nat. acclim., **50**, 1903, (1-10).

**Cunningham**, J. T. Report . . . on the experiments in oyster and lobster culture in 1902, with summary of the work from 1897. Falmouth, Rep. R. Cornwall Polyt. Soc., **70**, 1903, (27-39).

**Donovan**, C. The etiology of one of the heterogeneous fevers of India. Brit. Med. J., London, **1903**, 2, (1401).

Dutier, J. Deux races belges. Campine et Coucou de Malines. Aviculteur, Paris, 23, 1903, (5-8, av. fig.).

Les Wyandottes. Aviculteur, Paris, 28, 1903, (18-20, av. fig.).

------ Les Dorking. Aviculteur, Paris, 23, 1903, (42-44, av. fig.).

Leghorn. Aviculteur, Paris, 23, 1902, (114–116, 183–185, av. fig.).

de Pékin. Aviculteur, Paris, 23, 1903, (174-176, av. fig.).

Dutier, J. La race de Barbézieux. Aviculteur, Paris, 23, 1903, (197-200).

Le Yokohama. Aviculteur, Paris, 23, 1903, (222-224).

Les Nangasaki. Aviculteur, Paris, 23, 1903, (247-248, av. fig.).

Dutton, J. E. Report of the Malaria Expedition to the Gambia, 1902. Liverp. Sch. Trop. Medicine, Mem. X. London (Longmans, Green & Co.), 1903, (46, pls.). [Review], Nature, London, 68, 1903, (429).

and Todd, J. L. First Report of the Trypanosomiasis Expedition to Senegambia (1902) of the Liverpool School of Tropical Medicine and Medical Parasitology. London (Longmans, Green & Co., for the University Press of Liverpool), 1903, (50 + vii, 5 pla. and numerous charts). 4to. [Review], Lancet, London, 1903, 2, (1727, 1728).

**Fernald**, H. T. Some common insect pests of the farmer. Pennsylvania, Dept. Agric., Bull., Harrisburg, No. 99, 1902, (32, with pl.); Pennsylvania, Rep. Dept. Agric., Harrisburg, 8, pt. 1, 1903, 1903, (386-411, with pl.).

Forest, ainé. L'élevage des autruches dans la colonie du Cap. Naturaliste, Paris, (sér. 2), 25, 1903, (154-158).

Foughres, marquis de. Destruction des rats par le virus Danysz. Paris, Bul. soc. nat. acclim., 50, 1903, (81-83).

Galiani, A. La pesca delle spugne a Trapani. Neptunia, Venezia, 18, 1902, (111-113).

**Galli-Valerio**, B. The part played by the fleas of rats and mice in the transmission of babonic plagues. J. trop. Med., London, 5, 1903, (33-35).

**Gillette**, C. P. Notes on some Colorado insects. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (51-55).

Grandier, Laurent. Chèvres blanches sans cornes. Aviculteur, Paris, 23, 1903, (125-128, 137-140).

Heuscher, J. und Hersche. Bericht über den Besuch bayerischer Fischzuchtanstalten. Schweiz. Fischerei Ztg, Pfäffikon, 10, 1902, Beilage No. 1, (16).

Hinsch, G. Deperimento delle viti per causa di un acaro (Coepophagus echinopus). Bollettino di Entomologia agraria, Padova, 9, 1902, (33-35).

Howard, I [eland] O[ssian]. A new industry brought by an insect. [Introduction of the Smyrna fig into U.S.] The Forum, New York, **30**, 1901, ([605]-607).

Jacomet, Alphonse. A la ferme d'autruches de Nice. Aviculteur, Paris, 23, 1903, (53-56, av. fig.).

Aviculteur, Paris, 23, 1903, (136-137).

Lamarche, C. de. L'élevage du lapin et le lapin angora. Paris, Bul. soc. nat. acclim., 50, 1903, (145-151).

Laplisse, Armand. Les combattants anglais. Aviculteur, Paris, 23, 1903, (77-79, av. fig.).

cultour, Paris, 23, 1903, (91-93, av. fig.).

Paris, 28, 1903, (282-284, av. fig.).

Leishman, W. B. On the possibility of the occurrence of Trypanosomiasis in India. Brit. Med. J., London, **1903**, 1, (1252-1254, 2 text figs.).

Lesseux, C. de. Pisciculture du lavaret dans le lac d'Aiguebelette (Savoie). Nature, Paris, (ler sem.), **81**, 1903, (234, av. fig.).

Lotter, J. W. Katechismus der Bienenzucht. 6 Aufl. Nürnberg (F. Korn), 1903, (IV + 234). 18 cm. 1,60 M.

Lupia, Ferdinand. Der Werte eines Bienenvolkes für die Landwirtschaft. Carinthia II, Klagenfurt, 93, 1903, (136).

McCook, Henry Christopher. Insects and civilization. Harper's Monthly Magazine, New York and London, 105, 1902, ([79]-82).

Manson, P. Trypanosomiasis on the Congo. Brit. Med. J., London, **1903**, 1, (720-721); [abstract], London, J. R. Microsc. Soc., **1903**, (307).

----- 'Tropical Diseases. A Manual of the Diseases of Warm Climates. New and Revised Edition. London (Cassell & Co.), 1903, (XXIV + 756, 2 pls. and 130 text figs.). [Contains a general account of Malarial and other Protozoan parasites.] & vo. Mariatt, Charles] L[ester]. Applied entomology in Japan. Washington, D.C., Bull. U. S. Dept. Agric. Div. J nt., No. 49, 1903, (56-63, with pl.).

Measham, Miss C. E. C. Malaria and the mosquito. Rochester Nat., 3, 1903, (185-191).

Mégnin, Pierre. Des terriers en général et du fox terrier en particular. Eleveur, Paris, 19, 1903, (7-11, 29-30, av. fig.).

Mercer, W. F. A few insects and plant diseases of special interest to farmers. Columbus, Ohio, Univ. Bull. St. Univ., (N. Ser.), **3**, 1901, (126-138).

Newhall, Charles Stedman. Sheep and the forest reserves. The Forum, New York, **30**, 1901, (710-716).

Minni, Emilio. La caccia degli uccelli acquatici (a sciopon) nelle lagune di Venezia. Neptunia, Venezia, **18**, 1902, (87-92).

Nuttall, G. H. F. Note on the supposed transmission of plague by fleas and of relapsing fever by bed-bugs. J. trop. Med., London, 5, 1903, (65).

**Orborn**, Herbert. Insects of the season in Ohio. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (45-47).

**Plimmer,** H. G. The parasitic theory of cancer. Brit. Med. J., London, **1903**, 2, (1511-1515).

Quinet. Le Musée d'histoire naturelle de Bruxelles. Ce qu'il est et ce qu'il devrait être. Chasse et pêche, Bruxelles, 1903, (220-221).

**Bane**, F. William. Plant environment and insect depredations. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (84-86).

**Baspail**, Xavier. Protection des semailles contre les corbeaux. Paris, Bul. soc. nat. acclim., **50**, 1903, (169-170).

**Bobinson**, B[enjamin] L[incoln]. Insecticides used at the Gray herbarium. Rhodora, Boston, Mass., **5**, 1903, (237-247).

**Bomanin-Jacur**, Giuseppe. Osservazioni sopra alle zanzare e sopra ad alcune condizioni locali della città di Padova e dei suoi immediati dintorni in rapporto alla malaria. Roma, Società studi malaria, **3**, 1902, (256–278, con 1 tav.).

Ross, R. Report on Malaria at Ismalia and Suez. Liverp. Sch. Trop. Medicine, Mem. IX. London (Longmans, Green & Co.), 1903, (24).

Sambon, L. W. Principles determining the geographical distribution of disease. J. trop. Med., London, 5, 1903, (101-106).

Sleeping-sickness in the light of recent knowledge. J. trop. Med., London, 6, 1903, (201-209, 2 textfigs.).

Schivardi, P. Paludi, risaie ed anofeli senza malaria. Malpighi, Gazzetta medica, Roma, 28, 1902, (169–175).

schmidt, Peter. Einige Beobachtungen über die Seefischerei in Japan. Berlin, Mitt. D. Seefischereiver., 19, 1903, (38-68).

**Scott**, Thomas. Some further observations on the food of fishes with a note on the food observed in the stomach of a common porpoise. Glasgow, Rep. Fish. Board, **21**, pt. 3, 1903, (218-227, 2 text-figs.).

Sennebogen, E. Sulla malattia delle anguille. Neptunia, Venezia, 18, 1902, (39-41).

storza, C. Maceratoi e zanzare nel contado di Bologna. Riv. igiene sanità pubb., Torino, 13, 1902, (59-63).

**Smith,** E. J. Pests and grease. [Criticism of paper by F. W. Dod]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (244-246).

**smith**, Hugh M. The French sardine industry. Washington, D.C., Bull, U. S. Fish Com., **21**, 1901, (1-26, with text fig. and pl.).

**Stephens**, J. W. and **Ohristophers**, S. R. The practical study of malaria and other blood parasites. London (Longmans Green & Co.), 1903, (vi + 378 + XXXV, 2 pls., 93 text-figs.). 8vo.

Malaria Committee. Eighth series. London (Royal Society), 1903, (77).

Surface, H. A. Insects injurious to cucurbitaceous plants. Pennsylvania, Rep. Dept. Agric., Harrisburg, 8, pt. 1, (1902), 1903, (529-550, with pl.); Pennsylvania, Dept. Agric., Bull., Harrisburg, No. 96, 1902, (30, with pl.). 23.5 cm. **Surface**, H. A. The economic value of our native birds 1. An analytic key for the determination of Pennsylvanian birds. 2. General discussion of our native birds by orders and families. Pennsylvania, Dept. Agric., Div. Zool. Q. Bull. Harrisburg, 1, No. 2, 1903, (16, with pl.).

The economic value of our native birds. Part 2. By orders and families. Order 8. Raptores. The birds of prey. Family 11. Cathartidae. The valtures. Family 12. Falconidae. The hawks. etc. Pennsylvania, Dept. Agric., Div. Zool. Q. Bull., Harrisburg, 1, No. 3, 1902, (32). 23.3 cm.

Taylor, L. Second Progress Report of the Campaign against Mosquitoes in Sierra Leone. Liverp. Sch. Trop. Medicine, Mem. 5, pt. 2. Liverpool (University Press) 1902, (13).

**Theobald**, F. N. British Museum (Natural History). First report on Economic Zoology. London, 1903, (xxxiv + 192). 8vo. Includes "a classification of animals from the point of view of Economic Zoology," by E. Ray Lankester, (xi-xxxiv).

**Todd**, R. A. Notes on the Invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., 6, 1903, (541-561).

**Underwood**, William Lyman. Mosquitoes and suggestions for their extermination. Pop. Sci. Mon., New York, N.Y., **63**, 1903, (453-466).

The mosquito nuisance and how to deal with it; prepared for the Board of health of Belmont, Mass. Boston (W. B. Clarke co.) 1903, (15 + [1], with illustr.). 22.5 cm.

Veltelina, V. Osservazioni intorno alla semina delle anguille nelle valli salve. Neptunia, Venezia, 18, 1902, (174-176).

Wacques, Paul. Communication sur les races de pigeons dits espagnols présentés pur M. Salgot à l'Exposition d'aviculture de Madrid. Paris, Bul. soc. nat. acclim., 50, 1903, (11-13).

Watson, M. A note on the parasites of a case of malignant malaria, with a discussion of the development of the crescent. J. Trop. Med., London, 6, 1902, (221-223, 1 pl.). Webster, F. M. The price of dairy products as influencing the abundance of some insects. New York, N.Y., J. Ent. Soc., 11, 1903, (59-60).

Wilcox, Earley Vernon. Sheep and the forests. The Forum, New York, N.Y., **31**, 1901, ([311]-317).

# 0070 PRINCIPLES OF NOMEN-CLATURE.

Allen, J[oel] A[saph]. Zimmermann's "Zoologiae geographicae" and "Geographische Geschichte" considered in their relation to mamualian nomenclature. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 16, 1902, (13-22).

Vernacular names of birds. Auk, Cambridge, Mass., (N. Ser.), 20, 1903, (70-73).

Banks, Nathan. An application of the law of priority [to the 1842 rules of the British Association]. Science, New York, N.Y., (N. Ser.), 17, 1903, (115).

Those manuscript names. Science, New York, N.Y., (N. Ser.), 17, 1903, (508).

Bather, F. A. The publication of rejected names. Science, New York, N.Y., (N. Ser.), 17, 1903, (389-390).

Berlepsch, Hans Graf von. On the nomenclature of some Peruvian birds. Ibis, London, **1903**, (135-137).

Brown, Arthur Erwin. Some recent. applications of the A. O. U. code. Science, New York, N.Y., (N. Ser.), 18, 1903, (535).

Bradley, J. Chester. Vernacularnames again. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (26).

Bruce, D. Nomenclature of Malaria; a suggestion. Lancet, London, **1903**, 1, (131, 132); Brit. Med. J., London, **1903**, 1, (15).

Cicérin, T. Einiges über lateinische Transcription russicher Namen. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (228).

**Cockerell**, T[heodore] D[ru] A[lison]. The publication of rejected names. Science, New York, N.Y., (N. Ser.), **17**, 1903, (189, 546-547).

Orthoplasy, etc. Science, New York, N.Y., (N. Ser.), **17**, 1903, (275). **Cockerell**, T[heodore] D[ru] A[lison]. Some overlooked zoological generic names. Nature, London, **68**, 1903, (526).

Cook, O[rator] F[uller]. Types of pre-Linnaean genera. Science, New York, N.Y., (N. Ser.), **17**, 1903, (350– 352).

Di Gregorio, Marchese Antonio. On some names (chiefly Linnean) of animals and plants erroneously paired in synonymy. Philadelphia, Pa., Proc. Amer. Phil. Soc., 42, 1903, (263-264).

Doran, Edwin W. Vernacular names of animals. [Principles of compound words]. Amer. Nat., Boston, Mass., 37, 1903, (550-555). Also published separately. 24 cm.

Vernacular names of insects. Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., No. **49**, 1903, (108-111).

------ The vernacular names of birds. Auk, Cambridge, Mass., (N. Ser.), **20**, 1903, (38-42).

Gill, Theo[dore] [Nicholas]. Walbaum and binomialism. Science, New York, N.Y., (N. Ser.), 17, 1903, (744-746).

Grote, Radcliffe A. Ueber Nomenklaturregeln. Insektenbörse, Leipzig, 20, 1903, (173).

Jordan, David Starr. The types of Linnaean genera. Science, New York, N.Y., (N. Ser.), **17**, 1903, (627-628).

Kendall, H. Some notes on vernacular names. Emu, Melbourne, 3, 1903, (51-54).

Kleinschmidt, O. Meine neue Nomenklatur. Ornith. Monatsber., Berlin, 11, 1903, (156).

**Enowiton**, F[rank] H[all]. The publication of rejected names. Science, New York, N.Y., (N. Ser.), **17**, 1903, (506-508).

Linstow, [Otto] von. Die moderne helminthologische Nomenclatur. Zool. Anz., Leipzig, **26**, 1903, (223–229).

Lönnberg, E. On the names of the two species of skua with pointed tailfeathers. Zoologist, London, (Ser. 4), 7, 1903, (338-342).

Loomis, Leverett Mills. Recognition of geographic variation in nomenclature.

[With bibliography.] Auk, Cambridge, Mass., (N. Ser.), 20, 1903, (294-299).

Lahe, M[ax]. Eine nomenclatorische Berichtigung betr. die Cestoden-Gattung Amphitretus R. Bl. Centrabl. Bakt., Jean, Abt. 1, 33, Originale, 1903, (608– 609).

Norman, A. M. New generic names for some Entomostraca and Cirripedia. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (367-369).

Nutting, C[harles] C[leveland]. The perplexities of a systematist. [Address of the Chairman of the Section of Zoology and vice-president of the American Association for the Advancement of Science. Read at the Washington meeting, January 27, 1902.] Proc. Amer. Ass. Adv. Sci., Washington, D.C., 52, 1903, (439-454); Science, New York, N.Y., (N. Ser.), 17, 1903, (63-72).

Pickard, Fredk. On rules of nomenclature. Zool. Anz., Leipzig, 26, 1903, (441-447).

**Poche**, Franz. Zur Nomenclatur der Orthopteren, nebst einigen allgemein nomenclatorischen Bemerkungen in Hinsicht auf die neuen internationalen Nomenclaturregeln. Zool. Anz., Leipzig, **26**, 1903, (233–241).

Pousar, Volter. Die ornithologische Nomenklatur des Uria troile. Tidskr. Jäg. Fisk., Helsingfors, **1903**, 2, (62–63).

**Prout.** [Binomials? of early authors.] Ent. Rec., London, **15**, 1903, (13-14).

**Rothschild**, *Hon.* W. and **Jordan**, K. A revision of the Lepidopterous family *Sphingidae*. Nov. Zool., Tring, **9**, Supplement, 1903, (cxxxv + 972, with 67 pls.).

**Bosan**, C. Les animaux dans les proverbes. 1<sup>re</sup> et 2<sup>e</sup> parties. Paris (Ducrocq), [1902], 1<sup>re</sup> partie, (384), 2<sup>e</sup> partie, (381). 18 cm.

Sclater, P. L. On the generic name *lxoreus*. Ibis, London, 1903, (142).

**Sharpe**, R. Bowdler. A hand-list of the Genera and species of Birds (Nomenclature Avium tum Fossilium tum Viventum). Vol. IV, London, 1903, (XII + 392).

Sherborn. [Binomials of early authors.] Ent. Rec., London, 15, 1903, (65-66). Stainagtr, Leonhard. A new name for the Hawaiian bird genus [Oreomystis a. nom.]. Washington, D.C., Proc. Biol. Soc., 16, 1903, (11-12). Separate. 233 cm.

**Stone**, Witmer. The significance of trinomials. Condor, Santa Clara, Cal., 5, 1903, (43-45).

On the generic names of the North American owls. Auk, Cambridge, Mass., (N. Ser.), 20, 1903, (272-276).

**Thor**, Sig. Bemerkungen zur neueren "Hydrachniden "Nomenklatur. Nyt. Mag. Naturv., Kristiania, 41, 1903, (65-68).

V[errill], A[ddison] E[mery]. Note on the nomenclature of Bermuda birds. Amer. J. Sci., New Haven, Conn., (Ser. 4), 12, 1901, (470-471).

Waite E. R. A matter of nomenclature. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (288).

Williamson, G. A. The nomenclature of Malaria. Brit. Med. J., London, 1903, 1, (823).

williston, S[amuel] W[endell]. Some osteological terms. Science, New York, N.Y., (N. Ser.), 18, 1903, (829-830).

# 0090 TECHNIQUE.

Andres, Angelo. Di un nuovo istrumento misuratore per la somatometria (somatometro a compasso). Milano, Rend. Ist. comb.. (Ser. 2), 35, 1902, (529-533, con 4 tav.).

**Bölousov**, N. Quelques méthodes d'injections des vaisseaux sanguins. (Russ.) Charikov, 'Ird. obšč. ispyt. prir., **37**, 1902, [1903], (307-311).

**Cameron**, J. A method of preparing lantern slides of histological objects. Edinburgh, Proc. Scot. Microsc. Soc., 3, 1903, (350-352).

**Gamerane**, Lorenzo. Ricerche somatometriche in Zoologia. [Conferenza.] Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (13-15).

**Dekhuysen**, M. C. Liquide fixateur isotonique avec l'eau de mer, pour les objets dont on ne veut pas éliminer les formations calcaires. Paris, C.-R. Acad. sci., 137, 1903, (445-447). Fritsch, Karl. Die Relieflupe. Soc. Entomol., Zürich, 17, 1902, (82-84).

Harris, H. F. A modification of the Romanowsky stain. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (188– 191).

**Krasuskaja**, A. A. Die Technik der Corrosionspräparate. (Russ). St. Peterburg, Bull. labor. biol., **VI**, 3, 1903, (42-46).

Lachi, P[ilade]. Un apparecchio per la rapida macerazione delle ossa. Mon. zool. ital., Firenze, 13, 1902, (66-71, con 1 fig.).

Löwit, M[oriz]. Ueber färberische Differenzen zwischen der Mastzellengranulation und der Haemamoeba leucaemiae magna. Beitr. path. Anat., Jena, 33, 1903, (113-122, mit 1 Taf.).

Osborn, Herbert. A method for mounting dry *Coceidas* for permanent preservation. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (35-36).

Plate, L[udwig]. Beiträge zur Technik des Sammelns, der Konservierung und der Aufstellung biologischer Gruppen mariner Tiere. Verh. D. zool. Ges., Leipzig, 13, 1903, (143-158).

Williamson, E. B. To collect pairs of dragon flies. Poisoning specimens. Philadelphia, Ps., Ent. News. Acad. Nat. Sci., 13, 1902, (59-60).

# 0207 STRUCTURE (OR MOR-PHOLÓGY). [IN GENERAL; OR OF MORE THAN ONE OF THE CLASSES OF ANIMALS.]

#### GENERAL.

Farmer, J. B. The structure of animal and vegetable cells. Sect. II. Lankester's Treatise on Zoology, q. v. Part I, fasc. 2, (1-46).

Hertwig, O. Eléments d'anatomie et de physiologie générales. La Cellule. Paris (Naud), 1903, (XIV + 428, av. fig.). 28 cm.

**Howes,** G. B. The morphological method and recent progress in zoology. London, Rep. Brit. Ass., **1902**, (618-635); Nature, London, **66**, 1902, (522-530); [reprint], Washington, D.C., Smithsonian Inst., Rep., **1902**, 1903, (11+581-608). Separate. 24.5 cm. Lesshaft, P. P. Allgemeine Anatomie der Organe des vegetativen Lebens. (Russ.) St. Peterburg, Bull. labor. biol., VI, 3, 1903, (47-68).

**Bohde**, E[mil]. Untersuchungen über den Bau der Zelle. I. Kern und Kernkörper. Zs. wiss. Zool., Leipzig, **73**, 1903, (497-682, mit 9 Taf.).

Saint-Hilaire, K. K. Untersuchungen über den Stoffwechsel in der Zelle und in den Geweben. (Russ.) St. Peterburg, Trav. Soc. nat., **XXXIII**, 2, 1903, (139-310, 356-363); deutsches Rés., (311-355, 364-370, Taf. I-V).

**Studnička**, F. K. Schematische Darstellungen zur Entwickelungsgeschichte einiger Gewebe. Anat. Anz., Jena, **22**, 1903, (537-556, mit 2 Taf.).

**Warren**, E. A preliminary attempt to ascertain the relationship between the size of cell and the size of body in *Daphnia magna* Straus. Biometrika, Cambridge, 2, 1903, (255-259).

COMPARATIVE ANATOMY.

**Cameron**, J. Homologies of the sense organs. J. Anat. Physiol., London, **17**, 1903, (XLII-XLIII).

On the origin of the pineal body as an amesial structure, deduced from the study of its development in Amplibia. Anat. Anz., Jena, 23, 1903, (394-395).

**Carpenter**, G. H. On the relationships between the classes of Arthropoda. Dublin, Proc. R. Irish Acad., **24**, 1903, (320-360); [abstract], London, J. R. Microsc. Soc., **1904**, (178).

**Gaskell**, W. H. The origin of Vertebrates deduced from the study of *Ammocoetes*. Part XI. The origin of the Vertebrate body cavity and excretory organs; the meaning of the somites of the trunk and of the ductless glands. J. Anat. Physiol., London, **17**, 1903, (168-219).

**Holmes**, Gordon M. On the comparative anatomy of the nervus acusticus. Dublin, Trans. R. Irish Acad., **32**, 1903, (101-144).

Lang, Arnold. Fünfundneunzig Thesen über den phylogenetischen Ursprung und die morphologische Bedeutung der Centralteile des Blutgefässsystems der Tiere. Zürich, Vierteljahrschr. Natf. Ges., 47, 1902, (393– 421).

Nusbaum, Józef. Principes d'anatomie comparée. II Volume: L'anatomie comparée des Vertébrés. (Polonais) Warszawa (Kasa Mianowskiego, Wende i Sp.), 1903, (552). 24.5 cm, 4 rub.

Tims, H. W. M. The evolution of teeth in the Mammalia. J. Anat. Physiol., London, 17, 1903, (131-149).

#### TEGUMENT AND ITS ORGANS.

**Biedermann**, W[ilhelm]. Geformte Sekrete. Zs. allg. Physiol., Jena, 2, 1903, (395–481, mit 4 Taf.).

Dekhuysen, M. C. Ueber das Epithel der Oberfläche des Magens. Nach Untersuchungen von M. C. Dekhuyzen und P. Vermaat. Annt. Anz., Jena, 23, ErgH., 1903, (145-152).

Linden, Gräfin M[aria] von. Die Zeichnung der Tiere. Vortrag . . . Natw. Wochenschr., Jens, 18, 1903, (205-210, 220-224).

**Prentiss**, C. W. Ueber die Fibrillengitter in dem Neuropil von *Hirudo* und *Astacus* und ihre Beziehung zu den sogenannten Neuronen. Arch. mikr. Anat., Bonn, **62**, 1903, (592-606, mit 1 Taf.).

**Beichard**, Adolf. Ueber Cuticularund Gerüst-Substanzen bei wirbellosen Tieren. Heidelberg (G. Koester), 1903, (46). 22 cm. 1 M.

Saint-Hilaire, K. K. Untersuchungen über den Stoffwechsel in der Zelle und in den Geweben. (Russ.) St. Peterburg, Trav. Soc. nat., XXXIII, 28, 1903, (139-310, 356-363); deutsches Rés., (311-355, 364-370, Taf. I-V).

Schaffer, Josef. Ueber das vesikulöse Stützgewebe. Vorläuf. Mitteilung. Anat. Anz., Jena, 23, 1903, (464–479).

Schuberg, August. Untersuchungen über Zellverbindungen. [Tl 1.] Zs. wiss. Zool., Leipzig, 74, 1903, (155-325, mit 7 Taf.).

#### NERVOUS SYSTEM.

Neurobiologische Arbeiten. Hrsg. v. Oskar Vogt. Serie 2: Weitere Beiträge zur Hirnanatomie. Bd 1, Lfg 1: M. Borchert, Torpedo. Jena, Denkschr. med. Ges., 10, 1903, (1V + 59), mit 10 Taf.).

Beard, J[ames] Carter. Are the senses of the lower animals superior to ours? Sci. Amer., New York, N.Y., 88, 1903, (26).

**Dermard**, H. M. Studies in the retina. Part VI. The continuity of the nervess through the vertebrate retina. Q. J. Microsc. Sci., London, 47, 1903, (303– 362, pls. XXVII-XXIX).

**Gameron**, J. On the origin of the pineal body as an amesial structure, deduced from the study of its development in Amphibia. Edinburgh, Proc. Soct. Microsc. Soc., **3**, 1903, (340-349, pl. XXIII).

Homologies of the sense organs. J. Anst. Physiol., London, 17, 1903, (XLII-XLIII).

Donaggio. Sugli apparati fibrillari endocellulari di conduzione nei centri nervosi dei vertebrati superiori. Riv. sper. freniatr., Reggio-Emilia, 28, 1902, (108-109).

**Donaldson**, Henry H. On a formula for determining the weight of the central nervous system of the frog from the weight and length of its entire body (with bibliography). Chicago, Ill., Dec. Pub. Univ. Chic., (Ser. 1), **10**, 1903, ([15]-30, with text-fig.).

Edinger, L. Brain anatomy and psychology. [Transl.] The Monist, Chicago, Ill., 11, 1901, ([339]-360).

Holmes, Gordon. On morphological changes in exhausted ganglion cells. Zs. allg. Physiol., Jena, 2, 1903, (502– 515).

**Eronthal**, P[aul]. Zum Kapitel: Leukocyt und Nervenzelle. Anat. Anz., Jena, 22, 1903, (448–454).

Muhae, Effa Funk. The eyes of the blind vertebrates of North America. 6. The eyes of *Typhlops lumbricalis* (Linnaeus), a blind snake from Cuba. Wood's Holl, Mass., Mar. Biol., Lab. Bull., 5, 1903, (261-270, with text fig.).

Nissi, Franz. Die Neuronenlehre und ihre Anhänger. Ein Beitrag zur Lösung des Problems der Beziehungen zwischen Nervenzelle, Faser und Grau. Jena (G. Fischer), 1903, (VI + 478, mit 2 Taf.). 26 cm. 12 M. Fettit, Auguste. Sur les enveloppes des centres nerveux. Bul. Muséum, Paris, 1903, (151-153, av. fig.).

Prentiss, C. W. Ueber die Fibrillengitter in dem Neuropil von *Hirudo* und *Astacus* und ihre Beziehung zu den sogenannten Neuronen. Arch. mikr. Anat., Bonn, **62**, 1903, (592–606, mit 1 Taf.).

**Boncoroni**, L. Le fibre amieliniche pericellulari e peridendritiche nella corteccia cerebrale. Riforma med., Roma, **18**, 1902, (543-546, 544-558).

**Sionaker**, James Rollin. The eye of the common mole, *Scalops aquaticus* machrinus. [With bibliography]. J. Comp. Neur., Granville, Ohio, **13**, 1902, ([335]-366, with 3 pls.).

**Spitzka**, Edward Anthony. Brainweights of animals with special reference to the weight of the brain in the Macaque monkey. J. Comp. Neur., Granville, Ohio, **13**, 1903, ([9]-17).

#### Myology.

Anthony, R. Du rôle de la compression dans la localisation des tendons. Paris, C.-R. Acad. sci., **137**, 1903, (622-624).

Huntington. George S[umner]. Present problems of myological research and the significance and classification of muscular variations. Amer. J. Anat., Baltimore, Md., **2**, 1903, (157–175, with 7 pls.).

McMurrich, J[ames] Playfair. The phylogeny of the forearm flexors [with bibliography]. Amer. J. Anat., Baltimore, Md., **2**, 1903, (177-209).

The phylogeny of the palmar musculature [with bibliography]. Amer. J. Anat., Baltimore, Md., 2, 1903, (463-500).

Münch, Karl. Die sogenannte Querstreifung der Muskelfaser der optische Ausdruck ihrer spiraligen anisotropen Durchwindung. Arch. mikr. Anat., Bonn, **62**, 1903, (55-107, mit 1 Taf.).

# Skeleton including Osteology and Dentition.

Huxley, Thomas H[enry]. A manual of the anatomy of invertebrated animals. New York (D. Appleton & Co.), 1901, (596, with illustr.). 20 cm.

#### ALIMENTARY SYSTEM.

Lapicque, Louis. Sur la relation entre la longueur de l'intcstin et la grandeur de l'animal. Paris, C.-R. soc. biol., 55, 1903, (29-30).

**Maurel**, E. Rapport du poids du foie au poids total de l'animal. Paris, C.-R. soc. biol., **55**, 1903, (43-45).

Rapport du poids du foie à la surface totale de l'animal. Paris, C.-R. soc. biol., 55, 1903, (45-48).

Rapport du poids du foie au poids total et à la surface totale de l'animal. Déductions théoriques et pratiques. Paris, C.-R. soc. biol., **55**, 1903, (196-198).

**Boss**, Mary J. The origin and development of the gastric glands of *Desmognatius*, *Amblystoma* and pig. [With bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (66-95); [reprint], [Thesis]... Ph. D., Cornell, 1902. 25.5 cm.

Saint-Hilaire, K. K. Untersuchungen über den Stoffwechsel in der Zelle und in den Geweben. (Russ.) St. Peterburg, Trav. Soc. nat., XXXIII, 2, 1903, (139-310, 356-363); deutsches Rés., (311-355, 364-370, Taf. I-V.).

Tims, H. W. M. The evolution of teeth in the Mammalia. J. Anat. Physiol., London, 17, 1903, (131-149).

SKELETAL STRUCTURE OF INVERTEBRATES.

**Smith**, Geoffroy. Actinosphaerium eichhorni. A biometrical study in the mass relations of nucleus and cytoplasm. Biometrika, Cambridge, **2**, 1903, (241– 254).

# BLOOD, LYMPH.

Kronthal, P[aul]. Zum Kapitel: Leukocyt und Nervenzelle. Anat. Anz., Jena, 22, 1903, (448-454).

Lang, Arnold. Beiträge zu einer Trophocöltheorie. Betrachtungen und Suggestionen über die phylogenetische Ableitung der Blut- und Lymphbehälter, insbesondere der Articulaten. Mit einem einleitenden Abschnitt über die Abstammung der Anneliden. Jenaische Zs. Natw., 38, 1903, (1-373, mit 6 Taf.).

# EXCRETORY ORGANS.

**Gashell**, W. H. The origin of Vertebrates deduced from the study of *Ammocoetes*. Part XI. The origin of the Vertebrate body cavity and excretory organs; the meaning of the somites of the trunk and of the ductless glands. J. Anat. Physiol., London, **17**, 1903, (168-219).

#### REPRODUCTIVE ORGANS.

Farmer, J. B., Moore, J. E. S. and Walker, C. E. On the resemblances exhibited between the cells of malignant growths in man and those of normal reproductive tissues. London, Proc. R. Soc., 72, 1903, (499-504).

# SPECIAL GLANDS.

Braus, H[ermann]. Sekretkanälchen und Deckleisten. Anat. Anz., Jena, 22, 1903, (368-373).

**Gaskell**, W. H. The origin of Vertebrates deduced from the study of *Ammocoetes*. Part XI. The origin of the Vertebrate body cavity and excretory organs, the meaning of the somites of the trunk and of the ductless glands. J. Anat. Physiol., London, **17**, 1903, (168-219).

**Holmgren**, Emil. Weiteres über die Trophospongien verschiedener Drüsenzellen. Anat. Anz., Jena, **23**, 1903, (289-297).

Saint Hilaire, K. K. Untersuchungen über den Stoffwechsel in der Zelle und in den Geweben. (Russ.) St. Peterburg, Trav. Soc. nat., XXXIII, 2, 1903, (139-310, 356-363); deutsches Rés., (311-355, 364-370, Taf. I-V.)

RUDIMENTARY AND VESTIGIAL ORGANS.

Brues, Charles T. The structure and significance of vestigial wings among insects. [with bibliography.] Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (179-190).

**Sionaker**, James Rollin. The eye of the common mole, *Scalops aquaticus* machrinus. [With bibliography]. J. Comp. Neur., Granville, Ohio, **13**, 1902, ([335]-366, with 3 pls.).

# 0211 PHYSIOLOGY [OF THE ANIMAL KINGDOM OR OF MORE THAN ONE OF ITS BRANCHES].

#### GENEBAL.

Some experiments with a chrysalis. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (286-287). [0215 4411].

Cook, O[rator] F[uller]. Stages of vital motion. Pop. Sci. Mon., New York, N.Y., 63, 1903, (14-24).

**Devaux**, H. Sur une réaction nouvelle et générale des tissus vivants. Essai de détermination directe des dimensions de la micelle albuminöide. Bordeaux, Actes soc. linn., **58**, 1903, (Proc.-verb., CCLIX-CCLXIV).

Hertwig, O. Eléments d'anatomie et de physiologie générales. La Cellule. Paris (Naud), 1903, (xiv + 428, av. fig. 28 cm.

Thilo, O[tto]. Die Bedeutung der technischen Wissenschaften für den Naturforscher. Physik. Zs., Leipzig, 4, 1903, (759-763).

Tichonovic, V. V. A l'étude de l'excrétion de l'acide phosphorique par l'organisme animal. (Russ.) Charikov, Trd. Oběč. ispyt. prir., XXXVIII, 1, 1903, (67-84).

Tur, I. Ja. Kasuistik und Theorie der mehrkeimigen Missbildungen. Arb. a. d. zoot. Labor. d. Univ. Warschau. No. XXIX. (Russ.) Varšava, Izv. Univ., 1903, (18, mit 9 Fig. und 1 Taf.).

#### PARTHENOGENESIS.

**Delage**, Yves. Elevage des larves parthénogénétiques d'Astéries dues à l'action de l'acide carbonique. Paris, C.-R. Acad. sci., **137**, 1903, (449–451).

La parthénogenèse par l'acide carbonique, obtenue chez les œufs après l'émission des globules polaires. Paris, C.-R. Acad. sci., **137**, 1903, (473-475).

**Greeky**, Arthur W. On the effect of variations in the temperature upon the process of artificial parthenogenesis. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (129–136).

Hunter, S[anuel] J[ohn]. On the conditions governing the production of artificial parthenogenesis in *Arbacia*. Wood's Holl, Mass., Mar. Biol. Leb. Bull., 5, 1903, (143–151).

Loob, Jacques. Artificial parthenogenesis in molluscs. Berkeley, Univ. Cal. Pub., Physiol., 1, 1903, (7-9). Separate. 26.5 cm.

Messing, S. Ueber Entzündung bei den niederen wirbellosen Tieren. Centralbl. Path., Jena, 14, 1903, (915– 920).

**Somov**, M. P. Die Lehre von der Parthenogenesis in Vergangenheit und Gegenwart. (Russ.) Moskva, Trd. Kruž. izsl. russ. prir., **1**, 1903, (111– 126).

Tichomirov, A. Befruchtung und Parthenogenese. (Russ.) Jestestv. i Geogr., Moskva, 7, No. 5, 1902, (1-32, mit 9 Fig.).

**Treadwell**, Aaron L[ouis]. Notes on the nature of "artificial parthenogenesis" in the egg of *Podake obscura*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **3**, 1902, (235-240).

Wedekind, W. Eine rudimentäre Function. Zool. Anz., Leipzig 26, 1903, (203–204).

Wheeler, William Morton. The origin of female and worker ants from the eggs of parthenogenic workers. Science, New York, N.Y., (N. Ser.), 18, 1903, (830–833).

#### PRODUCTION OF SEX.

Castle, W. E. The heredity of sex. (Cambridge, Mass., Cont. Mus. Comp. Zool. Harward Coll., No. 137.) Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., 40, 1903, (189-218). Separate. 24.6 cm.

Lonhosseir, M[ihaly] von. Das Problem der geschlechtsbestimmenden Ursachen. Jena (G. Fischer), 1903, (III + 99). 24 cm. 2 M.

Morgan, T[homes] H[unt]. Recent theories in regard to the determination of sex. Pop. Sci. Mon., New York, N.Y., 64, 1903, (97-116).

#### FUNCTION OF SPECIAL OBGANS AND STRUCTURES.

Bancroft, Frank W. and Esterly, C. O. A case of physiological polarization in the Ascidian heart. Berkeley, Univ. Cal. Pub. Zool., 1, 1903, (105– 114). Separate. 27 cm.

Benaley, R. R. The cardiac glands of mammals [with bibliography]. Amer. J. Anat., Baltimore, Md., 2, 1902, (105-156).

Bonnier, Pierre. [Problème de l'orientation à distance.] Bul. inst. psych. internat., Paris, 2, 1902, (214-216).

Cameron, J. Homologies of the sense organs. J. Anat. Physiol., London, 17, 1903, (XLII-XLIII).

**Chauveau**, A. "Animal thermostat." Problènes d'énergétique biologique, soulevés par une Note de Lord Kelvin sur la régulation de la température des animaux à sang chaud. La permanence des processus producteurs de la chaleur de combustion. Paris, C.-R. Acad. sci., **136**, 1903, (792-798).

Dekhuysen, M. C. Liquide fixateur isotonique avec l'eau de mer, pour les objets dont on ne veut pas éliminer les formations calcaires. Paris, C.-R. Acad. sci., 137, 1903, (445-447).

Ducceschi, Virgilio. Una legge del movimento animale. Zs. allg. Physiol., Jena, 2, 1903, (482-501).

Edinger, L. Brain anatomy and psychology [Transl.]. The Monist, Chicago, Ill., **11**, 1901, ([339]-360).

**Fischer**, O[tto]. Physiologische Mechanik. [Vortrag.] Physik. Zs., Leipzig, **4**, 1903, (782–793); Arch. Math., Leipzig, (3. Reihe), **7**, 1903, (110– 123); Natw. Rdsch., Braunschweig, **18**, 1903, (585–588, 597–601).

Kelvin, Lord. Animal thermostat. Nature, London, 67, 1903, (401, 402).

Lang, Arnold, Ob die Wassertiere hören ? Winterthur, Mitt. Natw. Ges., 4, 1902, (3-55, 17 figs.).

Loeb, Jacques. Zu3ammenstellung der Ergebnisse einiger Arbeiten über die Dynamik des thierischen Wachsthums. Arch. EntwMech., Leipzig, **15**, 1903, (669-678). Meyer, Edouard. Appareils régulateurs de la circulation du sang chez l'animal nouveau-né. Paris, C.-R. Acad. sci., 136, 1903, (711-718).

Pütter, A. Die Flimmerbewegung. Ergebn. Physiol., Wiesbaden, 2, Abt. 2, 1903, (1-102).

Saint-Hilaire, K. K. Untersuchungen über den Stoffwechsel in der Zelle und in den Geweben. (Russ.) St. Peterburg, Trav. Soc. nat. **EXXIII**, 2, 1903, (139-310, 356-363); deutsches Rés., -(311-355, 364-370, Taf. I-V).

Thomson, J. A. [Review of "Die organischen Regulationen. Vorbereitungen zu einer Theorie des Lebens," by Hans Driesch, Leipzig, 1901, (XV + 228).] Nature, London, **67**, 1903, (50).

#### ASSIMILATION.

Yung, E[mile]. Effets anatomiques de l'inanition. Arch. Sci. Phys., Genève, (sér. 4), 15, 1903, (456-457).

#### RESPIRATION.

Bohn, Georges. Conditions normales de la respiration pour les animaux marins. Paris, C.-R. soc. biol., 55, 1903, (290-201).

Du Bois-Reymond, R[ené]. Mechanik der Atmung. Ergebn. Physiol., Wiesbaden, 1, Abt. 2, 1902, (377-402).

#### ENVIRONMENTAL EFFECTS.

**Boistesselin**, Henri du. La production de l'électricité chez les êtres vivants et l'électrochimie. Electrochimie, Paris, **9**, 1903, (74-76).

Brues, Charles T. The structure and significance of vestigial wings among insects [with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (179-190).

Errod, Morton John. Daphnia pond. A study in environment. Missoula, Bull. Univ. Mont., No. 17, Biol. Ser. No. 5, 1903, (230-233, with pl.).

Hamilton, G. E. H. Barrett-. Abstract of a physiological hypothesis to explain the winter whitening of mammals and birds inhabiting snowy countries, and the more striking points in the distribution of white in Vertebrates generally. Dublin, Proc. R. Irish Acad., 24, 1903, (303-314).

Keeble, F. and Gamble, F. W. The colour-physiology of the higher Crustaceans. London, Phil. Trans. R. Soc., 1968, 1903, (295-388).

Loeb, Jacques. On the relative toxicity of distilled water, sugar solutions, and solutions of the various constituents of the sea-water for marine animals. [Translated from Pflüger's Archiv, **97**, 1903, (394).] Berkeley Univ. Cal., Pub. Physiol., **1**, 1903, (55-69).

**Oestergren**, Hjalmar. Aether als Betäubungsmittel für Wasserthiere. Zs. wiss. Mikrosk., Leipzig, **19**, 1903, (300– 308).

**Osborn.** Hebert. Highways and byways of animal life. Pop. Sci. Mon., New York, N.Y., **63**, 1903, (499-515).

Ostwald, Wolfgang. Theoretische Planktonstudien. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (1-62, mit 4 Taf.).

Ueber eine neue theoretische Betrachtungsweise in der Planktologie, insbesondere über die Bedeutung des Begriffs der "inneren Reibung des Wassere" für dieselbe. Plön, ForschBer. biol. Stat., **10**, 1903, (1-49).

Shaler, N[athaniel] S[outhgate]. The relations of animals and plants. Harper's Magazine, New York and London, 104, 1902, ([721]-724).

Tichonovič, V. V. A l'étude de l'excrétion de l'acide phosphorique par l'organisme animal. (Russ.) Charikov, Trd. Obšč. ispyt. prir., XXXVIII, 1, 1903, (67-84).

#### REGENERATION.

Barturth, Dietrich. Ist die Regeneration vom Nervensystem abhängig? Anat. Anz., Jena, **19**, ErgH., 1901, (197-201).

Child, C. M. Form-regulation in Coelentera and Turbellaria. Washington, D.C., Smithsonian Inst. Misc. Collect, Q. Issue, **45**, 1903, (134–143, with pl.). Separate. 24.5 cm.

thus. Wood's Holl, Mass., Mar. Biol.

Lab. Bull., 5, 1903, (239-260, 304-319, with text-fig.); 6, 1903, (1-11, with text-fig.).

**Delage**, Yves. Sur la non-régénération des sphérides chez les oursins. Paris, C.-R. Acad. sci., **137**, 1903, (681-682).

Francé, R. H. Die "Selbstregulationen" im lebenden Organismus. Umschau, Frankfurt a. M., 7, 1903, (346-852).

Galeotti, G. Sugli innesti fra tessuti animali. Rivista dei lavori italiani del 1896. Mon. zool. ital., Firenze, 13, 1902, (73-78).

Hargitt, George Thomas. Regeneration in *Hydromedusae*. Lincoln, Stud. Zool. Lab., Univ. Neb., No. 57, 1903, (32, with pl.). 23 cm.

Holmgren, Emil. Regeneration. (Swedish) Hygiea, Stockholm, (N.F.), 1, 2, 1901, (321-337).

Mariani, F. e Pigari, F. Nota preventiva sul trapianto degli organi. Genova, Boll. R. Acc. med., **17**, 1902, (131-134).

Monks, Sarah P. Regeneration of the body of a starfish. [*Phataria (Linckia) fascialis*]. [Abstract.] Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (351); London, J. R. Microsc. Soc., **1903**, (616).

Morgan, Thomas] H[unt]. Regeneration of the leg of Amphiuma means. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (293-296, with text fig.).

Hypothesis of formative stuffs. New York, N.Y., Bull. Torrey Bot. Cl., **30**, 1903, (206-213).

Ottolenghi, D. Ricerche sperimentali sul trapianto della glandula salivare sottomascellare. Torino, Giorn. Acc. med., 65, 1902, (178-188, con fig.).

**Pessolini**, P. Sugli innesti eutanei alla Krause. Contributo allo studio dell'autonomia vitale dei tessuti. Archivio sc. med., Torino, **26**, 1902, (S19-333, con tav.).

Przibram, H. Regeneration. Ergebn. Physiol., Wiesbaden, 1, Abt. 2, 1902, (43-119).

**Babes.** Regeneration im Tierreiche. Nebst Nachtrag. Aus d. Heimat, Stuttgart, **15**, 1902, (85–89); **16**, 1903, (68), Thomson; J. A. Regeneration of lost parts in animals. Edinburgh Trans. Scot. Nat. Hist. Soc., 2, 1903, (34-49).

Traina, R. Sugli innesti di tessuti embrionali nell'ovaio e sulla produzione delle cisti ovariche. Archivio sc. med., Torino, 26, 1902, (13-52, con 4 tav.).

**Wilson**, Edmund B. Notes on the reversal of asymmetry in the regeneration of the chelae in *Alpheus heterochelis*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (197-210).

------- Notes on merogony and regeneration in *Renilla*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (215-226).

**Zeleny**, Charles. A study of the rate of regeneration of the arms in the brittle - star *Ophioglypha lacertosa*. Wood's Holl, Mass., Mas., Biol. Lab. Bull., **6**, 1903, (12-17, with diagr.).

ACTION OF DRUGS AND TOXINES.

Nicloux, Maurice. Dosage de petites quantités de glycérine. Existence de la glycérine dans le sang animal. Bul. Muséum, Paris, **1903**, (154–156).

**Viguier**, C. Action de l'acide carbonique sur les œufs d'Echinodermes. Paris, C.-R. Acad. sci., **136**, 1903, (1687-1690).

#### CHENICAL PHYSIOLOGY.

Bertrand, Gabriel. Sur l'existence de l'arsenic dans l'œuf de la poule. Paris, C.-R. Acad. sci., **136**, 1903, (1083-1085).

Sur la recherche et la preuve de l'existence de l'arsenic chez les animaux. Ann. chim. phys., Paris, (sér. 7), 29, 1903, (242-276).

\_\_\_\_\_ Sur l'existence de l'arsenic dans la série animale. Bul. sci. pharm., Paris, 5, 1902, (329-332).

Fürth, Otto von. Vergleichende chemische Physiologie der niederen Tiere. Jena (G. Fischer), 1903, (XIV + 670). 26 cm. 16 M.

Gautrelet, Jean. De la puissance de l'acide lactique dans les muscles des Invertébrés et des Vertébrés inférieurs. Paris, C.-R. Acad. sci., 137, 1903, (417– 418). **Meigen**, Wilhelm. Beiträge zur Kenntnis des kohlensauren Kalkes. Freiburg i. B., Ber. natf. Ges., **13**, 1903, (40-94).

Nentahij, M. u. Zaleshij, T. Ueber die Bestimmung des Ammoniaks in den thierischen Säften und Geweben. (Russ.) Arch. sc. biol., St. Peterburg, 9, 1902, (316-330).

**Ostwald**, Wolfgang. Ueber die physikalisch-chemischen Bedingungen des Schwebens im Wasser, mit besonderer Rücksicht auf das Plankton, und über eine neue theoretische Betrachtungsweise in der Planktologie. Verh. Ges. D. Natf., Leipzig, **74**, (1902), II, 1, 1903, (155-157).

Sellier. Sur la lipase du sang chez quelques groupes de poissons et d'animaux invertébrés. Bordeaux, Actes soc. linn., (sér. 6), 7, 1902, (Proc.-verb. XLIX-L).

Tichonovič, V. V. A l'étude de l'excrétion de l'acide phosphorique par l'organisme animal. (Russ.) Charikov, Trd. Oběč. ispyt. prir., **XXXVIII**, 1, (1903), (67-84).

#### EXPERIMENTAL PHYSIOLOGY.

**Delage**, Yves. La parthénogenèse par l'acide carbonique, obtenue chez les œufs après l'émission des globules polaires. Paris, C.-R. Acad. sci., **137**, 1903, (473-476); [abstract], London, J. R. Microsc. Soc., **1904**, (187).

**Greeley**, Arthur W[hite]. The artificial production of spores in *Monas* by a reduction of temperature. Chicago, 111., Dec. Pub. Univ. Chic., (Ser. 1), **10**, 1903, ([71]-77, with text fig.).

Lapicque, L. et Lapicque, Mme. Sur la loi d'excitation électrique chez quelques invertébrés. Paris, C.-R. Acad. sci., 136, 1903, (1147-1148).

Manca, G. Recherches chimiques sur les animaux à sang froid soumis à l'inanition. Arch. ital. biol., Paris, **37**, 1902 (161-176).

Rabes, O. Verwachsungsversuche mit Thieren. Prometheus, Berlin, 14, 1903, (737-740, 762-765).

#### 0215 DEVELOPMENT [GENERAL WORKS ON MORE THAN ONE OF THE BRANCHES].

33

#### GENERAL.

Studien über Entwickelungsgeschichte der Tiere, hrsg. v. Emil Selenka, H. 10: Menschenaffen (Anthropomorphae), Studien über Entwickelung und Schädelbau, Lfg 5: Selenka, Zur Keimesgesch. d. Primaten. Wiesbaden (C. W. Kreidel), 1903, (IV + 14 + II, 329-373, mit 1 Portr. u. 1 Taf.). 33 cm. In Mappe 18,65 M.

Bastian, H. Charlton. On the origin of Bacteria and their allies by Heterogenesis. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (381–405, pls. XXV– XXVI).

Fischel, Alfred. Entwickelung und Organ-Differenzierung. Arch. Entw-Mech., Leipzig, 15, 1903, (679-750).

Garbowski, Tad[däus]. Morphogenetische Studien. Als Beitrag zur Methodologie zoologischer Forschung. Jena (G. Fischer), 1903, (VIII + 189, mit 6 Taf.). 36 cm. 28 M.

Hickson, S. J. The mechanics of development. Presidential address. Manchester, Trans. Microsc. Soc., **1902**, 1903, (28-37).

His, Wilhelm. Die Zeit in der Entwickelung der Organismen. Basel, Verh. Natf. Ges., 16, 1903, (210-228).

Korschelt, E[ugen] und Heider, K[arl]. Lehrbuch der vergleichenden Entwicklangsgeschichte der wirbellosen Thiere. Allgemeiner Theil. Lfg 2. 1. u. 2. Aufl. Jena (G. Fischer), 1903, (111, 539-750). 26 cm.

Wedekind, W. Eine rudimentäre Function. Zool. Anz., Leipzig, 26, 1903, (203-204).

#### OOGENESIS AND OVUN.

Farmer, J. B. and Moore, J. E. S. New investigations into the reduction phenomena of animals and plants. Preliminary communication. London, Proc. R. Soc., 72, 1903, (104–108).

Henschen, Folke. Zur Struktur der Eizelle gewisser Crustaceen und Gastropoden. Anat. Anz., Jens, 24, 1903, (15-29).

(x 2-9053)

Lécallion, A. Sur le développement de l'ovaire de *Polyzenus lagurus* de Geer. Paris, C.-R. Acad. sci., 136, 1903, (1691-1693).

Van der Stricht, O. Les "pseudochromosomes dans l'occyte de chauvesouris. Communication préliminaire. Nancy (Berger-Levrault et Cie.), 1902, (7). Svo.

Wallace, W. Observations on ovarian ova and follicles in certain Teleostean and Elasmobranch fishes. Q. J. Microsc. Sci., London, 47, 1903, (161-213, pls. XV-XVII).

#### SPERMATOGENESIS.

**Blackman**, Maulsby W. The spermatogenesis of the Myriapods. II. On the chromatin in the spermatocytes of *Scolopendra heros*. [with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (187-217, with text fig.).

Dewits, J. Was veranlasst die Spermatozoen, in das Ei zu dringen? Arch. Anat. Physiol., Leipzig, Physiol. Abt., 1903, (100-104).

Farmer, J. B. and Moore, J. E. S. New investigations into the reduction phenomena of animals and plants. Preliminary communication. London, Proc. R. Soc., 73, 1903, (104–108).

**Pischer**, Martin H. How long does (*Arbacia*) sperm live in sea-water? Amer. J. Physiol., Boston, Mass., 8, 1903, (430-434).

Guyer, M. F. Hybridism and the germ-cell. Cincinnati, Ohio, Univ. Cincin. Bull., No. 21, 1902, (20, with pl.). 23.5 cm.

Montgomery, Thomas H[arrison] jun. Further studies on the chromosomes of the Hemiptera Heteroptera. Philadelphia, Pa., Proc. Acad. Nat. Sci., 1901, (261-271, with pl.); [reprint], Philadelphia, Cont. Zool. Lab. Univ. Pa., **1901**, 1902, (261-271, with pl.).

The spermatogenesis of Peripatus (Peripatopsis) balfouri up to the formation of the spermatid, [with bibliography]. [Reprint.] Philadelphia, Cont. Zool. Lab., Univ. Pa., **1901**, 1902, (277-368, with pl.).

The heterotypic maturation mitosis in Amphibia and its general significance [with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (259-269).

**Stéphan**, P. L'évolution des corpuscles centraux dans la spermatogenèse de *Chimaera monstrosa*. Paris, C.-R. soc. biol., **55**, 1903, (265-267).

Van der Stricht, O. Le spermatozolde dans l'œuf de chauve-souris. Halle (Verlag von Gustav Fischer), 1902, (6). 8vo.

Variot. Indépendance de la spermatogenèso de la sécrétion interne des glandes génitales. Paris, Bul. mém. soc. méd. hôpit., **19**, 1902, (272-273).

#### FERTILISATION.

Kathariner, L. Das Problem der Befruchtung. Natur u. Offenb., Münster, 49, 1903, (513-528).

Loeb, Jacques. A method by which the eggs of a sea-urchin (Strongylocentrotus purpuratus) can be fertilized with the sporm of a starfish (Asterias ochracea). Berkeley, Univ. Cal., Pub. Physiol., 1, 1903, (1-3). Separate. 26.5 cm.

The fertilization of the egg of the sea-urchin by the sperm of the star-fish. [Address before the Sigma Xi scientific society at Stanford university, October 13, 1903.] Berkeley, Univ. Cal., Pub. Physiol., **1**, 1903, (39-53). Separate. 27.3 cm.

Tichomirov, A. Befruchtung und Parthenogenese. (Russ.). Jestertv. i (leogr., Moskva, 7, No. 5, 1902, (1-32, mit 9 Taf.).

# EMBRYOLOGY, ORGANOGENY, HISTOGENY.

**Cameron**, J. The application of Professor His' method of reconstruction to the study of embryology. Edinburgh, Proc. Scot. Microsc. Soc., **3**, 1903, (332– 339).

**Conklin**, Edwin G[rant]. The individuality of the germ nuclei during the cleavage of the egg of *Crepidula*. [With bibliography.] Wood's Holl, Mass., Mar. Biol. Lab. Bull., 2, 1901, (257-265, with text fig.); [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, (257-265, with text fig.).

The cause of inverse symmetry. Anat. Anz., Jena, 23, 1903, (577-588).

**King**, Helen Dean. The formation of the notochord in the Amphibia, [with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (287-300).

The effects of heat on the development of the toad's egg [with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (218-232, with text fig.).

Lowis, Frederic T. The gross anatomy of a 12-mm. pig. [Sus] [with bibliography]. Amer. J. Anat., Baltimore, Md., 2, 1903, (211-228, with 4 pls.).

Lillie, Ralph S. Fusion of blastomeres and nuclear division without celldivision in solutions of non-electrolytes. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (164-178).

Marshall, F. H. A. The œstrous cycle and the formation of the corpus luteum in the sheep. London, Phil. Trans. R. Soc., **196B**, 1903, (47-97, pls. VII-X).

Mitrofanov, P. J. Ueber das primäre Blatt in der Entwicklung der Reptilien und Vögel (Sauropsida). Arb. a. d. zootom. Labor. d. Univ. Warschau No. XXVI. (Russe) Varšava, Izv. Univ., 1903, (27 + III, mit 16 fig.).

Morgan, T[homas] H[unt]. Recent theories in regard to the determination of sex. Pop. Sci. Mon., New York, N.Y., 64, 1903, (97-116).

**Peebles**, Florence. A preliminary note on the position of the primitive streak, and its relation to the embryo of the chick. [Gallus domesticus.] Wood's Holl, Mass., Mar. Biol Lab. Bull., 4, 1903, (211-214).

**Perrier**, Edmond et **Gravier**, Charles. La tachygenèse ou accélération embryogénique; son importance dans les modifications des phénomènes embroygéniques, son rôle dans la transformation des organismes. Ann. sci. nat. (zool.), Paris, (sér. 8), **16**, 1902, (133-374); [résumé], Paris, C.-R. Acad. sci., **136**, 1903, (798-801).

Ross, Mary J. The origin and development of the gastric glands of *Desmognathus*, *Amblystoma* and pig. [With bibliography.] Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (66-95); [reprint], [Thesis]... Ph.D. ... Cornell 1902. 25.5 cm. **studnička**, F. K. Schematische Darstellungen zur Entwickelungsgeschichte einiger Gewebe. Anat. Anz., Jena, **23**, 1903, (537-556, mit 2 Taf.).

Torrey, John Cutter. The early embryology of *Thalassema mellita* (Conn). [Ph.D., Columbia University.] New York, N.Y., Ann. Acad. Sci., 14, 1903, (165-246, with pl.).

Tur, I. Ja. Zur Kasuistik und Theorie der mehrkeimigen Missbildungen. Arb. a. d. zoot. Labor. d. Univ. Warschau No. XXIX. (Russ.) Varšava, Izv. Univ., 1903, (18, mit 9 Fig. u. 1 Taf.).

Weber, A. Notes de mécanisme embryonnaire. J. anat. physiol., Paris, 39, 1903, (76-34, av. 16 fig. et 1 pl.).

Wilson, Edmund B. Notes on inerogony and regeneration in *Renilla*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (215-226).

Wintrebert, P. Influence du système nerveux sur l'ontogenèse des membres. Paris, C.-R. Acad. sci., **137**, 1903, (131-133).

Zur Strassen, O[tto]. Ueber die Mechanik der Epithelbildung. Verh. D. zool. Ges., Leipzig, **13**, 1903, (91-112).

#### EXPERIMENTAL EMBRYOLOGY.

Some experiments with a chrysalis. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (286-287).

Bohn, Georges. Influence des rayons du radium sur les animaux en voie de croissance. Paris, C.-R. Acad. sci., 136, 1903, (1012-1013); [abstract], London, J. R. Microsc. Soc., 1903, (483).

Delage, Yves. Elevage des larves parthénogénétiques d'astéries dues à l'action de l'acide carbonique. Paris, C.-R. Acad. sci., 137, 1903, (449-451).

La parthénogenèse par l'acide carbonique, obtenue chez les œufs après l'émission des globules polaires. Paris, C.-R. Acad. sci., **137**, 1903, (473-475); [abstract], London, J. R. Microsc. Soc., **1904**, (187).

Gorham, F[rederic] P[oole] and Tower, B. W. Does potassium cyanide prolong the life of the unfertilized egg of the sea urchin? Amer. J. Physiol., Boston, Mass., 8, 1903, (175-182).

(x 2-9053)

**Greeley**, Arthur W. On the effect of variations in the temperature upon the process of artificial parthenogenesis. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (129-136).

Hunter, S[amuel] J[ohn]. On the conditions governing the production of artificial parthenogenesis in *Arbacia*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (143-151).

Janssens, F. A. Production artificielle de larves géantes chez un Echinide. Paris, C.-R. Acad. sci., 137, 1903, (274-276).

Loob, Jacques. Artificial parthenogenesis in molluscs. Berkeley, Univ. Cal. Pub. Physiol., **1**, 1903, (7-9). Separate. **26.5** cm.

Maas, Otto. Einführung in die experimentelle Entwickelungsgeschichte (Entwickelungsmechanik). Wiesbaden (J. F. Bergmann), 1903, (XVI + 203). 26 cm. 7 M.

**Treadwell**, Aaron L[ouis]. Notes on the nature of "artificial parthenogenesis" in the egg of *Podake obscura*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **3**, 1902, (235-240).

Viguier, C. Action de l'acide carbonique sur les œufs d'echinodermes. Paris, C.-R. Acad. sci., **136**, 1903, (1687-1690).

#### POSTEMBRYONIC ONTOGENY.

**Studnička, F.** K. Schematische Darstellungen zur Entwickelungsgeschichte einiger Gewebe. Anat. Anz., Jena, **22**, 1903, (537-556, mit 2 Taf.).

#### METAMORPHOSIS.

Giard, Alfred. Les idées de Lamarck sur la métamorphose. Paris, C.-R. soc. biol., 55, 1903, (8-9).

Péres, C. Contributions à l'étude des métamorphoses. Bul. sci. France-Belgique, Paris, 37, 1903, (195-427, av. fig. et 3 pls.). Thèse fac. sci. Lille, 1902, (240, av. 3 pls). 29 cm.

#### CHANGES DURING LIFE.

Loeb, Jacques. Zusammenstellung der Ergebnisse einiger Arbeiten über die Dynamik des thierischen Wachsthums. Arch. EntwMech., Leipzig, 15, 1903, (669-678).

d 2

# 0219 ETHOLOGY.

#### GENEBAL.

Bach, M. Studien und Lesefrüchte aus dem Buche der Natur. Für jeden Gebildeten, zunächst für die reifere Jugend und ihre Lehrer. Gänzl. ungearb. u. bedeutend verm. v. Ludwig Borgas. Bd 1. 10. Aufl. Köln (J. P. Bachem), 1903, (343). 22 cm. 3,50 M.

Bougon. Les animaux et l'homme. Naturaliste, Paris, (sér. 2), 25, 1903, (128-129).

Burroughs, John. Real and sham natural history. The Atlantic Monthly, Boston and New York, **91**, 1903, (298– 309).

Darwin, Francis. A Naturalist's Calendar kept at Swaffham Bulbeck, Cambridgeshire, by Leonard Blomefield (formerly Jenyns). Edited by Francis Darwin. Cambridge, 1903, (xviii + 84). 8vo.

**Delage**, Yves. Sur la non-régénération des sphéridies chez les Oursins. Paris, C.-R. Acad. sci., **137**, 1903, (681– 682); [abstract], London, J. R. Microsc. Soc., **1904**, (66).

Gough, L. Tierleben in einem Taubenschlag in Basel. J. Ornith., Leipzig, 51, 1903, (257-258).

Hilgendorf, F. W. Notes on some insects. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (264-267).

Joseph, Heinrich. Der Begriff des Individuums in der Zoologie. Wien, Schr. Ver. Verbr. Natw. Kenntn., 43, 1903, (305-345).

Staby, Ludwig. Aus Natur und Leben. Naturwissenschaftliche Streifzüge. Berlin (Globus), [1903], (256). 23 cm. Geb. 2,20 M.

Van der Snickt, L. Le turbit anglais. Chasse et pêche, Bruxelles, 1902, (808– 809.)

#### HABITS.

Bohn, Georges. De l'indépendance fonctionnelle des zoldes d'un Annélide, à propos des phénomènes de rotation présentés par les Hirudinées. Bul. Muséum, Paris, **1903**, (26-30).

Brehm, A. Thierleben. Bearbeitet nach der neuesten deutschen Ausgabe für die Jugend von A. M. Nikolskij. (Russ.) Davydov, K. N. Rapport préliminaire sur un voyage à l'île de Java et aux autres îles de l'archipel Malais. (Russ.) St. Peterburg, Bull. Ac. Sc., (5 Sér.) 18, No. 1, 1903, (25-32).

Haache, W. Die Thierwelt Europa's, deren Leben und Sitten. Aus dem deutschen übersetzt von V. A. Moekaleva unter der Redaction von G. N. Kovalevskij. (Russ.). St. Peterburg, 1902, (596 + XVI, mit 240 Fig.). 27 cm.

Jakobson, G. G. Einige zoologische Beobachtungen in Turkestan im Frühlinge 1903. (Russ.). St. Peterburg, Trav. Soc. nat., **XXXIV**, 1, 1903. (Protok. No. 4-5), (183-190, 1 Fig.); deutsch. Rés., (192-193).

Rosan, C. Les animaux dans les proverbes. 1<sup>re</sup> et 2<sup>o</sup> parties. Paris (Ducrocq), [1902], 1<sup>re</sup> partie, (384), 2<sup>o</sup> partie, (381). 18 cm.

Sabrazés. L'autosuccion des mamelles chez la vache. Bordeaux, Actes soc. linn., (sér. 6, 7), 57, 1902, (Proc. verb. CLX-CLXI).

#### MIGRATION.

Bonnier, Pierre. [Problème de l'orientation à distance]. Bul. inst. psych. internat., Paris, 2, 1902, (214-216).

#### SEXUAL RELATIONS.

Jakobson, G. G. Einige zoologische Beobachtungen in Turkestan im Frühlinge 1903. (Russ.). St. Peterburg, Trav. Soc. nat., XXXIV, 1, 1903, (Protok. No. 4-5), (183-190, 1 Fig.); deutsches Rés., (192-193).

Month, C. B. The spring rivalry of birds. Some views on the limit to multiplication. Irish Nat., Dublin, 12, 1903, (152-166).

#### OVIPOSITION.

Houssay, Frédéric. Sur la ponte, la fécondité et la sexualité chez les poules carnivores. Paris, C.-R. Acad. sci., 187, 1903, (934–936). Schreiner, J. F. Rebenschneider (Lethrus apterus Walk.) und die Mittel zu dessen Bekämpfung. (Eine landwirtbschaftliche Monographie.) (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, IV, No. 1, 1903, (45, mit 10 Fig. u. 1 Taf.).

#### LUMINOSITY.

[Carus, Paul.] Electricity and phosphorescence in the animal world. The Open Court, Chicago, Ill., 15, 1901, (540-550, with text fig.).

Dubois, Raphaël. Sur une "lampe vivante de sùreté" Paris, C.-R. Acad. sci., 136, 1903, (1493-1494).

Girisch, Heiur. Leuchtende Lebewesen. Pharm. Ztg, Berlin, 48, 1903, (628).

Haupt, H. Leuchtende Organismen. Natw. Wochenschr., Jena, 19, 1903, (65-71).

Holmes, S. J. Phototaxis in Volvox. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (319–326); [abstract], London, J. R. Microsc. Soc., **1903**, (730).

Laloy, L. La vision et les organes lumineux dans les profondeurs de la mer. Nature, Paris, **30**, (2° semest.), (300-301, av. fig.)

#### HABITAT.

Nordisches Plankton, hrsg. v. K[arl] Brandt . . . Lfg 2. Kiel u. Leipzig (Lipsius & Tischer), 1903, (7+29+ 40). 29 cm. 3,60 M.

Agrassis, Alexander. Preliminary report and list of stations. With remarks on the deep-sea deposits by Sir John Murray. (Reports on the scientific results of the expedition to the tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer "Albatross" from August, 1899, to March, 1900. Commander Jefferson F. Moser, U.S.N., commanding, 1.). Cambridge, Mass., Mem. Mus. Comp. Zool. Harvard Coll., **26**, 1902, (21 + 1 - 114,with 21 charts). Separate 28.8 cm.

Chun, Carl. Aus den Tiefen des Weltmeeres. Schilderungen von der deutschen Tiefsee-Expedition. 2. umgearb u. verm. Aufl. Jena (G. Fischer), 1903, (IX + 592, mit 46 Taf. u. 3 Kart.). 29 cm. 18 M. Auch in 12 Lfgn.

**Cohn**, Ludwig. Untersuchungen über das Plankton des Löwentin und einiger anderer Seen Masurens. Zs. Fischerei, Berlin, **10**, 1903, (201-331, mit Taf.).

**Issel**, R. Studi sulla fauna termale euganea. Nota preventiva. Genova, Boll. Musei zool. anat. comp., **1901**, N. 108, (1-5).

Jensen, Sören, Johansen, A. C. and Levinsen, F. Chr. The plankton in the Danish seas in the years 1898-1901. II. (Danish) Kjöbenhavn, Vid. Sels. Skr., (Ser. 6), **12**, [1903], (263-326).

Kučin, I. V. Planktonstudien in dem Ilmen-See im Sommer 1902. (Russ.) Nikolsk Fischzucht., St. Peterburg, 1903, 7, (14-42, mit 5 Taf.).

Laloy, L. La vie au fond des mers. Nature, Paris, **30**, (2<sup>•</sup> semest.), 1902, (235-236, av. fig.).

Lebedinskij, J. Zur Höhlenfauna der Krym. (Russ.). Odessa, Ann. Soc. Nat., 25, livr. 2, 1903, (75–88, mit Taf. I-II.).

Levander, K[aarlo] M[ainio]. Über die Zusammensetzung des Zooplanktons im Finnischen Meerbusen. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, 1903, VI Section, (6-8).

Lohmann, H[ans]. Neue Untersuchungen über den Reichthum des Meeres an Plankton und über die Brauchbarkeit der verschiedenen Fangmethoden. Zugleich auch ein Beitrag zur Kenntnis des Mittelmeerauftriebs. Wiss. Meeresunters., Kiel, (N. F.), 7, Abt. Kiel, 1903, (1– 87, mit 4 Taf.).

Lo Bianco, Salvatore. Le pesche abissali eseguite da F. A. Krupp col Yacht Puritan nelle adiacenze di Capri ed in altre località del Mediterraneo. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (109-279, mit 3 Taf.).

Marsson, M. Die Fauna und Flora des verschmutzten Wassers und ihre Beziehung zur biologischen Wasseranalyse. Plön, ForschBer. biol. Stat., 10, 1903, (60-73).

Nestler, K[arl]. Das Tierleben der Alpenseen nach den neueren Forschungen dargestellt. Wissenschaftliche Beilage zum Jahresberichte der II.

•

städtischen Realschule zu Leipzig für das Schuljahr Ostern 1901 bis Ostern 1902. Leipzig (Druck v. B. Zechel), 1902, (III + 50). 25 cm.

Östergren, Hj[almar]. Animal life in the deep sea. Untlines of lectures held during the summer courses in Uppsala, 1901. (Swedish) Uppsala, 1901, (20). 21 cm.

**Ostwald**, Wolfgang. Theoretische Planktonstudien. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (1-62, mit 4 Taf.).

Zur Lehre vom Plankton (Nach Vorträgen . . . ). Natw. Wochenschr., Jena, **18**, 1903, (481–486).

Ueber die physikalischchemischen Bedingungen des Schwebens im Wasser, mit besonderer Rücksicht auf das Plankton, und über eine neue theoretische Betrachtungsweise in der Planktologie. Verh. Ges. D. Natf., Leipzig, 74, (1902), II, 1, 1903, (155-157).

Ueber eine neue theoretische Betrachtungsweise in der Planktologie, insbesondere über die Bedeutung des Begriffs der "inneren Reibung des Wassers" für dieselbe. Plön, Forsch-Ber. biol. Stat., **10**, 1903, (1-49).

Paganetti-Hummler. Die Höhlenfauna Oesterreich-Ungarns und des Occupationsgebietes. OestUng. Rev., Wien, 29, 1902, (14-32).

Redeke, H[einrich] C[arl] und Breemen, P. J. van. . . Plankton und Bodentiere in der Nordsee gesammelt . . August, 1901 . . (Holländisch) Helder, Tijdschr. Ned. Dierk. Ver., (Ser. 2), 8, [1903], (118-147).

**Ricker**, Maurice. Plankton studies and their utility. Missoula, Bull. Univ. Mont., No. **17**, Biol. Ser. No. **5**, 1903, (281-285).

**Schnee**. Einige Bemerkungen über die Tierwelt der Litoralregion von Jaluit. Zs. Natw., Stuttgart, **75**, (1902), 1903, (373-384).

Scourfield, D. J. Lakes and their scientific investigation. London, Proc. S. Lond. Ent. Nat. Hist. Soc., 1902, (61 66).

**Skorikov,** A[leksandr] S[tepanovič]. Zur Frage über die Verbreitung der Organismen in den Flüssen. (Russ.) Věst. rybopromyšl., St. Peterburg, **1903**, XVIII., (9–16).

**Steuer**, Adolf. Beobachtungen über das Plankton des Triester Golfes im Jahre 1902. (Mitt. aus d. zool. Stat. Triest. No. 8). Zool. Anz., Leipzig, **27**, 1903, (145-148, mit 1 Taf.).

Ulrich, Carl Jost. A contribution to the subterranean fauna of Texas. [Arthropoda, with nn. spp. in Crustacea, Arachnida and Aptera]. Contributions from the Zoological Laboratory of the Indian University No. 34 in Lincoln, Nebr., Trans. Amer. Microsc. Soc., 23, 1901, [1902], (83-100, with pl.).

Vallentin, R. Observations on the Plankton of Looe pool. Truro, J. R. Inst. Cornwall, 15, 1903, (328-344).

**Viré**, Armand. La faune et la flore souterraines du Puits de Padirac (Lot). Bul. Muséum, Paris, **1902**, (601–607, av. fig.).

La faune souterraine. Châlon-sur-Saône, Bul. soc. sci. nat., (n. sér.), **8**, 1902, (170-174, 199-202, 230-233).

Voigt, Max. Das Zooplankton des kleinen Uklei- und Plus-Sees bei Plön. Plön, ForschBer. biol. Stat., **10**, 1903, (105-115).

**Zykoff**, W[ladimir]. Bemerkung über das Winterplankton der Wolga bei Saratow. Zool. Anz., Leipzig, **26**, 1903, (544-546).

------ Bemerkung über das Plankton der Altwässer des oberen Jenissees. Zool. Anz., Leipzig, **26**, 1903, (626-628).

#### INSTINCT AND PSYCHOLOGY.

Beard, J[ames] Carter. Are the senses of the lower animals superior to ours? Sci. Amer., New York, N.Y., 88, 1903, (26).

Have the lower animals other senses than ours? Sci. Amer., New York, N.Y., **89**, 1903, (378-379).

**Christoleit**, E Zur Erwägung über Instinkt und über darwinistiches Monopol in der Naturwissenschaft. Zool. Garten, Frankfurt a. M., **44**, 1903, (20-24).

Ettlinger, Max. Untersuchungen über die Bedeutung der Deszendenztheorie für die Psychologie. Köln (J. P. Bachem in Komm.), 1903, (86). 24 cm. 1,50 M. Glard. Les jeux chez les animaux. Bul. inst. psych. internat., Paris, 2, 1902, (213-214).

Jacquot, Lucien. La notion du temps chez les animaux. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (318).

Kolbe, H. J. Ueber die psychischen Funktionen der Tiere. Natw. Wochenschr., Jena, 19, 1903, (1-7).

Marahall, William. Charakterbilder aus der heimischen Tierwelt. Leipzig (A. Twietmeyer), 1903, (III + 402). 22 cm. Geb. 6 M.

Morgan, C. Lloyd. The beginnings of mind. Int. Q., Burlington, Vt. 6, 1902, ([330]-352).

**Perrier**, Edmond. L'instinct. Bul. inst. psych. internat., Paris, **1**, 1901– 1902, (305–320).

Schröder, Chr. Ueber experimentell erzielte Instinktvariationen. Verh. D. zool. Ges., Leipzig, 13, 1903, (158-166).

Seidel, L. E. Das Leben der Tiere in Charakterbildern und abgerundeten (Iemälden. Ein naturhistorisches Lesebuch für Schule und Haus. 3. Aufl. Langensalza (F. G. L. Gressler), 1902, (VIII + 479). 23 cm. 3,50 M.

**Thorndike**, Edward L[ee]. The experimental method of studying animal intelligence. Int. Mon., Burlington, Vt., 5, 1902, (224-238).

**Uerküll**, J. von. Psychologie und Biologie in ihrer Stellung zur Tierseele. Ergebn. Physiol., Wiesbaden, 1, Abt. 2, 1902, (212-233).

Wagner, V. A. Die biologische Methode in der Zoopsychologie. (Russ.) St. Peterburg, Trav. Soc. nat., XXXIII, 2, 1903 (1-96).

Witchell, C. A. Some instances of intelligence in animals. Gloucester, Proc. Cotteswold Nat. F. Cl., 14, 1903, (119-125).

#### SYMBIOSIS.

Gamble, F. W. and Keeble, F. The bionomics of *Convoluta roscoffensis* with special reference to its green cells. Q. J. Microsc. Sci., London, 47, 1903, (363– 431, pls. XXX, XXX1).

Howard, L[eland] O[ssian]. On the habits of Entilia vinuata [in relation to

#### PARASITISM.

Jahresbericht über die Neuerungen und Leistungen auf dem Gebiete der Pflanzenkrankheiten, hrsg. v. M[ax] Hollrung. Bd. 4: Das Jahr 1901. Berlin (P. Parey), 1903, (VIII + 305). 26 cm.

Braun, Max. Die thierischen Parasiten des Menschen. Ein Handbuch für Studirende und Aerzte. 3 verm. u. verb. Aufl. Würzburg (A. Stuber), 1903, (XII + 360). 24 cm. 8 M.

**Crawley**, Howard. Nosema geophili, sp. n., a mysosporidian parasite of *Geophilus*. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (337-338). Separate 25.6 cm.

Galli-Valerio, Bruno. Notes de parasitologie. Centrabl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (81-91).

Lowis, L. L. Common parasites of domestic animals. Agric. Exp. Sta., Oklahoma, Stillwater, Bull. No. 53, 1902, (24, with 11 figs.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (301).

Lutz, Adolph. Waldmosquitos und Waldmalaria. Centrabl. Bakt., Jena, Abt. 1, **33**, Originale, 1903, (282-292).

**Peiper**, E[rich]. Tierische Parasiten. Ergebn. Path., Wiesbaden, **7**, (1900-01), 1902, (524-595).

Saint-Rémy, G. Le parasitisme dans le règue animal. Rev. gén. sci., Paris, 14, 1903, (778-784).

Scheube, B[otho]. Die Krankheiten der warmen Länder. Ein Handbuch für Aerzte. 3 umgearb. Aufl. Jena (G. Fischer), 1903, (VIII + 791, mit 13 Taf.). 25 cm. 16 M.

Sokolowsky, Alexander. Der Körperbau thierischen Parasiten in Beziehung zu ihrer Lebensweise. Prometheus, Berlin, 14, 1903, (785-788).

Vierordt, Hermann. Die klinisch wichtigen Parasiten. [In: Handbuch der Geschichte der Medizin. Bd 2.] Jena, 1903, (648-665).



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# BRETTERS OF THE

Bistone, Karl. Two Auftreten forstauftreten Stanssörssen im Jahre A. auft sumi anticher Berichte Berennet Za Forstw. Berlin, S. ef. 217-33.

Fund Fernann. Forstschutz. [In : how Finndruck for Forstwissenschaft. h. Tuhmen. AG. 1-89.

Differ (n. 2.) Untersuchangen wore die Hinneverbreitung forststaatlichter Tere in der Schweiz. Juren, Min. Schweiz, Forstl.Versuchew., 2. 1965, 3-31 mit 11 figs.).

Beiter Pal. Nützliche und Beiter Krizziere des Feld., Obstant Windows. Leitfaden für den Unterricht an landwirtschaftlichen Lehranstalten und zum Gebrauche für praktische Landwirte. Leipzig u. Breslau (K. Scholtze), 1903, (VII + 88). 20 cm. Kart, 1,20 M.

**Bichter v. Binnenthal**, Friedrich. Die Rosenschädlinge aus dem Tierreiche, deren wirksame Abwehr und Bekämpfung. Ein Ratgeber für die gärtnerische Praxis, hrsg. v. Verein deutscher Rosenfreunde. Stuttgart (E. Ulmer), 1903, (X + 392). 24 cm. 4 M.

Weinland, E. Antifermente [Schutz der parasitischen Würmer gegen die Wirkung der Sekrete des Digestionstractus]. Zs. Biol., München, 44, 1902, (1-15).

#### PATHOLOGY.

Roch, Maurice. La chirurgie chez les animaux. Rev. sci., Paris, (sér. 4), 17, 1902, (1<sup>-7</sup> sem.), (311).

#### 0223 VARIATION AND ÆTIOLOGY.

#### GENERAL.

**Bateson**, W. Variation and differentiation. [A criticism of Pearson's "Fundamental conceptions of biology," 1902]. Cambridge (Printed for the author), 1903, (23).

**Davenport**, C[harles] B[enedict]. The animal ecology of the Cold Spring sand spit, with remarks on the theory of adaptation. [With bibliography.] Chicago, Ill., Dec. Pub. Univ. Chic., (Ser. 1), **10**, 1903, ([155]-176, with text fig.).

Eigenmann, Carl. H. and Kennedy, Clarence. Variation notes. Bloomington, Cont. Zool. Lab. Indiana Univ., No. 52 in Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (227-230).

**Favre**, A. Variations des êtres organisés. Bul. Agric., Neuchâtel, **11**, 1902, (200-204).

Gaskell, W. H. The origin of Vertebrates deduced from the study of *Ammocates*. Part xi. The origin of the Vertebrate body cavity and excretory organs; the meaning of the somites of the trunk and of the ductless glands. J. Anat. Physiol., London, 17, 1903, (163-219). **Kellogg**, V[ernon] L[yman] and **Bell**, R. G. Variations induced in larval, pupal and imaginal stages of *Bombyz* mori by controlled varying food supply. Science, New York, N.Y., (N. Ser.), **18**, 1903, (741-748).

McIntosh, D. C. Variation in "Ophiocoma nigra" (O. F. Müller). Biometrika, Cambridge, 2, 1903, (463– 473).

Meisenheimer, J[ohannes]. Die Methode der Variationsstatistik und ihre bisherigen Ergebnisse auf dem Gebiete der Zoologie. Zusammenfassende Uebersicht. Natw. Wochenschr., Jena, 18, 1903, (229-234, 241-245).

Myers, C. S. The origin of variation. [Brief logical note.] Nature, London, 68, 1903, (224).

**Pearl**, Raymond and **Dunbar**, Frances J. Variation and correlation in *Arcella*. Biometrika, Cambridge, **2**, 1903, (321–337).

Vernon, H[orace] M[iddleton]. Variation in animals and plants. New York (H. Holt & Co.), 1903, (ix + 415, with illus.). 20.5 cm.

Viré, Armand. Influence de la lumière et de l'obscurité sur la transformation des animaux. Observations et expériences. Paris, Bul. mém. eoc. anthr., (sér. 5), **3**, 1902, (581-589).

Woodward, H. The President's address. Some ideas on life. London, J. R. Microsc. Soc., 1903, (142-157).

#### SUBSTANTIVE VABIATION.

**Camerano**, Lorenzo. Ricerche somatometriche in Zoologia. [Conferenza]. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (13-15).

**Gadow,** H. Evolution of the colourpattern and orthogenetic variation in certain Mexican species of lizards, with adaptation to their surroundings. London, Proc. R. Soc., **72**, 1903, (109–125, pls. III-V).

Giglioli, H. H. The strange case of Athene chiaradiae. Ibis, London, 1903, (1-18, pl. I).

Hamilton, G. E. H. Barrett-.... Winter whitening of mammals and birds. Dublin, Proc. R. Irish Acad., 24, 1903, (303-314). **Elunsinger**, C. B. Ueber Melanismus bei Tieren im allgemeinen und bei unseren einheimischen insbesondere. Stuttgart, Jahreshefte Ver. Natk., **59**, 1903, (267-297).

Willem, Victor. L'influence de la lumière sur la pigmentation de *Isotoma tenebricola*. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (193-196).

#### MERISTIC VARIATION.

Schuster, E. H. J. Variation in "Eupagurus prideauxi" (Heller). Biometrika, Cambridge, 2, 1903, (191– 210).

TERATOLOGICAL VABIATION.

Houssay, Frédéric. Sur un poulet ayant vécu 7 jours après l'éclosion avec un second jaune inclus dans l'abdomen. Paris, C.-R. Acad. sci., **136**, 1903, (1709-1710).

Lesbre et Forgeot. Etude anatomique d'un fœtus bovin sycéphalien d'un genre intermédiaire aux genres janiceps et iniope d'Is. Geoffroy Saint-Hilaire. J. anat. physiol., Paris, **39**, 1903, (11– 38, 22 fig.).

Quinet. Chiens nus, hommes velus. Bruxelles (Vanbuggenhoudt), 1901 (16, av. figs.) 12mo.

**Babaud**, E. Fragments de tératologie générale : l'union des parties similaires. Bul. sci. France, Belgique, Paris, **37**, 1903, (436-460).

Regnault, Félix. Les causes de la polydactylie. Naturaliste, Paris, (sér. 2), 25, 1903, (108-110).

Tur, I. Ja. Zur Kasuistik und Theorie der mehrkeimigen Missbildungen. Arb. a. d. zoot. Labor. d. Univ. Warschau, No. XXIX (Russ.) Varšava, Izv. Univ., **1903**, (18, mit 9 fig. u. 1 Taf.).

Windle, B. C. A. Thirteenth report on recent teratological literature. J. Anat. Physiol., London, 17, 1903, (298-313).

#### BIONOMIC VARIATION.

sohröder, Chr. Ueber experimentell erzielte Instinktvariationen. Verh. D. zool. Ges., Leipzig, 13, 1903, (158-166).

#### HEREDITY.

Bateson, W. The present state of knowledge of colour-heredity in mice and rats. London, Proc. Zool. Soc., 1903, 2, (71-98).

On Mondelian heredity of three characters allelomorphic to each other. Cambridge, Proc. Phil. Soc., 12, 1903, (153-154).

<u>Mendel's principles of</u> heredity in mice. Nature, London, **67**, 1903, (462–463). Cf. Weldon, *ib.* (512); Bateson, *ib.* (585); and Weldon, *ib.* (610).

**Blanchard**, N. On inheritance (grandparent and offspring) in thoroughbred racehorses. Biometrika, Cambridge, 2, 1903, (229-234).

Castle, W. E. Mendel's law of heredity [with bibliography]. Cambridge, Mass., Cont. Mus. Comp. Zool. Harvard Coll., No. 136, in Boston, Mass., Proc. Amer. Acad. Arts Sci., 38, 1903, ([533]-548).

Cambridge, Mass., Cont. Mus. Comp. Zool. Harvard Coll., No. **187**.) Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll, **40**, 1903, (189-218). Separate. 24.6 cm.

and Allen, Glover M. The heredity of albinism [with bibliography]. Cambridge, Mass., Cont. Mus. Comp. Zool. Harvard Coll., No. **142**, in Boston, Mass., Proc. Amer. Acad. Arts Sci., **38**, 1903, ([601]-622).

**Coutagne**, Georges. Sur les facteurs élémentaires de l'hérédité. Paris, C.-R. Acad. sci., **137**, 1903, (1075-1077).

Recherches expérimentales sur l'hérédité chez les vers à soie. Bul. sci. France Belgique, Paris, **37**, 1903, (1-194, av. fig. et 9 pls.).

Doncaster, L. Mendel's law of heredity in insects. Ent. Rec., London, 15, 1903, (142-144).

**Efficier**, Valentin. Ueber die physiologischen Grundlagen der Vererbungserscheinungen. Stuttgart, Jahreshefte Ver. Natk., **59**, 1903, (LXXXIII-LXXXV).

**Eidd**, W. The direction of hair in animals and man. London, 1903, (xii + 154). 8vo. 43

.

Les, Alice. On inheritance (greatgrandparents and great-great-grandparents and offspring) in thoroughbred racehorese. Biometrika, Cambridge, 2, 1903, (234-240).

Luts, F. E. Note on the influence of change in sex on the intensity of heredity. Biometrika, Cambridge, 2, 1903, (237-240).

**Fussbaum**, M[oritz]. Die Vererbung erworbener Eigenschaften. Bonn, SitzBer. Ges. Natk., **1903**, med. Sektion, (19-26).

**Orschansky**, I[saak]. Die Vererbung im gesunden und krankhaften Zustande und die Entstehung des Geschlechts beim Menschen. Stuttgart (F. Enke), 1903, (XI + 348). 25 cm. 9 M.

**Pearson**, K. The law of ancestral heredity. Biometrika, Cambridge, **2**, 1903, (211-229).

and Lee, Alice. On the laws of inheritance in man. I. Inheritance of physical characters. Biometrika, Cambridge, 2, 1903, (357-462).

Regnault, Félix. La consanguinité. Naturaliste, Paris, (sér. 2), 24, 1902, (288-289).

**Serg1**, G[iuseppe]. Some ideas concerning biological heredity. [Transl.] The Monist, Chicago, Ill., **12**, 1901, ([1]-20, with text fig.).

senffer, Rob. Die Kontinuität des Keimprotoplasmas. Eine Prioritätsfrage. G. Jägers Monatsbl., Stuttgart, 21, 1902, (149-152).

Weldon, W. F. R. Mr. Bateson's revisions of Mendel's theory of inheritance. Biometrika, Cambridge, 2, 1903, (286-298).

Woods, F. A. Mendel's laws and some records in rabbit breeding. Biometrika, Cambridge, 2, 1903, (299-306).

#### CROSSES AND HYBRIDS.

Castle, W. E. Mendels law of heredity [with bibliography]. Science, New York, N.Y., (N. Ser.), 18, 1903, (396-406).

**Darbishire**, A. D. Second and third reports on the result of crossing Japanese waltzing mice with European albino races. Biometrika, Cambridge, 2, 1903, (165-173, 282-285).

**Doncaster**, L. Experiments in hybridisation, with special reference to the effect of conditions on dominance. London, Phil. Trans. R. Soc., **196B**, 1903, (119-173); [Prelim. Abstracts], London, Proc. R. Soc., **61**, 1903, (497); Nature, London, **68**, 1903, (94).

Giard, A. Croisement d'animaux de races différentes. Feuille jeunes natural., Paris, (sér. 4), 38, 1903, (223).

Guyer, M. F. Hybridism and the germ-cell. Cincinnati, Ohio, Univ. Cincin. Bull., No. 21, 1902, (20, with pl.). 23.5 cm.

**Zulueta**, A. de. Question sur le croisement d'animaux de race différente. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (206).

#### EVOLUTION.

Beushausen, Louis. Die Entwickelung der Tierwelt. [In: Weltall und Menschheit, hrsg. v. H. Kraemer, Bd 2.] Berlin, 1902–1903, (409–518, mit Taf.).

Breitenbach, Wilhelm. Fleischmann gegen Darwin. Zs. Natw., Stuttgart, 75, (1902), 1903, (325-340).

**Castle**, W. E. Mendel's law of heredity [with bibliography]. Science, New York, N.Y., (N. Ser.), **18**, 1903, (396-406).

**Gaton**, R. Abstract of inaugural address on acquired differences in structure and function between the right and left sides of the body. Liverpool, Proc. biol. Soc., **17**, 1903, (3-14).

Cook, O[rator] F[uller]. Evolution, cytology and Mendel's laws. Pop. Sci. Mon., New York, N.Y., 63, 1903, (219-228).

**Dacqué**, Edgar. Der Descendenzgedanke und seine Geschichte vom Altertum bis zur Neuzeit. München (E. Reinhardt), 1903, (III + 120). 26 cm. 2 M.

Den Heede, Ad. Van. De l'évolution vitale. Kev. Hortic. Suisse Rom., Genève, **34**, 1902, (47-49).

Dodel, Arnold. Mosè o Darwin? Arpino (Fraioli), 1903, (IV + IV + 219). 8vo. Duncker, G. Ueber Asymmetrie bei "Gelasimus pugilator" Latr. Biometrika, Cambridge, 2, 1903, (307-320).

**Eismond**, Józef. [La généalogie des animaux. Dans : Heflich A. et Milchalski S.: Guide pour les autodidactes. V Partie, I Livraison] (Polonnais) Warszawa (Kasa Mianowskiego, Gebethner i Wolff), 1903, (307-316).

Errera, L. De quelques progrès récents de la théorie de l'évolution. Bruxelles, Rev. Univ., **1903**, (641-691).

Fleischmann, Albert. Die Descendenztheorie. Gemeinverständliche Vorlesungen über den Auf- und Niedergang einer naturwissenschaftlichen Hypothese. Leipzig (A. Georgi), 1:901, (VII + 274). 24 cm.

Die Darwin'sche Theorie. Gemeinverständliche Vorlesungen über die Naturphilosophie der Gegenwart, gehalten vor Studirenden aller Fakultäten. Leipzig (G. Thieme), 1903, (VII + 402). 25 cm. 7,50 M.

**Prass**, E[berhard]. Dauerformen in der Tierwelt. Stuttgart, Jahreshefte Ver. Natk., **59**, 1903, (LXXXII-LXXXIII).

**Pry**, Sir E. [Letter] on natural selection. Nature, London, **67**, 1903, (414). Cf. Galton, *ib*. (343).

Giuffrida-Ruggeri, V. Qualche contestazione intorno alla più vicina filogenesi umana. Mon. zool. ital., Fireuze, 13, 1902, (257-270).

Hartmann, Eduard von. Die Abstammungslehre seit Darwin. Ann. Natphilos., Leipzig. 2, 1903, (285-355).

Hickson, S. J. The mechanics of development. Presidential address. Manchester, Trans. Microsc. Soc., 1902, 1903, (28-37).

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Koken, Ernst. Palaeontologie und Descendenzlehre. Vortrag . . . Jena (F. Fischer), 1902, (33). 24 cm. 1 M. Leche, Wilhelm. [Quelques nouvelles tendances dans la théorie de la descendance]. (Suédois et finnois) Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, 1903, (25-41, av. 12 pl.); F. Tidskr. Helsingfors, 1902, 53, (453-471, av. 12 pl.); Luonnon Ystävä, Helsingfors, 1903, 7, (46-52, 87-93, av. 12 pl.).

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Rosa, Daniel. Die progressive Reduktion der Variabilität und ihre Beziehungen zum Aussterben und zur Entstehung der Arten. Im Einverständnis mit dem Verf. aus dem Ital. übers. v. Heinrich Bosshard. Jena (G. Fischer) 1903, (III + 106). 24 cm. 2,50 M.

**Smith**, Geoffrey. Actinosphaerium eichhorni. A biometrical study in the mass relations of nucleus and cytoplasm. Biometrika, Cambridge, **2**, 1903, (241– 254).

**Summers,** H. E. Some problems of heredity and evolution. (Presidential address). Des Moines, Proc. Iowa Acad. Sci., **10**, (1902), 1903, (26-40).

**Vries.** Hugo de. On the origin of species. [Translated from Album der Natuur by H. T. A. Hus.] Pop. sci. Mon., New York, N.Y., **62**, 1903, (481–496).

Weismann, August. Vorträge über Descendenztheorie, gehalten au der Universität zu Freiburg i. B. Bd 1. 2. Jena (G. Fischer), 1902, (XII + 456; VI + 462, mit 3 Taf.). 24 cm. 20 M

Wettstein, R[ichard] von. Der Neo-Lamarckismus. Verh. Ges. D. Natf., Leipzig, 74, (1902), 1, 1903, (77-91).

Der Neo-Lamarckismus und seine Beziehungen zum Darwinismus. Vortrag... Jena (G. Fischer), 1903, (30). 24 cm.

Wieland, G. R. Polar climate in time the major factor in the evolution of plants and animals. Amer. J. Sci., New Haven, Conn., (Ser. 4), 16, 1903, (401-430).

Wilson, Edmund B. Mr. Cook on "Evolution, cytology, and Mendel's laws." Pop. Sci. Mon., New York, N.Y., 64, 1903, (88-89).

**Woodland**, W. On the phylogenetic cause of the transposition of the testes in Mammalia; with remarks on the evolution of the diaphragm and the metanephric kidney. London, Proc. Zool. Soc., **1903**, 1, (319-340).

Yatsu, Nachide. The origin of Metazoa. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (227-234).

# 0227 GEOGRAPHICAL ZOOLOGY.

# **Geographical Distribution.**

Meisenheimer, J[ohannes]. Die bisherigen Forschungen über die Beziehungen der drei Südkontinente zu einem antarktischen Schöpfungszentrum. (Zusammenfassende Uebersicht). Natw. Wochenschr., Jena, **19**, 1903, (20-25).

Maller, Robert. Studien und Beiträge zur Geographie der Wirtschaftstiere. Bd 1: Die geographische Verbreitung der Wirtschaftstiere mit besonderer Berücksichtigung der Tropenländer. Leipzig (M. Heinsius Nachf.), 1903, (VIII + 296, mit Taf.). 23 cm. Geb. 9 M.

**Beuter**, C[do] M[orannal]. Thiergeographische Schilderungen, nach dr. E. L. Trouèssart]. (Schwedisch and Finnisch) Stockholm, 1903, (158, mit thiergeographische Mappe). 8vo.

**Sambon**, L. W. Principles determining the geographical distribution of disease. J. trop. Med., London, **5**, 1903, (101-206).

**smith**, H. M. Marine animals in interior waters. Science, New York, N.Y., (N. Ser.). **17**, 1903, (114).

Waagen, L. Die Verbreitung der marinen Tierwelt während der späteren Kreidezeit. Ein Beitrag zur Lösung tiergeographischer Probleme. Natur u. Offenb., Münster, **49**, 1903, (321-326).

Wesenberg-Lund, C. Sur l'existence d'une faune relicte dans le lac de Furesö. Kjöbenhavn, Vid. Selsk. Overs., **1902**, 1903, (257-303, with 1 map).

Williams, Henry Shaler. Shifting of faunas as a problem of stratigraphic geology. Rochester, N.Y., Proc. Acad. Sci., 14, 1903, (177–190, with pl.).

# Topographical 200logy.

OCEAN AS A WHOLE.

Nordisches Plankton, hrzg. v. K[arl] Brandt . . . Lfg 2. Kiel u. Leipzig (Lipsius & Tischer), 1903, (7 + 29 + 40). 29 cm. 3,60 M. [0219].

Lang, Arnold. La signification biologique de la beauté d'une partie de la faune marine. Verh. Schweiz. Natf. Ges., Aarau, **86**, 1903, (102–117); Arch. Sci. Phys., Genève, (sér. 4), **16**, 1903, (594–596).

**Pelseneer**, Paul. Les abimes de la mer et leurs habitants. Bruxelles (Imprimerie J. H. Moreau), 1903, (19). 8vo. fr 0,75.

#### d EUROPE.

Haacke, W. Die Thierwelt Europa's, deren Leben und Sitten. Aus dem deutschen übersetzt von V. A. Moskaleva unter der Redaction von G. N. Kovalevskij. (Russ.) St. l'etersburg, 1902, (596 + XVI, mit 240 Fig.). 27 cm.

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Smith, eichhorni mass reh Biometrii 254), U. S. WAR DEPARTMENT BUREAU OF INSCLAR AFFAIRS. Official handbook : Description of the Philippines [and catalogue of the Philippine exhibit, Louisiana purchase exposition, St. Louis, Mo., 1904]. Revised and completed with the aid of chiefs of bureaus and experts of the Philippine government [in 2 vols.]. Part 1. Manila, 1903, (449). 23.2 cm.

**Davydov**, K. N. Rapport préliminaire sur un voyage à l'ile de Java et aux autres iles de l'archipel Malais. (Russ.) St. Peterburg, Bull. Ac. Sc., (5 Sér.), **18**, No. 1, 1903, (25-32).

Kübenthal, Willy]. Schlusswort [zu: Ergebnisse einer zool. Forschungsreise in den Molukken n. Borneo]. Frankfurt a. M., Abh. Sonckenb. Ges., 25, 1903, (969-988).

**Semon**, Richard. Zoologische Forschungsreisen in Australien und dem malayischen Archipel. Mit Unterstützung des Herrn Dr. Paul von Ritter ausgeführt i. d. J. 1891-1893. Bd 5: Wirbelkose Tiere, Lfg 6. Jena, Denkschr. med. Ges., **8**, 1903, (643-778, 1-VI, mit 16 Taf.).

Veth, P. J. Java, geographisch, -thnologisch, historisch. 2te Aufl., bearbeitet von Joh F. Snelleman und J[an] F[rederik] Niermeyer. Teil III. Geographie. [Fauna: Invertebrata (214-250); Vertebrata (251-304)]. (Holliandisch) Haarlem (Erven F. Bohn), 1903, (VII + 602, mit 1 Karte). 26 cm.

Volz, M. Fauna Sumatras. Bern, Mitt. Natf. Ges., 1903, (VIII-IX).

Weber, Max. Der indo-australische Archipel und die Geschichte seiner Thierwelt. Verh. Ges. D. Natf., Leipzig, 74, (1902), I, 1903, (51-62); [review], Nature, London, 67, 1903, (182).

# ei ASIATIC TURKEY.

Daday, Jenő. Mikroskopische Susswasserthiere aus Turkestan. (Ungarisch) Math. Termt. Ért., Budapest, 21, 1903, (324-357).

#### f AFRICA.

#### fa MEDITEBBANEAN STATES.

Weisgerber, F. Voyage de recomnaissance au Maroc. 2º partie: Climat, flore, faune, population. Rev. gén. sci., Paris, 14, 1903, (509-519, av. fig.).

(x 2-9053)

fb N. E. AFRICA.

**Budgett**, J. S. (the late). Account of his recent journey to Uganda in search of the Okapi and *Polypterue*. London, Proc. Zool. Soc., **1903**, 1, (2-10).

#### fd WEST AFRICA.

**Destenave**. Le lac Tchad. 2° partie : les habitants, la faune, la flore. Rev. gén. sci., Paris, **14**, 1903, (717-727, av. fig.).

#### fe Congo State.

Kunene - Sambesi - Expedition. H. Baum. 1903. Im Auftrag des koloniulwirtschaftlichen Komitees hrsg. v. O[tto] Warburg. Berlin (E. S. Mittler & S. in Komm.), 1903, (XI + 593, mit 13 Taf. u. 1 Karte). 25 cm. Geb. 20 M.

La faune au Congo. Belg. colon., Bruxelles, 1902, (509-510).

Le problème du Taganika. Au point de vue de la distribution de la faune. Mouv. géogr., Bruxelles, **1903**, (131-133).

Boulenger, G. A. Additions à la faune ichthyologique du bassin du Congo. Annales du nusée du Congo, publiées par ordre du secrétaire d'Etat indépendant du Congo. Zoologie. Série 1. Matériaux pour la faune du Congo. Planches dessinées sous la direction de l'auteur par P. J. Smit et J. Green. Tome 11 fascicule 11. Bruxelles (Spineux et Cie), 1902, (19-57, pls. VII-XVI hors texte). 4to. Le fascicule 20 fr.

Verdick. Notes sur la faune du Katanga. Belg. colon., Bruxelles, 1902, (280-281, 295).

#### f EAST AFRICA.

**Budgett**, J. S. (the late). Account of his recent journey to Uganda in search of the Okapi and *Polypterus*. London, Proc. Zool. Soc., **1903**, 1, (2-10).

Forbes, H. O. The Natural History of Sokotra and Abd-el-kuri. Being the report upon the results of the conjoint expedition to these islands in 1898-1899, by Mr. W. R. Ogilvie-Grant, of the British Museum, and Dr. H. O. Forbes, of the Liverpool Museums, together with information from other available sources. Forming a monograph of the Islands. Liverpool, 1903, (xlvii + 598, XXVII pls.) 8vo. A collection of memoirs by specialists, and recorded in detail under their names. A description of the expedition is given by Forbes.

#### g North America.

Morne, Max. Synopsis of North American invertebrates. 19. The Trichodectidae. Amer. Nat., Boston, Mass., **37**, 1903, (609-624). Separate 24 cm. (Contributions from the Department of Zoology and Entomology of the Ohio State University No. 12).

# gd CANADIAN DOMINION EAST.

Boardman, George A. Scientific lists [of birds and other fauna of Maine and New Brunswick]. Chapter 11 of The naturalist of the Saint Croix. . . by S. L. Boardman. Bangor, 1903, [[298]-322).

Schuchert, Charles. On the Helderbergian fossils near Montreal, Canada. [Descriptions of two new species of *Chonostrophia* from Quebec and New York]. Amer. Geol., Minneapolis, Minn., 27, 1901, (245-253).

gg NOBTH EASTERN UNITED STATES.

New YORK FOREST FISH AND GAME Commission. Sixth annual report of the Forest, fish and game commission of the state of New York. [1900.] Albany, N.Y., 1901, (532, with col., pl., text fig. and map). [0020.]

Seventh annual report. . . Albany, 1902, (93, with pl.). 23 cm.

Boardman, George A. Scientific lists [of birds and other fauna of Maine and New Brunswick]. Chapter 11 of The Naturalist of the Saint Croix . . . by S. L. Boardman. Bangor, 1903, ([298]-322).

Butts, Charles. Fossil faunas of the Olean quadrangle. Albany Univ., N.Y., Bull. St. Mus., No. 69, 1903, (990-995). Clarke, John M[ason] and Buedemann, Rudolf. Catalogue of type specimens of Paleozoic fossils in New York state museum. Albany Univ., N.Y., Bull. St. Mus., No. 65, 1903, (847). 23 cm.

Guelph fauna in the state of New York [with nn. spp. in Brachiopoda and Mollusca]. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (195, with pl.). 29.8 cm.

**Cleland**, Herdman Fitzgerald. A study of the fauna of the Hamilton formation of the Cayuga Lake section in Central New York [With bibliography]. Washington, D.C., U S. Dept. Int. Bull. Geol. Surv., No. **206**, 1903, (112, with pl.). 23.2 cm.

**Cumings**, Edgar R. A section of the Upper Ordovician at Vevay, Indiana. [Faunal lists, with descriptions of new species of Bryozoa]. Amer. Geol., Minnespolis, Minn., **28**, 1901, (361– 380, with 2 pl.).

**Davenport**, C[harles] B[enedict]. The animal ecology of the Cold Spring sand spit, with remarks on the theory of adaptation. [With bibliography]. Chicago, Ill., Dec. Pub. Univ. Chic., (Ser. 1), 10, 1903, ([155]–176, with text fig.).

Grabau, Amadeus W. Stratigraphy of Becraft mountain, Columbia county, New York. [List of fossils, with nn. spp. of Brachiopoda]. Albany Univ., N.Y., Bull. St. Mus., No. 69, 1903, (1030-1079, with map.).

Kofoid, C[harles] A[twood]. Plankton studies 4. The plankton of the Illinois river 1894-1899 with introductory notes upon the hydrography of the Illinois river and its basin. Part 1. Quantitative investigations and general results. [With bibliography]. Urbana, Bull. Ill. Lab. Nat. Hist., 6, 1903, ([95]-629, with maps and pl.).

Loomis, F. B. The dwarf fauna of the pyrite layer at the horizon of the Tully limestone in western New York. Albany Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920, with 5 pls.).

Marsh, C[harles] Dwight. The plankton of lake Winnebago and Green lake. Wisconsin, Madison, Geol. Nat. Hist. Surv., Bull., No. 12, 1903, (vi + 94, with pl.). 24.8 cm. Schuchert, Charles. On the Manlius formation of New York. Amer. Geol., Minneapolis, Minn., 31, 1903, (160-178).

**Talbot**, Mignon. A contribution to a list of the fauna of the Stafford limestone of New York. Amer. J. Sci., New Haven, Conn., (Ser. 4), **16**, 1903, (148– 150).

gi WESTERN UNITED STATES.

Adams, George I[rving], Girty, George HL and White, David. Stratigraphy and paleontology of the Upper Carboniferous rocks of the Kansas section. [Stratigraphy by G. I. Adams, Invertebrate fossils by G. H. Girty, and Fossil plants from the Upper Carboniferous and Permian by D. White]. Washington, D.C., U. S. Dept. Int., Bull. Geol. Surv., No. 211, 1903, (123, with maps). "23 cm.

Arnold, Ralph. The paleontology and stratigraphy of the marine Pliceene and Pleistocene of San Pedro, California. (Diss. Leland Stanford Junior University.) [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3]. in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (1-420, with pl.). Separate. 30.8 cm.

**Blaisdell**, F. E. The three Californias [three faunal areas of California]. Philadelphia, Pa, Ent. News Acad. Nat. Sci., **13**, 1902, (173–175).

Geckerell, Wilmatte Porter. A trip to the Truchas peaks, New Mexico. Amer. Nat., Boston, Mass., 37, 1903, (887-891).

Errod, Morton John. Daphnia pond. A study in environment. Missoula, Bull. Univ. Mont., No. 17, Biol. Ser. No. 5, 1903, (230-233, with pl.).

Girty, George H. Tabulated list of invertebrate fossils from the carboniferous section of Kansas. (Stratigraphy and paleontology of the upper carboniferous section of Kansas by George I. Adams, George H. Girty and David White). Washington, D.C., U. S. Dept.

(x 2-3053)

Int. Bull. Geol. Surv., No. 211, 1903, (73-83).

51

Merriam, C[linton] Hart. Results of a biological survey of Mount Shasta, California. Washington, D.C., U. S. Dept. Agric. Div. Biol. Surv., N. Auer. Fauna, No. 16, 1899, (179, with text, fig. and pl). [Reprinted in 1901]. 23 cm.

**Sternberg**, Charles H. The permian life of Texas. Topeks, Trans. Kan. Acad. Sci., **18**, 1903, (94–98).

Notes on the Judith river group [containing a letter from E. D. ('ope.] Science, New York, N.Y., (N. Ser.), **17**, 1903, (870–872).

**Yates**, Lorenzo, Gordin. Prehistoric California. Its topography, flora and fauna—with the evidence of the time of the advent of man, and his development, from the records of his past found in the soil. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, ([81]–86, [113]–118, 129–137, with pl).

h CENTRAL AND SOUTH AMERICA AND WEST INDIES.

**O[sborn]**, H[enry] F[airfield]. The Cope Pampean collection [representing the Pleistocene fauna of South America, American Museum of Natural History]. Science, New York, N.Y., (N. Ser.), **17**, 1903, (157-158).

he WEST INDIAN ISLANDS.

Mayer, Alfred Goldsborough. A laboratory for the study of Marine zoology in the tropical Atlantic. Pop. Sci. Mon., New York, N.Y., 64, 1903, (41-47).

hh BRAZIL.

**Eatser**, Friedrich. Grundzüge der Geologie des unteren Amazonasgebietes (des Staates Pará in Brazilien). Leipzig (M. Weg), 1003, (UII + 298, mit 4 Portr., 1 Karte). 26 cm. 14 M.

hk Chili.

Fauna chilensis. Abhandlungen zur Kenntniss der Zoologie Chiles nach den Sammlungen von Dr. L. Plate. Bd 3, E 2 H. 1. Zool. Jahrb., Jena, Suppl. 6, 1903, (1-214, mit 13 Taf.). 24 cm. [0030].

### i AUSTRALABIZ.

**Semon**, Richard. Zoologische Forschungsreisen in Australien und dem malayischen Archipel. Mit Unterstützung des Herrn Dr. Paul von Ritter ausgeführt i. d. J. 1891—1893. Bd 5: Wirbellose Tiere, Lfg 6. Jena, Denkschr. med. Ges., **8**, 1903, (643–778, I— VI, mit 16 Taf.).

#### ia New Guinea with Islands from Wallace's line.

Ergebnisse einer zoologischen Forschungsreise in den Molukken und Borneo, im Auftrage der Senckenbergischen naturforschenden Gesellschaft ausgeführt von Dr. Willy Kükenthal. Tl 2: Wissenschaftl. Reiseergebnisse, Bd 3, H. 4. Frankfurt a M., Abh. Senckenb. Ges., **25**, 1903, (5 Bl., S. 932-988, m. 1 Taf.).

**Davydov**, K. N. Rapport préliminaire sur un voyage à l'ile de Java et aux autres îles de l'Archipel Malais. (Russ.) St. Peterburg, Bull. Ac. Sc., (5 Sér.), **18**, No. 1, 1903, (25-32).

Kürenthal, W[illy]. Schlusswort [zu: Ergebnisse einer zool. Forschungsreise in den Molukken u. Borneo]. Frankfurt a M., Abh. Senckenb. Ges., 25, 1903, (969–988).

Willey, A. Zoological results based on material from New Britain, New Guinea, Loyalty Islands and elsewhere, collected during the vears 1895, 1896 & 1897 by Arthur Willey. Part VI. Cambridge, 1902. 4to. [Review], Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1902, (133-135).

# ic AUSTRALIA AS A WHOLE.

Hall, T. S. Whence came our Australian animals? Vict. Nat., Melbourne, 20, 1903, (39-41).

Hedley, C. Effect of the Bassian Isthmus upon the existing marine fauna: a study in ancient geography. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (876-883, with 1 map).

### k ARCTIC.

Fauna Arctica. Eine Zusammenstellung der arktischen Tierformen mit besonderer Berücksichtigung des Spitzbergen-Gebietes auf Grund der Ergebnisse der deutschen Expedition in das nördliche Eismeer im Jahre 1898. Unter Mitwirkung zahlreicher Fachgenossen hrsg. v. Fritz Römer und Fritz Schaudinn. Bd. 3, Lfg 1; Lfg 2; Hartmeyer, Ascidien. Jena (G. Fischer), 1903, (1-90, mit 3 Taf.; 91-412, mit 11 Taf.). 36 cm.

Graf, L. v. . . [Alekandrowsk] . . Zoologische Studienreise . . . Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (357-378).

**Enipowitsch**, N. Zur Kenntnis der physikalischen Geographie des Eismeeres. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecius du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, (42–48).

## kd Islands North of Europe and Asia.4

Birulia, A. A. Compte-rendu du zoologue de l'expédition sur les travaux scientifiques en été 1902 pendant sa vie sur l'île Nouvelle-Sibérie. Rapports sur les travaux de Expédition Polaire Russe dirigée par le baron Toll. V. (Russ.) St. Peterburg, Bull. Ac. Sc., (5 Sér.), **18**, No. 3, 1903, (91-94).

### l ATLANTIC.

**Cleve**, P[er] T[eodor]. Additional notes on the seasonal distribution of Atlantic Plankton Organisms [especially as concerns the southern hemisphere]. (3öteborg, Vet. Handl., (Ser. 4), 4, 1901, (1-51).

# la North Atlantic Ocean.

**Cleve**, P[er] T[eodor]. The Plankton of the North Sea and the Skagerak in 1900 (1902). Stockholm, Vet.-Ak. Handl., **35**, No. 7, 1901-2, (49).

Lohmann, H[ans]. Untersuchungen über die Tier- und Pflanzenwelt sowie über die Bodensedimente des nordatlantischen Ozeans zwischen dem 38. und 50. Grade nördl. Breite. Berlin, Sitz-Ber. Ak. Wiss, **1903**, (560-583, mit 1 Taf.).

Redeke, H[einrich] C[arl] und Breemen, P. J. van. Plankton und Bodentiere in der Nordsee gesammelt . . . August 1901 . . . (Holländisch) Helder, Tijdschr. Ned. Dierk. Ver., (Ser. 2), 8, [1903], (118-147).

# 16 Azores; Canaries; Madeira; Cape Verde.

Scharff, R. F. Some remarks on the Atlantis problem. Dublin, Proc. R. Irish Acad., 24, 1903, (268-302).

# le SOUTH ATLANTIC AND ISLANDS.

Vanhöffen, E[rnst]. Biologische Beobachtungen [auf der deutschen Südpolar-Expedition]. Berlin, Veröff. Inst. Meeresk., H. 2, 1902, (39–45).

🗰 Indian Ocean.

**Cleve**, P[er] T[eodor]. Planktou from the Indian Ocean and the Malay Archipelago. (1901.) Stockholm. Vet.-Ak. Handl., **35**, No. 5, 1901-2, (58, with 8 pls.).

ma OCEAN AND ISLANDS N. OF EQUATOR.

Gardiner, J. Stanley. The fauna and geography of the Maldive and Laccadive Archipelagoes. Vol. i, Parts 2 and 3. Vol. ii. Parts 1-4. Cambridge, 1902-1903. See numerous articles in the special Records.

**Elons.** C. B. In the Andamans and Nicobars. The narrative of a cruise in the schooner "Terrapin," with notices of the islands, their fauna, ethnology, etc. [The zoology is but slight, there are lists of mammals and birds, pp. 320-331, with some comments thereon.] London, 1903, (xvi + 373, with illustr.). 8vo.

n PACIFIC.

Agassiz, Alexander. Preliminary report and list of stations. With remarks on the deep-sea deposits by Sir John Murray. (Reports on the scientific results of the expedition to the tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer "Albatross" from August, 1899, to March 1900. Commanding 1.). Cambridge, Mass., Mem. Mus. Comp. Zool. Harvard Coll., 26, 1902, (21 + 1-114, with 21 charts). Separate 28.8 cm.

# ne MARSHALL ISLANDS.

**Schnee.** Einige Bemerkungen über die Tierwelt der Litoralregion von Jaluit. Zs. Natw., Stuttgart, **75**, (1902), 1903, (373-384).

——— Darwinistische Studien auf einer Korallen-Insel. (Gemeinverst. Darwinist. Vorträge u. Abh., H. 9.) Odenkirchen (W. Breitenbach), 1903, (46). 23 cm. 1 M.

#### nf FIJI ISLANDS.

**Guppy**, H. B. Observations of a Naturalist in the Pacific between 1896 and 1899. Vol. 1. Vanna Levu, Fiji, a description of its leading physical and geological characters. London, 1903, (xx + 392, with 1 pl., 2 maps). 8vo.

#### ANTARCTIC.

Vanhöffen, E[rnst]. Biologische Beobachtungen [auf der deutschen Südpolar-Expedition]. Berlin, Veröff. Inst. Meeresk., H. 2, 1902, (39-45).

------ Biologischer Bericht [der deutschen Südpolar-Expedition]. Berlin, Veröff. Inst. Meeresk., H. 5, 1903, (143-154).

### og ANTARCTIC CONTINENT.

Woodward, H. Address. [Southern Continent and Fauna.] Norwich, Trans. Nat. Soc., 7, 1903, (429-444).

# 0231 TAXONOMY OR CLASSI-FICATION IN GENERAL.

Das Tierreich. Eine Zusammenstellung und Kennzeichnung der rezenten Tierformen. Begründet von der zool. Gesellsch. Im Auftrage der k. preuss. Akad. d. Wissenschaften zu Berlin hrsg. v. Franz Eilhard Schulze. Lfg 18. 19. Berlin (R. Friedländer & S.), 1903, (XXXI + 255; XV + 168). 26 cm. 12,60 M.; 8,40 M. Arnold, R. The paleontology and stratigraphy of the marine Plicocene and Pleistocene of San Pedro, California. (Diss. Leland Stanford Junior University.) [Reprinted from San Francisco, Merr. Cal. Acad. Sci., **3**] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (1-420, with pl.). Separate 30.8 cm.

Bistram, A. Freiherr von. Beiträge zur Kenntnis der Fauna des unteren Lias in der Val Solda. Geologischpaläontologische Studien in den Comasker Alpen. I. Freiburg i. B., Ber. natf. Ges., 13, 1903, (116-214, mit 8 Taf.).

Born, P. Einmal etwas Nicht-Carabologisches. Insektenbörse, Leipzig, **20**, 1903, (316-317, 323-324).

Burckhardt, Rud[olf]. Zur Geschichte der biologischen Systematik. Basel, Verh. Natf. Ges., 16, 1903, (388-440).

**Carpenter**, G. H. On the relationships between the classes of Arthropoda. Dublin, Proc. R. Irish Acad, **24**, 1903, (320-360).

**Coratish**, C. The living animals of the world; a review of the animal kingdom for all, treated in an entirely new manner and edited by C. J. Cornish in co-operation with the most celebrated zoologists of the world. The Dutch edition undertaken by Dr. J. Buttikofter through Dr. J. Macleod, professor in Ghent. Brief description of quadrupeds, birds, fishes, insects, etc. (Dutch) Parts 11 and 12. Antwerp, Gent, 1903, (321-384): Vol. II, Parts 15-17, (65-160): Parts 22-24, (280-384). De nederlandische boekhandel. 4to. fr. 0. 90.

Dacqué, E. Mittheilungen über den Kreidecomplex von Abu Roash bei Cairo. Palacontographica, Stuttgart, 30, 11, 1903, (337-392, mit 3 Taf.).

Dahl, F. Erscheinungen in der modernen Systematik. Zool. Anz., Leipzig, 28, 1903, (693-696).

**Drevermann**, F. Die Fauna der oberdevonischen Tuffbreccie von Langenaubach bei Haiger. Berlin, Jahrb. geol. Landesanst., **21**, 1901, Abh. auss. st. Pers., (99-207, mit 5 Taf.).

Forbes, H. O. The Natural History of Sokotra and Abd-el-kuri. Being the report upon the results of the conjoint expedition to these islands in 1898-9, by Mr. W. R. Ogilvie-Grant, of the British Museum, and Dr. H. O. Forbes, of the Liverpool Museums, together with information from other available sources. Forming a monograph of the Islands. Liverpool, 1903, (xlvii + 598, XXVII pls.). 8vo. A collection of memoirs by specialists : recorded in detail under their names. À description of the expedition is given by Forbes.

Lankester, E. R. A classification of Animals from the point of view of Economic Zoology. [*in*] British Museum (Natural History) first report of Economic Zoology, 1903, Introduction (xi-xxxiv).

Lo Bianco, S. Le pesche abissoli eseguite da F. A. Krupp col Yacht Puritan nelle adiacenze di Capri ed in altre località del Mediterraneo. Mitt. zool. Stat. Nespel, Berlin, **16**, 1903, (109-279, mit 3 Taf.).

**Oppenheim**, P. Ueber die Fossilien der Blättermergelvon Theben. München, SitzBer. Ak. Wiss., math.-physik. Cl., **32**, (1902), 1903, (435–456, mit 1 Taf.).

Panleke, W. Ueber die Kreideformation in Südamerika und ihre Beziehungen zu anderen Gebieten. Tl 1. (Beitrage zur Geologie und Palaeontologie von Südamerika. Unter Mitwirkung von Fachgeuossen hrsg. v. G. Steinmann, X.) N. Jahrb. Min., Stuttgart, Beilagebd 17, 1903, (252-312, mit 3 Taf.).

**Sinclair**, W. J. A preliminary account of the exploration of Potter Creek cave. Shasta County, California. Science, New York, N.Y., (N. Ser.), **17**, 1803, (708-712).

Watther, K. Das Unterdevon zwischen Marburg a. I. und Herborn (Nassau). N. Jahrb. Min., Stuttgart, Beilagebd 17, 1903, (1-75, mit 4 Taf.).

Wollemann, A. Die Fauna des Senons von Biewende bei Wolfenbüttel. Berlin, Jahrb. geol. Landesanst., 21, 1901, Abh. auss. st. Pers., (1-30).

Woodworth, J. B. On the sedentary impression of the animal whose trail is known as Climactichnites. [Suggestion of molluscan origin]. Albany Univ., N.Y., Bull. St. Mus., No. 69, 1903, (959-966, with pl.).

Yatsu, N. The origin of Metazoa. (Japanese) Dobuts. Z., 'Tokyo, 15, 1903, (227-334).

# 0403-6031 SPECIAL ZOOLOGY.

References to previous volumes will be made thus: v. N. 2, i = VolumeFor Zoology, 2ND ANNUAL ISSUE, pt. i.

# 0403-0431 PROTOZOA.

## TITLES.

Aleksandrova, V. A. u. Istomina, N. A. Beobachtungen an Infusorien (Wirkung des Salamandergiftes; einige Wirkungen der Inductionsschläge. (Russ.) St. Peterburg. Trav. Soc. nat., XXXIV, 1, 1903, (Protok. N. 4-5), (156-157), deutsches Rés., (159-160). [0411 0407 0431]. 1

Annett, H. E., Dutton, J. E. and Elliott, J. H. Report of the Malaria Expedition to Nigeria. Liverp. Sch. Trop. Medicine, Mem. 3. London (Longmans, Green & Co.) 1902, (68, 2 pls., besides charts and illustrs.) [0060 0419 0427 fd 4203 4227 fd].

Argutinsky, P[etr, Fürst]. Ueber Malaria im europäischen Russland (ohne Finnland). Eine Skizze. Arch. Hyg., München, 47, 1903, (317-326, mit 1 Kart.). [0403 0419 0431]. 3

———— Beiträge zur Kenntnis der Morphologie und Biologie der Malaria-Parasiten. (Russ.) Arch. sc. biol., St. Peterburg, [russ. Ausg.] **10**, 1903, No. 1, (12-48, mit 1 Taf.). [0403 0407 0415 0419]. 4

Zur Kenntniss des Tropicaparasiten (*Plasmodium praecoz* Gr. u. Fel.). Die Tüpfelung der Wirtszellen der Halbmonde. Centralbl. Bakt., Jena, Abt. **34**, Originale, 1903, (144–149, mit 1 Taf.). [0403 0419 0431]. 5 Awerinzew, S. Beiträge zur Kenntnis der marinen Rhizopoden. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (349– 364). [0407]. 6

Ueber die Struktur der Kalkschalen mariner Rhizopoden. Zs. wiss. Zool., Leipzig, **74**, 1903, (478-490, mit 1 Taf.). [0407]. 7

Ayrton, W. On Zoothamnium geniculatum, a new Infusorian. London, J. Quek. Microsc. Cl., 8, 1903, (407-410, pl. 21); [abstract], London, J. R. Microsc. Soc., 1903, (504). [0407 0431]. 8

Babes, V[ictor]. Bemerkungen üher die Entdeckung des Parasiten der seuchenhaften Hämoglobinurie des Rindes (Texasfieber, Tristeza etc.) und des "Carceag" des Schafes. Centralbl. Bakt., Jena, Abt. 1, 33, Originale, 1903, (449-458); [abstract], London, J. R. Microsc. soc., 1903, (618). [0431]. 9

Beard, J. Carter. The Amoeba-a slime monster and its victim. Sci. Amer., New York, N.Y., 89, 1903, (31). [0419 0431]. 10

# Behrens v. Rievel [Heinrich].

Berestneff, N[ikolaj]. Ueber einen neuen Blutparasiten der indischen Frösche. Arch. Protistenkunde, Jena, 2, 1903, (343-348, mit 1 Taf.). [0419 0431]. 11 Bezzenberger, Ernst. Ueber Infusorien aus asiatischen Anuren. Arch. Protistenkunde, Jena, **3**, 1903, (138–174, mit 1 Taf.). [0419 0407]. 12

Neue Infusorien aus asiatischen Anuren. Zool. Anz., Leipzig, 26, 1903, (597-599). [0419 0431]. 13

# Bohn, G. v. Chéneveau, C.

Bortolotti, C. Sviluppo e propagazione delle opalinine parassite del lombrico. Mon. zool. ital., Firenze, 13, 1942, (185-204, con fig.). [0407 0415 0419 0431]. 14

Bosc, F. J. Les epithéliomas parasitaires. La clavelée et l'epithélioma claveleux. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (413-420, 517-526, 666-674, mit 3 Taf.). [0403 0419 0431]. 15

Boyce, R. W., Ross, R. and Sherrington, S. The history of the discovery of Trypanosomes in Man. Lancet, London. **1903**, 1, 509-513). [0403 0419]. 16

Note on the discovery of the human Trypanosome. Nature, London, 67, 1903, (56). [0403]. 17

**Brandes**, G[ustav]. Ueber die Natur des Vorticellen-Stieles. Zs. Natw., Stuttgart, **75**, (1902), 1903, (459-460). [0431 0411]. 18

Bruce, D. Nomenclature of Malaria; a suggestion. Lancet, London, 1903, 1, (131, 132); Brit. Med. J., London, 1903, 1, (15). [0403 0070 1431]. 19

and Nabarro, D. Progress Report on Sleeping Sickness in Uganda. Rep. S. S. Comm. (Royal Soc.), 1, (11-88, 10 pls.). [Abstract], Nature, London, 68, (517). [0403 0407 0419]. 20

and Greig, E. D. Further Report on Sleeping Sickness in Uganda. Rep. S. S. Comm. IV, (87, 4 pls,, 2 maps, and 2 text figs.). [Abstract]. Lancet, London, 1903, 2, (1730-1732). [0403 0407 0419]. 21

**Calkins**, Gary N[athan]. Marine Protozoa from Wood's Holl. [With bibliography.]. Washington, D.C., Bull. U. S. Fish. Com., **21**, (1901), 1902, (413-468, with text fig.). [0403 0427 gg 0431]. 22

 **Castellani**, A. Some observations on the morphology of the *Trypanosoma* found in sleeping sickness. Brit. Med. J., London, **1903**, 1, (1431–1432, 1 text fig.). [0403 0407 0419 0415 0060]. 24

On the discovery of a species of *Trypanosoma* in the cerebrospinal fluid of cases of sleeping sickness. London, Proc. R. Soc., **71**, 1903, (501-508, 2 tables); Lancet, London, **1903**, 1, (1735-1736); [abstract], Nature, London, **68**, 1903, (116). [0403 0407 0419 0060]. 25

Presence of Trypanosoma in sleeping sickness. Rep. S. S. Comm. (Royal Society), **1**, (1-10, 2 tables). [Identical with preceding.] [0407 0419 0060]. 26

Adult forms and developmental forms of the Trypanosome found in sleeping sickness. Rep. S. S. Comm. II, (9-13, pls. 1 and 2). [0403 0407 0419 0415 0060]. 27

Researches on the etiology of sleeping-sickness. J. trop. Med., London, 6, 1903, (167-171, 1 pl. and 2 text-figs.). [0403 0407 0419 0060]. 28

Die Actiologie der Schlafkrankheit der Neger. Centralbl. Bakt., Jena, Abt. 1, **35**, Originale, 1903, (62– 67, mit 1 Taf.). [0403 0431]. 29

Chéneveau, C. et Bohn, G. De l'action du champ magnétique sur les Infusoires. Paris, C.-R. Acad. sci., 136, 1903, (1579-1580). [0419:0411]. 30

Christophers, S. R. v. Stephens, J. W.

Christy, C. Malaria: the mode of entry of the spore into the red bloodcorpuscle. Brit. Med. J., London, 1903, 2, (645, 1 text-fig.). [0403 0419 0060]. 31

Ciuff, [M.]. Ricerche sugli Sporozoi. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (42–43). [0431]. 31A

**Clarke**, J. J. Protozoa and Disease. Part I. London (Baillière, Tindall, & Cox), 1903, (XIV + 177, 91 figs. in text). 8vo. [Review], Lancet, London, **1903**, 2, (891-892). [0419 0403 0060]. 32

**Cohnheim**, Paul. Ueber Infusorien im Magen und im Darmkanal des Menschen und ihre klinische Bedeutung. Vortrag. D. med. Wochenschr. Berliu, 29, 1903, (206-208, 230-232, 245-248). [0419]. 33

Crawley, Howard. List of the polycystid gregarines of the United States [with bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (41-58, with pl.). [0419 0427 gf 0431]. 34 The polycystid gregarines of the United States. Second contribution [with bibliography]. From Phila-delphia, Pa., Proc. Nat. Sci., October, 1903], (632-644, with pl.). Separate. 25.5 cm. [0427 gf 0431]. 34 . Nosema geophili, sp. n., a myxo-sporidian parasite of Geophilus. Philadelphia, Pa., Proc. Acad. Nat. Sci., 35, 1903, (337-338). Separate. 25.6 cm. [Abstract], London, J. R. Microsc. Soc., 1903, (618). [0219 0431 3431]. 35

Crossman, R. W. v. Weed, C. M.

Dangeard, P.-A. Contribution à l'étude des Diplozoaires. Paris, C.-R. Acad. sci., 136, 1903, (769-771). [0407 0431]. 37

Daniels, C. W. r. Manson, P.

Dionisi, A[ntonio]. Die Malaria einiger Fledermausarten. Unters. Natk., Giessen, 17, 1901, (281-337, mit 2 Taf.). [0403 0419 0431]. 38

Dofietn, F[ranz] und Prowasek, S. von. Die pathogenen Protozoen (mit Ausnahme der Hämosporidien). [In: Handbuch der pathogenen Mikroorganismen. Bd 1]. Jena, 1903, (865-1006). [0403 0419 0431]. 39

Donovan, C. The etiology of one of the heterogeneous fevers of India. Brit. Med. J., London, **1903**, 2, (1401). [0060 0403 0419]. 40

Drago, U. Coccidum scyllii n. sp. Roma, Ric. Lab. anat. norm., 9, fasc. 1°, 1902, (89-94, con fig.). [0431]. 41

Drzewecki, W. Ueber vegetative Vorgänge im Kern und Plasma der Gregarinen des Regenwurmhodens. Arch. Protistenkunde, Jena, **3**, 1903, (107-125, mit 2 Taf.). [0431 0415]. 42

Dubosoq, O. v. Lóger, L.

Dunbar, F. T. v. Pearl, R.

Durham, H. B. Report of the Yellow Fever Expedition to Para. Liverp. Sch. Trop. Medicine, Mem. vii. London (Longmans, Green & Co.), 1902, (79, 1 pl.). [0419 0427 hh]. 43 Dutton, J. E. Report of the Malaria Expedition to the Gambia, 1902. Liverp. Sch. Trop. Medicine, Mem. x. London (Longmans, Green & Co.), 1903, (46, 5 pls.). [Review]. Nature, London, **68**, 1903, (429). [0419 0060 0403 0020]. 44

and **Todd**, T. L. Preliminary account of the Investigations of the Liverpool Expedition to Senegambia (1902). Brit. Med. J., London, **1903**, 1, (304-305). [0419 0415 0403]. 45

First Report of the Trypanosomiasis Expedition to Senegambia (1902) of the Liverpool School of Tropical Medicine and Medical Parasitology. London (Longmans, Green & Co. for the University Press of Liverpool), 1903, (504, vii, 5 pls. and numerous charts). 4to. [Review], Lancet, London, **1903**, 2, (1727-1728). [0407 0419 0403 0020 0060 0431]. 46

#### --- v. Annett, H. E.

Elliott, T. H. v. Annett, H. E.

Enriques, P. Ricerche osmotiche sugli Infusori. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1902. (340-347). [0411 0431]. 47

Ricerche osmotiche sui Protozoi delle infusioni. Roma, Rend. Acc. Lincei, (Ser. 5). **11**, 1902, (392-397). [0403 0411 0431]. 48

Adattamento degli Infusori marini alla vita nell'acqua dolce. Mon zool. ital., Firenze, **13**, 1902, (Supplemento), (49-59). [0403 0411 0431]. 49

Farmer, J. B The structure of animal and vegetable cells. Section H. in Lankester's Treatise on Zoology. [One or two references to Protozoa.] Pt. I, ii, 1903, (1-46, 20 text-figs.). [Reviews], Nature, London, 68, 1903, (818); Irish Nat., Dublin, 12, 1903, (242-243). [0403 0407]. 50

**Peinberg**, L[udwig]. Ueber das Gewebe und die Ursache der Krebsgeschwülste. D. med. Wochenschr., Berlin, **29**, 1903, (67-70). [0407 0431]. 51

Das Gewebe und die Ursache der Krebsgeschwülste. Unter Berücksichtigung des Baues der einzelligen thierischen Organismen. Berlin, (A. Hirschwald), 1903, (VI + 231, mit 4 Taf.). 25 cm. 10 M. [0407 0431]. 52 Ferret, P. Observations relatives au développement de la cuticule chez le Sarcocystis tenella. Arch. anat. microsc., Paris, **6**, 1903, (88–98, av. pl.). [0407 0415]. 53

Fof. [A.]. Sui Citoryctes vaccine. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (34). [0403 0431]. 54

Forel, F. A. Le Léman. Monographie limnologique. Vol. III, pt. 1. Lausanne (F. Rouge), 1902, (411, text-figs. 167-227). [Review], Nature, London, **67**, (411-412). [0027 di 0427 di 0030 5127 di]. 55

Fowler, G. H. On *Planktonetta* atlantica Borgert. Q. J. Microsc. Sci., London, **47**, 1903, (133–143, pls. 11, 12). [0407 0431]. 56

Fuhrmann, O. Myxosporidies des corégones du lac de Neuchâtel. Arch. Sci. Phys., Genève, (sér. 4), 14, 1902, (172-173). [0419 0427 di 0431 5419]. 57

**Galli-Valerio**, Bruno. Notes de parasitologie. Centralbl. Bakt., Jena, Abt. **1**, **35**, Originale, 1903, (81-91). [0219 0403 0419 0431 1231 1219 1431 1419 4219]. 58

**Gillot**. Coloration des hématozoaires. Paris, C.-R. soc. biol., **55**, 1903, (244). [0407 0431]. 59

Gineste, v. Kunstler, J.

**Goldberger**, Huge. Die Wirkung von anorganischen substanzen auf Protisten. Ein Beitrag zur Biochemie des Protoplasmas. Zs. Biol., München, **43**, 1903, (503-581). [0411]. 60

Gotschlich, Emil. Ueber Protozoën-Befunde (Apiosoma) im Blute von Flecktyphuskranken. Vorl. Mitt. D. med. Wochenschr., Berlin, 29, 1903, (329-331). [0419 0431]. 61

Grassi, Battista. Die Malaria-Studien eines Zoologen. Nachtrag zur 2. verm. Aufl. Jena (G. Fischer), 1903, (19). 31 cm. [0419 0403 0431]. 62

**Greeley**, Arthur W[hite]. The artificial production of spores in *Monas* by a reduction of temperature. Chicago, 111., Dec. Pub. Univ. Chic., (Ser. 1), **10**, 1093, ([71]-77, with text fig.). [0211 (1411) (1431].

Reactions of Paramoecia and other protozoa to chemical and electrical stimuli. Science, New York, N.Y., (N. Ser.), **17**, 1903, (980-F.32). [0111 0131]. 64 Greig, E. D. r. Bruce, D.

Grobben, [Karl]. Ueber die systematische Gruppirung der Amoebinen und Foraminiferen. Verh. Ges. D. Natf., Leipzig, **74**, (1902), 1I, 1, 1903, (151-152). [0431]. 65

**Guiart,** J. Sur un nouvel infusoire parasite de l'homme. Paris, C.-R. soc. biol., **55**, 1903, (245-246). [0419 0431]. 66

Parasitologie pratique. Les parasites de l'intestin et leur recherche dans les matières fécales. Bul. sci. pharm, Paris, **6**, 1902, (152– 157, 109–208, av. fig.). [0419 1219 4219]. 67

Hamburger, Clara. Beiträge zur Kenntnis von Trachelius orum. Arch. Protistenkunde, Jena, 2, 1903, (445-474, mit 2 Taf.). [0431 0407]. 68

Hanna, W. Trypanosoma in birds in India. Q. J. Microsc. Sci., London, 47, 1903, (433–438, pl. 32). [0419 0403]. 69

Harris, H. F. A modification of the Romanowsky stain. Centralbl. Bakt., Jena, Abt. 1, **34**, Originale, 1903, (188-191). [0090]. 70

Hartmann, Max. Die Fortpflanzungsweisen der Organismen, erläutert an Protozoen, Volvocineen und Dicyemiden (zugleich Mitteilung über den Generationswechsel der Dicyemiden). Hab-Schr., Giessen, Leipzig (G. Thieme), 1903, (43). 23 cm. [1215 1231 0415].

Herrmann, A. Zweiter Beitrag zur Kenntniss des Vorkommens von Foraminiferen im Tertiär des Unter-Elsass. Strassburg, Mitt. geol. Landesanst., **5**, 1903, (263-273). [0403 0431]. 72

Dritter Beitrag zur Kenntniss des Vorkommens von Foraminiferen im Tertiär der Gegend von Pechelbronn, Lobsann, Sulz u/Wald und Gunstett im Unter-Elsass. Strassburg, Mitt. geol. Landesanst., **5**, 1903, (323-341). [0431]. 73

Hickson, S. J. The Infusoria or Corticata Heterokaryota. Section L, in Lankester's Treatise on Zoology, pt. I, ii, (361-420, 97 text-figs.). [Reviews] Nature, London, 68, 1903, (618); Irish Nat., Dublin, 12, 1903, (242-243). [0403 0431]. 74

Holland, R. r. Newton, R. B.

Holmes, M. W. Foraminifera from the Gault at Merstham. Croydon, Proc. Microsc. Nat. Hist. Cl., 1903, (34-40). [0127 de 0431]. 75

**Holmes**, S. J. Phototaxis in *Volvox*. Wood's Holl, Mass, Mar. Biol. Lab. Bull., **4**, 1903, (319–326); [abstract], London, J. R. Microse. Soc., **1903**, (7-30). [0211 0419 0431]. 76

Immermann, Ferdinand. Ueber Fremdkörperskelette bei Aulacanthiden. Zool. Anz., Leipzig, 27, 1903, (70-76). [0107]. 77

Issel, Raffaele. Ancistridi del Golfo di Napoli. Studio monografico sopra una nuova famiglia di Cigliati, commensali di molluschi marini. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (63-108, mit 3 Taf.). [0431 0419 2219]. 78

Jaquemet, Marcel. Sur la systématique des Coccidies des Céphalopodes. Arch. Protistenkunde, Jena, 2, 1903, (190–194). [0431]. 79

Jennings, H[erbert] S[pencer]. Studies on reaction to stimuli in unicellular organisms. IX. On the behavior of fixed infusoria (Stentor and Vorticella), with special reference to the modifiability of Protozoan reactions [with bibliography]. [Contributions from the Zoological laboratory of the University of Michigan, No. 57], in Amer. J. Physiol., Boston, Mass., 8, 1902, (23-60). [0411]. 80

Johnson, Herbert P. A new sporozoan parasite of Anopheles. J. Med. Res., Boston, Mass., 7, 1902, (213-219, with pl.). [0419 0431 4231]. 81

Jukes-Browne, A. J. The Cretaceous Rocks of Britain. Vol. II. The Lower and Middle Chalk of England. Mem. geol. Surv. U. K., London, 1903, (xiii + 568, 8 pls., 87 text-figs.). [0427 de 0627 de 2027 de 2227 de]. 82

Kempner, W. v. Rabinowitsch.

Ktimenko, W. Beitrag zur Pathologie des *Balantidium* [Paramoscium] coli. Beitr. path. Anat., Jena, **33**, 1903, (281– 201, mit 2 Taf.). [0431 0419]. 83

Konsel, H[ermann], Schütz, [Johann Wilhelm], Weber, A[ugust], Miesmer, [Hermann]. Ueber die Hämoglobinurie der Rinder in Deutschland. Berlin, Arb. Gesundhtsamt, 20, 1903, (1-77, mit 3 Taf.). [0419 0431 3031]. 84

Actes soc. linn., 58, 1903, (Proc.-verb. CLXXI-CLXXIV, av. fig.). [0407]. 87

Kuwano, [Hisato]. Trypanosoma parasitic in Triton pyrrhogaster. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (297). [0419]. 88

Laveran, A. Sur deux Hippobosques du Transvaal susceptibles de propager Trypanosoma theileri. Paris, C.-R. soc. biol., 55, 1903, (242-243). [4219 4227 fg 4231 0419 0431]. 89

Protozoaires parasites du sang. Paris, C.-R. soc. biol., 55, 1903, (305-306). [0403 0419]. 90

et Menul, F. Le Nagana, le Surra et le Cadéras constituent trois entités morbides distinctes. Paris, C.-R. Acad. sci., **136**, 1903, (1529-1532). [0419 0431]. 91

Sur un Protozoaire nouveau (Piroplasma donorani Lav. et Mesn.), parasite d'une fièvre de l'Inde. Paris, C.-R. Acad. sci., **137**, **1903**, (957-961). [0419 0431]. 92

Ledoux-Lebard. Action du sérum sanguin sur les Paramécies. Ann. Inst. Pasteur, Paris, 16, 1902, (510-521). [0411]. 93

Action de la lumière sur la toxicité de l'éosine et de quelques autres substances pour les Paramécies. Ann. Inst. Pasteur, Paris, **16**, 1902, (587-594). [0411]. 94

Léger, Louis. Sporozoaire parasite des moules et autres Lamellibranches comestibles. Paris, C.-R. Acad. sci., 137, 1903, (1003-1005). [0419 0431 2219]. 95

Sur quelques Cercomonadines nouvelles ou peu connues parasites de l'intestin des insectes. (Note préliminaire.) Arch. Protistenkunde, Jena, 2, 1903, (180-189). [0431 0419]. 96

garines et l'épithélium intestinal chez

les Trachéates. Arch. parasit., Paris, **6**, 1902, (377–473, av. fig. et 5 pl.). [0419 0431 2419 3419]. 97

Leishman, W. B. On the possibility of the occurrence of Trypanosomiasis in India. Brit. Med. J., London, **1903**, 1, (1252-1254, 2 text. jgs.). [0419 0403 0427ef 0060]. 98

Lemmermann, E[mst]. Flagellatae. Chlorophycese, Coccospharales und Silicoflagellatae. [In: Nordisches Plankton. Lfg 2.] Kiel u. Leipzig, 1903, (XXI 1-XXI 40). [0431]. 99

Lindner, G[ustav]. Regelmässiger Befund spezifischer Monaden in den Miescher'schen Schläuchen. Natw. Wochenschr., Jena, **18**, 1903, (315–316). [0431].

Lingard, Alfred. The giant Trypanonoma discovered in the blood of bovines. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (234-238, mit 1 Taf.). [0403 0431]. 101

Linstow, [Otto] von. Parasiten, meistens Helminthen, aus Siam. Arch. mikr. Anat., Bonn, **62**, 1903, (108–121, mit 1 Taf.). [0419 0431 0427 ce 1227 ce 1231 1427 ce 1431]. 102

Lister, J. J. The Foraminifera. Section I in Lankester's Treatise on Zoology, Pt. I, ii, (47–149, 59 text-figs.). [Reviews]. Nature, London, **68**, 1903, (618); Irish Nat., Dublin, **12**, 1903, (242–243). [0403]. 103

Le Bianco, Salvatore. Le pesche abissali eseguite da F. A. Krupp col yacht Puritan nelle adiacenze di Capri ed in altre località del Mediterraneo. Mitt. zool. stat. Neapel, Berlin, **16**, 1903, (109-279, mit 3 Taf.). [0431 1631 2231 2631 0227 dm 0219 0231]. 104

Löwit, M[oriz]. Ueber färberische Differonzen zwischen der Mastzellengranulation und der Haemamoeba leucaemiae magna. Beitr. path. Anat., Jena, 33, 1903, (113-122, mit 1 Taf.). 0090 0411 0431]. 105

Lohmann, H[ans]. Neue Untersuchungen über den Reichthum des Meeress an Plankton und über die Brauchbarkeit der verschiedenen Fangmethoden. Zugleich auch ein Beitrag zur Kenntnis des Mittelmeerauftriebs. Wiss. Meeresunters., Kiel, (N.F.), 7, Abt. Kiel, 1903, (1-87, mit 4 Taf.). [0219 0227 dm '31 5007]. 106 Loisel, Gustave. Expériences sur la conjugaison des Infusoires. Paris, C.-R. soc. biol., 55, 1903, (53-55). [0415]. 107

Sur les causes de la sénescence chez les Protozoaires. Paris, C.-R. soc. biol., 55, 1903, (55-57). [0411]. 108

Sur la sénescence et sur la conjugaison des Protozoaires. [Expériences et théories nouvelles.] Zool. Anz., Leipzig, **26**, 1903, (484–495); [abstract], London, J. R. Microsc. Soc., **1903**, (503). [0411 0415]. 109

Lo Monaco, D[om.] und Paniohi, L. Die Wirkung der antiperiodischen Heilmittel auf den Malariaparasiten. Unters. Natk., Giessen, 17, 1901, (264-280). [0431 0419]. 110

Lühe, M[ax]. Die Coccidien-Literatur der letzten 4 Jahre. Zusammenfassende Besprechung. Zool. Centralbl., Leipzig, 10, 1903, (617-661); [abstract], London, J. R. Microsc. Soc., 1903, (730). [0431]. 111

Luts, Adolph und Splendore, Alfonso. Ueber Pebrine und verwandte Mikrosporidien. Ein Beitrag zur Kenntnis der brasilianischen Sporozoen. Erste Mitteilung. Centralbl. Bakt., Jena, Abt. 1, 38, Originale, 1903, (150–157). [0431 4419]. 112

Magnitzkij, Roman Sergĕevič. Chilodon notamoibos n. sp. (Russ.). Moskva, Dnevn. Zool. Otd. Imp. Obsc. liub. jest., III, 5, 1903, (25-27, mit Taf.). 35 cm. [0407 0419 0423 0431]. 112A

Maier, Hermann Nicolaus. Ueber den feineren Bau der Wimperapparate der Infusorien. Arch. Protistenkunde. Jena, 2, 1903, (73-179, mit 2 Taf.). [0407].

Manson, P. Trypanosomiasis on the Congo. Brit. Med. J., London, **1903**, J, (720-721); [abstract], London, J. R. Microsc. Soc., **1903**, (307). [0419 0403 0427 fd 0060]. 114

Tropical Diseases. A Manual of the Diseases of Warm Climates. New and Revised Edition. London (Cassell & Co.), 1903, (**xxiv** + 756, 2 pls. and 130 text figs.). [Contains a general account of malarial and other Protozoan parasites.] 8vo. [0060 0403 0419]. ..., 115 Hanson, P. and Daniels, C. W. Remarks on a case of Trypanosomiasis. Brit. Mod. J., London, 1903, 1, (1249-1252, 2 text-figs.). [0419]. 116

Marotel, G. r. Moussu, G.

Martini, Erich. Ueber die Entstehung der Neuerkrankungen an Malaria während des Frühjahres und Sommers unserer Breiten. Zs. Hyg., Leipzig, 41, 1902, (147-152, mit 2 Taf.). [0431].

Ueber die Entwickelung der Tseteeparasiten in Säugethieren. Za. Hyg., Leipzig, 42, 1903, (341-350, mit l Taf.). [0431 0419]. 118

Matthews, C. (1, and Oswell, B. L. The microscopic life of the river Trent. Burton-on-Trent, Trans. Nat. Hist. Soc., 5, 1, 1903, (31-34). [0403 0427 de 0419]. 119

**Haxwell Adams**, A. Trypanosomiasis and its cause. Brit. Med. J., London, **1905**, 1, (721-732); [abstract], London, J. R. Microsc. Soc., **1903**, (307). [0419 0403], 120

Memil, F. v. Laveran, A.

Infusorien (*Paramoecium*) ihre Nahrung zu wählen. (Russ.) St. Peterburg, Bull. labor. biol., ♥, 4, 1902, (23-26). [0419 0431]. 122

Metmer, Rud. Untersuchungen an Coc-idium cuniculi. Arch. Protistenkunde, Jena, 2, 1903, (13-72, mit 1 Taf.). [0415 0431 6031]. 123

Missener, [Hermann] v. Kossel, H.

Millet, W. F. Report on the recent Foraminifera of the Malay Archipelago, collected by Mr. A. Durrand, F.R.M.S. Part XIV. London, J. R. Microsc. Soc., 1903, (253-275, pl. 5). [0427 dc 0431]. 124

Minchin, E. A. The Sporozoa. Section K in Lankester's Treatise on Zoology, pt. I. ii, (150-360, 127 textfigs.). [Reviews], Nature, London, 68, 1903, (618); Irish Nat., Dublin, 12, 1903, (242-243). [0419 0403]. 125

Minkiewitech, R. K. Ueber eine neue Art Codenella im Plankton des Asowischen und Aralischen Meeres. (Russ.) Tuškent, Izv. Turk. Otd. Geogr. Obšč., III, livr. 3, 1903, (43–46). [0427 (4331]. 126

Mitrofanov, P. I. Der Kernapparat der Farannoscien. Arb. a. d. zootom. Labor. d. Univ. Warschau No. XXXI. (Russ.) Varšava, Izv. Univ., **1903**, (48, mit 31 fig.). [0407 0415]. 127

Miyajima, Mikinosuke. On the malaria parasite Halteridium of sparrows. (Japanese) Dobuts Z., Tokyo, 15, 1903, (131-151). [0403 0407 0415 0419 0431]. 128

Molisch, Hans. Amoeben als Parasiten in Volvox. Berlin, Ber. D. bot. Ges., 21, 1903, (20-23, mit 1 Taf.). [0431 0419]. 129

Moroff, Theodor. Beitrag zur Kenntnis einiger Flagellaten. Arch. Protistenkunde, Jena, **3**, 1903, (69-106, mit 2 Taf.); [abstract], London, J. R. Microsc. Soc., **1903**, (46). [0431]. 130

Moussu, G. et Marotel, G. J.a coccidiose du mouton et son parasite [Coccidium faurei, n. sp.] Arch. parasit., Paris, 6, 1902, (82-98, av. 10 fig.). [0431 6019]. 131

Mouton, Henri. Recherches sur la digestion chez les Anibes et sur leur diastase intracellulaire. Ann. Inst. Pasteur, Paris, **16**, 1902, (457-509, av. l pl.). [0411]. 132

Muratet, [L.] v. Sabrazès, [J.].

Nabarro, D. r. Bruce, D.

Negri, A. Beitrag zum Studium der Aetiologie der Tollwuth. Zs. Hyg., Leipzig, 43, (507-528, mit 2 Taf.). [0423 0431]. 133

Neresheimer, Eugen Robert. Ueber die Höhe histologischer Differenzierung bei heterotrichen Ciliaten. Arch. Protistenkunde, Jena 2, 1903, (305-324, mit 1 Taf.). Diss. Munchen. Jena (G. Fischer), 1903, (22). 23 cm. [0407 0411 0431]. 135

Nishikawa, Tökichi. Further observations on the "red current," due to Gonyaulax poligramma. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (347-353). [0419 0431]. 137

**Okolovič**, I. M. Die Erscheinungen der Reizbarkeit bei den niederen Thieren. (Russ.) Rec. méd. vétérin., Varsava, 7, 1902, (108-135). [0411]. 1374

Oswell, B. L. v. Matthews, C. G.,

H. 1. Zool. Jahrb., Jens, Suppl. 6, 1903, (1-214, mit 13 Taf.). 24 cm. [0030].

# i AUSTRALASIA.

**Semon**, Richard. Zoologische Forschungsreisen in Australien und dem malayischen Archipel. Mit Unterstützung des Herrn Dr. Paul von Ritter ausgeführt i. d. J. 1891—1893. Bd 5 : Wirbellose Tiere, Lfg 6. Jena, Denkschr. med. Ges., **8**, 1903, (643-778, I---VI, mit 16 Taf.).

### ia New Guinea with Islands from Wallace's line.

Ergebnisse einer zoologischen Forschungsreise in den Molukken und Borneo, im Auftrage der Senckenbergischen naturforschenden Gesellschaft ausgeführt von Dr. Willy Kükenthal. Tl 2: Wissenschäftl. Reiseergebnisse, Bd 3, H. 4. Frankfurt a M., Abh. Senckenb. Ges., **25**, 1903, (5 Bl., S. 032-988, m. 1 Taf.).

**Davydov**, K. N. Rapport préliminaire sur un voyage à l'ile de Java et aux autres îles de l'Archipel Malais. (Russ.) St. Peterburg, Bull. Ac. Sc., (5 Sér.), **18**, No. 1, 1903, (25-32).

Kükenthal, W[illy]. Schlusswort [zu: Ergebnisse einer zool. Forschungsreise in den Molukken u. Borneo]. Frankfurt a M., Abh. Senckenb. Ges., 25, 1903, (969-988).

Willey, A. Zoological results based on material from New Britain, New Guinea, Loyalty Islands and elsewhere, collected during the years 1895, 1896 & 1897 by Arthur Willey. Part VI. Cambridge, 1902. 4to. [Review], Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1902, (133-135).

# ic AUSTRALIA AS A WHOLE.

Hall, T. S. Whence came our Australian animals? Vict. Nat., Melbourne, 20, 1903, (39-41).

Hedley, C. Effect of the Bassian Isthmus upon the existing marine fauna: a study in ancient geography. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903. (876-883, with 1 map).

k ARCTIC.

Fauna Arctica. Eine Zusammenstellung der arktischen Tierformen mit besonderer Berücksichtigung des Spitzbergen-Gebietes auf Grund der Ergebnisse der deutschen Expedition in das nördliche Eismeer im Jahre 1898. Unter Mitwirkung zahlreicher Fachgenossen hrsg. v. Fritz Römer und Fritz Schaudinn. Bd. 3, Lfg 1; Lfg 2; Hartmeyer, Ascidien. Jena (G. Fischer), 1903, (1-90, mit 3 Taf.; 91-412, mit 11 Taf.). 36 cm.

Graff, L. v. . . [Alekandrowsk] . . Zoologische Studienreise . . . Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (357-378).

Enipowitsch, N. Zur Kenntnis der physikalischen Geographie des Eismeeres. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, (42–48).

# kd Islands North of Europe and Asia.

**Birulia**, A. A. Compte-rendu du zoologue de l'expédition sur les travaux scientifiques en été 1902 pendant sa vie sur l'île Nouvelle-Sibérie. Rapports sur les travaux de Expédition Polaire Russe dirigée par le baron Toll. V. (Russ.) St. Peterburg, Bull. Ac. Sc., (5 Sér.), **18**, No. 3, 1903, (91–94).

# l ATLANTIC.

**Cleve**, P[er] T[eodor]. Additional notes on the seasonal distribution of Atlantic Plankton Organisms [especially as concerns the southern hemisphere]. (öteborg, Vet. Handl., (Ser. 4), 4, 1901, (1-51).

## la NORTH ATLANTIC OCEAN.

**Cleve**, P[er] T[eodor]. The Plankton of the North Sea and the Skagerak in 1900 (1902). Stockholm, Vet.-Ak. Handl., **35**, No. 7, 1901-2, (49).

Lohmann, H[ans]. Untersuchungen über die Tier- und Pflanzenwelt sowie über die Bodensedimente des nordstlantischen Ozeans zwischen dem 38. und 50. Grade nördl. Breite. Berlin, Sitz-Ber. Ak. Wiss, **1903**, (560-583, mit 1 Taf.).

Redeke, H[einrich] C[arl] und Breemen, P. J. van. Plankton und Bodentiere in der Nordsee gesammelt . . . August 1901 . . . (Holländisch) Helder, Tijdschr. Ned. Dierk. Ver., (Ser. 2), 8, [1903], (118-147).

# 16 Azores; Canaries; Madeira; Cape Verde.

Scharff, R. F. Some remarks on the Atlantis problem. Dublin, Proc. R. Irish Acad., 24, 1903, (268-302).

#### le South Atlantic and Islands.

Vanhöffen, E[rnst]. Biologische Beobachtungen [auf der deutschen Südpolar-Expedition]. Berlin, Veröff. Inst. Meeresk., H. 2, 1902, (39–45).

m Indian Ocean.

**Cleve**, P[er] T[eodor]. Planktou from the Indian Ocean and the Malay Archipelago. (1901.) Stockholm. Vet.-Ak. Handl., **35**, No. 5, 1901-2, (58, with 8 pls.).

ma OCEAN AND ISLANDS N. OF EQUATOR.

Gardiner, J. Stanley. The fauna and geography of the Maldive and Laccadive Archipelagoes. Vol. i, Parts 2 and 3. Vol. ii. Parts 1-4. Cambridge, 1902-1903. See numerous articles in the special Records.

**Eloss**, C. B. In the Andamans and Nicobars. The narrative of a cruise in the schooner "Terrapin," with notices of the islands, their fauna, ethnology, etc. [The zoology is but slight, there are lists of mammals and birds, pp. 320-331, with some comments thereon.] London, 1903, (xvi + 373, with illustr.). 8vo.

#### n PACIFIC.

Agrassiz, Alexander. Preliminary report and list of stations. With remarks on the deep-sea deposits by Sir John Murray. (Reports on the scientific results of the expedition to the tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer "Albatross" from August, 1899, to March 1900. Commander Jefferson F. Moser, U.S.N., commanding. 1.). Cambridge, Mass., Mem. Mus. Comp. Zool. Harvard Coll., 26, 1902, (21 + 1-114, with 21 charts). Separate 28.8 cm.

#### MARSHALL ISLANDS.

**Schnee.** Einige Bemerkungen über die Tierwelt der Litoralregion von Jaluit. Zs. Natw., Stuttgart, **75**, (1902), 1903, (373-384).

——— Darwinistische Studien auf einer Korallen-Insel. (Gemeinverst. Darwinist. Vorträge u. Abh., H. 9.) Odenkirchen (W. Breitenbach), 1903, (46). 23 cm. 1 M.

### nf FIJI ISLANDS.

**Guppy**, H. B. Observations of a Naturalist in the Pacific between 1896 and 1899. Vol. 1. Vanua Levu, Fiji, a description of its leading physical and geological characters. London, 1903, (xx + 392, with I pl., 2 maps). 8vo.

#### ANTARCTIC.

Vanhöffen, E[rnst]. Biologische Beobachtungen [auf der deutschen Südpolar-Expedition]. Berlin, Veröff. Inst. Meeresk., H. 2, 1902, (39–45).

------ Biologischer Bericht (der deutschen Südpolar-Expedition). Berlin, Veröff. Inst. Meeresk., H. 5, 1903, (143-154).

### oa ANTARCTIO CONTINENT.

Woodward, H. Address. [Southern Continent and Fauna.] Norwich, Trans. Nat. Soc., 7, 1903, (429-444).

# 0231 TAXONOMY OR CLASSI-FICATION IN GENERAL.

Das Tierreich.	Bin 9.	amenstel-
lung und Kennz		maten
Tierformen. B		
Gesellsch. Im		
Akad. d. Winser		
v. Franz Eilha		
Berlin (R. Fri		
(XXXI + 255;		
12,60 M.; 8,40 M.		

ne

**Solger,** F. Woher stammen die Coccolithen des Tiefseeschlammes? Natw. Wochenschr., Jena, **18**, 1903, (529-533). [0431]. 184

Splendore, Alfonso v. Lutz, A.

Statkevič, P. G. Beitrag zur Methodik der biologischen Untersuchungen von Protisten. Neue Methoden der Züchtung von Protisten sowie der Beobachtung ihrer Bewegungen. (Russ.) Moskva, Dnevn. Zool. Otd. Imp. Obšč. Ilub. jest., III, 5, 1903, (42-51). 35 cm. [0411 0423 0403]. 184A

**Stebbins**, James H., *jun*. On the occurrence of parasites in the blood of the *Damonia revesii* turtle. J. Appl. Microsc., Rochester, N.Y., **6**, 1903, (2164–2168). [0419 5631]. 185

**Stempell**, W[alter]. Beiträge zur Kenntnis der Gattung Polycaryum. Arch. Protistenkunde, Jona, **2**, 1903, (349-363, mit 1 Taf.). [0431 2631]. 186

Ueber die Fortpflanzung der Protozoen. Zusammenfassende Uebersicht. Greifswald, Mitt. natw. Ver., **34**, (1902), 1903, (89-97). [0415]. 187

**Stephens**, J. W. and **Christophers**, S. R. Note on the changes in the red cell produced by the malignant tertian parasite. Brit. Med. J., London, **1903**, 1, (730). [0407]. 188

tudy of malaria and other blood parasites. London (Longmans, Green & Co.), 1903, (vi + 378 + xxxv, 2 pls., 93 text-figs.). 8vo. [0419 0060 0403]. 189

**Steuer**, Adolf. Ueber das Vorkommen von Coccolithophoriden im Golf von Triest. (Mitt. aus d. zool. Stat. Triest. No. 7.) Zool. Anz., Leipzig, **27**, 1903, (129–131). [0427 dm 0431]. 190

Ueber eine Euglenoide (Eutreptia) aus dem Canale grande von Triest. Arch. Protistenkunde, Jena, 3, 1903, (126-137). [0431]. 191

stevens, Nettie Maria. Further studies on the ciliate Infusoria, *Licno*phora and *Boveria*. Arch. Protistenkunde, Jena, **3**, 1903, (1–43, mit 6 Taf.). [0431 0415]. 192

Strehl, Karl. Ueber die Natur des Vorticellenstieles. Zs. wiss. Mikrosk., Leipzig, 20, 1903, (189). [0431]. 193

Taylor, L. Second Progress Report of the Campaign against Mosquitoes in Sierra Leone. Liverp. Sch. Trop. Medicine, Mem 5, pt. 2. Liverpool (University Press) 1902, (13). [0419 0020 0060 0403]. 194

**Thompson**, B. The junction beds of the Upper Lias and Inferior Oolite in Northamptonshire. Pt. II: Stratigraphical and Palæontological. Northampton, J. Nat. Hist. Soc., **11**, 1903, (197-216, 235-244); **12**, 1903, (54-69). [0427 de 2227 de]. 195

Thompson, I. C. On the plankton of the Indian Ocean. London, Rep. Brit. Ass., 1902, 1903, (643–644). [2619 0419]. 196

Todd, J. L. v. Dutton, J. E.

Tyzzer, E. E. Coccidium infection of the rabbit's liver. [With bibliography.] J. Med. Res., Boston, Mass., 7, 1902, (235-254, with pl.). [0419 0431]. 197

Wallengren, Hans. Zur Kenntnis der Galvanotaxis. [Forts.] Zs. allg. Physiol., Jena, 2, 1903, (516–555). [0411 0431]. 198

Watson, M. A note on the parasites of a case of malignant malaria, with a discussion of the development of the crescent. J. trop. Med., London, **6**, 1903, (221-223, 1 pl.). [0415 0419 0060 0403]. 199

Weber, A[ugust] v. Kossel, H.

Weed, C. M. and Crossman, R. W. A Laboratory Guide for Beginners in Zoology. London (Heath & Co.), 1903, (XXIV + 105); [Review], Nature, London, 68, 1903, (319). [0030 0807 0803 0403 1803]. 200

West, G. S. Observations on freshwater Rhizopods, with some remarks on their classification. London, J. Linn. Soc. Zool., 29, 1903, (108-117, pl. 13). [0423 0427 0431]. 201

Williamson, G. A. The nomenclature of Malaria. Brit. Med. J., London, **1903**, 1, (823). [0403 0070]. 202

Woodcook, H. M. Report, in Report of the Committee on investigations made at the Marine Biological Laboratory, Plymouth. London, Rep. Brit. Ass., 1902, (271-272). [1019 0419 2219]. 203

Woodward, H. Note on the occurrence of Protozoa geologically, in: The President's Address, Some Ideas on Life. London, J. R. Microsc. Soc., 1903, (142-157, text-figs. 35 and 36, 1 table). [0427]. 205

Wright, J. Foraminiferal, high-level Boalder Clay in the County of Dublin, and in Dumfriesshire and Ayrshire; with observations on the origin of Boalder Clays. Irish Nat., Dublin, 12, 1903, (173-180). [0427 de]. 206

The micro-fauna of the Boulder Clay, with some remarks on the movement of glaciers. Belfast, Rep. Nat. Hist. Phil. Soc, **1903**, (47-50). [0427 de]. 207

The Foraminifera of the Boulder Clay of Knock Glen, Co. Down. Belfast, Rep. Nat. F. Cl., (Ser. 2), 5, 1903, (59-63). [0427 de]. 208

Foramiuiferal Boulder Clay from Woodburn, Carrickfergus. Belfast, Rep. Nat. F. Cl., (Ser. 2), 5, 1903, (109–114). [0427 de]. 209

**Yatsu**, [Naohide]. Two facts observed on *Amoeba*. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (297-298). [0419]. 210

**Zacharias**, Otto. Biologische Charakteristik des Klinkerteiches zu Plön. Mit Anhang: Ueber die Infektion von Synchaeta pectinata Ehrenb. mit den parasitischen Schläuchen von Ascosporidium blochmanni. Plön, Forsch-Ber. biol. Stat, **10**, 1903, (201-222, mit 1 Taf.). [0227 de 0431]. 211

Zur Kenntniss der niedern Flora und Fauna holsteinischer Moorsümpfe. Plön, ForschBer. biol. Stat., 10, 1903, (223-289, mit Taf.). [0431 1231 0231 0227 de]. 212

Drei neue Panzerflagellaten des Süsswassers. Plön, Forsch-Rer. biol. Stat., **10**, 1903, (290-292). [0431]. 213

Früheren Beschreibung der Staurophrya elegans. Plön, ForschBer. biol. Stat., 10, 1903, (312-314). [0431]. 214

Zernev, S. A. Ueber das Zooplankton des Aral-Sees, auf Grund der von 1. S. Berg im Jahre 1900 gesammelten (x 2-9053) Materialien. (Russ.) Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., 3, livr. 111, 1903, (1-38). [0227 0427 1627 1631 2627 2631]. 215

**Zorn**, Ludwig. Beitrag zur Kenntnis der Amoeben-Enteritis. Diss. München (Druck v. Kastner & Lossen), 1901, (32). 20 cm. [0419]. 216

# 0403 COMPREHENSIVE AND GENERAL WORKS.

## GENERAL.

**Calkins**, Gary N[athan]. Marine Protozoa from Wood's Holl [with bibliography]. Washington, D.C., Bull. U. S. Fish. Com., **21**, (1901), 1902, (413-468, with text-fig.).

Enriques, P. Ricerche osmotiche sui Protozoi delle infusioni. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1902, (392-397).

Adattamento degli Infusori marini alla vita nell'acqua dolce. Mon. zool. ital., Firenze, **13**, 1902, (Sapplement), (49-59).

Galli-Valerio, Bruno. Notes de parasitologie. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (81-91).

Herrmann, A. Zweiter Beitrag zur Kenntniss des Vorkommens von Foraminiferen im Tertiär des Unter-Elsass. Strassburg, Mitt. geol. Landesanst., 5, 1903, (263-273).

Matthews, C. G. and Oswell, B. L. The microscopic life of the river Trent. Burton-on-Trent, Trans. Nat. Hist. Soc., 5, 1, 1903, (31-34).

**Prowasek**, S. Beitrag zur Kenntnis der Regeneration und Biologie der Protozoen. Arch. Protistenkunde, Jena, **3**, 1903, (44–59).

**Statkevič**, Pavel Grigorievič. Beitrag zur Methodik der biologischen Untersuchungen von Protisten. Neue Methoden der Züchtung von Protisten sowie der Beobachtung ihrer Bewegungen. (Russ.) Moskva, Dnevn. Zool. Otd. Imp. Obšč. liub. jest., **III**, 5, 1903, (42-51). 35 cm.

Weed, C. M. and Crossman, R. W. Protozoa in: A Laboratory Guide for Beginners in Zoology. London (Heath & Co.), 1903, (XXIV + 105). [Review], Nature, London, 68, 1903, (319).

Williamson, G. A. The nomenclature of malaria. Brit. Med. J., London, 1903, 1, (823).

# TREATISES.

Doffein, F[ranz] und Prowassk, S. von. Die pathogenen Protozoen (mit Ausnahme der Hämosporidien). [In : Handbuch der pathogenen Mikroorganismen. Bd. 1.] Jena, 1903, (865–1006).

**Parmer, J. B.** The structure of animal and vegetable cells. Section H in Lankester's Treatise on Zoology. [One or two references to Protozoa.] Pt. I, ii, 1903, (1-46, 20 text-figs.). [Reviews] Nature, London, **68**, 1903, (618); Irish Nat., Dublin, **12**, 1903, (242, 243).

Hickson, S. J. The Infusoria or Corticata Heterokaryota. Section L in Lankester's Treatise on Zoology, pt. I, ii, (361-426, 97 text figs.). [Reviews], Nature, London, **68**, 1903, (618); Irish Nat., Dublin, **12**, 1903, (242-243).

Lister, J. J. The Foraminifers. Section I in Lankester's Treatise on Zoology, Pt. I, ii, (47-149, 59 text-figs.). [Reviews], Nature, London, **68**, 1903, (618): Irish Nat., Dublin, **12**, 1903, (242, 243).

Minohin, E. A. The Sporozoa. Section K in Lankester's Treatise on Zoology, Pt. I, ii, (150-360, 127 textfigs.). [Reviews], Nature, London, **68**, 1903, (618); Irish Nat., Dublin, **12**, 1903, (242, 243).

#### TECHNIQUE.

Koreck, J. The technique of staining malaria parasites. [Transl.] J. Trop. Med., London, 6, 1903, (196-197).

Laveran, A. Procédés de coloration des Protozoaires parasites du sang. Paris, C.-R. soc. biol., 55, 1903, (305-306).

# ECONOMICS.

Jahresbericht über die Fortschritte in der Lehre von den pathogenen Mikroorganismen, umfassend Bakterien, Pilze und Protozoën. Unter Mitwirkung von Fachgenossen bearb. u. hrsg. v. P[aul] von Baumgarten und F[erencz] Tangl. Jg 16 (1900), Abt. 2. Leipzig (S. Hirzel), 1902, (401-812, I-XII). 23 cm. 12 M. Jg. 17, 1901. *Ib.*, (X11 + 1114). 23 cm. 32 M.

Argutinsky, P[etr. Fürst]. Ueber Malaria im europäischen Russland [ohne Finnland] Eine Skizze. Arch. Hyg., München, 47, 1903, (317-326, mit ] Kart.).

Morphologie und Biologie der Malaria-Parasiten. (Russ.) Arch. sc. biol., St. Peterburg, [russ. Ausg.], **10**, 1903, No. 1, (12-48, mit 1 Taf.).

Zur Kenntniss des Tropicaparasiten (*Plosmodium praecox* Gr. u. Fel.). Die Tüpfelung der Wirtszellen den Halbmonde. Centralbl. Bakt., Jena, Abt. 1, **34**, Originale, 1903, (144-149. mit 1 Taf.).

Bosc, F. J. Les epithéliomas parasitaires. La clavelée et l'epithélioma claveleux. *l.c.* (413-420, 517-526, 666-674, mit 3 Taf.).

Boyce, R., Ross, R. and Sherrington, C. S. Note on the discovery of the human Trypanosome. Nature, London, 67, 1903, (56).

history of the discovery of Trypanosomes in Man. Lancet, London, **1903**, 1, (509-513).

**Bruce**, D. Nomenclature of malaria; a suggestion. Lancet, London, **1903**, 1, (131, 132); Brit. Med. J., London, **1903**, 1, (15).

and **Nabarro**, D. Progress Report on sleeping sickness in Uganda. Rep. S. S. Comm. (Royal Soc.), **1**, (11-88, 10 pls.). [Abstract], Nature, London, **68**, (517).

and Greig, E. D. Further Report on sleeping sickness in Uganda. *l.c.* IV., (87, 4 pls., 2 maps, and 2 text-figs.). [Abstract], Lancet, London, **1903**, 2, (1730–1732).

**Castellani**, A. On the discovery of a species of *Trypanosoma* in the cerebrospinal fluid of cases of sleeping sickness. London, Proc. R. Soc., **11**, 1903, (501-508, 2 tables); Lancet, London, **1903**, 1, (1735-1736); [abstract], Nature, London, **68**, 1903, (116).

**Castellani**, A. Some observations on the morphology of the *Trypanosoma* found in sleeping sickness. Brit. Med. J., London, **1903**, 1, (1431, 1432, 1 text-fig.).

Researches on the etiology of sleeping-sickness. J. trop. Med., London, 6, 1903, (167-171, 1 pl. and 2 text-figs.).

Presence of Trypanosoma in sleeping sickness. Rep. S. S. Comm. (Royal Society), 1, (1-10, 2 tables). [Identical with preceding.]

Adult forms and developmental forms of the Trypanosome found in sleeping sickness. *l.c.* 2, (9-13, pls. 1 and 2).

Die Actiologie der Schlafkrankheit der Neger. Centrabl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (62-67, mit 1 Taf.).

Christy, C. Malaria: the mode of entry of the spore into the red bloodcorpuscie. Brit. Med. J., London, 1903, 2, (645, 1 text-fig.).

Clarke, J. J. Protozoa and Disease. Part I. London (Baillière, Tindall & Cox), 1903, (xiv + 177, 91 figs. in text). Svo. [Review], Lancet, London, 1903, 2, (891, 892).

**Diomisi**, A[ntonio]. Die Malaria einiger Fledermausarten. Unters. Natk., Giessen, **17**, 1901, (281–337, mit 2 Taf.).

Dafiein, F[ranz] und Prowasek, S. von. Die pathogenen Protozoen (mit Ausnahme der Hämosporidien). [In: Handbuch der pathogenen Mikroorganismen. Bd. I.] Jena, 1903, (865–1006).

**Denovan**, C. The etiology of one of the heterogeneous fevers of India. Brit. Med. J., London, **1903**, 2, (1401).

Durham, H. B. Report of the Yellow Fever Expedition to Para. Liverp. Sch. Trop. Medicine, Mem. VII. London (Longmans, Green & Co.), 1902, (79, 1 pl.). [Important remarks on Lankesterella.]

Dutton, J. E. Report of the Malaria Expedition to the Gambia, 1902, Liverp. Sch. Trop. Medicine, Mem. X. London (Longmans, Green & Co.), 1903, (46, 5 pls.). [Review], Nature, London, 68, 1903, (429).

(x 2-9053)

Dutton, J. E. and Todd, J. L. Preliminary account of the Investigations of the Liverpool Expedition to Senegambia (1902). Brit. Med. J., London, 1903, 1, (304, 305).

First Report of the Trypanosomiasis Expedition to Senegambia (1902) of the Liverpool School of Tropical Medicine and Medical Parasitology. London (Longmans, Green & Co. for the University Press of Liverpool), 1903, (50 + VII, 5 pls. and numerous charts). 4to. [Review], Lancet, London, **1903**, 2, (1727-1728).

Foa, [A.]. Sui Citoryctes vaccinae. Mon. zool. ital., Firenze, 13, 1902, (supplemento) (34).

Grassi, Battista. Die Malaria-Studien eines Zoologen. Nachtrag zur 2. verm. Aufl. Jena (G. Fischer), 1903, (19). 31 cm.

Hanna, W. Trypanosoma in birds in India. Q. J. Microsc. Sci., London, 47, 1903, (433–438, pl. 32).

Leishman, W. B. On the possibility of the occurrence of Trypanosomiasis in India. Brit. Med. J., London, **1903**, 1, (1252-1254, 2 text-figs.).

Lingard, Alfred. The giant *Trypa-nosoma* discovered in the blood of bovines. Centrabl. Bakt., Jena, Abt. 1, **35**, Originale, 1903, (234-238, mit 1 Taf.).

Manson, P. Trypanosomiasis on the Congo. Brit. Med. J., London, **1903**, 1, (720, 721); [abstract], London, J. R. Microsc. Soc., **1903**, (307).

Maxwell-Adams, A. Trypanosomiasis and its cause. Brit. Med. J., London, 1903, 1, (721-722); [abstract], London, J. R. Microsc. Soc., 1903, (307).

Miyajima, Mikinosuke On the malaria parasite *Halteridium* of sparrows. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (131-151).

Panichi, L. Sulla sede del parassita malarico nell'eritrocito dell'uomo, Archivio farmac., Roma, 1, 1902, (148-432). **Plimmer**, H. G. The parasitic theory of cancer. Brit. Med. J., London, **1903**, 2, (1511-1515).

Prowazek, S. Protozoenbericht für das Jahr 1889. Arch. Natg., Berlin, 62, Bd 2, H. 3, 1896. [1903], (259-290).

Rabinowitsch, Lydia und Kempner, W. Die Trypanosomen in der Menschenund Tierpathologie, sowie vergleichende Trypanosomenuntersuchungen. Centrabl. Bakt., Jena. Abt. 1, **34**, Originale, 1903, (804-822, mit 1 Taf.).

Ross, R. Report on Malaria at Ismalia and Suez. Liverp. Sch. Trop. Medicine, Mem. 1X. London (Longmans, Green & Co.), 1903, (24).

**Sambon**, L. Sleeping-sickness in the light of recent knowledge. J. trop. Med., London, **6**, 1903, (201-209, 2 text-figs.).

Schüffner, Wilhelm. Die Beziehungen der Malariaparssiten zu Mensch und Mücke an der Ostküste Sumatras. Zs. Hyg., Leipzig, 41, 1902, (89-122, mit 4 Taf.).

**Stevers**, R. Cas de malaria, traité par le bleu de méthylène. (Suèdois) F. Läkares. Handl., Helsingfors, 43, 1902, (857-858).

**Silberstein**, Moritz. Beobachtungen füber die Entstehung von jungen Malariaparasiten aus älteren. Centrabl. Bakt., Jena, Abt. 1, **34**, Originale, 1903, (149-155, 225-241).

Stephens, J. W. and Christophers, S. R. The practical study of malaria and other blood parasites. London (Longmans, Green & Co.), 1903, (vi + 378 + xxxv, 2 pls., 93 text-figs.). 8vo.

Taylor, L. Second Progress Report of the Campaign against Mosquitoes in Sierra Leone. Liverp. Sch. Trop. Medicine, Mem. 5, pt. 2. Liverpool (University Press), 1902, (13).

Watson, M. A note on the parasites of a case of malignant malaria, with a discussion of the development of the crescent. J. trop. Med., London, 6, 1903, (221-223. 1 pl.).

# 0407 STRUCTURE.

Aleksandrova, V. A. u. Istomina, N. A. Beobachtungen an Infusorien (Wirkung des Salamandergiftes, einige Wirkungen der Inductionschläge). (Russ.) St. Peterburg, Trav. Soc. Nat., XXXIV, 1, 1903, (Protok. No. 4-5), (156-177), deutsches Rés., (159-160).

Argutinskij, P. M. Beiträge zur Kenntnis der Morphologie und Biologie der Malaria-Parasiten. (Russ.). Arch. sc. biol., St. Peterburg, [russ. Ausg.], 10, No. 1, 1903, (12-48, mit 1 Taf.).

Awerinzew, S. Ueber die Struktur der Kalkschalen mariner Rhizopoden. Zs. wiss. Zool., Leipzig, 74, 1903, (478– 490, mit 1 Taf.).

------ Beiträge zur Kenntnis der marinen Rhizopoden. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (349-364).

Ayrton, W. On Zoothamnium geniculatum, a new Infusorian. London, J. Quek. Microsc. Cl., 8, 1903, (407-410, pl. 21); [abstract], London, J. R. Microsc. Soc., 1903, (504).

Bernenberger, Ernst. Ueber Infusorien aus asiatischen Anuren. Arch. Protistenkunde, Jena, **3**, 1903, (138–174, mit 1 Taf.).

Bortolotti, Ciro. Sviluppo e propagazione delle Opalinine parassite del lombrico. Mon. zool. ital., Firenze, 13, 1902, (195-204, con fig.).

Bruce, D. and Nabarro, D. Progress Report on sleeping sickness in Uganda. Rep. S. S. Comm. (Royal Soc.), 1, (11– 88, 10 pls.); [abstracts], Nature, London, 68, (517).

and Greig, E. D. Further Report on sleeping sickness in Uganda. Rep. S. S. Comm. IV, (87, 4 pls., 2 maps, and two text-figs.); [abstract]. Lancet, London, **1903**, 2, (1730-1732).

**Calkins**, Gary N. The Protozoan nucleus. Arch. Protistenkunde, Jena, **2**, 1903, (213–237).

**Castellani**, A. On the discovery of a species of *Trypanosoma* in the cerebrospinal fluid of cases of sleeping sickness. London, Proc. R. Soc., **71**, 1903, (501-508, 2 tables); Lancet, London, **1903**, 1, (1735-1736); [abstract], Nature, London, **68**, 1902, (116).

Researches on the etiology of aleeping-sickness. J. Trop. Med., London; 6, 1903, (167–171, 1 pl. and 2 text-figs.). **Castellani**, A. Some observations on the morphology of the *Trypanosoma* found in sleeping sickness. Brit. Med. J., London, **1903**, 1, (1431, 1432, 1 textfigs.).

Adult forms and developmental forms of the *Trypanosoma* found in sleeping sickness. *l.c.* II, (9-13, pls. 1 and 2).

**Dangeard**, P. A. Contribution à l'étude des Diplozoaires. Paris, C.-R. Acad. sci., **136**, 1903, (769-771).

Dutton, J. E. and Todd, J. L. First Report of the Trypanosmiasis Expedition to Senegambia (1902) of the Liverpool School of Tropical Medicine and Medical Parasitology. London (Longmans, Green & Co. for the University Press of Liverpool), 1903, (50 + vii, 5 pls. and numerous charts). 4to. [Review], Lancet, London, 1903, 2, (1727, 1728).

Farmer, J. B. The structure of animal and vegetable cells. Section H in Lankester's Treatise on Zoology. [One or two references to Protozoa.] Pt. I, ii, 1903, (1-46, 20 text-figs.). [Reviews], Nature, London, 68, 1903, (618); Irish Nat., Dublin, 12, 1903, (242, 243).

Feinberg, L. Ueber das Gewebe und die Ursache der Krebsgeschwülste. D. med. Wochenschr., Berlin, 29, 1903, (67-70).

Das Gewebe und die Ursache der Krebsgeschwülste. Unter Berücksichtigung des Baues der einzelligen thierischen Organismen. Berlin (A. Hirschwald), 1903, (VI + 231, mit 4 Taf.). 25 cm. 10 M.

Ferret, P. Observations relatives au développement de la cuticule chez le *Sarcocystis tenella*. Arch. anat. microsc, Paris, **6**, 1903, (88–98, av. pl.).

Powler, G. H. On Planktonetta atlantica Borgert. Q. J. Microsc. Sci., London, 47, 1903, (133-143, pls. 11 and 12).

Gillot. Coloration des hématozoaires. Paris, C.-R. soc. biol., 55, 1903, (244).

Hamburger, Clara. Beiträge zur Kenntnis von *Trachelius ovum*. Arch. Protistenkunde, Jena, 2, 1903, (445–474, mit 2 Taf.). Kunstler, J. Sur la bouche des protozoaires. Arch. anat. microsc., Paris, 6, 1903, (61-74).

et Gineste. Étuda de la structure du noyau des Ciliés. Bordeaux, Actes soc. linn., 58, 1903, (Proc.verb. CLXXI-CLXXIV, av. fig.).

Magnitzkij, Roman Sergeevič. Chilodon notamoibos nov. sp. (Russ.) Moskva, Dnevn. Zool. Otd. Imp. Obšč. líub. jest., III, 5, 1903, (25-27, mit Taf.). 35 cm.

Mater, Hermann Nicolaus. Ueber den feineren Bau der Wimperapparate der Infusorien. Arch. Protistenkunde, Jena, 2, 1903, (73-179, mit 2 Taf.).

Mitrofanov, P. I. Der Kernapparat der Faramoecien. Arb. a. d. zootom. Labor. d. Univ. Wurschau No. XXXI. (Russ.) Varšava, Izv. Univ., **1903**, (48, mit 31 fig.).

Miyajima, Mikinosuke. [Halteridium, parasitic in sparrows.] (Japanese) Dobuts. Z., Tokyo, 15, 1903, (131-151).

Neresheimer, Eugen Robert. Ueber die Höhe histologischer Differenzierung bei heterotrichen Cilisten. Arch. Protistenkunde, Jena. 2, 1903, (305-324, mit 1 Taf.). Diss. München. Jena (G. Fischer), 1903, (22). 23 cm.

**Fearl**, R. and **Dunbar**, F. J. Variation and correlation in *Arcella*. Biometrika, Cambridge, **2**, 1903, (321-337, 2 textfigs., 9 tables).

Prowasek, S. Flagellatenstudien. Anhang: Fibrilläre Strukturen der Vorticellinen. Arch. Protistenkunde, Jena, 2, 1903, (195-212, mit 2 Taf.).

Ross, R. Notes on the bodies recently described by Leishman and Donovan. Brit. Med. J., London, **1903**, 2, (1261-1262).

———— Further notes on Leishman's bodies. *l.c.* (1401, 17 text-figs.).

**Smith**, G. Actinosphaerium eichhorni. A biometrical study in the mass relations of nucleus and cytoplasm. Biometrika, Cambridge, 2, 1903, (241-254, pls. 1-4, 4 tables).

**Stephens**, J. W. and **Christophers**, S. R. Note on the changes in the red cell. produced by the malignant tertian parasite. Brit. Med. J., London, **1903**, 1, (730).

.

# 0411 PHYSIOLOGY.

Aleksandrova, V. A. u. Istomina, N. A. Beobachtungen an Infusorien (Wirkung des Salamandergiftes, einige Wirkungen der Inductionsschläge). (Russ.) St. Peterburg, Trav. Soc. nat., XXXIV, 1, 1903, (Protok. No. 4-5), (156-157); deutsches Rés., (159-160).

Brandes, G[ustav]. Ueber die Natur des Vorticellen-Stieles. Zs. Natw., Stuttgart, 75, (1902), 1903, (459-460).

Chéneveau, C. et Bohn, G. De l'action du champ magnétique sur les Infusoires. Paris. C.-R. Acad. sci., **136**, 1903, (1579-1580).

Enriques, P. Ricerche osmotiche sugli Infusori. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1902, (340-347).

Protozoi delle infusioni. *l.c.* (392-397).

Adattamento degli Infusori marini alla vita nell'acqua dolce. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (49-59).

**Goldberger**, Hugo. Die Wirkung von anorganischen Substanzen auf Protisten. Ein Beitrag zur Biochemie des Protoplasmas. Ze. Biol., München, **43**, 1902, (503-581).

Greeley, Arthur W[hite]. The artificial production of spores in *Monas* by a reduction of temperature. Chicago, Ill., Dec. Pub. Univ. Chic., (Ser. 1), **10**, 1903, ([71]-77, with text-fig.).

Reactions of Paramoecia and other protozoa to chemical and electrical stimuli. Science, New York, N.Y., (N. Ser.), **17**, 1903, (980-982).

**Holmes**, S. J. Phototaxis in *Volvoz*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (319–326); [abstract], London, J. R. Microsc. Soc., **1903**, (730).

Jennings, H[erbert] Spencer]. Studies on reaction to stimuli in unicellular organisms. IX. On the behavior of fixed infusoria (Stentor and Vorticella), with special reference to the modifiability of Protozoan reactions [with bibliography]. [Contributions from the Zoölogical laboratory of the University of Michigan. No. 57] in Amer. J. Physiol., Boston, Mass., 8, 1902, (23-60).

' Kunstler, J. et Gineste, Ch. Simple remarque sur la constitution du Balantidium entozoon. Paris, C.-R. soc. biol., 55, 1903, (340).

Ledoux-Lebard. Action du sérum sanguin sur les Paramécies. Ann. Inst. Pasteur, Paris, 16, 1902, (510-521).

Action de la lumière sur la toxicité de l'éosine et de quelques autres substances pour les Paramécies. *l.c.* (587-594).

Löwit, M[oriz]. Ueber färberische Differenzen zwischen der Mastzellengranulation und der Haemamoeba leucaemiae magna. Beitr. path. Anat., Jena, 33, 1903, (113-122, mit 1 Taf.).

Loisel, Gustave. Sur la sénescence et sur la conjugaison des Protozoaires. (Expériences et théories nouvelles.) Zool. Anz., Leipzig, 26, 1903, (484-495); [abstract], London, J. R. Microsc. Soc., 1903, (503)

Manson, P. Trypanosomiasis on the Congo. Brit. Med. J., London, **1903**, 1, (720-721); [abstract], London, J. R. Microsc. Soc., **1903**, (307).

Metall'nikov, S. I. Ueber die intracelluläre Verdauung. St. Peterburg, Bull. Ac. Sc., (5 F.), **19**, No. **3**, 1903, (187-193).

Mouton, Henri. Recherches sur la digestion chez les Amibes et sur leur diastase intracellulaire. Ann. Inst. Pasteur, Paris, **16**, 1902, (457-509, av. 1 pl.).

Neresheimer, Eugen Robert. Ueber die Höhe histologischer Differenzierung bei heterotrichen Ciliaten. Diss. München. Jena (G. Fischer), 1903, (22).-23 cm. Arch. Protistenkunde, Jena, 2, 1903, (305-324, mit 1 Taf.).

**Okolovič**, I. M. Die Erecheinungen der Reizbarkeit bei den niederen Thieren. (Russ.) Rec. méd. vétérin., Varšava, 7, 1902, (108-135).

Prowasek, S. Beitrag zur Kenntnis der Regeneration und Biologie der Protozoen. Arch. Protistenkunde, Jena, 3, 1903, (44-59).

generation bei den Protozoen. l.c. (60-63). **Elevel**, [Heinrich] und **Behrens**. Beiträge zur Kenntnis der Sarcosporidien und deren Enzyme. Centralbl. Bakt., Jena, Abt. 1, **35**, Originale, 1903, (341–352).

Rosale, Emil. Die Reaktion einiger Iufusorien auf einzelne Induktionsschläge. Diss. Leipzig. Jena (G. Fischer), 1902, (31). 23 cm.

**Statkevič**, Pavel Grigorievič. Beitrag zar Methodik der biologischen Untersuchungen von Protisten. Neue Methoden der Züchtung von Protisten sowie der Beobachtung ihrer Bewegungen. (Russ.) Moskva, Dnevn. Zool. Otd. Imp. Obeč. Ifub. jest., III, 5, 1903, (42-51). 35 cm.

Wallengren, Hans. Zur Kenntnis der Galvanotaxis. [Forts.] Zs. allg. Physiol., Jena, 2, 1903, (516-555).

### 0415 DEVELOPMENT.

Argutinskij, P. M. Beiträge zur Kenntnis der Morphologie und Biologie der Malaria-Parasiten. (Russ.) Arch. sc. biol., St. Peterburg, (russ. Ausg.), 10, No. 1, 1903, (12–48, mit 1 Taf...

Bortolotti, Ciro. Sviluppo e propagazione delle Opalinine parassite del lombrico. Mon. zool. ital., Firenze, 13, 1902, (195-204, con fig.).

**Castellani**, A. Some observations on the morphology of the *Trypanosoma* found in sleeping sickness. Brit. Med. J., London, **1903**, 1, (1431-1432, 1 textfig.).

Adult forms and developmental forms of the Trypanosome found in sleeping sickness. Rep. S. S. Comm. II, (9-13, pls. 1, 2).

Draswecki, W. Ueber vegetative Vorgänge im Kern und Plasma der Gregarinen des Regenwurmhodens. Arch. Protistenkunde, Jena, **3**, 1903, (107-125, mit 2 Tal.).

**Dutton, J. E.** and **Todd**, J. L. Preliminary account of the Investigations of the Liverpool Expedition to Senegambia (1902). Brit. Med. J., London, **1903**, 1, (301-305).

Farret, P. Observations relatives au développement de la cuticule chez le Sarcorystis tenella. Arch. anat. microsc., Paris. 6, 1903, (88-98, av. pl.).

Lóger, Louis. Sur quelques Cercomonadines nouvelles ou peu connues parasites de l'intestin des insectes. (Note préliminaire.) Arch. Protistenkunde, Jena, 2, 1903, (180-189).

Loisel, Gustave. Expériences sur la conjugaison des Infusoires. Paris, C.-R. soc. biol., 55, 1903, (53-55).

Sur la sénescence et sur la conjugaison des Protozoaires. (Expériences et théories nouvelles.) Zool. Anz., Leipzig, **26**, 1903, (484-495); [abstract], London, J. R. Microsc. Soc., **1903**, (503).

Metsmer, Rud. Untersuchungen an Coccidium cuniculi. Arch. Protistenkunde, Jena, 2, 1903, (13-72, mit 1 Taf.).

Mitrofanov, P. I. Der Kernapparat der Paramoecien. Arb. a. d. zootom. Labor. d. Univ. Warschau, No. XXXI. (Russ.) Varšava, Izv. Univ., **1903**, (48, mit 31 fig.).

Miyajima, Mikinosuke. [Halteridium, parasitic in sparrows.] (Japanese) Dobuts. Z., Tokyo, 15, 1903, (131-151).

Pérez, Charles. Le cycle évolutif de l'Adelea mesnili, coccidie coelomique parasite d'un lépidoptère. Arch. Protistenkunde, Jena, 2, 1903, (1-12, mit l'Taf.).

**Prowasek**, S. Die Kernteilung des Entosiphon. l.e. (325-328).

Der Encystierungsvorgang bei Dileptus. l.c. 8, 1903, (64-68).

Schaudinn, Fritz. Untersuchungen über die Fortpflanzung einiger Rhizopolen. (Vorläuf. Mitt.) Berlin, Arb. Gesundhtsamt, **19**, 1903, (547-576).

**Siegel.** Die geschlechtliche Entwicklung von *Haemogregarina stepanovi* im Rüsselegel *Placobdella catenigeria*. (Vorlänf. Mitt.). Arch. Protistenkunde, Jena, 2, 1903, (339-342).

**Silberstein**, Moritz. Beobachtungen über die Entstehung von jungen Malariaparasiten aus älteren. Centralbl. Bakt., Jena, Abt 1, **34**, Originale, 1903, (149-155, 225-241). **Stempell**, Walter. Ueber die Fortpflanzung der Protozoen. Zusammenfassende Uebersicht. Greifswald, Mitt. natw. Ver., **34**, (1902), 1903, (89-97).

**Stevens**, Nettie Maria. Further studies on the ciliate Infusoria, *Licnophora* and *Boveria*. Arch. Protistenkunde, Jena, **3**, 1903, (1-43, mit 6 Taf.).

**Watson**, M. A note on the parasites of a case of malignant malaria, with a discussion of the development of the crescent. J. trop. Med., I.ondon, **6**, 1903, (221-223, 1 pl.).

# 0419 ETHOLOGY.

Jahresbericht über die Fortschritte in der Lehre von den pathogenen Mikroorganismen, umfassend Bacterien, Pilze und Protozoën. Unter Mitwirkung von Fachgenossen bearb. u. hrsg. v. P[aul] von Baumgarten und F[erencz] Tangl. Jg 17, 1901. Leipzig (S. Hirzel), 1903. (XII + 1114). 23 cm. 32 M.

Annett, H. E., Dutton, J. E. and Elliott, J. H. Report of the Malaria Expedition to Nigeria. Liverp. Sch. Trop. Medicine, Mem. 3. London (Longmans, Green & Co.), 1902, (68, 2 pls., besides charts and illustrs.).

Argutinskij. P. M. Beiträge zur Kenntnis der Morphologie und Biologie der Malaria-Parasiten. (Russ.) Arch. sc. biol., St. Peterburg, (Russ. Ausg.), 10. No. 1, 1903, (12-48, mit 1 Taf.).

Zur Kenntniss des Tropicaparasiten (*Plasmodium praecox* Gr. u. Fel.). Die Tüpfelung der Wirtszellen der Halbmonde. Centralbl. Bakt., Jena, Abt. 1, **34**, Originale, 1903, (144-149, mit 1 Taf.).

Ueber Malaria in europäischen Russland (obne Finnland). Eine Skizze. Arch. Hyg., München, 47, 1903, (317-326, mit 1 Kart.).

. Beard, J. Carter. The Amoeba-a slime monster and its victim. Sci. Amer., New York, N.Y., 89, 1903, (31).

Berestneff. N[ikolaj]. Ueber einen neuen Blutparasiten der indischen Frösche. Arch. Protistenkunde, Jena, 2, 1903, (343-348, mit 1 Taf.).

Bersenberger, Ernst. Ueber Infusorien aus asiatischen Anuren. *l.c.* 3, 1903, (138–174, mit 1 Taf.). Bezzenberger, Ernst. Neue Infusorien aus asiatischen Anuren. Zool. Anz., Leipzig, 26, 1903, (597-599).

Bortolotti, C. Sviluppo e propagazione delle Opalinine parassite del lombrico. Mon. zool. ital., Firenze, 18, 1902, (195– 204, con fig.).

Bosc, F. J. Les epithéliomas parasitaires. La clavelée et l'epithélioma claveleux. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (413-420, 517-526, 666-674, mit 3 Taf.).

Boyce, R., Ross, R. and Sherrington, C. S. Note on the discovery of the human Trypanosome. Nature, London, 67, 1903, (56).

history of the discovery of Trypanosomes in Man. Lancet, London, **1903**, 1, (509-513).

Bruce, D. and Nabarro, D. Progress Report on sleeping sickness in Uganda. Rep. S. S. Comm. (Royal Soc.), 1, (11– 88, 10 pls.). [Abstract], Nature, London, 68, (517).

and Greig, E. D. Further Report on sleeping sickness in Uganda. Rep. S. S. Comm. IV, (87, 4 pls., 2 maps, and 2 text figs.). [Abstract], Lancet, London, **1903**, 2, (1730-1732).

**Castellani**, A. On the discovery of a species of *Trypanosoma* in the cerebrospinal fluid of cases of sleeping sickness. London, Proc. R. Soc., **71**, 1903, (501–508, 2 tables); Lancet, London, **1903**, 1, (1735–1736); [abstract], Nature, London, **68**, 1903, (116).

Presence of *Trypanosoma* in sleeping sickness. Rep. S. S. Comm. (Royal Society), **1**, (1-10, 2 tables). [Identical with preceding].

Adult forms and developmental forms of the Trypanosome found in sleeping sickness. *l.c.* II, (9-13, pls. 1 and 2).

Some observations on the morphology of the *Trypanosoma* found' in sleeping sickness. Brit. Med. J., London, **1903**, 1, (1431, 1432, 1 text fig.).

Researches on the etiology of sleeping sickness. J. trop. Med., London, 6, 1903, (167-171, 1 pl. and 2 text-figs.). Chéneveau, C. et Bohn, G. De l'action du champ magnétique sur les Infusoires. Paris, C.-R. Acad. sci., **136**, 1903, (1579– 1580).

**Christy**, C. Malaria : the mode of entry of the spore into the red bloodcorpuscie. Brit. Med. J., London, **1903**, 2, (645, 1 text-fig.).

**Clarke**, J. J. Protozoa and Disease. Part I. London (Baillière, Tindall & Cox), 1903, (xiv + 177, 91 figs. in text). 8vo. [Review], Lancet, London, **1903**, 2, (891, 892).

Cohnheim, Paul. Ueber Infusorieu im Magen und im Darmkanal des Menschen und ihre klinische Bedeutung. Vortrag. D. med. Wochenschr. Berlin, 29, 1903, (206-208, 230-232, 245-248).

**Crawley**, Howard. List of the polycystid gregarines of the United States. [with bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (41-58, with pl.).

------ Nosema geophili sp. n., a myxosporidian parasite of Geophilus. I.e. (337-338). Separate. 25.6 cm.

**Dionisi**, A[ntonio]. Die Malaria ciniger Fledermausarten. Unters. Natk., Giessen, **17**, 1901, (281–337, mit 2 Taf.).

**Doficin**, F[ranz] und Prowasek, S. von. Die pathogenen Protozoen (mit Ausnahme der Hämosporidien). [In: Handbuch der pathogenen Mikroorganismen. Bd 1.] Jena, 1903, (865-1006).

**Domovan**, C. The etiology of one of the heterogeneous fevers of India. Brit. Med. J., London, **1903**, 2, (1401).

Durham, H. B. Report of the Yellow Fever Expedition to Para. Liverp. Sch. Trop. Medicine, Mem. VII. London (Longmans, Green & Co.), 1902, (79, 1 pl.). [Important remarks on Lankesterella.]

Dutton, J. E. Report of the Malaria Expedition to the Gambia, 1902. *l.c.* Mem. X. London (Longmans, Green & Co.), 1903, (46, 5 pls.). [Review], Nature, London, **68**, 1903, (429).

and **Todd**, J. L. Preliminary account of the Investigations of the Liverpool Expedition to Senegambia (1902). Brit. Med. J., London, **1903**, 1, (304, 305).

the Trypanosomiasis Expedition to Sene-

gambia (1902) of the Liverpool School of Tropical Medicine and Medical Parasitology. London (Longmans, Green & Co. for the University Press of Liverpool), 1003, (50 + vii, 5 pls. and numerous charts). 4to. [Review], Lancet, London, **1903**, **2**, (1727, 1728).

Fuhrmann, O. Myxosporidies des corégones du lac de Neuchâtel. Arch. Sci. Phys., Genève, (sér. 4), 14, 1902, (172-173).

Galli-Valerio, Bruno. Notes de parasitologie. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (81-91).

Gotschlich, Emil. Ueber Protozoëu-Befunde (*Apiosoma*) im Blute von Flecktyphuskranken. Vorl. Mitt. D. med. Wochenschr., Berlin, **29**, 1903, (329-331).

Grassi, Battista. Die Malaria-Studien eines Zoologen. Nachtrag zu 2. verm. Aufl. Jena (G. Fischer), 1903, (19). 31 cm.

**Guiart**, J. Sur un nouvel infusoire parasite de l'homme. Paris, C.-R. soc. biol., **55**, 1903, (245-246).

Parasitologie pratique. Les parasites de l'intestin et leur recherche dans les matières fécales. Bul. sci. pharm., Paris, **6**, 1902, (152-157, 199-208, av. fig.).

Hanna, W. Trypanosoma in birds in India. Q. J. Microsc. Sci., London, 47, 1903, (433-438, pl. 32).

**Issel**, Raffaelo. Ancistridi del Golfo di Napoli. Studio monografico sopra una nuova famiglia di Cigliati, commensali di molluschi marini. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (63-108, mit 3 Taf.).

Johnson, Herbert P. A new sporozoan parasite of *Anopheles*. J. Med. Res., Boston, Mass., 7, 1902, (213-219, with pl.).

Klimenko, W. Beitrag zur Pathologie des Balantidium [Paramoecium] coli. Beitr. path. Anat., Jena, 33, 1903,. (281-301, mit 2 Taf.).

Kossel, H[ermann], Schütz, [Johann Wilhelm], Weber, A[ugust], Missaner, [Hermann]. Ueber die Hämoglobinurie der Rinden in Deutschland. Berlin, Arb. Gesundhtsamt, 20, 1903, (1-77, mit 3 Taf.). Kuwano, [Hisato]. [Trypanosoma in the blood of Triton pyrrhogaster.] (Japanese) Dobuts. Z., Tokyo, 15, 1903, (297).

Laveran, A. Sur deux Hippobosques du Transvaal susceptibles de propager *Trypanosoma theileri*. Paris, C.-R. soc. biol., 55, 1903, (242-243).

------ Procédés de coloration des Protozoaires parasites du sang. *l.e.* (305-306).

et Mesnil, F. Le Nagana, le Surra et le Cadéras constituent trois entités morbides distinctes. Paris, C.-R. Acad. sci., **136**, 1903. (1529– 1532).

Sur un Protozoaire nouveau (Piroplasma denovani Lav. et Mesn.), parasite d'une fièrre de l'Inde. Le. 137, 1903, (957-961).

Léger, Louis. Sporozoaire parasite des moules et autres Lamellibranches comestibles. *l.c.* (1003-1005).

et Duboscq. (). Les grégarines et l'épithélium intestinal chez les Trachéates. Arch. parasit., Paris, **6**, 1902, (377–473, av. fig. et 5 pl.).

Leishman, W. B. On the possibility of the occurrence of Trypanosomiasis in India. Brit. Med. J., London, **1903**, 1, (1252-1254, 2 text-figs.).

Linstow, [Otto] von. Parasiten, meistens Helminthen, aus Stam. Arch. Mikr. Anat., Bonn, **62**, 1903, (108–121, mit 1 Taf.).

Lo Monaco, D[om] und Panichi, L. Die Wirkung der antiperiodischen Heilmittel auf den Malariaparasiten. Unters. Natk., Giessen, **17**, 1901, (264– 280).

Magnitzkij, Roman Sergĕevič. Chilodon notamoibos n. sp. (Russ.) Moskva, Dnevn. Zool. Otd. 1mp. Obšč. 1ub. jest., III, 5, 1903, (25 27, mit Taf.). 35 cm.

Manson, P. Trypanosomiasis on the Congo. Brit. Med. J., London, 1903, 1, (720-721); [abstract], London, J. R. Microsc. Soc., 1903, (307).

Tropical Diseases. A Manual of the Diseases of Warm Climates. New and Revised Edition. London (Cassell & Co.), 1903, (xiv + 756, 2 pls. and 130 text-figs.). [Contains a general account of malarial and other Protozoan parasites.] 8vo.

Manson, P. and Daniels, C. W. Remarks on a case of Trypanosomiasis. Brit. Med. J., London, **1903**, 1, (1249-1252, 2 text-figs.).

Martini, Erich. Ueber die Entwickelung der Tsetseparasiten in Säugethieren. Zs. Hyg., Leipzig, **42**, 1903, (341–350, mit 1 Taf.).

Matthews, C. G. and Oswell, B. L. The microscopic life of the river Trent. Burton-on-Trent, Trans. Nat. Hist. Soc., 5, 1, 1903, (31-34).

Maxwell-Adams, A. Trypanosomiasis and its cause. Brit. Med. J., London, 1903, 1, (721, 722); [abstract], London, J. R. Microsc. Soc., 1903, (307).

Metallinikov, S. I. Ueber die Fähigkeit der Infusorien (*Paramoecium*) ihre Nahrung zu wählen. (Russ.) St. Peterburg, Bull. labor. biol.,  $\nabla$ , 4, 1902, (23-26).

Minchin, E. A. The Sporozoa. Section K in Lankester's Treatise on Zoology, pt. I. ii, (150-360, 127 textfigs.). [Reviews], Nature, London, 68, 1903, (618); Irish Nat., Dublin, 12, 1903, (242, 243).

Miyajima, Mikinosuke. [Halteridium, parasitic in sparrows.] (Japanese) Dobuts. Z., Tokyo, 15, 1903, (131-151).

Molisch, Hans. Amoeben als Parasiten in Volvox. Berlin, Ber. D. bot. Ges., 21, 1903, (20-23, mit 1 Taf.).

Nishikawa, Tōkichi. . . . Gymnodinium sp. [as principal element in the "red current"]. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (347-353).

Panichi, L. Sulla sede del parassita malarico nell'eritrocito dell'uomo. Archivio farinac., Roma, 1, 1902, (418-432).

Penard, E. Observations sur les héliozoaires. Arch. Sci. Phys., Genève, (sér. 4), 15, 1903, (351-352).

Perronetto, E. Il coccidio jalino (l'occidum jalinum n. sp.) ed il microsporidio poliedrico (Micromporidium polyedrium, Bolle) nell'aomo. Torino. Giorn. Acc. Med., 65, 1902, (378).

Plenn, Marianne. Trypanoplasma cyprini nov. sp. Arch. Protistenkunde, Jena, 3, 1903, (175–180, mit 1 Taf.).

# Protozoa.

**Plimmer,** H. G. The parasitic theory of cancer. Brit. Med. J., London, **1903**, 2, (1511–1515).

Püch, Rudolf. Ueber das Verhalten der weissen Blutkörperchen bei Malaria. Zs. Hyg., Leipzig, 42, 1903, (563-626).

**Eabinowitsch**, Lydia und Kempner, W. Die Trypanosomen in der Menschenund Tierpathologie, sowie vergleichende Trypanosomenuntersuchungen. Centraibl. Bakt., Jens, Abt. 1, **34**, Originale, 1903, (804-822, mit 1 Taf.).

Ross, R. Report on Malaria at Ismalia and Suez. Liverp. Sch. Trop. Medicine, Mem. IX. London (Longmans, Green & Co.) 1903, (24).

Endmose Brown, R. N. 3. Plankton and Botany. In "The Scotia's voyage to the Falkland Islands." [Abundant occurrence of *Peridinidae*.] Scot. Geog. Mag., Edinburgh, **19**, 1903, (175, 176); [abstract], London, J. R. Microsc. Soc., **1903**, (526).

Sabrazès, [J.] et Muratet, [L.]. Trypanosome de l'anguille (Anguilla zulgaris). Bordeaux, Actes soc. linn., (sér. 6), 7, 1902, (Proc.-verb.-LXXXII-LXXXIII, CXXIV-CXXVIII, av. 1 pl.).

**Sambon**, L. Sleeping-sickness in the light of recent knowledge. J. trop. Med., London, **6**, 1903, (201-209, 2 text-figs.).

Schat, P. Weitere Mitteilungen über Surra [eine durch ein Trypanosoma verursachte Rinderkrankheit]. (Holländisch) Arch. Java Suiker., Soerabaia, 11, 1903, (49-67, mit 2 Taf.).

schüffner, Wilhelm. Die Beziehungen der Malariaparasiten zu Mensch und Mücke an der Ostküste Sumatras. Zs. Hyg., Leipzig, 41, 1902, (89-122, mit 4 Tal.).

**Scourfield**, D. J. Lakes and their scientific investigation. London, Proc. S. Lond. Ent. Nat. Hist. Soc., **1902**, (61–66).

Shipley, A. On the ento-parasites collected by the "Skeat Expedition" to Lower Siam and the Malay Peninsula in the years 1899-1900. London, Proc. Zool. Soc., 1903, 2, (145-156, pl. 16).

**Stebbins**, James H., *jun*. On the occurrence of parasites in the blood of the *Damonia retesii* turtle. J. Appl. Microsc., Rochester, N.Y., **6**, 1903, (2164-2168).

Taylor, L. Second Progress Report of the Campaign against Mosquitoes in Sierra Leone. Liverp. Sch. Trop. Medicine, Mem. 5, pt. 2. Liverpool (University Press) 1902, (13).

Thompson, I. C. On the plankton of the Indian Ocean. London, Rep. Brit. Ass., 1902, 1903, (643-644).

Tymer, E. E. Coccidium infection of the rabbit's liver. [With bibliography.] J. Med. Res., Boston, Mass., 7, 1902, (235-254, with pl.).

Watson, M. A note on the parasites of a case of malignant malaria, with a discussion of the development of the crescent. J. trop. Med., London, 6, 1903, (221-223, 1 pl.).

**Woodcock**, H. M. Report, in Report of the Committee on investigations made at the Marine Biological Laboratory, Plymouth. London, Rep. Brit. Ass., **1902**, (271-272).

**Yatsu**, [Naohide]. [Habits of Amoeba.] (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (297-298).

**Zorn**, Ludwig. Beitrag zur Kenntnis der Amoeben-Enteritis. Diss. München (Druck v. Kastner & Lossen), 1901, (32). 20 cm.

# 0423 ÆTIOLOGY.

Magnitzkij, Roman Sergĕevič. Chilodon notamoibos n. sp. (Russ.) Moskva, Duevn. Zool. Otd. Imp. Obšč. líub. jest., III, 5, 1903, (25-27, mit Taf.). 35 cm.

Negri, A. Beitrag zum Studium der Aetiologie der Tollwuth. Zs. Hyg., Leipzig, 43, (507-528, mit 2 Taf.).

Pearl, R. and Dunbar, F. J. Variation and correlation in Arcella. Biometrika, Cambridge, 2, 1903, (321-337, 2 text-figs., 9 tables).

**Statkevič**, Pavel Grigorievič. Beitrag zur Methodik der biologischen Untersuchungen von Protisten. Neue Methoden der Züchtung von Protisten sowie der Beobachtung ihrer Bewegungen. (Russ). Moskva, Dnevn. Zool. Otd. Imp. Obšč. Iŭub. jest., III, 5, 1903, (42-51). 35 cm. West, G. S. Observations on freshwater Rhizopods, with some remarks on their classification. London, J. Linn. Soc. Zool., 29, 1903, (108–117, pl. 13).

## 0427 GEOGRAPHICAL DISTRIBUTION.

**West**, G. S. Observations on freshwater Rhizopods, with some remarks on their classification. London, J. Linn. Soc. Zool., **29**, 1903, (108–117, pl. 13).

Woodward, H. Note on the occurrence of Protozoa geologically, in: The President's Address: Some Ideas on Life. London, J. R. Microsc. Soc., **1903**, (142– 157, text-figs., 35 and 36, 1 table).

d EUROPE.

db RUSSIA IN EUROPE.

Minkiewitsch, R. K. Ueber eine Art Codonella im Plankton des Asow'schen und Aralischen Meeres. (Russ.) Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., III, livr. 3, 1903, (43-46).

de BRITISH ISLANDS.

Holmes, W. M. Foraminifera from the Gault at Merstham. Croydon, Proc. Microsc. Nat. Hist. Cl., **1903**, (34–40).

Jukes-Browne, A. J. The Cretaceous Rocks of Britain. Vol. II. The Lower and Middle Chalk of England. Mem. (teol. Surv. U. K., London, 1903, (xiii + 568, 8 pls., 87 text-figs.).

Matthews, C. G. and Oswell, B. L. The microscopic life of the river Trent. Burton-on-Trent, Trans. Nat. Hist. Soc., 5, 1, 1903, (31-34).

**Pearcey**, F. G. Notes on the marine deposits of the Firth of Forth, and their relation to its animal life. Glasgow, Trans. Nat. Hist. Soc., **6**, 1903, (217-251, with map).

Thompson, B. The junction beds of the Upper Lias and Inferior Oolite in Northamptonshire. Pt. II: Stratigraphical and Palaeontological. Northampton, J. Nat. Hiat. Soc., 11, 1903, (197-216, 235-244); 12, 1903, (54-69). Wright, J. The micro-fauna of the Boulder Clay, with some remarks on the movement of glaciers. Belfast, Rep. Nat. Hist. Phil. Soc., **1903**, (47-50).

The Foraminifera of the Boulder Clay of Knock Glen, Co. Down. Belfast, Rep. Nat. F. Cl., (Ser. 2), 5, 1903, (59-63).

Clay from Woodburn, Carrickfergus. *l.c.* (109-114).

Foraminiferal, high-level Boulder Clay in the County of Dublin, and in Dumfriesshire and Ayrshire; with observations on the origin of Boulder Clays. Irish Nat., Dublin, **12**, 1903, (173-180).

## df FRANCE.

Pórez, Ch. Sur un Acinétien nouveau, Lernacophrya capitata, trouvé sur le Cordylophora lacustris. Paris, C.-R. soc. biol., 55, 1903, (98-100, av. fig.).

## di SWITZERLAND.

Forel, F. A. Le Léman. Monographie limnologique. Vol. iii, pt. 1, Lausanne (F. Rouge), 1902, (411, text-figs. 167– 227). [Review], Nature, London, **67**, (411–412).

Fuhrmann, O. Myxosporidies des corégones du lac de Neuchâtel. Arch. Sci. Phys., Genève, (Ser. 4), 14, 1902, (172-173).

Penard, E. Un Rhizopode nouveau : Clathrella foreli. Verh. Schweiz. Natf. Ges., Aarau, 85, 1902, (80); Arch. Sci. Phys., Genève, (4), 14, 1902, (554).

La Multicilia lacustris et ses flagellés. Rev. Suisse Zool., Genève, 11, 1903, (123-149, av. 1 pl.).

## dm MEDITERBANEAN.

**Steuer**, Adolf. Ueber das Vorkommen von Coccolithophoriden im Golf von Triest. (Mitt. aus d. zool. Stat. Triest. No. 7.) Zool. Anz., Leipzig, **27**, 1903, (129 131).

# e ASIA AND MALAY ARCHI-PELAGO.

# ea · ASIATIC RUSSIA.

Hinkiewitsch, R. K. Ueber eine neue Art Codonella im Plankton des Asow'schen und Aralischen Meeres. (Russ.) Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., III, livr. 3, (43-46).

Zernov, S. A. Ueber das Zooplankton des Aral-Sees, auf Grund der von L. S. Berg im Jahre 1900 gesammelten Materialien. (Russ.) *l.c.* (1-38).

ee Siam.

Linstow, [Otto] von. Parasiten, meistens Helminthen, aus Siam. Arch. mikr. Anat., Bonn, **62**, 1903, (108–121, mit 1 Taf.).

ef British India : Himalaya; Burma; Cevlon.

Leishman, W. B. On the possibility of the occurrence of Trypanosomiasis in India. Brit. Med. J., London, 1903, 1, (1252-1254, 2 text-figs.).

Lomas, J. Report on the Sea bottoms and Calcretes collected by Prof. Herdman. In: Report on Pearl cyster Fisheries of the Gulf of Manoar. Londoo, 1903, (148-162).

## eg MALAY PENINSULA AND ARCELI-PELAGO.

Millett, W. F. Report on the Recent Foraminifera of the Malay Archipelago collected by Mr. A. Durrand, F.R.M.S. Part XIV. London, J. R. Microsc. Soc., 1903, (253-275, pl. 5).

**Shipley**, A. On the ento-parasites collected by the "Skeat Expedition" to Lower Siam and the Malay Peninsula in the years 1899–1900. London, Proc. Zool. Soc., **1903**, 2, (145–156, pl. 16).

#### f AFRICA AND MADAGASCAR.

### fb N.E. AFBICA.

Ross, R. Report on Malaria at Ismalia and Suez. Liverp. Sch. Trop. Medicine, Mem. ix. London (Longmans, Green & Co.), 1903, (24). fd WEST AFRICA.

Annett, H. E., Dutton, J. E. and Elliott, J. H. Report of the Malaria Expeditions to Nigeria. Liverp. Sch. Trop. Medicine, Mem. 3. London (Longmans, Green & Co.), 1902, (68, 2 pls., besides charts and illustrs.).

Manson, P. Trypanosomiasis on the Congo. Brit. Med. J., London, 1903, 1, (720-721); [abstract], London, J. R. Microsc. Soc., 1903, (307).

#### g NORTH AMERICA.

### gf UNITED STATES AS A WHOLE.

**Crawley**, Howard. List of the polycystid gregarines of the United States, [with bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (41-58, with pl.).

The polycystid gregarines of the United States. Second contribution [with bibliography]. [From Philadelphia, Pa., Proc. Acad. Nat. Sci., October, 1903], (632-644, with pl.). Separate. 25.5 cm.

gg NORTH-EASTERN UNITED STATES.

Calkins, G. N. Marine Protozoa from Wood's Holl. Washington, D.C., Bull. U. S. Fish Com., 21, (1901), 1902, (413-468, with figs.).

### h CENTRAL AND SOUTH AMERICA AND WEST INDIES.

#### hh Brazil.

Durham, H. B. Report of the yellow fever expedition to Para. Liverp. Sch. Trop. Medicine, Mem. VII. London, (Longmans, Green & Co.), 1902, (79, 1 pl.). [Important remarks on Lankesterella].

#### hl FALKLAND ISLANDS.

**Budmose Brown**, R. N. 3. Plankton and Botany. In "The Scotia's voyage to the Falkland Islands." [Abundant occurrence of *Peridinidae.*] Scot. Geog. Mag., Edinburgh, **19**, 1903, (175–176); [abstract], London, J. R. Microsc. Soc., **1903**, (526).

# .

k ABCTIC.

kd Islands North of Europe and Asia.

Penard, Eugène. Notice sur les Rhizopodes du Spitzberg. Arch. Protistenkunde, Jena, 2, 1903, (238-282).

# 0431 TAXONOMY AND SYSTEMATIC.

### GENERAL.

Calkins, G. N. Marine Protozoa from Wood's Holl. [With bioliography.] Washington, D.C., Bull. U.S. Fish Com., 21, (1901), 1902, (413-468, with text fig.).

Zacharias, O. Zur Kenntnis der niedern Flora und Fauna holsteinischer Moorsümpfe. Plön, ForschBer. biol. Stat., 10, 1903, (223-289, mit 1 Taf.).

### MYCETOZOA.

Arachnula impatiens du Spitzberg. Penard, E. Arch. Protistenkunde, Jena, 2, 1903, (241-244).

**Bhumbler**, L. *l.c.* **3**, 1903, (189).

Biomyza vagans, B. cometa, Beschreibung. Rhumbler, L. l.c. (186-187, figs. 2, 3).

Dictiomyza trinchesei, Beschreibung. Rhumbler, L. l.c. (191–192, fig. 9).

Myzodictium sociale, Beschreibung. Rhumbler, L. l.c. (192, fig. 10).

Pontomyxa pallida, P. flava, Beschreibung. **Rhumbler**, L. l.c. (189– 190, figs. 5-6).

Protogenes primordialis, Beschreibung. **Rhumbler**, L. *l.c.* (186, fig. 1).

Protomyza aurantiaca, Beschreibung. Rhumbler, L. l.c. (190, fig. 7).

Rhizoplasma kaiseri, Beschreibung. Rhumbler, L. l.c. (190, fig. 8).

#### RHIZOPODA.

#### GENERAL.

Penard, E. Notice sur les Rhizopodes du Spitzberg. Arch. Protistenkunde, Jena, 2, 1903, (238-282). West, G. S. Observations on freshwater Rhizopods, with some remarks on their classification. London, J. Linn. Soc. Zool., 29, 1903, (108-117, pl. 13).

# RADIOLARIA.

Planktonetta atlantica Borgert. Fowler, G. H. London, Q. J. Microsc. Sci., 47, 1903, (133-143, pls. 11, 12).

### HELIOZOA.

### GENERAL.

Penard, E. Observations sur les héliozoaires. Arch. Sci. Phys., Genève, (sér. 4), 15, 1903, (351-352).

### SPECIAL.

Actinocoma n. gen. (~ Actinophrys), A. ramosa n. sp. **Penard**, E. Arch. Protistenkunde, Jena, **2**, 1903, (283– 304).

Actinosphaerium eichhorni, a biometrical study in the mass relations of nucleus and cytoplasm. **Smith**, G. Biometrika, Cambridge, **2**, 1903, (241– 254, pls. 1-4, 4 tables).

Nuclearia caulescens n. sp. Spitzberg. **Penard**, E. Arch. Protistenkunde, Jena, **2**, 1903, (272).

G. S. London, J. Linn. Soc. Zool., 29, 1903, (111–112).

Rhaphidiophrys brunii n. sp. Spitzberg. **Penard**, E. Arch. Protistenkunde, Jena, **2**, 1903, (277, fig. 14).

### FORAMINIFERA.

#### GENERAL.

Grobben, [K.]. Ueber die systematische Gruppirung der Amoebinen und Foraminiferen. Verh. Ges. D. Natf., Leipzig, 74, (1902), II, 1, 1903, (151– 152).

Herrmann, A. Zweiter Beitrag zur Kenntniss des Vorkommens von Foraminiferen im Tertiär des Unter-Elsass. Strassburg, Mitt. geol. Landesanst, 5, 1903, (263-273).

Dritter Beitrag zur Kenntniss des Vorkommens von Foraminiferen

## Protozoa.

im Tertiär der Gegend von Pechelbronn, Lobsann, Sulz u/Wald und Gunstett im Unter-Elsass. *l.e.* (323-341).

Holmes, M. W. Foraminifera from the Gault at Merstham. Croydon, Proc. Microsec. Nat. Hist. Cl., 1903, (34-40).

**Billett**, W. F. Report on the recent Foraminifera of the Malay Archipelago collected by Mr. A. Durrand, F.R.M.S. Part XIV. London, J. R. Microsc. Soc., **1903**, (253-275, pl. 5).

Schick, T. Beiträge zur Kenntnis der Mikrofauna des schwäbischen Lias. Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (111-177, mit 3 Taf.).

**Silvestri**, A. Lageninae del Mare Tirreno. Roma, Mem. Acc. Nuovi Lincei, **19**, 1902, (133-172, con fig.).

#### SPECIAL.

Allogromia n. nom., A. ovoidea n. nom. Rhumbler, L. Arch. Protistenkunde, Jena, **3**, 1903, (203, 207, figs. 19, 23).

Amphicoryne glabra n. sp. Malay Archipelago. **Willett**, W. F. London, J. R. Microsc. Soc., **1903**, (253-275, pl. 5).

Amphitrema lomanense n. sp. Penard, E. Arch. Protistenkunde, Jena, 2, 1903, (289, fig. 3).

Cornuspira primitiva n. nom. Rhumbler, L. l.c. 3, 1903, (181-294).

Cyclammina le-beli † n. sp. Tertiär, Unter-Elsass. Herrmann, A. Strassburg, Mitt. geol. Landesanst., 5, 1903, (340).

Dimorphina lingulinoides n. sp. Malay Archipelago. Millett, W. F. London, J. R. Microsc. Soc., 1903, (266, pl. 5).

Diplogromea n. nom. Rhumbler, L. Arch. Protistenkunde, Jena, 3, 1903, (214).

Fissurina un. spp. Mare Tirreno. Silvestri, A. Roma, Mem. Acc. Nuovi Lincei, 19, 1902, (143, 144, 146, 147).

Fusulina alternans † n. sp. Ostasien. Schellwien, E. In: K. Futterer, Durch Asien, Bd 3, 1903, (125-174).

Lagena nn. spp. Mare Tirreno. Silvestri, A. Roma, Mem. Acc. Nuovi Lincei, 19, 1902, (153, 156, 162). Lagunculina n. nom. Rhumbler, L. Arch. Protistenkunde, Jena, 3, 1903, (248).

Marsupulina n. nom. for M. schultzei n. nom. Rhumbler, I. l.c. (250, fig. 89).

Millettella n. nom. Bhumbler, L. l.c. (250).

Pamphagus hirsutus n. sp. Spitzberg. Penard, E. l.c. 2, 1903, (266, fig. 10).

Tolypammina n. nom., T. schaudinni n. nom. Rhumbler, L. l.c. 3, 1903, (277, fig. 126).

Turritellella n. nom. Rhumbler, L. l.e. (283).

Utigerina auberiana D'Orbigny var. glabra n. var. Malay Archipelago. Millett, W. F. London, J. R. Microsc. Soc., 1903, (268, pl. V, figs. 8, 9).

Vaginulina sulzensis † n. sp. Tertiär, Unter-Elsass. **Herrmann**, A. Strassburg, Mitt. geol. Landesanst., **5**, 1903, (273, text fig. 1).

Webbinella n. nom. Rhumbler, L. Arch. Protistenkunde, Jena, **3**, 1903, (229, fig. 55).

### AMOEBAEA.

Amocha. Beard, J. C. Sci. Amer., New York, N.Y., 89, 1903, (31).

Arcella vulgaris, variability in shell. **Pearl**, R. and **Dunbar**, F. J. Biometriks, Cambridge, 2, 1903, (321-327).

Clathrella n. gen., C. foreli n. sp. Penard, E. Verh. Schweiz. Natf. Ges., Aarau, 85, 1902, (80); Arch. Sci. Phys., Genève, (4), 14, 1902, (554); Arch. Protistenkunde, Jena, 2, 1903, (283– 304)

Cochliopodium opalinum n. sp. Spitzberg. Penard, E. Arch. Protistenkunde, Jena, 2, 1903, (250, fig. 5).

('ryptodifflugia turfacea n. sp. Zacharias, O. Plön, ForschBer. biol. Stat., 10, 1903, (239, pl. II, fig. 18).

Hyalosphenia nn. spp. Ireland and Hebrides. West, G. S. London, J. Linn. Soc. Zool., 29, 1903, (114–115).

Sphenoderia pulchella n. sp. West, G. S. I.c. (115-116).

# SPOROZOA.

# GENERAL.

Bosc, F. J. Les epithéliomas parasitaires. La clarelée et l'epithélioma claveleux. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (413-420, 517-526, 666-674, mit 3 Taf.).

Johnson, H. P. A new sporozoan parasite of *Anopheles*. J. Med. Res., Boston, Mass., 7, 1902, (213-219, with pl.).

Lindner, G. Regelmässiger Befund spezifischer Monaden in den Miescher'schen Schläuchen. Natw. Wochenschr., Jena, 18, 1903, (315-316).

Lutz, A. und Splendore, A. Ueber Pebrine und verwandte Mikrosporidien. Ein Beitrag zur Kenntnis der brasilianischen Sporozoen. Erste Mitteilung. Centralbl. Bakt., Jena, Abt. 1, 33, Originale, 1903, (150–157).

Panichi, L. Sulla sede del parassita malarico nell'eritrocito dell' uomo. Archivio farmac., Roma, 1, 1902, (148– 432).

Léger, L. Sporozoaire parasite des moules et autres Lamellibranches comentibles. Paris, C.-R. Acad. sci., 137, 1903, (1003-1005).

#### GREGARINIDA.

#### GENERAL.

**Crawley**, H. List of the polycystid gregarines of the United States [with hibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (41-58, with pl.).

The polycystid gregarines of the United States. Second contribution. [With bibliography.] *l.e.* (632-644, with pl.). Separate. 25.5 cm.

Léger, L. et Dubosoq, O. Les grégarines et l'épithélium intestinal chez les Trachéates. Arch. parasit., Paris, 6, 1902, (377-473, av. fig. et 5 pl.).

#### SPECIAL.

Actinocephalus americanus n. sp. United States. **Crawley**, H. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (623, pl. XXX, fig. 22). Acutispora n. gen., A. macrocephala n. sp. United States. Grawley, H. l.c. (632, pl. XXX, figs. 1-6).

Amphoroides fontariae n. sp. United States. **Crawley**, H. *l.c.* **55**, 1903, (53, pl. I, figs. 12-14).

Asterophora cratoparis n. sp. United States. **Grawley**, H. l.c. (54, pl. II, fig. 23).

Doliocystis rhyncobli n. sp. United States. Crawley, H. l.c. (56).

Euspora lucani n. sp. United States. Crawley, H. l.e. (50, pl. III, fig. 38).

Gigaductus n. gen., G. parvus n. sp. United States. **Grawley**, H. *l.c.* (633, pl. XXX, figs. 10-13).

Gregarina nn. spp. United States. Crawley, H. *l.c.* (46-49, pl. I, figs. 1-11, pl. II, figs. 19-21, 26-28, pl. III, figs. 29-30).

Hirmocystis (?) oralis n. sp. **Crawley**, H. l.c. (50, pl. I, figs. 5-6).

Hoplorhynchus scolopendras n. sp. United States. **Crawley**, H. l.c. (636, pl. XXX, fig. 19).

Monocystis, vegetative Vorgänge im Kern und Plasma. Drzewecki, W. Arch. Protistenkunde, Jena, 3, 1903, (107-125, mit 2 'Taf.).

Stenophora spiroboli n. sp. United States. Crawley, H. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (51, pl. 11, fig. 22).

Trichorhynchus lithobii n. sp. United States. **Grawley**, H. l.c. (637, pl. XXX, fig. 18).

## COCCIDIIDEA.

### GENERAL.

Ciuff, [M.]. Ricerche sugli Sporozoi. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (42-43).

Lthe, M. Die Coccidien-Literatur der letzten 4 Jahre. Zusammenfassende Besprechung. Zool. Centralbl., Leipzig, 10, 1903, (617-661).

### SPECIAL.

Adelea mesnili, cycle évolutif. **Péres**, C. Arch. Protistenkunde, Jena, **2**, 1903, (1-12, mit 1 Taf.).

# Protozoa.

Coecidium, infection of rabbit's liver. Typer, E. E. J. Med. Res., Boston, Mass., 7, 1902, (235-254, with pl.).

*cuniculi*, Untersuchungen. **Estaner**, R. Arch. Protistenkunde, Jena, 2, 1903, (13-72, mit 1 Taf.).

faurei n. sp. parasite du monton. Mousru, G. et Marotel, G. Arch. parasit., Paris, 6, 1902, (82-98, av. 10 fig.).

jalinum n. sp., nell'uomo. Percencito, E. Torino, Giorn. Acc. med., 65, 1902, (378).

Legerina n. gen. = Klossia octopiana Schn. u. K. eberthi Labbé. Jaquemet, M. Arch. Protistenkunde, Jena, 2, 1903, (190-194).

#### HAEMOSPORIDIA.

#### GENERAL.

Argutinsky, P. Ueber Malaria im europäischen Russland (ohne Fiunland). Eine Skizze. Arch. Hyg., München, 47, 1903, (317–326, mit 1 Kart.).

**Cham.** [M.]. Ricerche sugli Sporozoi. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (42-43).

Doffein, F[ranz] und Prowazek, S. von. Die pathogenen Protozoen (mit Ausnahme der Hämosporidien). [In : Handbuch der pathogenen Mikroorganismen. Bd 1.] Jena, 1903, (865-1006).

Gillot. ('oloration des hématozoaires. Paris, C.-R. soc. biol., 55, 1903, (244).

Lo Monaco, D[om.] und Paniehi, L. Die Wirkung der antiperiodischen Heilmittel auf den Malariaparasiten. Unters. Natk., Giessen, 17, 1901, (264-280).

Martini, Erich. Ueber die Entstehung der Neuerkrankhungen an Malaria während des Frühjahres und Sommers umserer Breiten. Zs. Hyg., Leipzig, 41, 1902, (147-152, mit 2 Tat.).

der Testseparasiten in Säugethieren. *i.e.* 42, 1903, (341-350, mit 1 Taf.).

Föch, R. Ueber das Verhalten der weissen Blutkörperchen bei Malaria. *l.e.* (563-626).

(N 2-9053)

Schüffner, W. Die Beziehungen der Malariaparasiten zu Mensch und Mücke an der Ostküste Sumatras. *l.c.* 41, 1902, (89-122, mit 4 Taf.).

**Silberstein**, Moritz. Beobachtungen über die Entstehung von jungen Malariaparasiten aus älteren. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (149– 155, 225–241).

### SPECIAL.

Haemamoeba leucaemia magna, Vergleichung mit Mastzellengranulation. Löwit, M. Beitr. path. Anat., Jens, 33, 1903, (113-122, mit 1 Taf.).

Haemogregarina stepanovi, geschlechtliche Entwicklung im Rüsselegel Placobdella catenigera. Siegel. Arch. Protistenkunde, Jens, **2**, 1903, (339-342).

Lankesterella monilis, Blutparasit der indischen Frösche. Berestneff, N. l.c. (343-348, mit 1 Taf.).

Piroplasma donovani n. sp., parasite d'une fièvre de l'Inde. Laveran, A. et Mesnil, F. Paris, C.-R. Acad. sci., 137, 1903, (957-961).

Plasmodium malariae. Grassi, B. Die Malaria-Studien eines Zoologen. Nachtrag zur 2. verm. Aufl. Jena (G. Fischer), 1903, (19). 31 cm.

*praecox*, Tüpfelung der Wirtszellen der Halbmonde. Argutinaky, P. Centralbl. Bakt., Jena, Abt. 1, **34**, Originale, 1903, (144-149, mit 1 Taf.).

### MYXOSPORIDIA.

Henneguyia zschokkei Gurley (= II. kolesnikovi Gurley, and Myzobolus bicaudatus Zschokke) from Coregonus sp., note. Fuhrmann, O. Arch. Sci. Phys., Genève, (sér. 4), 14, 1902, (172– 173).

Microsporidium polyedricum Bolle, nell'uomo. Perroncito, E. Torino, Giorn. Acc. med., 65, 1902, (378).

Nosema geophili n. sp., parasitism ou Geophilus. Grawley, H. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (337– 338).

#### SARCOSPORIDIA.

## GENEBAL.

Rievel, [H.] und Behrens. Beiträge zur Kenntnis der Sarcosporidien und deren Enzyme. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (341-352).

#### SPECIAL.

Balbiana siamensis n. sp. Siam. Linstow, [O.] von. Arch. mikr. Anat., Bonn, 62, 1903, (108-121, mit 1 Taf.).

# INCERTAE SEDIS.

Ascosporidium blochmanni, Infektion von Synchaeta pectinata Ehrenb. Zacharias, O. Plön, ForschBer. biol. Stat, 10, 1903, (201-222, mit 1 Taf.).

Histosporidium n. gen., H. carcinomatosum n. sp. Feinberg, L. Das Gewebe und die Ursache der Krebsgeschwülste. Berlin (A. Hirschwald), 1903, (VI + 231, mit 4 Taf.). 25 cm. 10 M.

Polycaryum, Beiträge zur Kenntnis der Gattung, P. laeve n. sp. in Daphnia longiepina. **Stempell**, W. Arch. Protistenkunde, Jens, **2**, 1903, (349-363, mit 1 Taf.).

# UNCLASSIFIED BY THE SLIP MAKER.

Achromaticus resperuginis n. sp. Diomisi, A. Unters. Natk., Giessen, 17, 1901, (281-337, mit 2 Taf.).

Halteridium, parasitic in sparrows. (Japanese) Miyajima, M. Dobuts. Z., Tokyo, 15, 1903, (131-151).

Polychromophilus nn. spp. Dionisi, A. Unters. Natk., Giessen, 17, 1901, (281– 337, mit 2 Taf.).

Pyrosoma. Bemerkungen über die Entdeckung des Parasiten der seuchenhaften Hämoglobinurie des Rindes. (Texasfieber, Tristeza, etc.) und des "Càrceag" des Schafes. Babes, V. Centralbl. Bakt., Jena, Abt. 1, 33, Originale, 1903, (449–458).

bigeminum der Rinder in Deutschland. Kossel, H., Schütz, J. W.], Wéber, A., Miesmer, [H.]. Berlin, Arb. Gesundhtsamt, 20, 1903, (1-77, mit 3 Taf.).

### MASTIGOPHORA.

Dangeard, P. A. Contribution à l'étude des Diplozoaires. Paris, C.-R. Acad. sci., 136, 1903, (769-771).

# FLAGELLATA.

# GENERAL.

Lemmermann, E[rnst]. Flagellatas, Chlorophyceae, Coccosphaerales und Silicoflagellatae. [In: Nordisches Plankton. Lfg 2.] Kiel u. Leipzig, 1903, (XXI 1-XXI 40).

Prowasek, S. Flagel! tenstudien. Anhang : Fibrilläre Strukturen der Vorticellinen. Arch. Protistenkunde, Jena, 2, 1903, (195-212, mit 2 Taf.).

Schat, P. Weitere Mitteilungen über Surra [eine durch ein *Trypanosoma* verursachte Rinderkrankheit]. (Holländisch) Arch. Java Suiker., Soerabaia, 11, 1903, (49-67, mit 2 Taf.).

schilling. Dritter Bericht über die Surra-Krankheit der Rinder und Pferde im Schutzgebiete Togo. Centralbl. Bakt., Jens, Abt. 1, 33, Originale, 1903, (184-189).

**Steuer**, A. Ueber das Vorkommen von Coccolithophoriden im Golf von Triest. (Mitt. aus d. zool. Stat. Triest. No. 7.) Zool. Anz., Leipzig, **27**, 1903, (129-131).

#### SPECIAL.

Bodo lacertae in lizards. Galli-Valerio, B. Centralbl. Bakt., Jens, Abt. 1, 35, Originale, 1903, (86).

Cercomonas gallinae dans l'homme. Galli-Valerio, B. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (86).

Coccolithophora. Solger, F. Natw. Wochenschr., Jena, 18, 1903, (529-533).

Codonoeca gracilis n. sp. Massachusetts. Calkins, G. N. Washington, D.C., Bull. U. S. Fish Com., 21, (1901), 1902, (423, fig. 8).

Crithidia nn. spp. parasites de l'intestin des insectes. Léger, L. Arch. Protistenkunde, Jena, 2, 1903, (185-188). Cryptomonas pelagica n. sp. Lohmann, H. Wiss. Meeresunters, Kiel, (N.F.), 7, (67, pl. I, fig. 16).

Dimastigamoeba nn. spp. Moroff, T. Arch. Protistenkunde, Jena, 3, 1903, (77-79, pl. XII).

Brtosiphon sulcatum, Kernteilung. Prowasek, S. 1.c. 2, 1903, (325–328).

*Eucomonas socialis* n. sp. **Moreff**, T. *l.e.* **3**, 1903, (80, 81, pl. VII, figs. 7 a-d).

Euglena quartana n. sp. Moroff, T. l.e. (96-103).

Eutreptia sp. aus dem Canale grande von Triest. Steuer, A. l.c. (126-137).

Gymnodinium gracile Bergh var. sphaerica n. var. Massachusetts. Calkins, G. N. Washington, D.C., Bull. U. S. Fish Com., 21, (1901), 1902, (413– 468, with text fig.).

Herpetomonas nn. spp. parasites de l'intestin des insectes. **Idger**, L. Arch. Protistenkunde, Jena, **2**, 1903, (180-189).

Heteronema tremulum n. sp. Zacharias, U. Plön, ForschBer. biol. Stat., 10, 1903, (270).

Mallomonas fastigata n. sp. Zacharias, O. l.c. (259).

Mastigamoeba nn. spp. Moroff, T. Arch. Protistenkunde, Jena, 3, 1903, (70-75).

simplex n. sp. Massachusetts. Calkins, G. N. Washington, D.C., Bull. U. S. Fish Com., 21, (1901), 1902, (422, fig. 7).

Menoidium falcatum n. sp. Zacharias, O. Plön, ForschBer. biol. Stat., 10, 1903, (270).

Monas, asexual reproduction. Greeley, A. W. Chicago, Ill., Dec. Pub. Univ. Chic., (Ser. 1), 10, 1903, ([71]-77, with text fig.).

Phacomonas n. gen., P. pelagica n. sp. Lohmann, H. Wiss. Mecresunters., Kiel, (N.F.), 7, Abt. Kiel, 1903, (66, pl. I, figs. 10, 11).

Polytoma uvella, Conjugationsprozessen. Prowasek, T. Arch. Protistenkunde, Jena, 2, 1903, (205– 208).

Rhabdosphasra stylifer im Golf von Triest. Stever, A. Zool. Anz., Leipzig, 27, 1903, (130).

(x 2-9053)

Rhynchomonas marina n. sp. Lohmann, H. Wiss. Mecresunters., Kiel, (N. F.), 7, Abt. Kiel, 1903, (48).

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Salpingoeca appendiculariae n. sp. Lohmann, H. l.c. (47).

Trachelomonas nn. spp. Palmer, T. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (791-795, with pl.).

Trichomonas caviae, sporulation. Galli-Valerio, B. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (87).

Trypanoplasma cyprini n. sp., ans Cyprinus carpio. Plehn, M. Arch. Protistenkunde, Jena, 3, 1903, (175–180, mit 1 Taf.).

Trypanosoma in der Menschen- und Tierpathologie, sowie vergleichende Trypanosomenuntersuchungen. Rabinowitsch, L. und Kempner, W. Le. 34, Originale, 1903, (804-822, mit 1 Taf.).

giant form discovered in the blood of bovines. Lingard, A. l.e. **35**, Originale, 1903, (234–238, mit 1 Taf.).

narius. Galli-Valerio, B. l.c. (88).

Babrazès, [J.] et Muratet, [L.]. Bordeaux, Actes soc. linn., (sér. 6), 7, 1902, (Proc.-verb. LXXXII-LXXXIII, CXXIV-CXXVIII, av. 1 pl.).

*equinum* (trypanosomes du nagana, surra et cadéras) constituent trois entités morbides distinctes. Laveran, A. et **Mesnil**, F. Paris, C.-R. Acad. sci., **136**, 1903, (1529–1532).

castellanii, Schlafkrankheit durch. Castellani, A. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (62-67, mit 1 Taf.).

gambicnse, T. sanguinis, occurrence and description and 3 nn. spp. Dutton, J. E. and Todd, J. L. Rep. Trypanosomiasis Exp. to Sengambia, London, 1903, (36, 50-54).

*theileri*, propagé par deux Hippobosques du Transvaal. Laveran, A. Paris, C.-R. soc. biol., **55**, 1903, (242– 243).

Volvoz. Amoeben als Parasiten. Molisch, H. Berlin, Ber. D. bot. Ges., 21, 1903, (20-23, mit 1 Taf.).

phototaxis. Holmes, S. J, Wood's Holl, Mass., Mar. Biol. Lab. Bull. 4, 1903, (319-326).

# DINOFLAGELLATA.

Achradina n. gen., A. pulchra n. sp. Lohmann, H. Wiss. Meeresanters., Kiel, (N.F.), 7, Abt. Kiel, 1903, (64).

Agrosphaera n. gen., A. pellucida n. sp. Mediterranean. Lo Bianoo, S. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (226).

Cladopyxis setifera n. sp. Lohmann, H. Wiss. Meeresunters., Kiel, (N.F.), 7, Abt. Kiel, 1903, (64).

Glenodinium n. spp. Zacharlas, O. Plön, ForschBer. biol. Stat., 10, 1903, (290-292).

*compressa* n. sp. Massachusetts. **Calkins**, G. N. Washington, D.C., Bull. U. S. Fish Com., **21**, (1901), 1902, (430, fig. 21).

Gymnodinium sp. [as principal element in the "red current"]. Niahikawa, T. Dobuts. Z., Tokyo, 15, 1903, (347-353).

Multicilia lacustris et ses flagellés. Penard, E. Rev. Suisse Zool., Genève, 11, 1903, (123-149, av. 1 pl.).

*palustris* n. sp. **Penard**, E. Arch. Protistenkunde, Jens, **2**, 1903, (283-304).

Peridinium truncatum n. sp. Zacharias, O. Plön, ForschBer. biol. Stat., 10, 1903, (290-292).

# INFUSORIA.

# GENERAL.

Aleksandrova, V. A. u. Istomina, N. A. Beobachtungen an Infusorien [Wirkung des Salamandergiftes; einige Wirkungen der Inductionsschläge. (Russ.) St. Peterburg, Trav. Soc. Nat., XXXIV, 1, 1903, (Protok. No. 4-5), (156-157), deutsches Rés., (159-160).

Bortolotti, C. . . Opalinine . . . del lombrico : sviluppo, propagazione. Mon. zool. ital., Firenze, 13, 1902, (195-204, con fig.).

Enriques, [Paolo]. Adattamento degli Infusori Marini alla vita nell'acqua dolce. *l.e.* (supplement), (49-50).

Ricerche osmotiche sugli Infusori. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1902, (340-347).

Protozoi delle infusioni. *l.c.* (392-397).

Hickson, G. J. 'The Infusoria or Corticata Heterokaryota. Section L in Lankester's Treatise on Zoology, pt. I, ii, (301-426, 97 text figs.). [Reviews] Nature, London, 68, 1903, (618); Irish Nat., Dublin, 12, 1903, (242-243).

**Renault**, B. Sur quelques nouveaux Infusoires fossiles. Autun, Bul. soc. hist. nat., **1903**, (Proc.-verb., 25-27, av. 1 pl.).

Roesle, E. Die Reaktion einiger Infusorien auf einzelne Induktionsschläge. Diss. Leipzig. Jena ((÷. Fischer), 1902, (31). 23 cm.

# ACINETARIA.

Lernacophrya n. gen., L. capitata n. sp. parasite sur Cordylophora lacustris. **Peres**, P. Paris, C.-R. soc. biol., **55**, 1903, (98-100, av. fig.).

Podophrya gracilis n. sp. Massachusetts. **Calkins**, G. N. Washington, D.C., Bull. U. S. Fish Com., **21**, (1901), 1902, (463).

Staurophrya elegans. Zeobarias, O. Plön, ForschBer. biol. Stat., 10, 1903, (312-314).

# CILIATA.

### GENERAL.

Issel, R. Ancistridi del Golfo di Napoli. Studio monografico sopra una nuova famiglia di Cigliati, comuensali di molluschi marini. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (63-108, mit 3 Taf.).

#### SPECIAL.

Ancistrum nn. spp. Golfo di Napoli. Issel, R. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (63-108).

Balantidium nn. spp. aus asiatischen Anuren. Bezzenberger, E. Arch. Protistenkunde, Jena, **3**, 1903, (148-154); Zool. Anz., Leipzig, **26**, 1903, (597-599).

(Paramoscium) coli, Pathologie. **Elimenko**, W. Beitr. path. Anat., Jena, **33**, 1903, (281-301, mit 2 Taf.).

# Protozoa.

Boveria, Conjugation, Regeneration und Theilung. Stevens, N. M. Arch. Protistenkunde, Jena, 3, 1903, (1-43, mit 6 Taf.).

stevensi n. sp. Golfo di Napoli. Issel, R. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (93).

Chilodon dentatus parasite de l'homme. Guiart, J. Paris, C.-R. soc. biol., 55, 1903, (245-246).

notamoibos n. sp. Magnitakij, R. S. (Russ.) Moskva, Dnevn. Zool. Otd. Imp. Obšč. Hub. jest., III, 5, 1903, (25-27, mit Taf.). 35 cm.

Codonella relicta n. sp. des Asow'schen und Aralischen Meeres. **Binkiswitsch**, R. K. Taškent, Izv. Turk. Otd. Russ. Geogr. Obsc., **III**, livr. **3**, 1903, (43-46).

Dileptus, Encystierung. Prowasek, 5. Arch. Protistenkunde, Jena, 3, 1903, (64-68).

Lembus infusionum n. sp. Massachusetts. Calkins, G. N. Washington, D.C., Bull. U. S. Fish Com., 21, (1901), 1902, (446).

Leptodesmus n. gen., L. tenellus n. sp. Zacharias, O. Plön, ForschBer. biol. Nat., 10, 1903, (271, pl. II, fig. 9).

Licnophora, Conjugation, Regeneration und Theilung. **Stevens**, N. M. Arch. Protistenkunde, Jena, **3**, 1903, (1-43, mit 6 Taf.).

Mesodinium cinctum n. sp. Massachusetts. Calkins, G. N. Washington, D.C., Bull. U. S. Fish Com., 21 (1901), 1902, (436).

Nyctotherus nn. spp. aus asiatischen Anaren. Bezzenberger, E. Arch. Protistenkunde, Jena, 3, 1903, (141-148); Zool. Anz., Leipzig, 26, 1903, (597-599).

*Opalina* nn. spp. aus asiatischen Anuren. **Bezzenberger**, E. Arch. Protistenkunde, Jena, **3**, 1903, (163–171).

Paramoecium, Fähigkeit Nahrung zu wählen. (Russ.) Metallinikov, S. I. St. Peterburg, Bull. labor. biol., V, 4, 1902, (23-26).

reactions to chemical and electrical stimuli. Greeley, A. W. Science, New York, N.Y., (N. Ser.), 17, 1903, (980-982). Plagiospira (\* Ansistrum) n. gen., P. erinita n. sp. Golfo di Napoli. Issel, R. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (86, pl. V, figs. 21-23).

Pleuronema setigera n. sp. Massachusetts. Calkins, G. N. Washington, D.C., Bull. U. S. Fish Com., 21 (1901), 1902, (445).

Rhabdostyla congregata n. sp. Zacharias, O. Plön, ForschBer. biol. Stat., 10, 1903, (201–222, mit Taf.).

Spirostomum ambiguum. Zur Kenntnis der Galvanotaxis. [Forts.] Wallengren, H. Zs. allg. Physiol., Jena, 2, 1903, (516-555).

Stentor coeruleus, die Höhe histologischer Differenzierung. Neresheimer, E. R. Arch. Protistenkunde, Jena, 2, 1903, (305-324, mit 1 Taf.).

Prowazek, S. *l.c.* **3**, 1903, (44–59).

Trachelius orum. Hamburger, C. l.e. 2, 1903, (445–474, mit 2 Taf.).

Uronychia setigera n. sp. Massachusetts. **Calkins**, G. N. Washington, D.C., Bull. U. S. Fish Com., **21**, (1901), 1902, (487).

Vorticella, die Natur des Stieles. Strehl, K. Zs. wiss. Mikrosk., Leipzig, 20, 1903, (189).

\_\_\_\_\_\_ Natur des Stieles.
Brandes, G. Zs. Natw., Stuttgart, 75, (1902), 1903, (459–460).

Zoothamnium geniculatum n ep. Suffolk. Ayrton, W. London, J. R. Microsc. Soc., **1903**, (504); London, J. Quek. Microsc. Cl., **8**, 1903, (407– 410, pl. 21).

# UNCLASSIFIED BY THE SLIP MAKER.

Apiosoma, im Blute von Flecktyphuskranken. Gotschlich, E, Vorl. Mitt. D. med. Wochenschr., Berlin, 29, 1903, (329-331).

Stylonychia mytilus, Begeneration. Prowazek, S. Arch. Protistenkunde, Jena, 3, 1903, (60–63). Citoryctes vaccinae. Fod. [A.]. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (34).

Feinberg, L. Ueber das Gewebe und die Ursache der Krebageschwülste. D. med. Wochenschr., Berlin, 29, 1903, (67-70).

Negri, A. Beitrag zum Studium der Aetiologie der Tollwuth. Zs. Hyg., Leipzig, 43, 1903, (507–528, mit 2 Taf.).

Sambon, L. Sleeping-sickness in the light of recent knowledge. J. trop. Med., London, 6, 1903, (201-209, 2 text figs.).

Schilling. Die Berkämpfung der Tsetsefliegen-Krankheit und ihre wirtschaftliche Bedeutung. Vortrag. Tropenpflanzer, Berlin, 6, 1902, (616-625).

## LIST OF NEW GENERA AND SPECIES.

Achradina n. gen. [Dinoflagellata]. Lohmann, 106.
pulchra. Lohmann. 106.
ACHROMATIOUS [Sporozoa]. ————————————————————————————————————
ACTINOCEPHALUS [Gregarinida]. americanus. Crawley. 34A.
Actinocoma n. gen. [Heliozos]. Penard. 143.
ramosa. Penard. 143.
Acutispora n. gen. [Gregarinida]. Crawley. 34A.
macrocephala. Crawley. 341.
Agrosphaera n. gen. [Dinoflagellata]. Lo Bianco. 104. ————————————————————————————————————
Allogromia n. nom. [Forsminifers]. Rhumbler. 162. ovoidea n. nom. Rhumbler. 162.
AMPHICOBYNE [Foraminifers]. ————————————————————————————————————
AMPHITREMA [Foraminifera]. ————————————————————————————————————
AMPHOROIDES [Gregarinida]. ———— fontariae. Crawley. 34.
ANOISTEUM [Ciliata]. ————————————————————————————————————

cycliodiodes. Issel. 78. 
ASTEROPHORA [Gregarinida]. ————————————————————————————————————
BALANTIDIUM [Ciliata]. ————————————————————————————————————
12, 13.
gracile. Bezzenberger. 12. helenae. Bezzenberger. 12, 13.
rotundum. Bezzenberger. 12, 13.
BALBIANA [Sarcosporidia]. siamensis. Linstow, von. 102.
Bodo [Flagellata]. ————————————————————————————————————
BOVERIA [Ciliata]. stevensi. Issel. 78.
CHILODON [Ciliata]. notamoibos. Magnitzkij. 1124.
CLADOPYXIS [Dinoflagellata].
Clathrella n. gen. [Amoebaea]. Penard.
144. foreli. Penard. 144.
COOCIDIUM [Coccidiidea]. faurci. Moussu et Marotel.
131.
jalinum. Perroncito. 149.
jalinum. Perroncito. 149. ————————————————————————————————————
jalinum. Perroncito. 149. ————————————————————————————————————
jalinum. Perroncito. 149. scyllii. Drago. 41. COCHLIOPODIUM [Amoebaea]. opalinum. Penard. 142. CODONELLA [Ciliata]. relicta. Minkiewitsch. 126. CODONOECA [Flagellata].
jalinum. Perroncito. 149. scyllii. Drago. 41. COCHLIOPODIUM [Amoebaca]. opalinum. Penard. 142. CODONELLA [Ciliata]. relicta. Minkiewitsch. 126. CODONOECA [Flagellata]. gracilis. Calkins. 22. CORNUSPIRA [Foraminifera].
jalinum. Perroncito. 149. scyllii. Drago. 41. COCHLIOPODIUM [Amoebaea]. opalinum. Penard. 142. CODONELLA [Ciliata]. relicta. Minkiewitsch. 126. CODONOECA [Flagellata]. gracilis. Calkins. 22. CORNUSPIRA [Foraminifera]. primitica. Rhumbler. 162. CBITHIDIA [Flagellata].
jalinum. Perroncito. 149. scyllii. Drago. 41. COCHLIOFODIUM [Amoebaes]. opalinum. Penard. 142. CODONELLA [Ciliata]. relicta. Minkiewitsch. 126. CODONOECA [Flagellats]. gracilis. Calkins. 22. CORNUSPIRA [Foraminifera]. primitiva. Rhumbler. 162.
jalinum. Perroncito. 149.         scyllii. Drago. 41.         COCHLJOPODIUM [Amoebaea].         opalinum. Penard. 142.         CODONELLA [Ciliata].         relicta. Minkiewitsch. 126.         CODONOECA [Flagellata].         gracilis. Calkins. 22.         CORNUSPIRA [Foraminifera].         primitiva. Rhumbler. 162.         CRITHIDIA [Flagellata].         campanulata. Léger. 96.
jalinum. Perroncito. 149.         scyllii. Drago. 41.         COCHLJOPODIUM [Amoebaea].         opalinum. Penard. 142.         CODONELLA [Cilista].         relicta. Minkiewitsch. 126.         CODONOECA [Flagellata].         gracitis. Calkins. 22.         CORNUSPIRA [Foraminifera].         primitiva. Rhumbler. 162.         CRITHIDIA [Flagellata].         campanulata. Léger. 96.         Munta. Léger. 96.         CRYPTODIFFLUGIA [Amoebaea].
jalinum. Perroncito.       149.         scyllii.       Drago.       41.         COCHLIOPODIUM [Amoebaea].       opalinum. Penard.       142.         CODONELLA [Cilista].       relicta.       Minkiewitsch.       126.         CODONOECA [Flagellats].       gracilis.       Calkins.       22.         CORNUSPIRA [Foraminifera].       primitiva.       Rhumbler.       162.         CRITHIDIA [Flagellata].       campanulata.       Léger.       96.         minuta.       Léger.       96.       1urfacea.       212.         CRYPTODIFFLUGIA [Amoebaea].       turfacea.       22.       212.         CRYPTOMIAS [Flagellata].       pelagica.       Lohmann.       106.         CYCLAMMINA [Foraminifera].       106.       106.
jalinum. Perroncito. 149.         scyllii. Drago. 41.         COCHLJOPODIUM [Amoebaea].         opalinum. Penard. 142.         CODONELLA [Ciliata].         relicta. Minkiewitsch. 126.         CODONOECA [Flagellats].         gracitis. Calkins. 22.         CORNUSPIRA [Foraminifers].         primitiva. Rhumbler. 162.         CBITHIDIA [Flagellats].         campanulata. Léger. 96.         MUMATA Luffacea. Zacharias. 212.         CRYPTODIFFLUGIA [Amoebaea].         turfacea. Zacharias. 212.         CRYPTONNAS [Flagellata].         pelagica. Lohmann. 106.

Diplogramia n. nom. [Foraminifera]. Rhumbler. 162. Dollocystis [Gregarinida]. rhyncobli. Crawley. 34. ECCOMONAS [Flagellata]. socialis. Moroff. 130. EUGLENA [Flagellata]. quartana. Moroff. 130. ECSPORA [Gregarinida]. lucani. Crawley. 34. FESURINA [Foraminifora]. ——— bicaudata var. tricaudata. n. var. Silvestri. 182. biconica. Silvestri. 182. bradyi. Silvestri. 182. cucullata. Silvestri. 182. quadricostulata var. parvula n. var. Silvestri. 182. var. sexcostulata Silvestri. 182. n. var. schlichti. Silvestri. 182. FORULINA [Foraminifers]. \_\_\_\_\_ alternans†. Schellwien. 172. n. gen. [Gregarinida]. Gigaductus Crawley. 34A. parous. Crawley. 34A. GLENODINIUM [Dinoflagellata]. - apiculatum. Zacharias. 213. compressa. Calkins. 22. Zacharias. lemmermanni. 213. GREGARINA [Gregarinida]. boletophagi. Crawley. 34. calverti. Crawley. 34. discaeli. Crawley. 34. elaterae. Crawley. 34. harpali. Crawley. 34. oralis. Crawley. 34. rylopini. Crawley. 34. GYMNODINIUM [Flagellata]. gracile var. sphaerica n. var. Calkins. 22. HERPETOMONAS [Flagellata]. gracilis. Léger. 96. lesnei. Léger. 96. HETERONEMA [Flagellata]. - tremulum. Zacharias. 212. HIMOCYSTIS [Gregarinida]. - (?) ovalis. Crawley. 34. Histosporidium n. gen. [Sporozoa].

HOPLORHYNCHUS [Gregarinida.] ----- scolopendras. Crawley. 34A. HTALOSPHENIA [Amoebaea]. inconspicua. West. 201 platystoma. West. 201. LAGENA [Foraminifera]. marginulinoides. Silvestri. 182. montagui. Silvestri. 182. sphaerula. Silvestri. 182. Lagunculina n. nom. [Foraminifera]. Rhumbler. 162. [Coccidiidae]. Legerina n. gen. 79. Jaquemet. LEMBUS [Ciliata]. infusionum. Calkins. 22. Leptodesmus n. gen. [Ciliata]. Zacharias. 212. - tenellus. Zacharias. 212. Lernacophrya n. gen. [Acinetaria]. Pérez. 147. capitata. Pérez. 147. MALLOMONAS [Flagellata]. — fastigata. Zacharias. 212. Marsupulina n. nom. [Foraminifera]. Rhumbler. 162. schultzei n. nom. Rhumbler. 162. MASTIGANOEBA [Flagellata]. ----- limax. Moroff. 130. polyvacuolata. Moroff. 130. radicula. Moroff. 130. simplex. Calkins. 22. MENOIDIUM [Flagellata]. falcatum. Zacharias. 212. MESODENTUM [Ciliata]. — cinctum. Calkins. 22. Millettella n. nom. [Foraminifera]. Rhumbler, 162. MULTICILIA [Dinaflagellata]. - palustris. Penard. 143. Nosema [Myxosporidia]. geophili. Crawley. 35. NUCLEARIA [Heliozoa]. - caulescens. Penard. 142. conspicua. West. 201. NYOTOTHERUS [Ciliata]. - macropharyngeus. Bezzenberger. 12, 13. magnus. Bezzenberger, 12.

OPALINA [Ciliata].

coracoidea.

12.

Bezzenberger.

OPALINA [Ciliata]. lanceolata. Bezzenberger. 12. lata. Bezzenberger. 12. longa. Bezzenberger. 12. macronucleata. Bezzenberger. 12. PAMPHAGUS [Foraminifera]. hirsutus. Pénard. 142. PERIDINIUM [Dinoflagellata]. - truncatum. Zacharias. 213. Phacomonas n. gen. [Flagellata]. Lohmann. 106. pelagica. Lohmann. 106. PIROPLASMA [Haemosporidia]. - donovani. Laveran et Mesnil. 92. Plagiospira n. gen. [Ciliata]. 78. Issel. – crinita, Issel, 78. PLEURONEMA [Ciliata]. – setigera. Calkins. 22 PODOPHRYA [Acinetaria]. - gracilis. Calkins. 22. POLYCARYUM [Sporozoa]. - laeve. Stempell. 186. POLYCHROMOPHILUS [Sporozoa]. — melanipherus. Dionisi. 38. murinus. Dionisi. 38. RHABDOSTYLA [Ciliata]. - congregata. Zacharias. 211. RAPHIDIOPHRYS [Heliozoa]. - brunii. Penard. 142.

RHTNCHOMONAS [Flagellata]. — — — marina. Lohmann. 106. SALPINGOECA [Flagellata].

---- appendiculariae. Lohmann. 106.

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SPHENODERIA [Amoebaea]. pulchella. West. 201. STENOPHORA [Gregarinida]. spiroboli. Crawley. 34. Tolypammina n. nom. [Foraminifera]. Rhumbler. 162. schaudinni n. nom. Rhumbler. 162. TRACHELOMONAS [Flagellata]. minor. Palmer. 138. spiculifera, Palmer. 138. spinosa. Palmer. 138. vermiculosa. Palmer. 138. vestita. Palmer. 138. TRICHORHYNCHUS [Gregarinida]. — lithobii. Crawley. 34A. TRYPANOPLASMA [Flagellata]. cyprini. Plehn. 150. TRYPANOSOMA [Flagellata]. johnstoni. Dutton & Todd. 46. karyozeukton. Dutton æ Todd. 46. mega. Dutton & Todd. 46. Turritellella n. nom. [Foraminifera]. Rhumbler. 162. URONYCHIA [Ciliata]. setigera. Calkins. 22. UVIGERINA [Foraminifera]. auberiana var glabra n. var. Millett. 124. VAGINULINA [Foraminifera]. – sulzensis.† Hermann. 72. VORTICELLA [Ciliata]. sinuata. Zacharias. 212. Webbinella n. nom. [Foraminifera] Rhumbler. 162.

ZOOTHAMNIUN [Ciliata]. \_\_\_\_\_ geniculatum. Ayrton. 9.

۰.

Protozoa.

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## 0603-0631 PORIFERA (OR SPONGIDA).

### TITLES.

Arnesen, Emily. Spongien von der norwegischen Küste. II. Bergens Mus. Aarb., 1903, No. 1, (30, with 7 pls). [0627 da 0631]. 1

Baar, R. Hornschwämme aus dem Pacific. Ergebnisse einer Reise nach dem Pacific, Schauinsland 1896/97. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (27-36). [0627 n 0631]. 2

Bistram, A. Freiherr von. Beiträge zur Kenntnis der Fauna des unteren Lias in der Val Solda. Geologischpaläontologische Studien in den Comasker Alpen. L. Freiburg i. B., Ber. natf. Ges., 18, 1903, (116-214, mit 8 Taf.). [0231 0631 2231]. 3

**Cobb**, John N. The sponge fishery of Florida in 1900. Washington, D.C., Rep. U.S. Com. Fish., **1902**, 1903, (161-175, with 4 pl.). [0603 0627 gh]. 4

Cotte, Jules. Sur la présence du tyrosinase chez Suberites domuncula. Paris, C.-R. soc. biol., 55, 1903, (137-139). [0611 0631]. 5

Sur la présence du manganèse et du fer chez les éponges. Paris, C.-R. soc. biol., **55**, 1903, (139-141). [0611]. 6

**Gariaev**, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal-Sees im Sommer 1900 u. 1901. (Russ.) St. Peterburg, Trd. Troick.-Kišcht. Otd. Russ. Geogr. Obsč., V, 2, 1902, [1903], (27-48, mit 1 Karte). [0627 1227 1827 2027 2227 2627 ca 0631 1231 1831 2031 2231 2631]. 7 Görich, Wilhelm. Zur Kenntnis der Spermatogenese bei den Poriferen und Cölentersten. Zool. Anz., Leipzig, 27, 1903, (64-70). [0615 0815]. 8

Weiteres über die Spermatogenese bei den Poriferen und Cölenteraten. Zool. Anz., Leipzig, **27**, 1903,. (172-174). [0615 0815]. 9

Hill, W. v. Jukes-Browne, A. J.

**Itima**, Isao. Studies on the Hexactinellida. Contribution III. Placosoma, a new euplectellid; Leucopsacidae and Caulophacidae. Tokyo, J. Coll. Sci., **18**, Art. 1, 1903, (1-124, with 3 pls.). [0607 0615 0627 ec 0631]. 10.

Jukes-Browne, A. J. On the Zones of the Upper Chalk in Suffolk. London, Proc. Geol. Ass., **18**, 1903, (85–94, pl. XVI). [1027 de 2027 de 0627 de 5427 de 0827 de]. 11

and **Hill**, W. The Cretaceons Rocks of Britain. Vol. II. The Lower and Middle Chalk of England. Mem. geol. Surv. U. K., London, **1903**. (568, with 8 pls.). [0627 de 0427 de 2027 de 2227 de]. 12

**Kirkpatrick**, B. Descriptions of South African Sponges. Pts. II, III. Cape Town, Marin. Invest., **2**, 1903, (171-180, with 1 pl., 233-264, pls. V, VI). [0627 fg 0631]. 13

Lendenfeld, R[obert] von. Eine biologische Notiz über Spongilla fragilis Leidy. Arch. Natg., Berlin, **69**, Bd 1, 1903, (181-182, mit 1 Taf.). [0615 0631]. 16

reich, hrsg. v. F. E. Schulze, Lfg 19.)

Berlin (R. Friedländer & S.), 1903, (XV + 168). 26 cm. 8,40 M. [0631]. 17

Leon, N. Prophysema haechelii [n. sp.]. Zool. Anz., Leipzig, 26, 1903, (418-419). [0631]. 18

Lundbeck, Will. Porifera (Pars I) Homorrhaphidae and Heterorrhaphidae. The Danish Ingolf-Expedition Vol. 6, Nr. 1; published at the cost of the Government by the direction of the Zoological Museum of the University. Kjöbenhavn, 1902, (1-108, 19 pls.). 33 cm. [0607 0627 0631]. 19

Die Bezeichnung der Spongiennadeln und Anderes. Im Anschluss an Prof. v. Lendenfeld's Referat über meine Spongienarbeit. Zool. Anz., Leipzig, **26**, 1903, (390–392). [0603 0607]. 20

Petch, W. Marine zoology at Filey. Naturalist, London, **1903**, (351). [0627 de 1827 de 1827 de 2027 de 2627 de 2227 de 5427 de 1027 de]. 21

Preiwisch, Josef. Kalkschwämme aus dem Pacific. Ergebnisse einer Reise nach dem Pacific, Schauinsland 1896-97. Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (9-26, mit 3 Taf.). [0631 0627 n]. 22

**Baisin**, Miss C. A. The formation of Chert and its micro-structures in some Jurassic Strata. London, Proc. Geol. Ass., **18**, 1903, (71-82, pls. XIV and XV). [0627 de 0631]. 23

**Rowe**, A. W. The zones of the White 'Chalk of the English Coast. London, Proc. Geol. Ass., **18**, 1903, (1-51, pls. I-XIII): [review by Jukes-Browne]. Geol. Mag., London, [4], **10**, 1903, (309-313). [0827 de 1027 de 1031 2027 de 0627 de]. 24

Schulze, Franz Eilhard. Caulophacus arcticus (Armauer Hansen) und Calycosoma gracile F. E. Sch. nov. spec. Berlin, Abh. Ak. Wiss., 1903, (1-22, mit 2 Taf.). 27 cm. [0631]. 25

Sollas, I. On Haddonella topsenti, gen. et sp. n., the structure and development of its pithed fibres. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (557-563, pls. XXVIII, XXIX). [0607 0631]. 26

Thiele, Joh. Beschreibung einiger unzureichend bekannten monaxonen Spongien. Arch. Natg., Berlin, 69, Bd 1, 1903, (375–398, mit 1 Taf.). [0631]. 27

**Thisle**, Joh. Kieselschwämme von Ternate. II. Frankfurt a. M., Abh. Senckenb. Ges., **25**, 1903, (932–968, mit 1 Taf.). [0627 ia 0631]. 28

Topeent, E. Zoologie, Spongiaires. In: Expédition antarctique belge. Résultate du voyage du S.Y. "Belgica" en 1897-1898-1899. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1901, 1902, (54, av. 6 pls. hors texte). 16 fr. [0603 0607 0627 k o 0631]. 29

Urban, F. Ueber das Dermalepithel der Kalkspongien. Verh. Ges. D. Natf., Leipzig, 74, (1903), II, 1, 1903, (159). [0607]. 30

**Weltner**, W[ilhelm]. Bericht über die Leistungen in der Spongiologie während der Jahre 1899–1901. Arch. Natg., Berlin, **62**, Bd 2, H. 3, 1896, [1903], (181–258). [0603]. 31

## 0603 COMPREHENSIVE AND GENERAL WORKS.

**Cobb**, John M. The sponge fishery in Florida in 1900. Washington, D.C., Rep. U.S. Com. Fish., **1902**, 1903, (161-175, with 4 pls.).

Lundbeck, Will. Die Bezeichnung der Spongiennadeln und Anderes. Im Anschluss an Prof. v. Lendenfeld's Referat über meine Spongienarbeit. Zool. Anz., Leipzig, **26**, 1903, (390-392).

Topsent, E. Zoologie, Spongiaires. In: Expédition antarctique belge. Résultats du voyage du S.Y. "Belgica" en 1897-1898-1899. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1901-1902, (54, av. 6 pls. hors texte).

Weltner, W[ilhelm]. Bericht über die Leistungen in der Spongiologie während der Jahre 1899–1901. Arch. Natg., Berlin, 62, Bd 2, H. 3, 1896, [1903], (181–258).

## 0607 STRUCTURE.

## GENEBAL.

**Ijima,** Isao. [Structure, &c., of Hexactinellida (Euplectellidae, Leucopsacidae, and Caulophacidae)]. Tokyo,

J. Coll. Sci., 18, Art. 1, 1903, (1-124, with 8 pls.).

Lundbeck, Will[iam]. Porifera (Pars 1) Homorrhaphidae and Heterorrhaphidae. The Danish Ingolf-Expedition, Vol. 6, Nr. 1; published at the cost of the Government by the Direction of the Zoological Museum of the University. Kjöbenhavn, 1902, (1-108, 19 pls.). 33 cm.

Solias, I. On Haddonella topenti, gen. et sp. n., the structure and development of its pithed fibres. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (557-563, pls. XXVIII-XXIX).

Topsent, E. Zoologie, Spongiaires. In: Expédition antarctique belge. Résultate du voyage du S.Y. "Belgica" en 1897-1898-1899. Rapport scientifiques. Anvers (Imprimerie J. E. Buschmann), 1901-1902, (54, av. 6 pls. hors texte). 16 fr.

#### TEGUMENT.

Urban, F. Ueber das Dermalepithel der Kalkspongien. Verh. Ges. D. Natf., Leipzig, 74, (1902), II, 1, 1903, (159).

#### INTERNAL SKELETAL STRUCTURES.

Landbeck, Will. Die Bezeichnung der Spongiennsdeln und Anderes. Im Anschluss an Prof. v. Lendenfeld's Beferat über meine Spongienarbeit. Zool. Anz., Leipzig, 26, 1903, (390-392).

## 0611 PHYSIOLOGY.

CHEMICAL PHYSIOLOGY.

Coste, Jules. Sur la présence du tyrosinase chez Suberites domuncula. Paris, C.-R. soc. biol., 55, 1903, (137-139).

ganèse et du fer chez les éponges. *l.c.* (139-141).

#### 0615 DEVELOPMENT.

#### GENERAL.

**Jima, Isao.** [Development of *Leucopeacus orthodocus.*] Tokyo, J. Coll. Sci., **13**, Art. 1, 1903, (1-124, with 8 pls.).

#### ASEXUAL REPRODUCTION.

Lendenfeld, R[obert] von. Eine biologische Notiz über Spongilla fragilis Leidy. Arch. Natg., Berlin, 69, Bd 1, 1903, (181-182, mit 1 Taf.).

## SPERMATOGENSIS.

Görich, Wilhelm. Zur Kenntnis der Spermatogenese bei den Poriferen und Cölentersten. Zool. Anz., Leipzig, 27, 1903, (64-70).

Weiteres über die Spermatogenese bei den Poriferen und Cölenteraten. l.c. (172-174).

## 0627 GEOGRAPHICAL DISTRI-BUTION.

d EUROPE.

da SCANDINAVIA.

Arnesen, Emily. Spongien von der norwegischen Küste. II. Bergens Mus. Aarb., 1903, No. I, (30, with 7 pls.).

Lundbeck, William. Porifers (Pars 1). Homorrhaphidae and Heterorrhaphidae. The Danish Ingolf Expedition Vol. 6, No. 1; published at the cost of the Government by the direction of the Zoological Museum of the University. Kjöbenhavn, 1902, (1-108, 19 pls.). 33 cm.

de BRITISH ISLANDS.

Jukes-Browne, A. J. On the zones of the Upper Chalk in Suffolk. London, Proc. Geol. Ass., 18, 1903, (85-94, pl. XVI).

and Hill, W. The Cretaceous Rocks of Britain. Vol. II. The Lower and Middle Chalk of England. Mam. Geol. Surv. U.K., London, **1903**, (568, with 8 pls.).

Petch, T. Marine Zoology at Filey. Naturalist, London, **1903**, (351).

**Baisin**, *Miss* C. A. The formation of Chert and its micro-structures in some Jurassic Strata. London, Proc. Geol. Ass., **18**, 1903, (71-82, pls. XIV-XV).

Bowe, A. W. The zones of the White Chalk of the English Coast. *l.c.* (1-51, pls. I-XIII); [review by Jukes-Browne], Geol. Mag., London, [4], 10, 1903, (309-313).

e Asia.

ea ASIATIC RUSSIA.

Gariaev, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal-See's im Sommer 1900 u. 1901. (Russ.) St. Peterburg, Trd. Troick.-Ktacht. Otd. Russ. Geogr. Obsč., V, 2, 1902, [1903], (27–48, mit 1 Karte).

ec JAPANESE ISLANDS.

**Ijima**, Isao. Studies on Hexactinellida. Contrib. III. Tokyo, J. Coll. Sci., **18**, Art. 1, **1903**, (1-124, with 8 pls.).

f AFRICA.

fg South Africa.

Kirkpatrick, R. Description of South African Sponges. Pt. II. Cape Town, Marin. Invest., 2, 1903, (171-180, with 1 pl.).

## g North America.

gh South Eastern United States.

**Cobb**, John N. The sponge fishery of Florida in 1900. Washington, D.C., Rep. U. S. Com. Fish., **1902**, 1903, (161-175, with **4** pls.). Separate. 23.2 cm.

## i AUSTRALASIA.

ia New Guinea with Islands Eastward of Wallace's Line.

Thiele, Joh. Kieselschwämme von (Russ.) St. Peterburg, Trd. 7 Ternate. II. Frankfurt a. M., Abh. Kiacht. Otd. Russ. Geogr. Obšč Senckenb. Ges., 25, 1903, (932–968, mit 1902, [1903], (27–48, av. 1 carte).

k ARCTIC.

Topsent, E. Zoologie, Spongiaires. In: Expédition antarctique belge. Résultats du voyage du S. Y. "Belgica" en 1807-1898-1899. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1901-1902, (54, av. 6 pls. hors texte). 16 fr.

## ka ARCTIC OCEAN.

Lundbeck, Will[iam]. Porifera (Pars 1) Homorrhaphidae and Heterorrhaphidae. The Danish Ingolf-Expedition Vol. 6, Nr. 1; published at the cost of the Government by the direction of the Zoological Museum of the University. Kjöbenhavn, 1902, (1-108, 19 pls.). 33 cm.

n PACIFIC.

Baar, R. Hornschwämme aus dem Pacific. Ergebnisse einer Reise nach dem Pacific, Schauinsland 1896-97. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (27-36).

Preiwisch, Josef. Kalkschwämme aus dem Pacific. Ergebnisse einer Reise nach dem Pacific, Schauinsland 1896-97. *l.c.* (9-26, mit 3 Taf.).

## o ANTARCTIC.

Topeent, E. Zoologie, Spongiaires. In : Expédition antarctique belge. Résultats du voyage du S.Y. "Belgica" en 1897-1898-1899. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1901-1902. (54, av. 6 pls. hors texte). 16 fr.

# 0631 TAXONOMY AND SYSTEMATIC.

## GENERAL.

Gariaev, V. P. . . Evertebratenfauna des Baikal-Sees . . (Russ.) St. Peterburg, Trd. Troick.-Kiacht. Otd. Russ. Geogr. Obšč., V, 2, 1902, [1903], (27-48, av. 1 carte).

Kirkpatrick, R. Description of South African Sponges. Pt. III. Cape Town, Marin. Invest., 2, 1903, (233-264, pls. V-VI).

Raisin, Miss C. A. The formation of Chert and its micro-structures in some Jurassic Strata. London, Proc. Geol. Ass., 18, 1903, (71-82, pls. XIV-XV).

Topsent, E. Zoologie, Spongiaires. In : Expédition antarctique belge, Résultats du voyage du S. Y. "Belgica" en 1897-1898-1899. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1901-1902, (54, av. 6 pls. hors texte). 16 fr.

## CALCAREA.

## GENERAL.

Pretwisch, J. Kalkschwämme aus dem Pacific. Ergebnisse einer Reise nach dem Pacific, Schauinsland 1896-97. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (9-26, mit 3 Taf.).

#### SPECIAL.

Ebnerella compressa n. sp. Pacific. Pretwisch, J. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (19-23, pl. IV, figs. 13-18).

Leucetta nn. spp. Pacific. **Preiwisch**, J. l.e. (10-14, pl. 11, figs. 1-6, pl. III, fig. 7).

Sycandra nn. spp. Pacific. **Pret**wisch, J. *l.c.* (15–19, pl. III, fig. 8, pl. IV, figs. 9–12).

## HEXACTINELLIDA.

Calycosoma gracile n. sp. Schulze, F. E. Berlin, Abh. Ak. Wiss., 1903, (14-21, pl. II).

Caulophacus arcticus (Armauer Hansen). Schulze, F. E. l.c. (1-14, pl. I). 27 cm.

Lotifolium n. sp. Ijima, I. Tokyo, J. Coll. Sci., 18, Art. 1, 1903, (87-96, 112, pl. VII).

Chaunoplectella described, C. spinifera n. sp. Ijima, I. l.e. (53-71).

Eudictyon<sup>†</sup> n. gen., E. steinmanni<sup>†</sup> n. form. Alps. Bistram, A. Freiburg i B., Ber. natf. Ges., 13, 1903, (184–186).

Leucopeacus orthodocus, L. scoliodocus described. 1jima, I. Tokyo, J. Coll. Sci., 18, Art. 1, 1903, (34-52, 110, pl. III, figs. 14-37).

Placosoma n. gen., P. paradictyum n. sp. **Ijima**, Isao. l.c. (2-28, 109, pls. I, II).

Sympagella anomala n. sp. Ijima, I. Le. (97-108, 112, pl. VIII).

## GENERAL.

Lendenfeld, Robert von. Tetraxonia. (Das Tierreich, hrsg. v. F. E. Schulze, Lfg 19.) Berlin (R. Friedländer & S.), 1903, (XV + 168). 26 cm. 8,40 M.

## TETRACTINELLIDA.

Discodermia nataleneis n. sp. S. Africa. **Kirkpatrick**, R. Cape Town, Marin. Invest., **2**, 1903, (172, pl. IV, figs. 2, 2 a-k, 3, 3 a-d).

Lithobactrum n. gen., L. forte n. sp. S. Africa. **Kirkpatrick**, R. *l.c.* (175, pl. IV, figs. 5, 5 a-g).

Microseleroderma n. gen., M. hirsutum n. sp. S. Africa. **Kirkpatrick**, R. l.c. (173).

Monanthus n. gen., *M. plumosus* n. sp. S. Africa. **Kirkpatrick**, R. *l.c.* (176, pl. IV, figs. 6, 6 a-e, 7, 7 a-b).

Triptolemus incertus n. sp. S. Africa. Kirkpatrick, R. *l.c.* (178, pl. IV, figs. 4 and 4 a-f).

## MONAXONIDA.

#### GENERAL.

Thiele, J. Beschreibung einiger unzureichend bekannten monaxonen Spongien. Arch. Natg., Berlin, **69**, Bd 1, 1903, (375–398, mit 1 Taf.).

Lundbeck, Will[iam]. Porifera (Pars 1) Homorrhaphidae and Heterorrhaphidae. The Danish Ingolf-Expedition Vol. 6, Nr. 1; published at the cost of the Government by the direction of the Zoological Museum of the University. Kjöbenhavn, 1902, (1-108, 19 pls.).

## SPECIAL.

Agelas carernosa n. sp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (963).

Azinysea tethyoides n. sp. S. Africa. **Kirkpatrick**, R. Cape Town, Marin. Invest., **2**, 1903, (245, pl. V, fig. 12; pl. VI, fig. 8 a-b).

Biemna humilis n. sp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (944). Bubaris reptans n. sp. S. Africa. Kirkpatrick, R. Cape Town, Marin. Invest., 2, 1903, (248, pl. V, fig. 14; pl. VI, fig. 15 a-c).

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Chalina spatula n. sp. Lundbeck, W. The Danish Ingolf Expedition, Vol. 6, No. 1, Kjöbenhavn, 1902, (11, 12, pl. II, fig. 3, pl. VIII, figs. 8, 9).

Clathria mollis n. sp. S. Africa. Kirkpatrick, R. Cape Town, Marin. Invest., 2, 1903, (249, pl. V, fig. 15; pl. VI, fig. 16 a-b).

Coppatias baculifer n. sp. S. Africa. **Kirkpatrick**, R. *l.c.* (239, pl. V, fig. 5; pl. VI, fig. 5 a-b).

Desmacella hamifera n. sp. Lundbeck, W. The Danish Ingolf Expedition. Vol. 6, No. 1, Kjöbenhavn, 1902, (93-95, pl. VII, figs. 4-6, pl. XVII, fig. 1, a-l).

Desmacidon clavellata n. sp. Norway. Arnesen, E. Bergens Mus. Aarb., **1903**, No. 1, (13, 14, pl. II, fig. 2, pl. IV, fig. 4).

Echinochalina n. gen. = Ophlita-»pongia australiensis Ridley. Thiele, J. Frankfurt a M., Abh. Sonckenb. Ges., 25, 1903, (961-962).

Esperella plumosa n. sp. Norway. Arnesen, E. Bergens Mus. Aarb., 1903, No. 1, (11, pl. II, fig. 1.).

Esperiopsis schmidtii n. sp. Norway. Arnesen, E. l.c. (8, 9).

Gelliodes nn. spp. Lundbeck, W. The Danish Ingolf Expedition Vol. 6, No. 1. Kjöbenhavn, 1902, (75-78, pl. V, figs. 3, 4, pl. XIV, figs. 3-6).

Gellius nn. spp. Norway. Arnesen, E. Bergens Mus. Aarb., 1903, No. 1, (7-8).

nn. spp. Lundbeck, W. The Danish Ingolf-Expedition. Vol. 6, No. 1. Kjöbenhavn, 1902, (64-71, pl. VI, figs. 5-8, pl. XIII, figs. 1-12).

mn. spp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1902, (941-942).

Halichondria nn. spp. Thiele, J. l.c. (935-936).

The Danish Ingolf-Expedition Vol. 6,

No. 1. Kjöbenhavn, 1902, (27-31, pl. II, fig. 7, pl. III, figs. 1, 2, pl. X, 3-8).

Hamacantha nn. spp. Lundbeck, W. l.e. (99–108, pl. V, figs. 6–9, pl. VII, figs. 2, 3, pl. XVIII, figs. 1–3, pl. XIX, figs. 1–6).

Hamigera stipitata n. sp. Norway. Arnessen, E. Bergens Mus. Aarb., 1903, No. 1, (20, 21).

*ternatonsis* n. sp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (952).

Histoderma natalense n. sp. S. Africa. **Kirkpatrick**, R. Cape Town, Marin. Invest., **2**, 1903, (250, pl. V, fig. 17; pl. VI, fig. 18a-e).

Hymedesmia prostrata n. sp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (955).

Hymeniacidon caliculatum n. sp. var. osculatum n. var. S. Africa. **Kirkpatrick**, R. Cape Town, Marin. Invest., **2**, 1903, (241, 242, pl. V, fig. 8; pl. VI. figs. 12, 13).

*llymeraphia* nn. spp. **Thiele**, J. Frankfurt a. M., Abh. Senckenb. Ges., **25**, 1903, (956, 957).

Kalastrella n. gen., K. vasiformis n. sp. var. minor n. var. S. Africa. **Eirkpatrick**, R. Cape Town, Marin. Invest., 2, 1903, (238, 239, pl. V, figs. 3, 4, pl. VI and figs. 3a-f, 4a-c).

Latrunculia natalensis n. sp. S. Africa. Kirkpatrick, R. l.e. (237, pl. V, fig. 2; pl. VI, fig. 2a-e).

*Mycale* nn. spp. **Thiele**, J. Frankfurt a. M., Abh. Senckenb. Ges., **25**, 1903, (950).

Myxilla grata n. sp. Thiele, J. l.c. (954).

Pachychalina schmidtii n. sp. Lundbeck, W. The Danish Ingolf-Expedition. Vol. 6, No. 1. Kjöbenhavn, 1992, (5-7, pl. I, figs. 1, 2, pl. VIII, figs. 1-3).

Petrosia nn. spp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (938, 939).

Phakellia microzephora n. sp. S. Africa. Kirkpatrick, R. Cape Town, Marin. Invest., 2, 1903, (242, pl. V, fig. 9; pl. VI, fig. 9a-d). Phloeodietyon nn. spp. Lundbeck, W. The Danish Ingolf-Expedition. Kjöbenhavn, 1902, (57-62, pl. VI, figs. 9-13, pl. XII, figs. 6-7, 10).

*eumitum* n. sp. S. Africa. **Kirkpatrick**, R. Cape Town, Marin. Invest., **2**, 1903, (253, pl. V, fig. 18; pl. VI, fig. 19a-b).

Placospongia labyrinthica n. sp. S. Africa. **Kirkpatrick**, R. *l.c.* (236, pl. V, figs. 1, 1a, 1b; pl. VI, fig. 1a-f).

Plumohalichondria papillosa n. sp. Norway. Arnesen, E. Bergens, Mus. Aarb., 1903, No. 1, (19-20).

Protoschmidtia nn. spp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (939).

*Reniera* nn. spp. **Lundbeck**, W. The Danish Ingolf-Expedition. Kjöbenhavn, 1902, (39–49, pl. II, fig. 6; pl. V, figs. 1, 2, 5; pl. XI, figs. 5, 8, 13–16).

Rhizochalina crassispicula (?) n. sp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (936).

Sigmaxinella nn. spp. S. Africa. Kirkpatrick, R. Cape Town, Marin. Invest., 2, 1903, (246, pl. V, fig. 13; pl. VI, fig. 14a-c).

Siphonochalina claviformis n. sp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (940).

mollicula n. sp. Lundbeck, W. The Danish Ingolf-Expedition. Vol. 6, No. 1. Kjöbenhavn, 1902, (15, 16, pl. VIII, figs. 12-14).

Spongilla fragilis Leidy, eine biologische Notiz. Lendenfeld, R. von. Arch. Nstg., Berlin, **69**, Bd 1, 1903, (181-182, mit 1 Taf.).

Stylostichon involutum n.sp. S. Africa. Kirkpatrick, R. Cape Town, Marin. Invest., 2, 1903, (250, pl. V, fig. 16; pl. VI, fig. 17a-e).

Suberites domuncula, présence du tyrosinase. Ootte, J. Paris, C.-R. soc. biol., 55, 1903, (137–139).

Syringella gorgonioides n. sp. S. Africa. **Eirkpatrick**, R. Cape Town, Marin. Invest., **2**, 1903, (244, pl. V, fig. 11; pl. VI, fig. 11a-b).

Tedania nn. spp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (946-947). Tethya magna n. sp. S. Africa. Kirkpatrick, R. Cape Town, Marin. Invest., 2, 1903, (240, pl. V, fig. 6; pt. VI, fig. 6a-d).

Toxochalina ternatensis n. sp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (940).

Trachya nuda n. sp. S. Africa. **Kirkpatrick**, R. Cape Town, Marin. Invest., 2, 1903, (241, pl. V, fig. 7; pl. VI, fig. 7a-b).

Tragosia infundibuliformis Johnst. var. natalensis n. var. S. Africa. Kirkpatrick, R. *l.e.* (243, pl. V, fig. 10; pl. VI, fig. 10a-c).

Thrinacophora incrustans n. sp. Thiele, J. Frankfurt a. M., Abh. Senckenb. Ges., 25, 1903, (932-968, mit 1 Taf.).

Yvesia nn. spp. Norway. Arnesen, E. Bergens Mus. Aarb., 1903, No. 1, (17-18).

## KERATOSA.

#### GENERAL.

Baar, R. Hornschwämme aus dem Pacific. Ergebnisse einer Reise nach dem Pacific, Schauinsland 1896-1897. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (27-36).

#### SPECIAL.

Coscinoderma concentricum n. sp. S. Africa. **Kirkpatrick**, R. Cape Town, Marin. Invest., **2**, 1903, (254, pl. VI, figs. 19, 19a).

Haddonella n. gen., H. topsenti n. sp. Torres Straits. Sollas, J. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (557-563, pls. XXVIII, XXIX).

Peammopemma inordinatum n. sp. S. Africa. **Kirkpatrick**, R. Cape Town, Marin. Invest., **2**, 1903, (257, pl. VI, fig. 21, 21a).

Stelospongia flava n. sp. Pacific. Baar, R. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (27-36).

### INCERTAE SEDIS.

Prophysema haeckelii [n. sp.]. Leon, N. Zool. Anz., Leipzig, **26**, 1903, (418– 419).

Porifera.

LIST OF NEW GENERA AND SPECIES.	Gelliu
Agelas [Monaxonida]. ————————————————————————————————————	
AXINYSBA [Monaxonida]. ————————————————————————————————————	Haddo
BIEMNA [Monaxonida]. ————————————————————————————————————	HALICH
BUBARIS [Monaxonida]. ————————————————————————————————————	
CALYOOSOMA [Hexactinellida]. gracile. Schulze. 25.	
CAULOPHAOUS [Hexactinellida]. ————————————————————————————————————	Нажас
CHAUNOPLECTELLA [Hexactinellida]. 	
CHALINA [Monaxonida]. ————————————————————————————————————	HANIG
CLATHRIA [Monaxonida]. 	HISTOR
COPPATIAS [Monaxonida].	HISIO
baculifer. Kirkpatrick. 14. COSCINODERMA [Keratosa].	
concentricum. Kirkpatrick. 14.	Нумея 
DESMACELLA [Monaxonida]. ———— hamifera. Lundbeck. 19.	
DESMACIDON [Monaxonida]. clavellata. Arnesen. 1.	Нумен
DISCODERNIA [Tetractinellida]. ———— natalensis. Kirkpatrick. 13.	Kalast
EBNERELLA [Calcarea]. compressa. Preiwisch. 22.	
Echinochalina n. gen. [Monaxonida]. Thiele. 28.	
ESPERELLA [Monaxonida]. ————————————————————————————————————	LATRU
ESPERIOPSIS [Monaxonida]. 	Leuce
Endictyon † n. gen. [Hexactinellida]. Bistram. 3.	
steinmanni † n. f. Bistram. 3. GELLIODES [Monaxonida].	Lithod
consimilia Lundbeck 19	Micros
hamata. Thiele. 28. porosa. Thiele. 28. plexa. Lundbeck. 19.	
GELLIUS [Monaxonida].	Monar
csperi. Arnesen. 1. irregularis. Thiele. 28. luridus Landbeck. 19.	MYOAL
massa. Arnesen. 1. microtoxa. Lundbeck. 19.	

	-	
Gellius [M	fonaxonida].	10
	primitirus. Lundbeck proximus. Lundbeck.	. 19. 19.
	proximus. Lundbeck. truncatus. Thiele. 28	
Haddonell	26.	ollas.
	topsenti. Sollas. 26. DRIA [Monaxonida].	
	colossea. Lundbeck.	19.
	? dificilis. Lundbeck. fragilis. Thiele. 28.	. 19.
	incrustans. Thiele. 2	.8.
	osculum. Lundbeck tenuiderma. Lundbeck	19. . 19.
HAMACANTI	HA [Monaxonida].	
	bowerbanki. Lundbeck implicans. Lundbeck	
HAMIGERA	[Monaxonida].	
	stipitata. Arnesen. I ternatensis. Thiele.	28.
HISTODERN	A [Monaxonida]. natalense. Kirkpatrick	. 14.
Hynedesm	IA [Monaxonida]. prostrata. Thiele. 28	3.
Hymeniaci 	וססא [Monaxonida]. caliculatum. Kirkpa 14.	
	caliculatum var. oscu n. var. Kirkpatrick	
HYMERAPH	IA [Monaxonida]. distincta. Thiele. 28 similis. Thiele. 28.	•
Kalastrell	a n. gen. [Monaxonida].	Kirk-
	patrick. 14. vasiformis. Kirkpatric	L 14
	vasiformis. Kirkpatric vasiformis var. minor 1 Kirkpatrick. 14.	s. 14. 1. var.
LATRUNCUL	Inapation: II. natalensis. Kirkpatric	F 14
LEUCETTA	[Calcarea].	A. 11.
	sambucus. Preiwisch. schauinslandi. Preiv	22. wisch.
Lithobactr	22. rum_n. gen. [Tetractine]	llida].
	Kirkpatrick. 13.	3.
Microscler	odermia n. gen. [Tetrad lida]. Kirkpatrick. hirsutum. Kirkpatrick	13.
Monanthu	s n. gen. [Tetractine	
	Kirkpatrick. 13. plumosus. Kirkpatrick	. 13.
MYCALE [M	Ionaxonida].	
	armata. Thiele. 28. moluccensis. Thiele.	28.

## Porifera.

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MYXILLA [Monaxonida]. ----- grata. Thiele. 28. PACHYCHALINA [Monaxonida]. - schmidtii Lundbeck. 19. PETROSIA [Monaxonida]. \_\_\_\_\_ cancellata. Thiele. 28. strongylata. Thiele. 28. PHAKELLIA [Monaxonida]. - microxephora. Kirkpatrick. 14. Phloeodiction [Monaxonida]. ----- eumitum. Kirkpatrick. 14. irregulare. Lundbeck. 19. tuber. Lundbeck. 19. Placosoma n. gen. [Hexactinellida]. Ijima. 10. paradictyum. Ijima. 10. PLACOSPONGIA [Monaxonida]. ----- labyrinthica. Kirkpatrick. 14. PLEMOHALICHONDRIA [Monaxonida]. papillosa. Arnesen. 1. PROPHYSEMA [Incertae sedis]. haeckelii. Leon. 18. PROTOSCHMIDTIA [Monaxonida]. \_\_\_\_\_ expansa. Thiele. 28. \_\_\_\_\_ pulvillus. Thiele. 28. PSANNOPENMA [Keratosa]. Kirkpatrick. **\_\_\_\_\_** inordinatum. 14. RESIERA [Monaxonida]. *calumus.* Lundbeck. 19. *folium.* Lundbeck. 19. heterofibrosa. Lundbeck. 19. hyalina. Lundbeck. 19. laza. Lundbeck. 19. parenchyna. Lundbeck. 19.

RHIZOCHALINA [Monaxonida]. ------ crassispicula. Thiele. 28. SIGNAXINELLA [Monaxonida]. ----- arborea. Kirkpatrick. 14. incrustans. Kirkpatrick. 14. SIPHONOCHALINA [Monaxonida]. STELOSPONGIA [Keratosa]. —— flara. Baar. 2. STYLOSTICHON [Monaxonida]. involutum. Kirkpatrick. 14. staurifera. Preiwisch. 22. SYMPAGELIA [Hexactinellida]. ——— anomala. Ijima. 10. SYRINGELLA [Monaxonida]. ----- gorgonioides. Kirkpatrick. 14. TEDANIA [Monaxonida]. breviepiculata. Thiele. 28. coralliophila. Thiele. 28. maeandrica. Thiele. 28. reticulata. Thiele. 28. THRINACOPHORA [Monaxonida]. — incrustans. Thiele. 28. TOXOCHALINA [Monazonida] ------ ternatensis. Thiele. **2**8. TETHYA [Monaxonida]. ---- magnu. Kirkpatrick. 14. TRACHYA [Monaxonida]. nuda. Kirkpatrick. 14. TRAGOSIA [Monaxonida]. ------ infundibuliformis. Kirkpatrick. 14. TRIPTOLEMUS [Tetractinellida]. — incertus. Kirkpatrick. 13. YVESIA [Monaxonida]. ----- lobata. Arnesen. 1. – mammillata. Arnesen. 1.

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# 0303-0831 CELENTERATA (OR CNIDARIA).

## TITLES.

Adars, Walter M. Beiträge zur Kenntnis der Spermatogenese bei den Colenteraten. Zs. wiss. Zool., Leipzig, 74, 1903, (81-108, mit 2 Taf.). [0815] 1

Arnold, Ralph. The peleontology and stratigraphy of the marine Pliocene and Pleistocene of San Pedro, California. (Dissertation . . . Leland Stanford Junior University . . . degree . . . Ph. D.). [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3**], in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **34**, 1903, (1-420, with pl.). [0227 gi 0231 0231 2231]. 2

**Beardaley**, A. E. The destruction of trout fry by Hydra. [Hydra pallida n. sp.] Washington, D.C., Bull. U.S. Fish Com., 22, (1902), 1903, (155-160). [0060 5403 5419 0819 0831]. 3

**Bedot**, [Maur]. Recherches sur la Bathyphysa grimaldis. Arch. Sci. Phys., Genève, (sér. 4), **15**, 1903, (464– 465). [0807 0831]. 4

**Beecher**, Charles E[merson]. Observations on the genus *Romingeria*. [Reprinted from the Amer. J. Sci., New Haven, Conn., **16**, 1903], (1-11, with 5 pl.). 23.1 cm. [0831]. 5

Bell, J. and Kirkpatrick. Guide to the Coral gallery. British Museum of Natural History. [Review], Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903. (132). [0803]. 6

Bernard, H. M. Catalogue of the Madreporarian Corals in the British Museum (Natural History). IV. The family *Poritidae*. i. The genus *Gonioporo*. London, 1903, (viii + 206, 14 pls.). [0803 0831]. 7

(n 2**-9053**)

Billard. De l'excrétion chez les hydroides. Paris, C.-R. Acad. sci., 137, 1903, (340-342). [0811 0831]. 8

Note sur les variations du Plumularia halccioides Alder. Bul. Muséum, Paris, **1903**, (57-62). [0823 0831]. 9

Bourne, G. C. Some new and rare corals from Funafuti. London, J. Linn. Soc. Zool., 29, No. 187, 1903, (26-37, pls. V, Vl). [0807 0827 nb 0831]. 10

Broch, Hjalmar. Die von dem norwegischen Fischereidampfer "Michael Sars "in den Jahren 1900-1902 in dem Nordmeer gesammelten Hydroiden. Bergens Mus. Aarb., **1903**, No. 9, (14, 4 pls.). [0827 ka la 0831]. 11

Brooks, Willium Keith. On a new genus [Dichotomia n. gen.] of hydroid jelly-fishes. Philadelphia, Pa., Proc. Amer. Phil. Soc., 42, 1903. (11-14, with 1 pl.). [0831]. 12

**Browne**, Edward. Report on some Medusae from Norway and Spitzbergen. Bergens Mus. Aarb., **1903**, No. 4, (36, with 5 pls.). [0827 da kd 0831]. 13

Brüning. Hydra und Limnaea im Aquarium. Natur u. Haus, Dresden, 11, 1903, (135–138). [0819 0831 2219 2231]. 14

Burchardt, Eugen. Alcyonaceen von Thursday Island (Torres-Strasse) und von Amboina, II. Jena, Denkschr. med. Ges., 8, 1903, (653-682, mit 4 Taf.). [0831 0827 ia]. 15

**Carlgren**, O. Ueber die Regeneration der Seeanemonen. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 Juillet 1902, **1903**, VI Section, (9-11). [0811 0831]. 16

н 2

**Carlgren**, O. Jahresbericht über die Anthozoen für die Jahre 1892 und 1893. Arch. Natg., Berlin, **62**, Bd 2, H. 3, 1896, [1903], (145-180). [0803]. 17

**Cerfontaine**, Paul. Recherches expérimentales sur la régénération et l'hétéromorphose chez Astroïdes calycularis et Pennaria cavolinii. Arch. biol., Paris-Liège, **19**, 1902, (245-315, av. 2 pls.). [0811 0831]. 18

Child, C. M. Form-regulation in Coelentera and Turbellaria. Washington, D.C., Smithsonian Inst. Misc. Collect. Q. Issue, 45, 1903, (134-143, with pl.). [0211 0811 1211 1231]. 19

Form - regulation in Cerianthus. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (239-260, 304-319, with text fig.); 6, 1903, (1-11, with text-fig.). [0211 0811 0831]. 20

Clarke, Samuel Fessenden. An Alaskan Corymorpha-like Hydroid. Washington, D.C., Smitheonian Inst., Nation. Mus. Proc., 26, 1903, (953–958, with text-fig.). Separate 24.3 cm. [0827 ga 0831]. 21

Crossman, R. W. v. Weed, C. M.

**Dacqué**, Edgar. Mittheilungen über den Kreidecomplex von Abu Roash bei Cairo. Palaeontographica, Stuttgart, **30**, 11, 1903, (337-392, 3 Taf.). [0831 2031 2231]. 22

Davydov, K. N. Les résultats du voyage scientifique au Java et les autres iles de l'Archipel Malais. II. Hydroctena salenskii n. sp. (Etude morphologique sur un nouveau coelenteré pélagique.) St. Péterburg. Mém. Ac. Sc., (8 F.), 14, No. 9, 1903, (16, av. 1 pl.). [0807 0831]. 23

Duerden, J. E. IV. Fissiparous gemmation. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (141-155, with 7 figs.). [0815]. 24

On the Actinian Bunodeopsis globulifera Verrill. London, Trans. Linn. Soc. Zool., (Ser. 2), 8, 1903, (297-317, 2 pls.). [0807 0831]. 25

West Indian sponge-incrusting Actinians. [With bibliography.] New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (495-503, with 4 pls.). [0827, he 0831]. 26 Elles, Gertrude L. and Wood, Ethel M. R. [Edited by Lapworth.] A monograph of British Graptolites. III. London, Monogr. Palaeont. Soc., 57, 1903, (XXIX-LII, 103-134, pls. XIV-XIX). [0807 0827 de 0831]. 27

**Etheridge**, R., *jun. Fossopora*, a new genus of Palaeozoic Perforate Corals. Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (16–19, with 2 pls.). [0831].

**Feltx**, Johannes. Studien über die korallenführenden Schichten der oberen Kreideformation in den Alpen und den Mediterrangebieten. Tl 1: Die Anthozoën der Gosauschichten in den Ostalpen. I. u. II. Hälfte. Palaeontographica, Stuttgart, **49**, 1903, (163-360, mit **9** Taf.). [0831]. 29

------- Verkieselte Korallen als Geschiebe im Diluvium von Schlesien und Mähren. Centralbl. Min., Stuttgart, **1903**, (561–577). [0831]. 30

Pischel, Alfred. Entwickelung und Organ-Differenzierung. Arch. Entw-Mech., Leipzig, 15, 1903, (679-750). [0215 0815]. 31

Fostie, M. The Lithothamnia of the Maldives and Laccadives [mentions corals on which Lithothamnion grows]. [Gardiner's] Fauna Maldive 1, (160-471, pls. XXIV and XXV). [2019 0819 0831]. 32

Fowler, G. H. Contributions to our knowledge of the plankton of the Faerce Channel. VIII. London, Proc. Zool. Soc., 1903, 1, (117-133, text-figs. 13-17). [0819 0827 da 0831 2615 2610 2631]. 33

Gardiner, J. S. The breaking-up of coral rock by organisms in the Tropics. London, Rep. Brit. Ass., 1902, (654-655). [Prelim. Abstract], Nature, London, 66, 1902, (641). [1019 1819 0819]. 34

The Maldive and Laccadive groups, with notes on other corat formations in the Indian Ocean (continued). Fauna Maldive, **1**, (314-346, pls. XVI-XVII, text-figs. 74 and 75 (concluded); 370-423, pls. XIX-XXI). [0819 0827 ma]. Gardiner, J. S. Lagoon deposits. I. General account. II. Report on certain deposits, by Sir J. Murray. Fauna Maldive, 2, 1, (581-588, pl. XXXIV). (9819 0827 ma 2031 0831]. 37

The origin of coral reefs as shown by the Maldives. Amer. J. Sci., New Haven, Conn., (Ser. 4), 16, 1913, (203-213). [0819 0827 ma]. 38

**GIII, E. L.** Note on the occurrence of Keisley Limestone-Pebbles in the red Nandstone-rocks of Peel (Isle of Man). London, Q J. Geol. Soc., **59**, 1903, (307-310). [2827 de 2027 de 1027 de 2227 de 0827 de]. 39

Görich, Wilhelm. Zur Kenntnis der Spermatogenese bei den Poriferen und Cölenteraten. Zool. Anz., Leipzig, 27, 1903, (64-70). [0615 0815]. 40

Weiteres über die Spermatogenese bei den Poriferen und Cölenteraten. Zool. Anz., Leipzig, 27, 1903, (172-174). [0615 0815]. 41

Goodchild, J. G. The Cœlentera in relation to geological zones. Edinburgh, Proc. R. Physic. Soc., 15, 1903, (57-62). [0803]. 42

Gordon, Maria M. O. The geological structure of Monzoni and Fassa. Edinburgh, Trans. Geol. Soc., **8**, 1903, (sp. part X + 180, with 18 pls., 2 maps and 33 text-figs.). [0827 dk 1027 dk 2027 dk]. 44

Gravier, Ch. Sur la Méduse du Victoria Nyanza. Paris, C.-R. Acad. sci., 137, 1903, (867-869). [0827 ff 0831]. 45

Greene, George K. Contribution to Indiana palaeontology. Part XI. New Albany, Ind., 1903, (98-109, with pl.). 22.8 cm. [0827 gg 0831 1031]. 46

Contributions to Indiana palaeontology. Part XV. New Albany, Indiana, 1903, (146-155, with pl.). 22.8 cm. [0827 gg 0831 1027 gg 1031]. 47

Guenther, Konrad. Die Samenreifung bei *Ilydra viridis*. Ein Beitrag zur Frage nach der Bedeutung des Nucleolus. (Vorläuf. Mitt.) Zool. Anz., Leipzig, **26**, 1903, (628-630). [0815 0831]. 48

Günther, R. T. On the structure and affinities of *Menestra parasites* Krohn; with a revision of the classification of the *Cladonenidae*. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (35–62, mit 2 Taf.; 280). [0831 0819 2207 2219 2231]. **49** 

Report on the Coelenterata from the intermediate waters of the N. Atlantic, obtained by Mr. George Murray during the cruise of the "Oceania" in 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (420–430, pls. IX, X). [0827 *la* 0831]. 50

Hall, T. S. On the occurrence of Monograptus in New South Wales. Sydney, N.S.W., Proc. Linn. Soc. N.S. Wales, 27, (1902), 1903, (654, 655, 1 text fig.). [0827 ie 0831]. 51

On the occurrence of Graptolites in New South Wales. Nature, London, 67, 1903, (288). [0827 ie 0831]. 52

The possibility of detailed correlation of Australian formations with those of the Northern Hemisphere. Presidential address, Melbourne. [Publication not named-recorded from separate copy.] (165-190). [0831]. 53

Hargitt, Cha[rle]s W[esley]. Synopsis. of North American Invertebrates 14. Part 4. The Scyphomedusae. Amer. Nat., Boston, Mass., 37, 1903, (331-345). [0827 g 0831]. 54

Regeneration in Hydromedusae. Lincoln, Stud. Zool. Lab., Univ. Neb., No. 57, 1903, (32, with pl.). 23 cm. [0211 0811 0831]. 55

Hentschel, Ernst. Gorgonacea von Amboina und Thursday Island. Jena, Denkschr., med. Ges., 8, 1903, (643-652, mit 2 Taf.) [0831 0827 ia]. 56

Henze, M. Zur Chemie des Gorgonins und der Jodgorsäure. Hoppe-Seylers Zs. physiol. Chem., Strassburg, **38**, 1903, (60-79). [0811]. 57

Herdman, W. A. The new biological station at Port Erin, being the 16th annual report of the Liverpool Marine Biology Committee. Liverpool, Trans. Biol. Soc., 17, 1903, (15-67). [2627 de 1227 de 1803 0827 de 5427 de 2227 de]. 58 Hickson, S. J. On the Coelenterata collected by Mr. C. Crossland in Zanzibar. I. Ceratella minima n. sp. London, Proc. Zool. Soc., **1903**, 1, (113-116). [0827 ff 0831]. 59

The horny membrane of Neohelia porcellana. Nature, London, 67, 1903, (344). [0807 0831]. 60

------ [Presidential address.] Nature, London, **68**, 1903, (452-458). [0000 6003 4603 0803]. 61

The Alcyonaria of the Maldives. I. The genera Xenia, Telesto, Spongoles, Nephthya, Paraspongodes, Chironephthya, Siphonogorgia, Solenocaulon, and Melitodes. [Gardiner's] Fauna Maldive II, 1, (473-502, pls. XXVI, XXVII). [0827 ma 0831]. 62

Horst, R. On a case of commensalism of a fish (Amphiprion intermedius Schleg.) and a large sea-anemone (Discosoma spec.). Leiden, Notes Mus. Jentink, 23, 1903, (180-182). [5419 5431 0831 0819]. 63

Jukes-Browne, A. J. On the zones of the Upper Chalk in Suffolk. London, Proc. Geol. Ass., 18, 1903, (85–94, 1 map). [1027 de 2027 de 0627 de 5427 de 0827 de]. 64

Kassianow, N. Ueber des Nervensystem der Alcyonarien. Bergens Mus. Aarb., **1903**, No. 6, (3). [0807 0831]. 65

Kinkelin, F[riedrich]. Brooksella rhenana n. sp. Das erste Medusenfossil aus dem Devon. Frankfurt a. M., Ber. Senckenb. Ges., **1903**, Tl 2, (89-95, mit 1 Taf.). [0831]. 66

**Kirkpatrick**, R. Notes on some Medusae from Japan. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (615– 621, pl. XXXIII). [0827 ec 0831]. 67

- v. Bell, J.

**Kishinouye**, Kamakichi. On Japanese corals. [Six species of *Corallium* characterized.] (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (103–106). [0803 0831]. 68

Corallium purillum n. sp. described in brief. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (372). [0831]. 69

Preliminary note on the Coralliidae of Japan. Zool. Anz., Leipzig, 26, 1903, (623-626). [0831]. 70

Krempt, Arm. Sur un point de l'anatomie de quelques Hexacoralliaires. Paris, C.-R. Acad. sci., **136**, 1903, (1210-1212). [0807 0831]. 71

Kükenthal, [Willy]. Ueber eine neue Nephthyidengattung aus dem südatlantischen Ocean. Zool. Anz., Leipzig, 26, 1903, (272-275). [0827 le 0831]. 72

Versuch einer Revision der Alcyonarien. II. Die Familie der Nephthyiden. TI 1. Zool. Jahrb., Jena, Abt. f. Syst,, **19**, 1903, (99–172, mit 2 Taf.). [0831]. 73

Lang, W. D. On a fossiliferous bed in the Selbornian of Charmouth. Geol. Mag, London, [4], 10, 1903, (388-392, 1 fig.). [0827 de 2027 de 2227 de 1827 de]. 74

Maas, Otto. Die Scyphomedusen der Siboga-expedition. Résultats des explorations zool., botan., océanogr., géol., entreprises aux Indes Néerl. or. 1899-1900, à bord du Siboga, sous le commandement de G. F. Tydeman publiés par Max Weber. (Hollandnis) Livr. 10, Monogr. 11. Leide (E. J. Brill), 1903, (91, mit 12 Taf.). 33 cm. [0827 eg ia 0831]. 75

Marchese, B. Osservazioni sul Tetraplatia colitans (Busch). Messina (tip. dell' Epoca), 1902, (12, con 1 tav.). [0831]. 76

Mathews, Albert P[rescott]. Electrical polarity in the hydroids. Amer. J. Physiol., Boston, Mass., 8, 1903, (294-299). [0811 0831]. 77

May, Albert J. A contribution to the morphology and development of Corymorpha pendula Ag. [With bibliography]. Amer. Nat., Boston, Mass., 37, 1903, (578-599). [0807 0815 0831]. 78

Moser, Fanny. Die Ctenophoren der Siboga-Expedition. Résultats des explorations zool, botan. océanogr., géol, entreprises aux Indes Néerl. or. 1899-1900, à bord du Siboga, sous le commandement de G. F. Tydeman, publiés par Max Weber. (Hollandaia) Livr. 11 Monogr. 12. Leide (E. J. Brill), 1903, (34, mit 4 Taf.). 33 cm. [0827 eg ia 0831].

Motz-Kossowska, M<sup>me</sup>. Sur l'action morphogène de l'eau en mouvement sur les Hydraires. Paris, C.-R. Acad. sci., **137**, 1903, (863-865). [0811 0831]. 80 Murbach, L. Egg laying in Gonionemus. Science, New York, N.Y., (N. Ser.), 17, 1903, (192). [0823 0831]. 81

Gonionemus versus "Gonionema." Science, New York, N.Y., (N. Ser.), 18, 1903, (373-374). [0831]. 82

and Shearer, C. On Medusae from the coast of British Columbia and Alaska. London, Proc. Zool. Soc., 1903, 2, (164-192, pls. XVII-XXII). [0827 gd 0831]. 83

Murray, Sir J. v. Gardiner, J. S.

Pearcey, F. G. Notes on the marine deposits of the Firth of Forth, and their relation to its animal life. Glasgow, Trans. Nat. Hist. Soc., 6, 1903, (217-251, with map.). [0427 de 2227 de 0827 de 2627 de 5427 de 1827 de]. 84

Peebles, Florence. Experiments in regeneration and in grafting of Hydrozoa [with bibliography]. [Reprinted from the Archiv für Entwickelungsmechanik der Organismen, 10, 1900]. Bryn Mawr, Pa., Bryn Mawr Coll. Monogr. (Repr. Ner.), 1, 1901, (1-51). [0211 0811 0831]. 85

Péres, Ch. Sur une station du Corlylofora lacustris. Paris, C.-R. soc. biol., 55, 1903, (98). [0819 0831]. 86

Perkins, Henry Farnham. The development of Gonionema murbachii. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (750-790, with pl.); [reprint], Dissertation, (Ph.D.), Johns Hopkins University. [0815 0831]. 87

Petch, T. Marine zoology at Filey. Naturalist, London, **1903**, (351). [0627 de 0827 de 1827 de 2027 de 2627 de 2227 de 5427 de 1027 de]. 88

The Marine Fauna of the Humber District and the Holderness Coast. Hull, Trans. Sci. F. Nat. Cl., 3, 1903, (27-41). [1027 de 2227 de 2627 de 0827 de 1827 de]. 89

Pratt, Edith M. The Alcyonaria of the Maldives. II. The genera Sarcophytum, Lobophytum, Sclerophytum and Alcyonium. [Gardiner's] Fauna Maldive, II, 1, (503-539, pla. XXVIII-XXXI). [0827 ma 0831]. 90

**Bichet**, Charles. Des poisons contenus dans les tentacules des Actinies (congestine et thalassine). Paris, C.-R. soc. biol., **55**, 1903, (246-248). [0811 (0831]. 91 Roule, Louis. Le Corail, son histoire. Messager de Bruxelles, **1902**, (127). [0803]. 93

**Bowe**, A. W. The zones of the white chalk of the English coast. III. Devon, London, Proc. Geol. Ass., **18**, 1903, (1-51, pls. I-XIII); IV. Yorkshire, *ib*, (193-296, pls. XVII-XL). [0627 de 2027 de 0827 de 1027 de 1031]. 94

Schuchert, Charles. On the Manlius formation of New York. Amer. Geol. Minneapolis, Minn., **31**, 1903, (160–178). [0227 gg 0831 2031]. 95

On the faunal provinces of the middle Devonic of American and the Devonic coral sub-provinces of Russia, with two paleographic maps. Amer. Geol., Minneapolis, Minn., **32**, 1903, (137-162, with 2 pls.). [0827 db g 0831]. 96

Shearer, C. v. Murbach, L.

Shrubsole, O. A. On the probable source of some of the pebbles of the Triassic Pebble-beds of South Devon and of the Midland Counties. London, Q. J. Geol. Soc., 59, 1903, (311-333). [0827 de 1827 de 2027 de]. 97

**Skorikov**, A. S. Zur Parasitologie der Störe. (Russ.) Veštn. rybopromyšl., St. Peterburg, **1903**, 18, (63–82, mit 1 Taf.). [0819 1219 1419 5419]. 98

**Strandmark**, J[ohan] E[dvard]. Lower Graptolite slate in Fågelsång, Scania. (Swedish) Stockholm, Geol. För, Förh., **23**, 1901, (548–556, pl. 17). [0831]. 99

**Thacher**, H[enrietta] F. A preliminary note on the absorption of the hydranths of hydroid polyps. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (96-98). [0811 0831].

Absorption of the hydranth in hydroid polype. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (297-303). [0811 0831]. 101

Thomson, J. A. [Review of "Die organischen Regulationen-Vorbereitun gen zu einer Theorie des Lebens," by Hans Driesch. Leipzig, 1901, (XV + 228). Nature, London, **67**, 1903, (50). [0823 0211]. 102 **Todd**, R. A. Notes on the Invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., **6**, 1903, (541-561). [5027 de 2219 2227 de 2603 1827 de 1027 de 1019 0827 de 0819 0227 de 0060]. 103

Tomes, R. F. Description of a species of *Heterastraca* from the Lower Rhaetic of Gloucestershire. London, Q. J. Geol. Soc., **59**, 1903, (403-407, 2 figs.); [review], Nature, London, **68**, 1903, (142). [0827 de 0831]. 104

Trinci, Giulio. Di una nuova specie di Cytacis gemmante del Golfo di Napoli. Mitt. zool. Stat. Neapel, Berlin, **16**. 1903, (1-34, mit 1 Taf.). [0831 0815]. 105

Di una nuova medusa gemmante (l'ytacis minima n. sp.) del Golfo di Napoli. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (52-53). [0831]. 106

Vanhöffen, Ernst. Ctenophoren. [In: Nordisches Plankton. Lfg. 2.] Kiel u. Leipzig, 1903, (XI 1-XI 7). [0827 la]. 107

vaughan, T[homas] Wayland. Corrections to the nomenclature of the Eocene fossil corals of the United States. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (101). [0831]. 108

The corals of the Buda limestone [Texas]. [Appendix to Mollusca of the Buda limestone by (J. B. Shattuck]. Washington, D.C., U. S. Dept. Int., Bull. Geol. Surv., No. **205**, 1903, (37-40, with pl.). [0831].

Weed, C. M. and Crossman, R. W. A laboratory guide for beginners in Zoology. London (Heath & Co.), 1903, (xxiv + 105). [Review] Nature, London, 68, 1903, (319). [0030 0403 1803 0803 0807]. 111

whitheld, R[obert] P[arr]. Observations on a remarkable specimen of *Halyeites* and description of a new species of the genus. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (489–490, with 2 pls.). Separate. 24.5 cm. [0831].

Wilson, Edmund B. Notes on merogony and regeneration in *Revilla*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (215-226). [0211 0215 0811 0815 0831]. 113

Wood, Ethel M. v. Elles, Gertrude L.

## 0803. COMPREHENSIVE AND GENERAL WORKS.

GENERAL.

Le corail au Japon. Bul. Musée commerc., Bruxelles, 1903, (1444).

**Carlgren**, Oskar. Jahresbericht über die Anthozoen für die Jahre 1892 und 1893. Arch. Natg., Berlin, **62**, Bd 2, H. 3, 1896, [1903], (145-180).

Goodchild, J. G. The Coelenterata in relation to geological zones. Edinburgh, Proc. R. Physic. Soc., 15, 1903, (57-62).

Hickson, S. J. [Presidential address]. Nature, London, 68, 1903, (452-458).

**Kishinouye**, Kamakichi. [On six Japanese species of *Corallium*.] (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (103-106).

Roule, Louis. Le Corail, son histoire. Messager de Bruxelles, 1902, (127).

Weed, C. M. and Grossman, R. W. A laboratory guide for beginners in Zoology. London (Heath & Co.), 1903, (xxiv + 105). [Review], Nature, London, 68, 1903, (319).

## MUSEUMS.

Bell, J. and **Eirkpatrick**. Guide to the Coral gallery. British Museum of Natural History. [Review], Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (132).

Bernard, H. M. Catalogue of the Madreporarian Corals in the British Museum. (Natural History). IV. The family *Poritidae*. I. The genus *Goniopora*. London, 1903, (VIII + 206, 14 pls.).

## 0807 STRUCTURE.

#### GENEBAL.

Bedot, [Maur.] Recherches sur la Bathyphysa grimaldii. Arch. Sci. Phys., Genève, (sér. 4), 15, 1903, (464-465).

Bourne, G. C. Some new and rare corals from Funafuti. London, J. Linn. Soc. Zool., 29, No. 187, 1903, (26-37, pls. V, VI).

Davydov, K. N. Les résultats du voyage scientifique au Java et les autres iles de l'Archipel Malais. II. *Hydroctena* ealenskii sp. n. (Etude morphologique sur un nouveau Coelenteré pélagique). St. Peterburg, Mém. Ac. Sc., (8 F.), 14, No. 9, 1903, (16, av. 1 pl.).

Duerden, J. E. On the Actinian Bunodeopeis globulifera Verrill. London, Trans. Linn. Soc. Zool., (Ser. 2), 8, 1903, (297-317, 2 pls.):

**Elles**, Gertrude and **Wood**, Ethel M. R. [Edited by Lapworth.] A monograph of British Graptolites. III. London, Monogr. Palaeont. Soc.. 57, 1903, (xxixlii, 103-134, pls. XIV-XIX).

**Krempt**, Arm. Sur un point de l'anatomie de quelques Hexacoralliaires. Paris, C.-R. Acad. sci., **136**, 1903, (1210– 1212).

May, Albert J. A contribution to the morphology and development of Corymorpha pendula Ag. [With bibliography.] Amer. Nat., Boston, Mass., **37**, 1903, (579-599).

Weed, C. M. and Grossman, R. W. A laboratory guide for beginners in Zoology. London (Heath & Co.), 1903, (xiv + 105). [Review], Nature, London, 63, 1903, (319).

#### NERVOUS SYSTEM AND ORGANS OF SENSE.

Davydov, K. N. Les résultats du voyage scientifique au Java et les autres iles de l'Archipel Malais. II. Hydroctena salenskii n. sp. (Etude morphologique sur un nouveau Coelenteré pélagique). St. Peterburg, Mém. Ac. Sc., (8 F.), 14, No. 9; 1903, (16, av. 1 pl.).

**Eastianow**, N. Ueber das Nervensystem der Alcyonarien. Bergens Mus. Aarb., **1903**, No. 6, (3).

#### SEELETAL STRUCTURES.

Hickson, S. J. The horny membrane of Nechelia porcellana. Nature, London, 67, 1903, (344).

## 0611 PHYSIOLOGY.

ì

FUNCTION OF SPECIAL STRUCTURES.

Billard. De l'excrétion chez les hydroldes. Paris, C.-R. Acad. sci., 137, 1903, (340-342).

#### ENVIRONMENTAL EFFECTS.

Motz-Kossowska, M<sup>me</sup>. Sur l'action morphogène de l'eau en mouvement sur les Hydraires. Paris, C.-R. Acad. sci., 137, 1903, (863–865).

## REGENERATION.

**Carlgren**, O. Über die Regeneration der Seeanemonen. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, VI Section, (9-11).

**Cerfontaine**, Paul. Recherches expérimentales sur la régénération et l'hétéromorphose chez *Astroïdes calycularis* et *Pennaria cavolinii*. Arch. biol., Paris-Liège, **19**, 1902, (245-315, av. 2 pl.).

Child, C. M. Form-regulation in Coclentera and Turbellaria. Washington, D.C., Smithsonian Inst., Misc. Collect. Q. Issue, 45, 1903, (134-143, with pl.).

Form-regulation in Ccrianthus. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **5**, 1903, (239-260, 304-319, with text-fig.); **6**, 1903, (1-11, with text-fig.).

Hargitt, George Thomas. Regeneration in *Hydromedusae*. Lincoln, Stud. Zool. Lab. Univ. Neb., No. 57, 1903, (32 with pl.). 23 cm.

Mathews, Albert P[rescott]. Electrical polarity in the hydroids. Amer. J. Physiol., Boston, Mass., 8, 1903, (294-299).

**Wilson**, Edmund B. Notes on merogony and regeneration in *Renilla*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (215-226).

#### ABSORPTION.

Thacher, 'H[enrietta] F. A preliminary note on the absorption of the hydranths of hydroid polyps. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (96-98).

Absorption of the hydranth in hydroid polyps. *l.c.* 5, 1903, (297-303).

## CHEMICAL PHYSIOLOGY.

Henze, M. Zur Chemie des Gorgonius und der Jodgorgosäure. Hoppe-Seylers Zs. physiol. Chem., Strassburg, 38, 1903, (60-79).

Richet, Charles. Des poisons contenus dans les tentacules des Actinies (congestine et thalassine). Paris, C.-R. soc. biol., 55, 1903, (246-248). **Peobles**, Florence. Experiments in generation and in grafting of Hydrozoa [with bibliography]. [Reprinted from the Archiv für Entwickelungsmechanik der Organismen, **10**, 1900]. Bryn Mawr, Pa., Bryn Mawr Coll. Monogr. (Repr. Ner.), **1**, 1901, (1-51).

## 0815 DEVELOPMENT.

#### GENERAL.

May, Albert J. A contribution to the morphology and development of Corymorpha pendula Ag. [with bibliography]. Amer. Nat., Boston, Mass., 37, 1903, (579-599).

Perkins, Henry Farnham. The development of Gonionema murbachii. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (750-790. with pl.).

## ASEXUAL REPRODUCTION.

Duerden, J. E. IV. Fissiparous gemmation. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (141-155, with 7 figs.).

#### SPERMATOGENESIS.

Aders, Walter M. Beiträge zur Kenntnis der Spermatogenese bei den Uölenteraten. Zs. wiss. Zool., Leipzig, 74, 1903, (81-108, mit 2 Taf.).

Görich, Wilhelm. Zur Kenntnis der Spermatogenese bei den Poriferen und Cöleuteraten. Zool. Anz., Leipzig, 27, 1903, (64-70).

Weiteres über die Spermatogenese bei den Poriferen und Cölenteraten. l.e. (172-174).

Guenther, Konrad. Die Samenreifung bei *Hydra viridis*. Ein Beitrag zur Frage nach der Bedeutung des Nucleolus. (Vorläuf. Mitt.) *l.c.* **26**, 1903, (628–630).

## EMBRYOLOGY.

**Trinci**, Giulio. Di una nuova specie di *Cytaeis gemmante* del Golfo di Napoli. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (1-34, mit 1 Taf.). Wilson, Edmund B. Notes on merogony and regeneration in *Renilla*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (215–226).

## EXPERIMENTAL EMBRYOLOGY.

**Fischel**, Alfred. Entwickelung und Organ-Differenzierung. Arch. Entw-Mech., Leipzig, **15**, 1903, (679–750).

## 0819 ETHOLOGY.

## GENERAL.

**Todd**, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass, **6**, No. 4, 1903, (541-561).

#### HABITS.

Beardaley, A. E. The destruction of trout fry by hydra. [*Hydra pallida* n. sp.] Washington, D.C., Bull. U. S. Fish Com., 22, (1902), 1903, (155-160).

Brüning. Hydra und Limnaea im Aquarium. Natur u. Haus, Dresden, 11, 1903, (135-138).

## HABITAT.

Fowler, G. H. Contributions to our knowledge of the plankton of the Faeroe Channel. VIII. London, Proc. Zool. Soc., 1903, 1, (117-133, text-figs. 13-17).

**Goodchild**, J. G. Observations on the bathymetrical distribution of reefbuilding Corals. Edinburgh, Proc. R. Physic. Soc., **15**, 1903, (66-69).

Pérez, Ch. Sur une station du Cordylofora lacustris. Paris, C.-R. soc. biol., 55, 1903, (98).

#### COBAL REEFS.

Review of Agassiz, A. On the formation of barrier reefs and of the different types of atolls. Nature, London, 67, 1903, (547).

Fould, M. The Lithothamnia of the Maldive and Laccadives [mentions corals on which Lithothamnion grow]. [Gardiners] Fauna Maldive, 1, (160– 471, pls. XXIV-XXV). Lagoon deposits. I. General account, II. Report on cortain deposits, by Sir J. Murray. *l.e.* **II**, 1, (581-588, pl. XXXIV).

The origin of coral reefs as shown by the Maldives. Amer. J. Sci., New Haven, Conn., (Ser. 4), 16, 1903, (203-213).

The breaking-up of coral rock by organisms in the Tropics. London, Rep. Brit. Ass., 1902, (654-655). [Prelim. Abstract], Nature, London, 66, 1902, (641).

## SYMBIOSIS.

Günther, R. On the structure and affinities of *Menestra parasites* Krohn; with a revision of the classification of the *Cladonemidae*. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (35-62, mit 2 Taf.; 280).

Horst, R. On a case of commensalism of a fish (Amphirion intermedius Schleg.) and a large sea-anemone (Discocoma spec.). Leiden, Notes Mus. Jentink, 23, 1903, (180-182).

#### PARASITISM.

**Skorikov**, A[leksander] S[tepanović]. Zur Parasitologie der Störe. (Russ). Vešt. rybopromyšl., St. Peterburg, **1903**, 18, (63-82, mit 1 Taf.).

## 0823 VARIATION AND ÆTIOLOGY.

#### GENERAL.

Billard, A. Note sur les variations du *Plumularia halecioides* Alder. Bul. Muséum, Paris, **1903**, (57-62).

Murbach, L. Egg laying in Gonionemus. Science, New York, N.Y., (N. Ser.), 17, 1903, (192).

#### EVOLUTION.

Thomson, J. A. [Review of "Die organischen Regulationen-Vorbereitungen zu einer Theorie des Lebens," by Hans Driesch. Leipzig, 1901, (xx + 228)]. Nature, London, 67, 1903, (50).

## 0827 GEOGRAPHICAL DIS-TRIBUTION.

EUROPE.

## da SCANDINAVIA.

Browne, Edward. Medusae from Norway and Spitzbergen. Bergens Mus. Aarb., 1903, No. 4, (36, with 5 pl.).

Fowler, G. A. Contributions to our knowledge of the plankton of the Faeroe Channel. VIII. London, Proc. Zool. Soc., 1903, 1, (117-133, text-figs. 13-17).

### db RUSSIA IN EUROPE.

Schuchert, Charles. On the faunal provinces of the middle Devonic of American and the Devonic coral subprovinces of Russia, with two paleographic maps. Amer. Geol., Minneapolis, Minn., 32, 1903, (137-162, with 2 pls.).

### BRITISH ISLANDS.

Elles, Gertrude J. and Wood, Ethel M. R. [Edited by Lapworth.] A monograph of British Graptolites. III. London, Mongr. Palaeont. Soc., 57, 1903, (xxix-lii, 103-134, pls. XIV-XIX).

**GHI, E. L.** Note on the occurrence of Keisley Limestone-Pebbles in the red sandstone-rocks of Peel (Isle of Man). London, Q. J. Geol. Soc., **59**, 1903, (307–310).

Herdman, W. A. [Coelenterata]: in the new biological Station at Port Erin, being the 16th annual report of the Liverpool Marine Biology Committee. Liverpool, Trans. Biol. Soc., **17**, 1903, (15-67).

Jukes-Browne, A. J. On the zones of the Upper Chalk in Suffolk. London, Proc. Geol. Ass., 18, 1903, (85-94, 1 map).

d

de

Lang, W. D. On a fossiliferous bed in the Selbornian of Charmouth. Geol. Mag., London, [4], 10, 1903, (388-392, 1 fg.).

**Pearcey**, F. G. Notes on the marine deposits of the Firth of Forth, and their relation to its animal life. Glasgow, Trans. Nat. Hist. Soc., **6**, 1903, (217-251, with map).

Petch, T. The Marine Fauna of the Humber District and the Holderness Coast. Hull, Trans. Sci. F. Nat. Cl., 3, 1903, (27-41).

Marine Zoology of Filey. Naturalist, London, **1903**, (351).

**Bowe**, A. W. The zones of the white chalk of the English coast. III. Devon. London, -Proc. Geol. Ass., **13**, 1903, (1-51, pp. I-XIII); IV. Yorkshire, *ib.*, (193-296, pls. XVII-XL).

**Shrubsole**, O. A. On the probable source of some of the pebbles of the Triassic Pebble-beds of South Devon and of the Midland Counties. London, Q. J. (Beol. Soc., **59**, 1903, (311-333).

Todd, R. H. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., 6, No. 4, 1903, (541-561).

Tomes, R. F. Description of a species of *Heterastraea* from the Lower Rhaetic of Gloucestershire. London, Q. J. Geol. Soc., **59**, 1903, (403-407, 2 figs.); [review], Nature, London, **68**, 1903, (142).

dk AUSTRIA-HUNGARY.

Gordon, Maria M. O. The geological structure of Monzoni and Fassa. Edinburgh, Trans. Geol. Soc., 8, 1903, (sp. part X + 180, with 18 pls., 2 maps, and 33 text-figs.).

e Asia.

ec JAPANESE ISLANDS.

Kirkpatrick, R. Notes on some Meducae from Japan. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (615– 621, pl. XXXIII). eg MALAY PENINBULA.

Maas, Otto. Die Scyphomedusen der Siboga-Expedition. Résultats des explorations zool., botan., océanogr., géol., entreprises à bord du Siboga, publiés par Max Weber. Livr. 10, Monogr. 11. Leide (E. J. Brill), 1903, (91, mit 12 Taf.). 33 cm.

Moser, Fanny. Die Ctenophoren der Siboga-Expedition. Résultats des explorations zool., botau., océanogr., géol., entreprises à bord du Siboga, publiés par Max Weber. Livr, 11, Monogr. 12. Leide (F. J. Brill), 1903, (34, mit 4 Taf.). 33 cm.

#### f AFRICA.

ff EAST AFRICA.

Hickson, S. J. On the Coelenterata collected by Mr. C. Crossland in Zanzibar. I. Ceratella minima n. sp. London, Proc. Zool. Soc., **1903**, 1, (113-116).

Gravier, Ch. Sur la Méduse du Victoria Nyanza. Paris, C.-R. Acad. sci., 137, 1903, (867-869).

## g NORTH AMERICA.

Hargitt, Cha[rle]s W[esley]. Synopsis of North American Invertebrates. 14. Part 4. The *Scyphomedusae*. Amer. Nat., Boston, Mass., **37**, 1903, (331-345).

**Schuchert**, Charles. On the faunal provinces of the middle Devonic of American and the Devonic coral subprovinces of Russia, with two paleographic maps. Amer. Geol., Minneapolis, Minn., **32**, 1903, (137-162, with 2 pls.).

ga ALASKA.

**Clarke**, Samuel Fessenden. An Alaskan *Corymorpha*-like-Hydroid. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (953-958, with text fig.). Separate. 24.3 cm.

#### gd CANADIAN DOMINION WEST.

Murbach, L. and Shearer, C. On Medusae from the coast of British Columbia and Alaska. London, Proc. Zool. Soc., 1903, 2, (164-192, pls. XVII-XXII). 99 NORTH EASTERN UNITED STATES.

Greene, George K. Contribution to Indiana palæontology. Part XI. New Albany, Indiana, 1903, (98-109); Part XV, l.e. (146-155, with pl.). 22.8 cm.

## h CENTRAL AND SOUTH AMERICA.

### he WEST INDIES.

Duerden, J. E. West Indian sponge incrusting Actinians. [With bibliography.] New York., N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (495-503, with 4 pls.). Separate. 24.5 cm.

i AUSTRALASIA.

#### ia NEW GUINEA, ETO.

Burchardt, Eugen. Alcyonaccen von Thursday Island (Torres-Strasse) und von Amboina, II. Jena, Denkschr. med. Ges., 8, 1903, (653-682, mit 4 Taf.).

Hentschel, Ernst. Gorgonaces von Amboina und Thursdey Island. *l.c.*, (643-652, mit 2 Taf.).

Mass, Otto. Die Scyphomedusen der Siboga-Expedition. Résultats des explorations zool., botan., océanogr., géol., entreprises à bord. du Siboga, publiés par Max Weber. Livr. 10, Monogr. 11. Leide (E. J. Brill), 1903, (91, mit 12 Taf.). 33 cm.

Moser, Fanny. Die Ctenophoren der Siboga-Expedition. Résultats des explorations zool., botan., océanogr., géol., entreprises à bord du Siboga, publiés par Max Weber. Livr. 11, Monogr. 12. Leide (E. J. Brill), 1903, (34, mit 4 Taf.). 33 cm.

ir NEW SOUTH WALES.

Hall, T. S. Occurrence of Monograptus in New South Wales. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903, (654, 655, with 1 text-fig.).

On the occurrence of Graptolites in New South Wales. Nature, London, **67**, 1903, (288).

## k ARCTIO.

**Bömer**, Fritz. Die Ctenophoren. (Fauna Arctica, 8.) Jens, 1903, (65–90). ka ARCTIC OCEAN.

Broch, Hjalmar. Die von . . . "Michael Sars" . . . gesammelten . Hydroiden. Bergens Mus. Aarb., 1903, No. 9, (14, 4 pl.).

## kd Islands North of Europe and , Asia.

**Browne**, Edward. *Medusae* from Norway and Spitzbergen. Bergens Mus. Aarb., **1903**, No. 4, (36, with 5 pls.).

## l ATLANTIC.

#### la NORTH ATLANTIC OCEAN.

Gunther, R. T. Report on the Coelenterata from the intermediate waters of the N. Atlantic, obtained by Mr. George Murray during the cruise of the "Oceana" in 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (420-430, pls. IX, X).

Vanhöffen, Ernst. Ctenophoren. [In: Nordisches Plankton. Lfg 2.] Kiel u. Leipzig, 1903, (XI 1-XI 7).

#### le South Atlantic and Islands.

Kükenthal, [Willy]. Ueber eine neue Nephthyidengattung aus dem südatlantischen Ocean. Zool. Anz., Leipzig, 26, 1903, (272-275).

#### m INDIAN OCEAN.

ma OCEANS AND ISLANDS N. OF EQUATOR.

Gardiner, J. S. Formation of the Maldives. London, Geog. J. 19, 1903, (277-296, 12 figs.).

The Maldive and Laccadive groups, with notes on other Coralformations in the Indian Ocean (continued). Fauna Maldive, 1, (314.346, pls. XVI, XVII, text-figs. 74, 75 (concluded); (376-423, pls. XIX-XXI).

I. agoon deposits. I. General account. II. Report on certain deposits, by Sir J. Murray. *l.c.* II, 1, (581-588, pl. XXXIV).

Gardiner, J. S. The origin of coral reefs as shown by the Maldives. Amer. J. Sci., New Haven, Conn., (Ser. 4), 16, 1903, (203-313).

Hickson, S. J. The Alevonaria of the Maldives. I. The genera Xenia, Telesto, Spongodes, Nephthya, Paraspongodes, Chironephthya, Siphonogoria, Solenocaulon, and Melitodes. Fauna Maldive, 2, 1, (473-502, pls. XXVI, XXVII).

Pratt, Edith M. The Alcyonaria of the Maldives. II. The genera Sarcophytum, Lobophytum, Sclerophytum and Alcyonium. l.c. (503-539, pls. XXVIII-XXXI).

n PACIFIC OCEAN.

nb SOUTH PACIFIC OCEAN.

Bourne, G. C. Some new and rare corals from Funafuti. London, J. Linn. Soc. Zool., 29, No. 187, 1903, (26-37, pls. V, VI).

## 0831 TAXONOMY.

## GENERAL.

Greene, G. K. Contribution to Indiana palaeontology. Part XI. New Albany, Indiana, 1903, (98–109, with pl.); Part XV. *Ib.* (146–155, with pl.). 22.8 cm.

Günther, R. T. Report on the Coelenterata from the intermediate waters of the North Atlantic, obtained by Mr. George Murray during the cruise of the "Oceana" in 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (420-430, pls. IX, X).

**Hall**, T. S. The possibility of detailed correlation of Australian formations with those of the Northern Hemisphere. Presidential address, Melbourne. [Publication not named – recorded from separate copy.] (165–190).

Hickson, S. J. On the Coelenterata collected by Mr. C. Crossland in Zanzibar. I. London, Proc. Zool. Soc., **1903**, 1, (113-116).

schuchert, C. On the faunal provinces of the middle Devonic of America and the Devonic coral sub-provinces of Russia, with two paleographic maps. Amer. Geol., Minneapolis, Minn., 32, 1903, (137-162, with 2 pls.).

**Vaughan**, T[homas] Wayland. Corrections to the nomenclature of the Eocene fossil corals of the United States. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (101).

### GRAPTOLITES.

### GENERAL.

Elles, G. L. and Wood, E. M. R. [Edited by Lapworth.]. A monograph of British Graptolites. III. London, Monogr. Palaeont. Soc., 57, 1903, (NXIX-LII, 103-134, pls. XIV-XIX).

Hall, T. S. On the occurrence of Graptolites in New South Wales. Nature, London, 67, 1903, (288).

**Strandmark**, J. E. Lower Graptolite slate in Fågelsång, Scania. (Swedish) Stockholm, Geol. För. Förh., 23, 1901, (548-556, pl. 17).

#### SPECIAL.

Amphigraptus distans<sup>†</sup> n. sp. Elles, G. L. and Wood, E. M. R. London, Monogr. Palaeont. Soc., 57, 1903, (124).

Leptograptus † nn. spp., nn. varr. Elles, G. L. and Wood, E. M. R. *l.c.* (108-117).

Monograptus<sup>†</sup>, occurrence in New South Wales. **Hall**, T. S. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **27**, (1902), 1903, (654, 655, 1 text fig.).

Nemagraptus gracilis var. remotus | n. var. Elles, G. L. and Wood, E. M. R. London, Monogr. Palaeont. Soc., 57, 1903, (130).

Phyllograptus cor<sup>†</sup> n. sp. Strandmark, J. E. Stockholm, Gcol. För. Förh., 23, 1901, (548-556).

### HYDROMEDUSAE.

#### GENERAL.

Billard. De l'excrétion chez les hydroīdes. Paris, C.-R. Acad. sci., 137, 1903, (340-342).

Broch, H. Die von dem norwegischen Fischereidampfer Michael Sars in den Jahren 1900-1902 in dem Nordmeer

gesammelten Hydroiden. Bergens Mus. Asrb., 1903, No. 9, (14, with pl.).

Browns, E. . . . Medusae from Norway and Spitzbergen. l.c. 1903, No. 4, (36, with 5 pls.).

**Clarice**, S. F. An Alaskan Corymorpha-like Hydroid. Washington, D.C., Smithsonian Inst. Nation. Mus. Proc., **26**, 1903, (953-958, with text fig.). Separate 24.3 cm.

Hargitt, G. T. Regeneration in *llydromedusae*. Lincoln, Stud. Zool. Lab. Univ. Neb., No. 57, 1903, (32, with pl.). 23 cm.

Kirkpatrick, R. [Notes on Trachomedusae and Discomedusae from Japan.] Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (618-621).

Mathews, A. P. Electrical polarity in the hydroids. Amer. J. Physiol., Boston, Mass., 8, 1903 (294-299).

Motz-Kossowska, M<sup>me</sup>. Sur l'action morphogène de l'eau en mouvement sur les Hydraires. Paris, C.-R. Acad. sci., 137, 1903, (863-865).

Murbach, L. and Shearer, C. On Meduace from the coast of British Columbia and Alaska. London, Proc. Zool. Soc., 1903, 2, (164-192, pls. XVII-XXII).

**Peebles**, Florence. Experiments in generation and in grafting of Hydroza [with bibliography]. [Reprinted from the Archiv für Entwickelungsmechanik der Organismen 10, 1900]. Bryn Mawr, Pa., Bryn Mawr Coll. Mouogr. (Repr. Ser.), 1, 1901, (1-51).

**Thacher**, H[enrietta] F. A preliminary note on the absorption of the hydranths of hydroid polyps. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (96-98).

Absorption of the hydranth in hydroid polyps. *l.c.* 5, 1903, (297– 303).

#### SPECIAL.

Acquorea norcegica n. sp. Browne, E. Bergens Mus. Aarb., 1903, No. 4, (19, pl. V, figs. 1-5).

Aglantha rosea Forbes. North Atlantic. Günther, R. T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (427–428, pl. X, figs. 6–8). Antennularia tariabilis n. sp. Norway. Broch, H. Bergens, Mus. Aarb., 1903, No. 9, (10, pl. IV, figs. 22-25).

Bathyphysa grimaldii, recherches. Bedot, [M.] Arch. Sci. Phys., Genève, (sér. 4), 15, 1903, (464-465).

Brooksella rhenana<sup>†</sup> n. sp. Das erste Medusenfossil aus dem Devon. **Kinkelin**, F. Frankfurt a. M., Ber. Senckenb. Ges., **1903**, Tl 2, (89-96, mit 1 Taf.)

Bythotiara n. gen. B. murrayi n. sp. North Atlantic. **Günther**, R. T. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (424-425, pl. X, figs. 4, 5).

Ceratella minima n. sp. Zanzibar. Hickson, S. J. London, Proc. Zool. Soc., 1903, 1, (116).

Codonium apiculum n. sp. British Columbia. Murbach, L. and Shearer, C. *l.c.* 2, (165-168, pls. XVII, XXII, figs. 1, 4, 5).

Cordylofora lacustris, une station de. Pérez, Ch. Paris, C.-R. soc. biol., 55, 1903, (98).

Corymorpha pendula, morphology and development. **May**, A. J. Amer. Nat., Boston, Mass., **37**, 1903, (579-599).

Cytacis minima n. sp. Golfo di Napoli. **Trinci**, G. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (1-34, mit 1 Taf.); Mon. zool. ital., Firenze, **18**, 1902, (52-53).

Dichotomia n. gen., D. cannoides n. sp. Brooks, W. K. Philadelphia, Pa., Proc. Amer. Phil. Soc., 42, 1903, (11-14, with 1 pl.).

Dipurena doliehogaster (Haeckel). British Columbia. **Murbach**, L. and **Shearer**, C. London, Proc. Zool. Soc., **1903**, 2, (169-170).

Gonionema murbachii, general development. **Perkins**, H. F. Philadelphia, Pa., Proc. Acad. Nat. Sci., **54**, 1902, [1903], (750-790, with pl.).

Gonionemus, variation of fertility. Murbach, L. Science, New York, N.Y., (N. Ser.), 17, 1903, (192).

nomenclature. Murbach, L. 18, 1903, (373-374).

rertens A. Agassiz, description, G. agassizi n. sp. Alaska and British Columbia. Murbach, L. and Shearer, C. London, Proc. Zool. Soc., 1903, 2, (183-188, pl. XXI, figs. 1, 2, and 3, and pl. XXII, fig. 3). Gonomeandrus n. gen., G. chrysostephanus n. sp. Japan. Kirkpatrick, R. Ann. Mag. Nat. Hist, London, (Ser. 7), 12, 1903, (615-618).

Halecium minutum n. sp. Norway. Broch, H. Bergens. Mus. Aarb., 1903, No. 9, (4, pl. I, figs. 1-4).

Ilalicornaria pluma n. sp. Norway. Broch, H. l.c. (8, pl. IV, figs. 15-21).

Halopsis ocellata Agassiz (?), description. N. Atlantic. Günther, R. T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (426).

Hippocrene mertensii (Haeckel). British Columbia. **Murbach**, L. and **Shearer**, C. London, Proc. Zool. Soc., **1903**, 2, (171-172).

*Ilydra* im Aquarium. **Brüning.** Natur u. Haus, Dresden, **11**, 1903, (135–138).

*pallida* n. sp. **Beardaley**, A. E. Washington, D.C., Bull. U. S. Fish Com., **22**, (1902), 1903. (155-160).

*viridis*, Spermatogenese. **Aders**, W. M. Zs. wiss. Zool., Leipzig, **74**, 1903, (81-108, mit 2 Taf.).

Guenther, K. Zool. Anz., Leipzig, 26, 1903, (628–630).

Hydroctena salenskii n. sp. Archipel Malais. **Davydov**, K. N. St. Peterburg, Mém. Ac. Sc., (8 S.), **14**, No. 9, 1903, (16, av. 1 pl.).

Lafoea elegantula n. sp. N. Seas. Broch, H. Bergens Mus. Aarb., 1903, 9, (5, pl. I, II, figs. 5-9).

Laodice chapmani n. sp. North Atlantic. **Günther**, R. T. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (425-426, pl. 1X, figs. 1, 2, 3).

Limnocnida tanganyicae. Victoria Nyanza. **Gravier**, C. Paris, C.-R. Acad. sci., **137**, 1903, (867-869).

Margelis nordgaardii n. sp. Browne, E. Bergens Mus. Aarb., **1903**, No. 4, (14, pl. II, fig. 1, pl. III, figs. 5, 6).

Margelopsis hartlaubii n. sp. Browne, E. I.e., (10, pl. I, fig. 2, pl. III, fig. 3).

Menestra, Symbiose mit Phyllirhoe, a revision of the classification of the Cladonemidae. **Günther**, R. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (35-62, mit 2 Tat.; 280). Mesonema victoria n. sp. British Columbis. Murbach, L. and Shearer, C. London, Proc. Zool. Soc., 1903, 2, (180-183, pl. XIX, figs. 1, 1A, and 2, XXII, fig. 2).

Mitrocomella fulva n. sp. Browne, -E. Bergens Mus. Aarb., 1903, No. 4, (17, pl. I, fig. 3, pl. III, figs. 1, 2).

Muggiaea kochii Chun, description. British Columbia. **Murbach**, L. and **Shearer**, C. London, Proc. Zool. Soc., **1903**, 2, (189–190).

Neohelia porcellana, horny membrane, Hickson, S. J. Nature, London, 67, 1903, (344).

Philadium languidum Haeckel, P. gregarium Haeckel, description. British Columbia. Murbach L. and Shearer, C. London, Proc. Zool. Soc., **1903**, 2, (179– 180, pl. XX, figs. 1, 14).

Plumularia halecioides Alder, variations. Billard, A. Bul. Muséum, Paris, 1903, (57-62).

Polyorchis minuta n. sp. Puget Sound. Murbach, L. and Shearer, C. London, Proc. Zool. Soc., **1903**, 2, (174-177, pl. XIX, and XXII, figs. 1, 3).

Proboscidactyla brevicirrata Haeckel. Murbach, L. and Shearer, C. British Columbia. *l.e.* (178-179).

Sarsia princeps n. nom. for Codonium princeps Haeckel. Browne, E. Bergens. Mus. Aarb., **1903**, 4, (8, pl. I, fig. 1, pl. III, fig. 4).

Syndictyon angulatum (Mayer), description. British Columbia. Murbach, L. and Shearer, C. London, Proc. Zool. Soc., 1903, 2, (168-169).

Tetraplatia volitans (Busch.), osservazioni. **Marchese**, B. Messina (tip. dell'Epoca), 1902, (12, con tav.).

Thaumantias cellularia (Haeckel). British Columbia. Murbach, L. and Shearer, C. London, Proc. Zool. Soc., 1903, 2, (172-174, pl. XXII, figs. 2, 24, 20).

Thuiaria hjorti n. sp. Norway. Broch, H. Bergens, Mus. Aarb., 1903, No. 9, (14).

Turris bresiconis n. sp. Alaska. Murbach, L. and Shearer, C. London, Proc. Zool. Soc., **1903**, 2, (170-171, pl. XVIII, figs. 1 and 2).

## GENERAL.

Browne, E. . . Medusae from Norway and Spitzbergen. Bergens Mus. Aarb., 1903, No. 4, (36, with 4 pls.).

Hargitt, C. W. Synopsis of North American Invertebrates. 14. Part 4. The Scyphomedusae. Amer. Nat., Boston, Mass., **37**, 1903, (331-345).

Maas, O. Die Scyphomedusen der Siboga-Expedition. Résultats des explorations zool., botan., océanogr., géol., entreprises à bord du Siboga, publiés par Max Weber. Livr. 10, Monogr. 11. Leide (E. J. Brill), 1903, (91, mit 12 Taf.). 33 cm.

## SPECIAL.

Aurelia aurita, Spermatogenese. Aders, W. M. Zs. wiss. Zool., Leipzig, 74, 1903, (95–105).

Cassiopeja ornata var. digitata n. var., C. andromeda, var. malayensis n. var. Maas, O. Die Scyphomedusen der Siboga-Expedition. Livr. 10, Monogr. 11, 1903, (43, 45, pl. IV, figs. 26-30).

Crambions n. gen., C. mastigophora n. sp. Mass, O. I.c. (49, pl. VI, figs. 47-53, pl. VIII, figs. 71-74, pl. XI, figs. 100-104, pl. XII, fig. 113).

Crossostoma anadyomene n. sp. Maas, O. l.e. (56, pl. VII, figs. 65-68).

Mastigias papua var. sibogas n. var. Mass, O. I.c. (66-70).

Netrostoma coerulescens n. sp. Mass, O. l.c. (35, pl. V, figs. 37-46, pl. XI, figs. 97-103, pl. XII, fig. 109).

Paraphyllina n. gen., P. intermedia n. sp. Mass, O. *l.e.* (6, pl. II, figs. 10-14, pl. XI, fig. 106).

## ALCYONARIA.

## GENERAL.

Burchardt, E. Alcyonaceen von Thursday Island (Torres-Strasse) und von Amboina, II. Jena, Denkschr. med. Ges., 8, 1903, (653-682, 4 Taf.).

Hentschel, E. Gorgonaces von Amboins und Thursday Island. *l.c.* (643-652, mit 2 Taf.).

(n 2-9053)

Hickson, S. J. The Alcyonaria of the Maldives. I. The Genera Xenia, Telesto, Spongodes, Nephthya, Paraspongodes, Chironephthya, Siphonogoria, Solonocaulon, and Melitodes. [Gardiner's] Fauna Maldive, II, 1, (473-502, pls. XXVI-XXVII).

Kassianow, N. Ueber das Nervensystem der Alcyonarien. Bergens Mus. Aarb., **1903**, No. 6, (3).

**Krempt**, Arm. Sur un point de l'anatomie de quelques Hexacoralliaires. Paris, C.-R. Acad. sci., **136**, 1903, (1210– 1212).

Kühenthal, W. Versuch einer Revision der Alcyonarien. II. Die Familie der Nephthyiden. Tl 1. Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (99–172, mit 2 Taf.).

Pratt, E. M. The Alcyonaria of the Maldives. II. The genera Sarcophytum, Lobophytum, Sclerophytum, and Alcyonium. [Gardiner's] Fauna Maldive, II., 1, (503-539, pls. XXVIII-XXXI).

### SPECIAL.

Acabaria amboinensis n. sp. Hantschel, E. Jens, Denkschr. med. Ges., 8, 1903, (643-652, 2 Taf.).

Acanthogorgia australiensis n. sp. Hentschel, E. l.c. (642–652, 2 Taf.).

Acanthomuricea n. gen., A. biserialis n. sp. Hentschel, E. l.c. (643-652, 4 Taf.).

Alcyonium sarcophytoides n. sp. Burchardt, E. l.c. (653-682, 4 Taf.).

Amphiacme n. nom. = Amphianthus Kükenthal. Kükenthal, W. Zool. Anz., Leipzig, 26, 1903, (272-275).

Aulopeammia † nn. spp. Pelix, J. Palaeontographica, Stuttgart, 49, 1903, (356-358, pl. XXII, fig. 9, 10).

Bebryce stellata n. sp. Hentoshel, E. Jena, Denkschr. med, Ges., 8, 1903, (643-652, 2 Taf.).

Capnella fungiformis n. sp. Kükenthal, W. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (133, pl. VII, fig. 5, pl. IX, figs. 30-32).

Chironephthya variabilis n. sp. Hickson, S. J. Fauna Maldive, II, 1, (488-493). Clavularia nn. spp. Burchardt, E, Jena, Denkschr. med. Ges., S, 1903, (653-682, 4 Taf.).

Corallium nn. spp. Japan. Kishinouye, K. Zool. Anz., Leipzig, 26, 1903, (623-626),

Japanese. **Kishinouye**, K. Dobuts. Z., Tokyo, **15**, 1903, (103-106).

*pusillum* n. sp., described in brief. Japanese. [**Kishinouye**, K.] *l.c.* (372).

Halysites †, description ; H. radiatus † n. sp. Nebraska, Pleistocene. Whitfield, R. P. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (489– 490, with 2 pls.).

Lemnalia umbellata n. sp. Kükenthal, W. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (139, pl. XII, fig. 6, pl. IX, figs. 33-35).

Lithophytum nn. spp. Kükenthal, W. l.c. (105-122).

Metalcyonium molle n. sp. Burchardt, E. Jena, Denkschr. med. Ges.. 8, 1903, (653-682, 4 Taf.).

Neospongodes n. gen., N. bahieneis n. sp. Kükenthal, W. Zool. Anz., Leipzig, 28, 1903, (272-275).

· Nephthya nn. spp. Kükenthal, W. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (141-169).

amboinensis n. sp. Burchardt, E. Jena, Denkschr. med. Ges., **8**, 1903, (653-682, 4 Taf.).

Renilla, regeneration and embryology. Wilson, E. B. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (215-226).

Sarcophytum nn. spp. **Pratt**, E. M. Fauna Maldive, **II**, 1, (512-513).

*gracile* n. sp. **Burchardt**, E. Jena, Denkschr. med. Ges., **8**, 1903, (653-682, **4** Taf.).

Sclerophytum n. gen., S. capitale, S. hirtum, S. palmatum, S. gardineri, S. durum, S. querciforme nn. spp. **Pratt**, E.M. Fauna Maldive, **II**, 1, (516-532).

Solenocaulon ramosa n. sp. Hickson, S. J. l.c. (498-499).

Spongodes nn. spp. Burchardt, E. Jena, Donkschr. med. Ges., 8, 1903, (653-682, 4 Taf.). Telesto rubra n. sp. Hickson, S. J. Fauna Maldive, II, 1, (480-481).

## ZOANTHARIA.

## GENERAL.

Bernard, H. M. Catalogue of the Madreporarian Corals in the British Museum (Natural History). IV. The family *Poritidae*. London, 1903, (VIII + 206, 14 pls.).

**Garlgren.** O. Ueber die Regeneration. der Seeanemonen. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 Juillet 1902, **1903**, VI Section, (9-11).

Duerden, J. E. West-Indian spongeincrusting Actinians. [With bibliography.] New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (495-503, with 4 pls.). Separate. 24.5 cm.

Felix, J. Verkieselte Korallen als Geschiebe im Diluvium von Schlesien und Mähren. Centralbl. Miu., Stuttgart, 1903, (561-577).

Studien über die korallenführenden Schichten der oberen Kreideformation in den Alpen und den Mediterrangebieten. Tl 1: Die Anthozoën der Gosauschichten in den Ostalpen. I. u. II. Hälfte. Palaeontographica, Stuttgart, **49**, 1903, (163-360, 9 Taf.).

Foulie, M. The Lithothamnia of the Maldives and Laccadives. [Mentions corals on which Lithothamnion grows.] Fauna Maldive, 1, (160-471, pls. XXIV, XXV).

Gardiner, J. S. Lagoon deposits. I. General account. II. Report on certain deposits, by Sir J. Murray. *l.c.* II, 1, (581-588, pl. XXXIV.).

**Richet**, C. Des poisons contenus dans les tentacules des Actinies (congestine et thalassine). Paris, C.-R. soc. biol., **55**, 1903, (246-248).

Vanghan, T. W. The corals of the Bada limestone [*Texas*]. [Appendix to Mollusca of the Buda limestone by G. B. Shattuck.] Washington, D.C., U. S. Dept. Int., Ball. Geol. Surv., No. **205**, 1903, (37-40, with pl.).

## SPECIAL.

Actinasis remesi † n. sp. Fellx, J. Centralbl. Minn., Stuttgart, 1903, (561-577).

Aldrichiella † n. var. (= Aldrichia † Vaughan, not Coquilett). Vaughan, T. W. Washington, D.C., Proc. Biol. Soc., 16, 1903, (101).

Aplosmilia crucifera † n. sp. Felix, J. Palaeontographica, Stuttgart, 49, 1903, (302, pl. XXIII, figs. 8-10).

Astraraea † n. gen. (= Thamnastrea multiradiata, etc.). Felix, J. l.c. (186).

Astrogyra † n. gen. (= Gyrosimilia educarsi Rouss). **Felix**, J. l.c. (251).

Astroïdes calycularis, recherches expérimentales sur la régénération et l'hétéromorphose. **Crefontaine**, P. Arch. biol., Paris-Liège, **19**, 1902, (245-315, av. 2 pl.).

Bunodeopsis globulifera Verrill. Duerden, J. E. London, Trans. Linn. Soc. Zool., (Ser. 2), 8, 1903, (297-317, 2 pls.).

Caryophyllia nn. spp. Vanghan, in Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3]. in Stanford University, Cal. Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol. No. 31, 1903, (1-420).

Ccratotrochus amphritrites † n. sp. Felix, J. Palaeontographica, Stuttgart, 49, 1903, (163-360).

*Cerianthus*, regeneration. **Child**, C. M. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **5**, 1903, (239-260, 304-319, with text-fig.); *Ib.*, **6**, 1903, (1-11, with textfig.).

Cyathoseris zitteli n. sp. † Felix, J. Palaeontographica, Stuttgart, 49, 1903, (227, pl. XXII, fig. 2).

Dimorphastraea waehneri † n. sp. Felix, J. l.e. (214, pl. XXIII, fig. 14).

Diphyphyllum billingsi † n. sp. Greens, G. K. Contribution to Indiana palaeontology. Part XI. New Albany, Ind., 1903, (98-109).

(n 2-9053)

Diploria latisinuata † n. sp. Felix, J. Palaeontographica, Stuttgart, 49, 1903, (276, pl. XX, fig. 16).

Discosoma sp., case of commensalism with Amphiprion intermedius. Horst, B. Leiden, Notes Mus. Jontink, 23, 1903, (180-182).

Elasmocoenia kittliana† n. sp. Felix, J. Palaeontographica, Stuttgart, 49, 1903, (301).

Endopachys† Lonsdale (= Rhectopeammia† Vaughan.) Vaughan, T. W. Washington, D.C., Proc. Biol. Soc., 16, 1903, (101).

Eridophyllum louisvillensis<sup>†</sup> n. sp. Greene, G. K. Contribution to Indiana paleontology. Part XI. New Albany, Ind., 1903, (98-109).

Favosiles helderbergias var. praecedens† n. var. New York, Silurian. Schuchert, C. Amer. Geol., Minneapolis, Minn., **31**, 1903, (160–178).

Fossopora<sup>†</sup> n. gen. **Etheridge**, R., jun. Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (16-19, with 2 pls.).

Goniopora, the genus. Bernard, H. M. Catalogue of madreporarian corals in the British Museum (Natural History). London, 1903, IV, 1, (VIII + 206, 14 pls.).

Haplaraea pratzi | n. sp. Felix, J. Palaeontographica, Stuttgart, 49, 1903, (184, pl. XVII, fig. 1).

Haplohelia ornata† n. sp. Felix, J. l.c. (823, pl. XVII, figs. 15, 16).

Heliophyllum<sup>†</sup> nn. spp. Greene, G. K. Contribution to Indiana palæontology. Pt. 15. New Albany, Indiana, 1903, (146-155, with pl.).

Heterastraea rhaetica<sup>†</sup> n. sp. Gloucestershire. **Tomes**, R. F. London, Q. J. Geol. Soc., **59**, 1903, (403-407, 2 figs.).

Heterocoenia † nn. spp. Pelix, J. Palaeontographica, Stuttgart, 49, 1903, (231, 235, 237-238).

Hydnophora kossmati n. sp.† Felix, J, Lc. (281, pl. XXII, fig. 8).

Lasmogyra† nn. spp. Felix, J. *i.e.* (246, 247, pl. XXI, figs. 4, 6-8, 12).

Latimaeandraraea† nn. spp. Felix, J. l.c. (222-224, pl. XX, fig. 18, pl. XXIII, fig. 7).

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Litharaea† un. spp. Felix, J. l.c. (179-180, pl. XX, figs. 17-19).

Montilivaltlia latona<sup>†</sup> n. sp. Felix, J. l.c. (240, pl. XXII, fig. 4).

Oculina nn. spp.† **Felix**, J. l.c. (322-323, pl. XXIV, fig. 8, pl. XXIII, figs. 4, 5).

Orbicella (?) tezana† n. sp. Buda Limestone, Texas. Vaughan, T. W. Washington, D.C., U. S. Dept. Int. Bull. Geol. Surv., No. 205, 1903, (38).

Pachygyra microphyse<sup>†</sup> n. sp. Felix, J. Palaeontographica, Stattgart, 49, 1903, (311, pl. XXIV, fig. 1).

Paracyathus pedroensis<sup>†</sup> n. sp. **Yaughan**, in Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3.**] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (1-420).

Parasmilia texana<sup>†</sup> n. sp. Buda limestone, Texas. **Vanghan**, T. W. Washington, D.C., U. S. Dept. Int. Bull. Geol. Surv., No. **205**, 1903, (37).

Pennaria carolinii, recherches expérimentales sur la régénération et l'hétéromorphose. **Cerfontaine**, P. Arch. biol., Paris-Liège, **19**, 1902, (245-315, av. 2 pls.).

Phyllocoenia roashensis<sup>†</sup> n. sp. **Decqué**, E. Palaeontographica, Stuttgart, **30**, II, 1903, (53, pl. III, fig. 1).

Phyllosmilia<sup>†</sup> nn. spp. Felix, J. l.c. (342-346, pl. XVIII, figs. 3-4, 9-11).

Placocoenia major<sup>†</sup> n. sp. Felix, J. I.c. (298, pl. XX, fig. 1).

Placohelia bigemmis<sup>†</sup> n. sp. Felix, J. l.c. (325, pl. XXII, figs. 12–13).

Placosmilia europhila<sup>†</sup>n. sp. Felix, J. l.c. (339, pl. XXIV, fig. 3).

Plesiophyllia acrisionae<sup>†</sup> n. sp. Felix, J. l.c. (241).

Protoseris cretacea<sup>†</sup> n. sp. Felix, J. l.c. (228, pl. XX, figs. 11-13).

Psilogyra<sup>†</sup> n. gen., P. telleri<sup>†</sup> n. sp. **Pelix**, J. l.c. (308, pl. XXIV, fig. 4).

Romingeria<sup>†</sup> observations on, nn. spp. Beecher, C. E. [Reprinted from the Amer. J. Sci., New Haven, Conn., 16, 1903], (1-11, with 5 pl.).

Stenogyra sinuosa<sup>†</sup> n. sp. Felix, J. Palaeontographica, Stuttgart, 47, 1903, (307, pl. XXI, fig. 15). Thamnaraeat nn. spp. **Felix**, J. *l.c.* (182, 183, pl. XXIII, fig. 6, pl. XVII, figs. 10, 11).

Thamnastraea† nn. spp. **Pelix**, J. l.e. (204, 208, 210, pl. XVII, fig. 8, pl. XXII, fig. 3, pl. XXIII, figs. 1-10).

Trochocyathus nn. spp. Funafuti. Bourne, G. C. London, J. Linn. Soc., Zool., **29**, No. 187, 1903, (27-32, pl. V, figs. 2-7, pl. VI).

<u>microphyss</u><sup>†</sup> n. sp. Felix, J. Palaeontographica, Stuttgart, **49**, 1903, (354, pl. XVIII, figs. 9, 10).

Trochosmilia† nn. spp. Felix, J. l.e. (327, 331, 332, pl. XVIII, fig. 7, pl. XXIV, figs. 3-7, 12).

## CTENOPHORA.

## GENERAL.

Moser, F. Die Ctenophoren der Siboga-Expedition. Résultats des explorations zool., botan., océanogr., géol., entreprises à bord du Siboga, publiés par Max Weber. Livr. 11, Monogr. 12. Leide (E. J. Brill), 1903, (34, mit 4 Tat.). 33 cm.

### SPECIAL.

Beroë pandorina n. sp. Moser, F. Die Ctenophoren der Siboga Expedition. Livr. 11, Monogr. 12, 1903, (24, pl. 111, figs. 1-8, pl. 1V, figs. 4-6).

Hormiphora sibogae n. sp. Moser, F. l.c. (13, pl. II, figs. 1-3).

Lampetia elegans n. sp. Moser, F. l.c. (15, pl. I, fig. 7).

Pleurobrachia nn. spp. Moser, F. l.c. (7, 8, pl. I, figs. 1-6, pl. IV, figs. 1-3).

#### LIST OF NEW GENERA AND SPECIES.

ACABARIA [Alcyonaria].

----- amboinensis. Hentschel. 56. ACANTHOGOBGIA [Alcyonaria].

australiensis. Hentschel. 56.

Acanthomuricea n. gen. [Alcyonaria]. Hentschel. 56.

------ biserialis. Hentschel. 56, ACTINASIS [Zoantharia].

— remešit. Felix. 30.

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CODONIUM [Hydromedusae]. AEQUOREA [Hydromedusae]. ----- norvegica. Browne. 13. Shearer. 83. ALCTONICH [Alcyonaria]. - sarcophytoides. Burchardt. CORALLIUM [Alcyonaria]. boshuensis. Kishinouye. 15. 70. n. nom. [Zoantharia]. Aldrichiells<sup>†</sup> inutile. Kishinouye. 70. Vaughan. 108. japonicum. Kishinouye. 70. konojoi. Kishinouye. 70. pusillum. Kishinouye. 69. sulcatum. Kishinouye. 70. [Alcyonaria]. nom. Amphiacme n. 72. Kükenthal. AMPHIGRAPTUS [Graptolites]. - distansf. Elles & Wood. Orambione n. gen. [Scyphomedusae]. Mass. 75. 27. ANTENNULARIA [Hydromedusae]. ------ variabilis. Broch. 11. mastigophora. Mass. 75. CROSSOSTOMA [Scyphomedusae]. APLOSMILIA [Zoantharia]. crucifera†. Felix. 29. - anadyomene. Maas. 75. SAstraraca † n. gen. [Zoantharia]. Felix. CYATHOSERIS [Zoantharia]. --- zitteli<sup>†</sup>. Felix. 29. 29. SAstrogyra† n. gen. [Zoantharia]. Felix. CYTAEIS [Hydromedusae]. 29. minima. Trinci. 105. AULOPSANNIA [Alcyonaria]. Dichotomia n. gen. [Hydromedusae]. - lithothamniodest. Felix. 29. Brooks. 12. reptanst. Felix. 29. cannoides. Brooks. 12. vermiculata<sup>†</sup>. Felix. 29. DINORPHASTRAEA [Zoantharia]. BEBRICE [Alcyonaria]. - waehnerit. Felix. 29. stellata. Hentschel. 56. BEROË [Ctenophora]. pandorina, Moser. 79. DIPLORIA [Zoantharia]. BROOKSELLA [Hydromedusae]. — latisinuata<sup>†</sup>. Felix. 29. - rhenana<sup>†</sup>. Kinkelin. 66. Bythotiara n. gen. [Hydromedusae]. ELASMOCOENIA [Zoantharia]. 50. —— kittliana†. Felix. 29. Günther. murrayi. Günther. 50. ERIDOPHYLLUM [Zoantharia]. CAPNELLA [Alcyonaria]. - louisvillensist. Greene. 46. Kükenthal. fungiformis. 73. FAVOSITES [Zoantharia]. helderbergiae var. praecedenst n. var. Schuchert. Vaughan. 2. pedroensist. 95. CASSIOPEIA [Scyphomedusae]. Fossopora n. gen. [Zoantharia]. Etheandromeda var. malayensis ridge. 28. n. var. Maas. 75. GONIONEMUS [Hydromedusae]. ornata var. digitata. n. var. agassizii. Murbach & Shearer. Maas. 75. 83. CERATELLA [Hydromedusae]. dusae]. Kirkpatrick. 67. Gonomeandrus minima. Hickson. 59. \_\_\_\_\_ ('ERATOTROCHUS [Zoantharia] chrysostephanus. Kirk-- amphitrites<sup>†</sup>. Felix. 29. patrick. 67. CHIBONEPHTHYA [Alcyonaria]. HALECIUM [Hydromedusae]. variabilis. Hickson. 62. - minutum. Broch. 11. CLAVULABIA [Alcyonaria]. amboinensis. Burchardt. 15. HALIOORNARIA [Hydromedusae]. pluma. Broch. 11. coronata. Burchardt. 15.

§Also described in N. 2, i, No. 7717.

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HAPLARAEA [Zoantharia]. ------ pratzi†. Felix. 29. HAPLOHELIA [Zoantharia]. — ornata†. Felix. 29. HELIOPHYLLUM [Zoantharia]. conglomeratum<sup>†</sup>. Greene. 47. - congregatum<sup>†</sup>. Greene. 47. HETERASTRAEA [Zoantharia]. rhaetica. Tomes. 104. HETEROCOENIA [Zoantharia]. costata<sup>†</sup>. Felix. 29. erecta<sup>†</sup>. Felix. 29. fuchsi<sup>†</sup>. Felix. 29. oculinaeformist. Felix. 29. stacheit. Felix. 29. HORMIPHORA [Ctenophora]. sibogae. Moser. 79. HYDNOPHORA [Zoantharia]. - kossmatit. Felix. 29. HYDRA [Hydromedusae]. pallida. Beardsley. 3. HYDROCTENA [Hydromedusae]. 23. ----- salenskii. Davydov. LAFOËA [Hydromedusae]. Broch. 11. elegantula. LAMPETIA [Ctenophora]. elegans. Moser. 79. LAODICE [Hydromedusae]. chapmani. Günther. 50. LASNOGYRA [Zoantharia]. gracilis†. Felix. 29. tortuosa†. Felix. 29. 29. lophiophorat. Felix. 29. LEMNALIA [Alcyonaria]. umbellata. Kükenthal. 73. LEPTOGRAPTUS [Graptolites]. ascendens . Elles and Wood. 27. flaccidus var. arcuatus † n. Elles and Wood. var. 27. - var. macer† n. var. Elles and Wood. 27. var. Elles and Wood. 27. - latus<sup>†</sup>. Elles and Wood. 27. LITHARAEA [Zoantharia].

----- latistellata<sup>†</sup>. Felix. 29. ----- vaughani<sup>†</sup>. Felix. 29. LITHOPHYTUM [Alcyonaria]. ------ armatum. Kükenthal. 73. confertum. Kükenthal. 73. formosanum. Kükenthal. 73. MARGELIS [Hydromedusae]. Browne. 13. nordgaardii. MARGELOPSIS [Hydromedusae]. hartlaubii. Browne. 13. MASTIGIAS [Scyphomedusae]. papua var. sibogae n. var. Maas. 75. MESONENA [Hydromedusae]. and victoria. Murbach Shearer. 83. METALOYONIUM [Alcyonaria]. molle. Burchardt. 15. MITROCOMELLA [Hydromedusae]. fulva. Browne. 13. MONTIVALTLIA [Zoantharia]. ——— latonaț. Felix. 29. NEMAGRAPTUS [Graptolites]. gracilis var. remotus† n. var. Elles and Wood. 27. [Alcyonaria]. 72. Neospongodes n. gen. Kükenthal. bahiensis. Kükenthal. 72. NEPHTHYA [Alcyonaria.]. amboinensis. Burchardt. 15. brassica. Kükenthal. 7 crassa. Kükenthal. 73. 73. cupressiformis. Kükenthal. 73. erecta. Kükenthal. 73. formosana. Kükenthal. 73. pacifica. Kükenthal. 73. sphaerophora. Kükenthal. 73. striata. Kükenthal, 73. thujaria. Kükenthal. 73. tongaensis. Kükenthal. 73. NETROSTOMA [Scyphomedusae]. coerulescens. Maas. 75. schlosseri<sup>†</sup>. Felix. 29. PACHYGYRA [Zoantharia]. microphyes<sup>†</sup>. Felix 29. PARACYATHUS [Zoantharia]. Paraphyllina n. gen. [Scyphomedusae]. Maas. 75. intermedia. Maas. 75.

## Cœlenterata.

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PARAMILIA [Zoentbaria]. - texana<sup>†</sup>. Vaughan. 109. PHYLLOCOENIA [Zoantharia]. ----- roashensis†. Dacqué. 22. PHYLLOGRAPTUS [Graptolites]. ---- corf. Strandmark. 99. PHYLLOSMILIA [Zoantharia] — aegiale†. Felix. 29. — diversicostata†. Felix. 29. – transienst. Felix. 29. PLACOCOENIA [Zoantharia]. ----- majort. Felix. 29. PLACOHELLA [Zoantharia]. bigenmist. Felix. 29. PLACOSMILIA [Zoantharia]. ----- europhila<sup>†</sup>. Felix. 29. PLESIOPHYLLIA [Zoantharia]. ----- aerisionae †. Felix. 29. PLEUROBRACHIA [Otenophora]. globosa. Moser. 79. pigmentata. Moser. 79. POLYOBCHIS [Hydromedusae]. Murbach minuta. and Shearer, 83. PROTOSERIS [Zoantharia]. cretacea<sup>†</sup>. Felix. 29. **Pellogyra**<sup>†</sup> n. gen. [Zoantharia] Felix. 29. telleri<sup>†</sup>. Felix. 29. minor<sup>†</sup>. Beecher. 5. SARCOPHYTUM [Alcyonaria]. graeile. Burchardt. roseum. Pratt. 90. tenuis. Pratt. 90. 15. SARSIA [Hydromedusae]. princeps. Browne. 13.

Sclerophytum n. gen. [Alcyonaria]. Pratt. 90. capitale. Pratt. 90. durum. Pratt. 90. gardineri. Pratt. 90. hirtum. Pratt. 90 palmatum. Pratt. 90. querciforme. Pratt. 90. SOLENOCAULON [Alcyonaria]. ----- ramosa. Hickson. 62. Burchardt. costatocyanea. 15. planoregularis. Burchardt. 15. STENOGYRA [Zoantharia]. sinuosa†. Felix. 29. THANNABAEA [Zoantharia]. — cladophora†. Felix. 29. lithodes<sup>†</sup>. Felix. 29. THAMNASTRAEA [Zoantharia]. ----- carinata†. Felix. 29. leptophylla<sup>†</sup>. Felix. 29. montuosa<sup>†</sup>. Felix. 29. THUIARIA [Hydromedusae]. - hjorti. Broch. 11. TROCHOCYATHUS [Zoantharia]. hastatus. Bourne. 10. microphyes<sup>†</sup>. Felix. 29. vasiformis. Bourne. 10. TROCHOSMILIA [Zoantharia]. chondrophoraf. Felix. 29
 didymophila<sup>†</sup>. Felix. 29.
 leptogramma<sup>†</sup>. Felix. 29. Felix. 29. peccadiophora<sup>†</sup>. Felix. 29. TURRIS [Hydromedusae]. — breviconis. Murbach and Shearer. 83.

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## 1003-1031 ECHINODERMATA.

## TITLES.

Arnaud, H. Les Echinocorys de Tercis (Landes). Bordeaux, Actes. soc. linn., (sér. 6), 7, 1902, (29-39, av. 9 pl.). [1031]. 1

Bell, F. J. [Exhibition of, and remarks upon, a Holothurian of the genus Actinopyga.] London, Proc. Zool. Soc., 1903, 1, (192). [1023 1015 1031]. 2

Report on a collection of Echinoderms from the neighbourhood of Zanzibar. Part I. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (244-248). [1027 ff]. 3

Actinogonidiate Echinoderms. Fauna of the Maldive and Laccadive Archipelagoes, 1, (223-233). [1027 ma 1031]. 4

**Blake**, J. H. The geology of the country around Reading. [The notes on the Chalk are by A. J. Jukes-Browne.] Mem. geol. Surv. Eng., London, **1903**, (Explanation of sheet 268), (92, with 13 text-figs.) [1027 de 2227 de]. 5

**Bianford**, W. T. The "Tanganyika Problem." Correspondence. London, Geog. J., 22, 1903, (92-96). [1027 f]. 6

Boveri, Marcella. Ueber Mitosen bei einseitiger Chromosomenbindung. Jenaische Zs. Natw., **37**, 1903, (401-446, mit 3 Taf.). [1015]. 7

**Gaullery**, Maurice et **Siedlecki**, Michel. Sur la résorption phagocytaire des produits génitaux inutilisés chez l'*Echinocardium cordatum*, Penn. Paris, C.-R. Acad. sci., **137**, 1903, (496–498); [abstract], London, J. R. Microsc. Soc., **1903**, (727–728). [1011 1031]. 8

**Cockerell**, T. D. A. The name Solenopeis. Nature, London, **67**, 1903, (559). [1031]. 10 Delage, Yves. Elevage des larves parthénogénétiques d'Astéries dues à l'action de l'acide carbonique. Paris, C.-R. Acad. sci., 137, 1903, (449-451). [0211 0215 1015 1031]. 11

La parthénogenèse par l'acide carbonique, obtenue chez les œufs après l'émission des globules polaires. Paris, C.-R. Acad. sci., **137**, 1903, (473-475); [abstract], London, J. R. Microse. Soc., **1904**, (187). [0211 0215 1015]. 12

Sur la non-régénération des sphéridies chez les oursins. Paris, C.-R. Acad. sci., **137**, 1903, (681-682); [abstract], London, J. R. Microse. Soc., **1904**, (66). [0215 1011 1031]. 13

**Döderlein**, L[udwig]. Bericht über die von Herrn Professor Semon bei Amboina und Thursday Island gesammelten Echinoidea. Jena, Denkschr. med. Ges., **8**, 1903, (683–726, mit 8 Taf.). [1031 1027 *ia*]. 14

Doncaster, L. Experiments in hybridisation, with special reference to the effect of conditions on dominance. London, Phil. Trans. R. Soc., **196**, B, (119-173, with 10 text figs.); [Prelim. Abstracts], London, Proc. R. Soc., **61**, 1903, (497); Nature, London, **68**, 1903, (94). [1023 1015 0223]. 15

On rearing the later stages of echinoid larvae. Cambridge, Proc. Phil. Soc., **13**, 1903, (47–49). [Author's reprints paged 48–50. Why?] [Prelim. Abstract], Nature, London, **67**, 1903, (215); [abstract], London, J. R. Microsc. Soc., **1903**, (183). [1031 1015]. 16

Fearnaides, W. G. On some new fossils from Penmorfa, and their bearing on the Cambro-Ordovician Succession near Tremadoc. London, Rep. Brit. Ass., 1902, (614-615). [1027 de 2827 de].

Fischer, Martin H. How long does (Arbacia) sperm live in sea-water? Amer. J. Physiol., Boston, Mass., 8, 1903, (430-434). [0215 1015]. 18

Fourteau, R. Note sur l'*llemiaster* cubicue Desor, et ses variations. Bul. Muséum, Paris, **1908**, (177–180). [1031]. 19

Fox-Strangways, C. The geology of the country near Leicester. Mem. geol. Surv. Eng., London, **1903**, (Explanation of sheet 156), (vi + 122, ii pls., 15 text-figs.). [1027 de]. 20

**Pritel**, P. H. Echinodermes fossiles. Les oursins. Naturaliste, Paris, (sér. 2), **24**, 1902, (185–188, av. fig.). [1031]. 21

Fühner, Hermann. Ueber die Einwirkung verscheidener Alkohole auf die Entwicklung der Seeigel. Arch. exper. Path., Leipzig, 51, 1903, (1-10). [1015 1031]. 22

Garbowaki, Tad[eusz]. Contribution à l'étude de la parthénogenèse artificielle chez les astéries. (Polouais) Kraków, Rozpr. Akad., B. **43**, 1903, (570-610, av. I pl.). [1011 1015 1031]. 23

Uber parthenogenetische Entwickelung der Asteriden. Kraków, Bull. Intern. Acad., **1903**, (810-830, mit 1 pl.). [1015 1031]. 24

Gardiner, J. S. The breaking-up of coral rock by organisms in the Tropics. London, Rep. Brit. Ass., **1902**, (654, 655); [Prelim. Abstract] Nature, London, **66**, 1902, (641). [1019 1819 0819]. 25

Gill, E. L. Note on the occurrence of Keisley Limestone-Pebbles in the red sandstone-rocks of Peel (Isle of Man). London, Q. J. Geol. Soc., 59, 1903, (307-310). [0827 2827 2027 1027 2227 de]. 26

Gordon, M. M. Ogilvie. The geological structure of Monzoni and Fassa. Edinburgh, Trans. Geol. Soc., 8, 1903, (sp. part X + 180, with 18 pls., 2 maps and 33 text-figs.). [1027 dk 2027 dk 0827 dk]. 27

Gorham, F[rederic] F[oole] and Tower, R. W. Does potassium cyanide prolong the life of the unfertilized egg of the seaurchin ? Amer. J. Physiol., Boston, Mass., 8, 1903, (175-182). [0215 1015 1031]. 28 Grabau, Amadeus W[illiam]. Notes on the development of the biserial arm in certain crinoids. Amer. J. Sci., New Haven, Conn., (Ser. 4), **16**, 1903, (289-300); [abstract], London, J. R. Microsc. Soc., **1903**, (728). [1015 1031]. 29

**Grave**, Caswell. On the occurrence among Echinoderms of larvae with cilia arranged in transverse rings, with a suggestion as to their significance. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **5**, 1903, (169–186, with text fig.). [1015 1023]. 30

Some points in the structure and development of *Mellita testudinata*. Baltimore, Md., Johns Hopkins Univ. Cir., **21**, 1902, (57-59). [1007 1015 1031]. 31

Greeley, Arthur W. On the effect of variations in the temperature upon the process of artificial parthenogenesis. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (129-136). [0211 0215 1015 1031]. 32

Greene, George K. Contribution to Indiana palaeontology. Parts XI-XV. New Albany, Ind., 1903, (98-155, with pl.). [0827 gg 0831 1031]. 33

Grieg, James A. Echinodermen von dem norwegischen Fischereidampfer "Michael Sars" in den Jahren 1900-1903 gesammelt. I. Ophiuroidea. Bergens Mus. Aarb., 1903, No. 13, (45, with 4 fig.). [1027 ka la 1031.]. 34

Guenther, Konrad. Ueber den Nucleolus im reifenden Echinodermenei und seine Bedeutung. Zool. Jahrb., Jena, Abt. f. Anat., 19, 1903, (1-28, mit 1 Taf.). [1015]. 35

Hambach, G. Revision of the Blastoides, with a proposed new classification, and description of new species. St. Louis, Mo., Trans. Acad. Sci., 13, 1903, (1-67, with pl.). [1031]. 36

Henri, Victor. Étude des contractions musculaires et des réflexes chez le Stichopus regalis. Paris, C.-R. Acad. sci., 137, 1903, (669-670). [1011 1031]. 37 ------ et Lalon, S. Régulation

osmotique des liquides internes chez les Echinodermes. Paris, C.-R. Acad. sci., **137**, 1903, (721-723); [abstract], London, J. R. Microsc. Soc., **1904**, (66). [1011]. 38 Herdman, W. A. Port Erin Biological Station, Guide to the Aquarium, &c. Liverpool, 1902, (44, 22 text-fig.) 3d. [Reprint], Liverpool, Proc. Biol. Soc., 16, 1902, (65-108). [1003]. 39

and **Thompson**, I. C. Echinodermata in: The marine fauna and fisheries of the district. In Handbook Brit. Assoc. Southport, **1903**, (167). [1027 de]. 40

Hey, W. C. Shore-collecting near Scarborough and Filey. Naturalist, London, 1903, (344-348). [2227 de 2627 de 1027 de]. 41

Hind, W. Life-zones in the British Carboniferous Rocks. Report of the Committee. London, Rep. Brit. Ass., 1903, (210-224). [1027 de 5427 de 2027 de 2227 de]. 42

Horne, J. Obituary notice of the late Mr. Bennie. Edinburgh, Trans. geol. Soc., 8, 1903, (187–193.) [0010 1003]. 43

Hunter, S[anuel] J[ohn]. On the conditions governing the production of artificial parthenogenesis in *Arbacia*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (143-151). [0211 1015 1031]. 44

Jackal, [Otto]. [Tiaracrinus tetraedra n. sp.] Berlin, Jahrb. geol. Landesanst., 21, 1901, Abh. Mitarb., (77). [1031] 45

Janssens, F. A. Production artificielle de larves géantes chez un Echinide. Paris, ('.-R. Acad. sci., 137, 1903, (274-276). [0215 1015 1031]. 46

Jukes-Browne, A. J. On the zones of the Upper Chalk in Suffolk. London, Proc. Geol. Ass., 18, 1903, (85-94, pl. XVI). [2027 de 0627 de 5427 de 1027 de 0827 de]. 47

Devonshire in the time of the Lower Chalk. Plymouth, Rep. Devon, Ass., 35, 1903, (787-799, I pl.). [1027 de 2027 de 2227 de]. 48

**Eatzer**, Freidrich. Grundzüge der Geologie des unteren Amazonasgebietes (des Staates Pará in Brasilien). Leipzig (M. Weg), 1903, (III+298, mit 4 Portr., 1. Karte). 26 cm. 14 M. [027 hh 1027 hh 1031 2031 2831]. 49

King, Helen Dean. Further studies on regeneration in Asterias vulgaris [with bibliography]. [Reprinted from the Archiv für Entwickelungsmechanik der Koehler, R. Zoologie. Echinides et ophuires. In: Expédition antarctique belge. Résultats du voyage du S.Y. "Belgica" en 1897-99. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1902, (42, av. 8 pls.). 17.50 fr. [1027 o 1031]. 51

et Vaney, C. Entosiphou diematis, nouvesu mollusque parasite d'une Holothurie abyssale. Rev. Suisse Zool., Genève, 11, 1903, (23–41, 1 pl.). [2219 2231 1019 1031]. 52

Lamplugh, G. W. The Geology of the Isle of Man. Mem. Geol. Surv. UK., London, 1903, (XIV+620, V pls., 109 text-figs.). [1027 de]. 53

and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., 59, 1903, (234-265, pls. XVI-XVIII, 2 text-figs.). [1827 de 2027 de 2031 2231 2227 de 1027 de]. 54

Leiper, R. T. On an Accelous Turbellarian inhabiting the common hearturchin. London, Rep. Brit. Ass., **1902**, (652, 653). [1019 1031 1219 1231]. 55

Lissajous. Echinides jurassiques des environs de Mâcon. Mâcon, Bul. soc. sci. nat., 2, 1903, (97-111, 157-184, av. 2 pls.). [1031 1027 df]. 56

Loob, Jacques. A method by which the eggs of a sea-urchin (Strongylocentrotus purpuratus) can be fertilized with the sperm of a starfish (Asterias ochracea). Berkeley, Univ. Cal., Pub. Physiol., **1**, 1903, (I-3). [0215 1015 1023]. 57

The fertilization of the egg of the sea-urchin by the sperm of the star-fish. [Address before the Sigma Xi Scientific Society at Stanford University, October 13, 1903.] Berkeley, Univ. Cal., Pub. Physiol., 1, 1903, (39-53). Separate 27.3 cm. [0215 1015 1023]. 58

Ludwig, H[ubert]. Echinodermen (Stachelhäuter). Fortges. v. Otto Hamann. (H. G. Bronn's Klassen u. Ordnungen des Thier-Reichs, Bd 2, Abt. 3, Lág 41-48, 62-64.) Leipzig (C. F. 1003

Winter), 1901-1903, (I-V, 953-1094, 1303-1366, mit Taf.). 26 cm. 12 + 4,50 M. [1003] 59

MacBride, E. W. The development of Echinus esculentus, together with some points in the development of E. miliaris and E. acutus. London, Phil. Trans. R. Soc., 195 B, 1903, (285-327, pls. VII-XVI). London (Dulau), 1903. 8s. 6d. [1015 1031]. 60

The development of the common sea-urchin (Echinus esculentus). London, Rep. Brit. Ass., **1902**, (647). [1015 1031]. 61

Report on a small collection of Echinoderm larvae made by Mr. George Murray, F.R.S., during the cruise of the "Oceana" in November, 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (477-478). [1015]. 62

**Wetterry**, A. et alii. The geology of the country around Dublin. Mem. geol. Surv. Ireland, Dublin, (Explanation of sheet 112), (viii + 160, v. pls., 21 textfigs.). [1027 de]. 63

McIntosh, D. C. Variation in "Ophiocoma nigra" (O. F. Müller). Biometrika, Cambridge, 2, 1903, (463–473, 10 text-figs.); [abstract], London, J. R. Microsc. Soc., 1904, (188). [1023 0223 1031]. 64

Meijere, J[ohannes] C[ornelis] H[endrik] de. Vorläufige Beschreibung der neuen, durch die Siboga-Expedition gesammelten Echiniden. Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (1-16). [1027 eg ia 1031]. 65

Mitsukuri, K[akichi]. Notes on the habits and life-history of *Stichopus japonicus* Selenka. Annot. Zool. Jap., Tokyo, **5**, 1903, (1-21). [1015 1019 1031]. 66

Monks, Sarah P. Regeneration of the body of a starfish. [Plataria (Linekia) fascialis.] [Abstracts], Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (351); London, J. R. Microsc. Soc., 1903, (616). [0211 1011 1031]. 67

Mortensen, Th. Chaetodiadema granulatum n. g. n. sp. A new Diadematid from the Gulf of Siam. Kjöbenhavn, Nath. Medd., **1903**, (1-4). [1027 ee 1031]. 68

genre de Diadematides. Rev. Suisse

Zool., Genève, **11**, 1903, (393-398, **4** figs.). [1027 eg 1031]. 69

Micholis, A. R. A list of Irish echinoderms. Being a report from the Fauna and Flora Committee. Dublin, Proc. R. Irish Acad., (Ser. 3), 24, Sect. B, 1903, (231-267, with 1 text-fig.); [abstract], London, J. R. Microsc. Soc., 1903, (728). [1027 de 1031]. 70

Fichinodermata : in A Guide to Belfast, &c. by the Belfast Naturalista' Field Club. Belfast (M'Caw & Co.), 1902, (231-233). 18.5 × 12 cm. [1027 de]. 71

Norman, A. M. Notes on the Natural History of East Finmark. Echinodermata. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (406-417, pl. XXVII). [1015 1027 db]. 72

**Oppenheim**, Paul. Ueber die Fossilien der Blättermergel von Theben. München, SitzBer. Ak. Wiss., math.physik. Cl., **32**, (1902), 1903, (435–456, mit 1 Taf.). [0231 1031 1027 fb 2231]. 73

**Setergren**, Hjalmar. The Holothurioidea of Northern Norway. Bergens Mus. Aarb., **1902**, No. 9, 1903, (34). [1027 da ka 1031]. 74

Pauleke, W. Ueber die Kreideformation in Südamerika und ihre Beziehungen zu anderen Gebieten. Tl 1. (Beiträge zur Geologie und Palaeontologie von Südamerika. Unter Mitwirkung von Fachgenossen hrsg. v. G. Steinmann, X). N. Jahrb. Min., Stuttgart, Beilagebd. 17, 1903, (252-812, mit 3 Taf.). [0231 1027 h 1031 2231]. 75

**Payedien**, B. F. Les oursins fossiles (suite et fin). Mâcon, Bul. soc. sci. nat., **2**, 1903, (114–116). [1031]. 76

Peach, B. N. Appendix. Part I. Palaeontological, in W. Gunn and others. The geology of North Arran, South Bute, and the Cumbrases, with parts of Ayrshire and Kintyre, (153–170). Mem. geol. Surv. Scot., Edinburgh, Sheet 21. [1027 de]. 77

Pearson, J. Report on the Holothurioidea collected by Professor Herdman, at Ceylon, in 1902. Rep. on Ceylon Pearl Oyster Fisheries, London, Roy. Soc., Pt. I, Supplementary Report, V, (181-208, pls. I-III). 4to. [1027 ef 1031]. 78 Partier, R[émy]. Sur deux espèces nouvelles d'Holothuries de la Nouvelle-Zélande. Bul. Muséum, Paris, 1903, (142-146, av. fig.). [1027 ik 1031]. 79

Putch, T. The marine fauna of the Humber district and the Holderness coast. Hull, Trans. Sci. F. Nat. Cl., 3, 1903, (27-41). [1027 de 2227 de 2627 de 0827 de 1827 de]. 80

Marine zoology at Filey. Naturalist, London, **1903**, (351). [0627 de 0827 de 1827 de 1027 de 2027 de 2627 de 2227 de 5427 de]. 81

**Betd**, C. The geology of the country around Salisbury. Men. geol. Surv. Eng., London, **1903**, (Explanation of sheet **298**), (iv + 78, 38 text-figs.). [1027 de]. 82

The geology of the country near Chichester. With contributions by G. W. Lamplugh and A. J. Jukes-Browne. Mem. geol. Surv. Eng., London, **1903**, (Explanation of sheet 317) (iv + 52, with 14 text-figs.). [1027 de 2227 de]. 83

Bennie, J. v. Thomson, J. A.

**Lowe,** A. W. The zones of the white chalk of the English coast. III. Devon. London, Proc. Geol. Ass., **18**, 1903, (1-51, pls. 1-XIII). IV. Yorkshire. *1b.*, (193-296, pls. XVII-XL). [Review] by H. B. Woodward, Nature, 1903, (428). [Revised by Jukes-Brown] Geol. Mag., London, [4], **10**, 1903, (309-313). [0627 *de* 0627 *de* 1027 *de* 1031 2027 *de*]. 84

**Basso**, A. Studi sugli echinodermi. Catania, Atti Acc. Gioenia, (Ser. 4), **15**, (79, 1902), 1902, (93, con tav. e fig.). [1007 1031]. 85

Sul significato delle idrospire e degli spiracoli dei Blastoidei. Mon. Zool. ital., Firenze, **13**, 1902, (Supplemento), (22-24, con 2 fig.). [1007 1031]. 86

Gruppi di echinodermi viventi e fossili e loro filiazione. Conferenza (Sunto). Mon. zool., ital., Firenze, 13, 1902, (Supplemento), (54-58). [1031 6640]. 87

Schuchert, Charles. On new Siluric Cystoidea, and a new Camarocrinus. Amer. Geol., Minneapolis, Minn., 32, 1903, (230-240). [1031]. 88

Siedlecki, Michel. v. Caullery, Maurice.

**Simpson**, J. Catalogue of echinoderms found at Aberdeen and neighbourhood. Tr. Aberdeen Working Men's Nat. Hist. Soc., **1901-1903**, No. 1, (39-43). [1019 1027 de 1031]. 89

Sollas, W. J. A method for the investigation of fossils by serial sections. London, Phil. Trans. R. Soc., 1968, 1903, (259-265). [1003]. 90

**Stebbing**, W. P. D. Excursion to Salisbury and the Vale of Wardour . . : Old Sarum and Stonehenge. London, Proc. Geol. Ass., **18**, 1903, (146-149). [1027 de 2227 de]. 91

Teichmann, Ernst. Ueber Furchung befruchteter Seeigeleier ohne Beteiligung des Spermakerns. Diss. Würzburg. Jens (G. Fischer), 1902, (31, mit 4. Taf.). 23 cm. [1015]. 92

Thompson, I. C. v. Herdman, W. A.

Thomson, J. A. and Bennie, J. Outline of special course in natural history for Training College and King's students. Summer Session 1903. University of Aberdeen, 1903, (68). 8vo. [0030 0050 1003]. 93

**Todd**, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., **6**, No. **4**, 1903, (541-561). [5003 5027 de 2219 2227 de 2603 1827 de 1027 de 1019 0827 de 0819 0227 de 0060]. 94

Tokunaga, S[higeyasu]. On the fossil echinoids of Japan. [Several living Echinoids dealt with]. (Japanees) Tokyo, J. Coll. Sci., 17, Art. 12, 1903, (1-27, with 4 pls.). [1027 ec 1031].

Tower, R. W. r. Gorham, F[rederic] P[oole].

Useher, W. A. E. The geology of the country around Torquay. Mem. geol. Surv. Eng., London, **1903**, (Explanation of sheet 350) (iv + 142, 17 text-figs.). [1027 de]. 96

**Viguier**, C. Action de l'acide carbonique sur les œufs d'Echinodermes. Paris, C.-R. Acad. sci., **136**, 1903, (1687-1690). [1015 0215 0211]. 97

Wagner, Johannes. Anatomie des Palaeopneustes niasicus. (Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 5, Lfg 1.) Jena, 1903, (1-60, mit 8 Taf.). 17 M. [103] 1007]. 98 Walker, J. F. v. Lamplugh, G. W.

Whitelegge, T. Echinoderms. Notes on the Zoology of Paanopa or Ocean Island and Nauru or Pleasant Island. Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (12-13). [1027 *ib*]. 99

Winslow, G. M. Note on the circular swimming of sand-dollar [*Echinarachnius parma*] spermatozoa. Science, New York, N.Y., (N. Ser.), **17**, 1903, (153-154). [1015 1031]. 100

Woodcock, H. M. Report, in Report of the Committee on investigations made at the Marine Biological Laboratory, Plymouth. London, Rep. Brit. Ass. 1903, (271-272). [1019 0419 2219]. 101

Woodward, H. The President's address: Some ideas on life. London, J. R. Microsc. Soc., 23, 1903, (142-157). [0040 1027]. 102

Woodward, H. B. Excursion to Royston, Hertfordshire, May 16, 1903. [Ech. identified by E. T. Newton]. London, Proc. Geol. Ass., 18, 1903, (166-170). [1027 de 2227 de]. 103

**Zeleny**, Charles. A study of the rate of regeneration of the arms in the brittle-star, *Ophioglypha lacertosa*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **6**, 1903, (12-17, with diagr.). [0211 1011 1031]. 104

### 1003 COMPREHENSIVE AND GENERAL WORKS.

### GENERAL.

Syllabus of Royal Albert Memorial College, Exeter, for Session 1903–1904.

**Sollas**, W. J. A method for the investigation of fossils by serial sections. London, Phil. Trans. R. Soc., **196**, B, 1903, (259-265).

**Thomson**, J. A. and **Bennie**, J. Outline of special course in natural history for Training College and King's students. Summer Session, 1903. University of Aberdeen, 1903, (68). 8vo.

### TREATISES.

Ludwig, H[ubert]. Echinodermen (Stachelhäuter). Fortges. v. Otto Hamann. (H. G. Bronn's Klassen u. Ordnungen des Thier-Reichs, Bd 2, Abt. 3, Lfg 41-48, 62-64.) Leipzig (C. F. Winter), 1901-1903, (I-V, 953-1094, 1303-1366, mit Taf.). 26 cm. 12 + 4,50 M.

### Aquaria.

Hardman, W. A. Port Erin Biological Station, Guide to the Aquarium, &c., Liverpool, 1902, (44, 22 text-fig.). 3d. [Reprint], Liverpool, Proc. Biol. Soc., 16, 1902, (65-108).

### BIOGRAPHY.

Horne, J. Obituary notice of the late Mr. Bennie. Edinburgh, Trans. Geol. Soc., 8, 1903, (187–193).

# 1007 STRUCTURE.

### GENERAL.

Grave, Caswell. Some points in the structure and development of *Mellita testudinata*. Baltimore, Md., Johns Hopkins Univ. Cir., **21**, 1902, (57-59).

Russo, A. Studi sugli Echinodermi. Catania, Atti Acc. Gioenia, (ser. 4), 15, (79, 1902), 1902, (93, con. tav. e fig.).

Sul significato delle idrospire e degli spiracoli dei Blastoidei. Mon. zool. ital., Frienze, 13, 1902, (Supplemento), (22-24, con. 2 fig.).

Wagner, Johannes. Anatomie des Palacopneustes niasicus. (Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 5, Lfg. 1.) Jena, 1903, (1-60, mit 8 Taf.). 17 M.

### EXTERNAL CHARACTERS.

østergren, Hja'mar. The Holothurioidea of Northern Norway. Bergens Mus. Aarb., **1902**, No. 9, 1903, (34).

# 1011 PHYSIOLOGY.

### GENERAL.

**Caullery**, Maurice et **Siedlecki**, Michel. Sur la résorption phagocytaire des produits génitaux inutilisés chez l'*Echino*cardium cordatum, Penn. Paris, C.-R. Acad. sci., **137**, 1903, (496–498); [abstract], London, J. R. Microsc. Soc., **1903**, (727–728). Henri, Victor. Étude des contractions musculaires et des réflexes chez le Sichopus regalis. Le. (669-670).

et Lalou, S. Régulation osmotique des liquides internes chez les Echinodermes. *l.c.* (721-723); [abstract], London, J. R. Microsc, Soc., 1904, (68).

### REGENERATION.

**Dalage**, Yves. Sur la non-régénération des sphéridies chez les Oursins. Paris, C.-R. Acad. sci., **137**, 1903, (681– 682); [abstract], London, J. R. Microsc. Soc., **1904**, (66).

**King**, Helen Dean. Further studies on regeneration in *Asterias vulgaris* [with bibliography]. [Reprinted from the Archiv für Entwickelungamechanik der Organismen, **10**, 1900.] Bryn Mawr, Pa., Bryn Mawr Coll. Monogr., (Repr. Ser.), **1**, 1901, ([723]-737).

Monks, Sarah. Regeneration of the body of a starfish. [*Phataria* (*Linekia*) *fascialis*.] [Abstract.] Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (351); London, J. R. Microsc. Soc., 1908, (616).

**Ecleny**, Charles. A study of the rate of regeneration of the arms in the brittle star *Ophioglypha lacertosa*. Wood's Holl, Mass., Mar. Biol. Leb. Bull., **6**, 1903, (12-17, with diagr.).

### 1015 DEVELOPMENT.

### GENERAL.

Bell, F. T. [Exhibition of, and remarks upon, a Holothurian of the genus Actinopyga.] London, Proc. Zool. Soc., 1903, 1, (192).

Grave, Caswell. Some points in the structure and development of *Mellita testudinata*. Beltimore, Md., Johns Hopkins Univ. Cir., 21, 1902, (57-59).

. MacBride, E. W. The development of *Echinus esculentus*, together with some points in the development of *E. miliaris* and *E. acutus*. London, Phil. Trans. R. Soc., **195**, B, 1903, (285-327, pls. VII-XVI). London (Dulau), 1903. 8s. 6d.

The development of the common sea-archin (*Echinus esculentus*). London, Rep. Brit. Ass., **1902**, (647).

### Ovun.

Guenther, Konrad. Ueber den Nucleolus im reifenden Echinodermenei und seine Bedeutung. Zool. Jahrb., Jena, Abt. f. Anat., **19**, 1903, (1-28, mit 1 Taf.).

### SPERMATOGENESIS AND SPERMATOZOA.

**Pischer**, Martin H. How long does (*Arbacia*) sperm live in sea-water? Amer. J. Physiol., Boston, Mass., 8, 1903, (430-434).

Winslow, G. M. Note on the circular swimming of sand-dollar [Echinarachnius parma] spermatozoa. Science, New York, N.Y., (N. Ser.), **17**, 1903, (153-154).

# PHENOMENA OF FERTILIZATION.

Boveri, Marcella. Ueber Mitosen bei einseitiger Chromosomenbindung. Jenaische Ze. Natw., 37, 1903, (401– 446, mit 3 Taf.).

Loeb, Jacques. A method by which the eggs of a sea-urchin (Strongylocentrolus purpuratus) can be fertilized with the sperm of a starfish (Asterias ochracea). Berkeley, Univ. Cal., Pub. Physiol., 1, 1903, (1-3). Separate. 26.5 cm.

The fertilization of the egg of the sea-urchin by the sperm of the star-fish. [Address before the Sigma Xi scientific society at Stanford University, October 13, 1903.] *l.e.* (39-53). Separate. 27.3 cm.

### EMBRYOLOGY.

Grave, Caswell. On the occurrence among Echinoderms of larvae with cilia arranged in transverse rings, with a suggestion as to their significance. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (169–186, with text fig.). **Delage**, Yves. Elevage des larves parthénogénétiques d'Astéries dues à l'action de l'acide carbonique. Paris, C.-R. Acad. sci., **137**, 1903, (449-451).

La parthénogenèse par l'acide carbonique, obtenue chez les œufs après l'émission des globules polaires. *l.c.* (473-475); [abstract], London, J. R. Microsc. Soc., **1904**, (187).

**Doncester,** L. Experiments in hybridization, with special reference to the effects of conditions on dominance. London, Phil. Trans. R. Soc., **196** B, 1903, (119-173, with 10 text-figs.); [Prelim. Abstracts] London, Proc. R. Soc., **61**, 1903, (497); Nature, London, **68**, 1903, (94).

On rearing the later stages of echinoid larvae. Cambridge, Proc. Phil. Soc., 12, 1903, (47-49). [Author's reprints, paged 48-50. Why?] [Prelim. Abstract], Nature, London, 67, 1903, (215); [Abstract], London, J. R. Microsc. Soc., 1903, (183).

Fühner, Hermann. Ueber die Einwirkung verschiedener Alkohole auf die Entwicklung der Seeigel. Arch. exper. Path., Leipzig, 51, 1903, (1-10).

Garbowald, Tad[eusz]. Contribution à l'étude de la parthénogenèse artificielle chez les astéries. (Polonais) Kraków, Rozpr. Akad., B, 43, 1903, (570-610, av. I pl.).

Über parthenogenetische Entwickelung der Asteriden. Kraków, Bull. Intern. Acad., **1903**, (810–830, mit 1 pl.).

Gorham, F[rederic] P[oole] and Tower, R. W. Does potassium cyanide prolong the life of the unfertilized egg of the sea urchin. Amer. J. Physiol., Boston, Mass., **8**, 1903, (175-182).

**Greeley**, Arthur W. On the effect of variations in the temperature upon the process of artificial parthenogenesis. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (129–136).

**Hunter**, S[anuel] J[ohn]. On the conditions governing the production of artificial parthenogenesis in *Arbacia*. *l.c.* **5**, 1903, (143–151).

Janssens, F.A. Production artificielle de larves géantes chez un Echinide. Paris, C.-R. Acad. sci., 137, 1903, (274-276).

Teichmann, Ernst. Ueber Furchung befruchtster Seeigeleier ohne Beteiligung des Spermakerns. Diss. Würzburg. Jena (d. Fischer), 1902, (31, mit 4 Taf.). 23 cm.

Viguier, C. Action de l'acide carbonique sur les œufs d'Échinodermes. Paris, C.-R. Acad. sci., **136**, 1903, (1687-1690).

# LARVAL FORMS.

MacBride, E. W. Report on a small collection of Echinoderm larvae made by Mr. George Murray, F.R.S., during the cruise of the "Oceana" in November 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (477-478).

# POSTEMBRYONIC ONTOGENY.

Grabau, Amadeus W[illiam]. Notes on the development of the biserial arm in certain crinoids. Amer. J. Sci., New Haven, Conn., (Ser. 4), 16, 1903, (289-300); [abstract], London, J. R. Microsc. Soc., 1903, (728).

**MacBride**, E. W. The development of *Echinus esculentus*, together with some points in the development of *E. miliaris* and *E. acutus*. London, Phil. Trans. R. Soc., **195** B, 1903, (285–327, pls. VII-XVI). London (Dulau), 1903, 8s. 6d.

Norman, A. M. Notes on the natural history of Eart Finmark, Echinodermata. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (406-417, pl. XXVII).

# 1019 ETHOLOGY.

### GENERAL.

Gardiner, J. S. The breaking-up of coral rock by organisms in the Tropics. London, Rep. Brit. Ass., 1902, (654-655). [Prelim. Abstract], Nature, London, 66, 1902, (641).

Mitsukuri, K[akichi]. . . Habits and life-history of Stichopus japonicus . . . Annot. Zool. Jap., Tokyo, 5. 1903, (1-21).

### HABITS,

Todd, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., 6, 1903, (541-561).

# PARASITISM.

Koehler, R. and Vaney. C. Entosiphon deimatis, nouveau mollusque parasite d'une Holothurie abyssale. Rev. Suisse Zool., Genève, 11, 1903, (23-41, 1 pl.).

Letper, R. T. On an Accelous Turbellarian inhabiting the common hearturchin. London, Rep. Brit. Ass., 1902, (652, 653).

Weedcock, H. M. Report, in Report of the Committee on investigations made at the Marine Biological Laboratory, Plymouth. *l.e.* (271, 272).

### HABITAT.

Simpson, J. Catalogue of echinoderms found at Aberdeen and neighbourhood. Tr. Aberdeen Working Men's Nat. Hist. Soc., 1901-1902, No. 1, (39-43).

# 1023 VARIATION AND ÆTIO-LOGY.

### GENERAL.

McIntosh, D. C. Variation in "Ophiocoma nigra" (O. F. Müller). Biometrika, Cambridge, 2, 1903, (463–473, 10 textfigs.); [abstract], London, J. R. Microsc. Soc., 1904, (188).

### TERATOLOGICAL VARIATION.

**Bell**, F. J. [Exhibition of, and remarks upon a Holothurian of the genus *Actinopyga.*] London, Proc. Zool. Soc., **1903**, 1, (192).

### CROSSES AND HYBRIDS.

Doncaster, L. Experiments in hybridization, with special reference to the effect of conditions on dominance. London, Phil. Trans. R. Soc., **196** B, 1903, (119-173, with 10 text-figs.); [Prelim. Abstracts], London, Proc. R. Soc., **61**, 1903, (497); Nature, London, **68**, 1903, (94).

(x 2-9053)

1027

Loeb, Jacques. A method by which the eggs of a sea-urchin (Strongylocentrotus purpuratus) can be fertilized with the sperm of a starfish (Asterias ochracea). Berkeley, Univ. Cal. Pub. Physiol., 1, 1903, (1-3). Separate. 26.5 cm.

The fertilization of the egg of the sea-urchin by the sperm of the star-fish. [Address before the Sigma Xi scientific society at Stanford university, October 13, 1903]. *l.e.* (39-53). Separate. 27.3 cm.

### EVOLUTION.

Grave, Caswell. On the occurrence among Echinoderms of larvæ with cilia, arranged in transverse rings, with a suggestion as to their significance. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (169–186, with text-fig.).

### 1027 GEOGRAPHICAL DISTRI-BUTION.

### GENERAL.

Woodward, H. The President's Address: Some ideas on life. London, J. R. Microsc. Soc., 23, 1903, (142-157).

d EUROPE.

da Norway.

østergren, Hjalmar. The Holothurioidea of Northern Norway. Bergens Mus. Aarb., **1902**, No. 9, 1903, (34).

### db RUSSIA IN EUROPE

Norman, A. M. Notes on the natural history of East Finmark, Echinodermata. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (406-417, pl. XXVII).

### de BRITISH ISLANDS.

Blake, J. H. The geology of the country around Reading. [The notes on the chalk are by A. J. Jukes-Browne]. Mem. Geol. Surv. Eng., London, **1903**, (Explanation of sheet 268), (92, with 13 text-figs.).

**Fearnaides**, W. G. On some new fossils from Penmorfa and their bearing on the Cambro-Ordovician Succession near Tremadoc. London, Rep. Brit. Ass., **1902**, (614, 615).

ĸ

Foz-Strangways, C. The geology of the country near Leicester. Mem. geol. Snrv. Eng., London, **1903**, (Explanations of sheet 156), (vi + 122, ii pls., 15 text-figs.).

Gill, L. Note on the occurrence of Keisley Limestone pebbles in the Red Sandstone Rocks of Peel (1ste of Man). London, Q. J. Geol. Soc., 59, 1903, (307-310).

Herdman, W. A. and Thompson, I. C. Echinodermata in: The marine fauna and fisheries of the district. In: Handbook Brit. Assoc. Southport, **1903**, (167).

Hey, W. C. Shore-collecting near Scarborough and Filey. Naturalist, London, **1903**, (344-348).

Hind, W. Life-zones in the British Carboniferous Rocks. Report of the Committee. London, Rep. Brit. Ass., 1902, (210-224).

Jukes-Browne, A. J. On the zones of the Upper Chalk in Suffolk. London, Proc. Geol. Ass., 18, 1903, (85-94, pl. XVI).

Devonshire in the time of the Lower Chalk. Plymouth, Rep. Devon Ass., 35, 1903, (787-799, 1 pl.).

Lamplugh, G. W. The Geology of the Isle of Man. Mem. Geol. Surv. U. K., London, **1903**, (XIV + 620, V pls., 109 text-figs.).

and **Walker**, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., **59**, 1903, (234-265, pls. XVI-XVIII, 2 text-figs.).

McHenry, A. et alii. The geology of the country around Dublin. Mem. Geol. Surv. Ireland, Dublin, (Explanation of Sheet 112), (viii + 160, V pls., 21 textfigs.).

**Nichols**, A. R. A list of echinoderms. Being a report from the Fauna and Flora Committee. Dublin, Proc. R. Irish Acad., (Ser. 3), **24**, Sect. B, 1903, (231– 267, with 1 text-fig.); [abstract], London, J. R. Microsc. Soc., **1903**, (728).

Echinodermata: in A Guide to Belfast, etc., by the Belfast Naturalists' Field Club. Belfast (M'Caw & Co.), 1903, (231-233). 18:5 + 12 cm. Peach, B. N. Appendix. Part I. Palaeontological, in W. Gunn and others, The geology of North Arran, South Bute, and the Cumbraes, with parts of Ayrshire and Kintyre, (153-170). Mem. Geol. Surv. Scot., Edinburgh, Sheet 21.

**Petch**, T. The marine fauna of the Humber district and the Holderness coast. Hull, Trans. Sci. F. Nat. Cl., **3**, 1903, (27-41).

Marine Zoology at Filey. Naturalist, London, **1903**, (351).

**Beid**, C. The geology of the country round Salisbury. Mem. Geol. Surv. Eng., London, **1903**, (Explanation of sheet 298), (iv + 78, 38 text-figs.).

The geology of the country near Chichester. With contributions by G. W. Lamplugh and A. J. Jukes-Browne. *l.e.* (Explanation of sheet 317), (iv + 52, with 14 text-figs.)

**Bowe**, A. W. The zones of the White Chalk of the English coast. III. Devon. The cliff-sections by C. Davies Sherborn. The White Chalk of the Devon Coast from Pinhay Cliff to Berry Cliff. London, Proc. Geol. Ass., **18**, 1903, (1-51, pls. I-XIII); [review], by H. B. W[oodward], Nature, London, **68**, 1903, (425).

**Simpson**, J. Catalogue of echinoderms found at Aberdeen and neighbourhood. Tr. Aberdeen Working Men's Nat. Hist. Soc., **1901**–1902, No. 1, (39– 43).

**Stebbing**, W. P. D. Excursion to Salisbury and the Vale of Wardour . . . Old Sarum and Stonehenge. London, Proc. Geol. Ass., **18**, 1903, (146–149).

• Todd, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., 6, 1903, (541-561).

Ussher, W. A. E. The geology of the country around Torquay. Mem. Geol. Surv., Eng., London, 1903, (Explanation of sheet 350) (iv + 142, 17 text-figs.).

Woodward, H. B. Excursion to Royston, Hertfordshire, May 16, 1903. [Ech. identified by E. T. Newton.] London, Proc. Geol. Ass., 18, 1903, (166-170). df FRANCE.

Lissajous. Echinides jurassiques des environs de Mâcon. Mâcon, Bul. Soc. sci. nat., 2, 1903, (97-111, 157-184, av. 2 pls.).

# dk Austria Hungary.

Gordon, M. M. Ogilvie. The geological structure of Monzoni and Fassa. Edinburgh, Trans. Geol. Soc., 8, 1903, (sp. part X + 180, with 18 pls., 2 maps and 33 text-figs.).

e ASIA.

er JAPANESE ISLANDS.

Tokunaga, Shigeyasu. On the fossil echinoids of Japan. [Several living echinoids dealt with]. Tokyo, J. Coll. Sci., 17, Art. 12, 1903, (1-27, with 4 pls.).

### ee SIAN.

Mortensen, Th. Chaetodiadema granulatum n. g., n. sp., a new Diadematid from the Gulf of Siam. Kjöbenhavn, Nath. Medd., **1903**, (1-7).

### ef BRITISH INDIA.

**Pearson**, J. Report on the Holothurioidea collected by Professor Herdman, at Ceylon, in 1902. Rep. Ceylon Pearl Oyster Fisheries, London, Roy. Soc., Pt. I, Supplementary Report, V, (181-205, pls. I-III). 4to.

# eg MALAY PENINSULA.

Metjere, J. C. H. de. [. . . Echiniden der Siboga-Expedition]. Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (1-16).

Mortensen, Th. Lissodiadema, nouveau genre de Diadematides. Rev. Suisse Zool., Genève, **11**, 1903, (393-398, 4 figs.).

### f AFRICA.

### fb Eorpr.

**Oppenheim**, Paul. Ueber die Fossilien der Blättermergel von Theben. (x 2-9053) München, SitzBer. Ak. Wiss., math.-... physik. Cl., **32**, (1902), 1903, (435-456, mit 1 Taf.).

# ff EAST AFRICA.

Blanford, W. T. The "Tanganyika Problem." Correspondence. London, Geog. J., 22, 1903, (92-96).

Bell, F. J. Report on a collection of Echinoderms from the neighbourhood of Zanzibar. Part I. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (244-248).

# g NORTH AMERICA.

# gg NORTH EASTERN UNITED STATES.

Greene, George K. Contribution to Indiana paleontology. Parts XI-XV. New Albany, Indiana, 1903, (98-155, with pl.). 22.8 cm.

# h CENTRAL AND SOUTH AMERICA.

Paulcke, W. Ueber die Kreideformation in Südamerika und ihre Beziehungen zu anderen Gebieten. Tl. 1. (Beiträge zur Geologie und Palaeontologie von Südamerika. Unter Mitwirkung von Fachgenossen hrsg. V. G. Steinmann, X. N. Jahrb. Min., Stuttgart., Beilagebd, **17**, 1903, (252-312, mit 3 Taf.).

### hh BRAZIL.

**Katzer**, Friedrich. Grundzüge der Geologie des unteren Amazonasgebietes (des Staates Pará in Brasilien). Leipzig (M. Weg), 1903, (III+298, mit 4 Portr., 1 Karte). 26 cm. 14 M.

### i AUSTRALASIA.

### ia New Guinea with Islands from Wallace's Line.

**Döderlein**, L[udwig]. Bericht über die von Herrn Professor Semon bei Amboina und Thursday Island gesammelten Echinoides. Jean, Denkachr. med. Ges., **8**, 1903, (683-726, mit 8 Taf.).

Meijere, J. C. H. de. Echiniden der Siboga-Expedition, Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (1-16).

к 2

1027

ib BISMABCK ARCHIPELAGO.

Whitelegge, T. [Echinoderms of Gilbert Group.] Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (12-13).

# ik New Zealand.

**Perrier**, R[émy]. Sur deux espèces nouvelles d'Holothuries de la Nouvelle-Zélande. Bul. Muséum, Paris, **1903**, (142-146, av. fig.).

# k ARCTIC.

ka ABCTIC OCEAN.

Grieg, James A. Echinodermen . . . Bergens Mus. Aarb., 1903, No. 13, (45, 4 fig.). [1027 la 1031].

**Østergren**, Hjalmar. The Holothurioidea of Northern Norway. *l.e.* **1902**, No. 9, 1903, (34).

### l ATLANTIC.

la NOBTH ATLANTIC OCEAN.

Greig, James A. Echinodermen . . . Bergens Mus. Aarb., **1963**, No. 13, (45, **4** fig.).

**MacBride**, E. W. Report on a small collection of Echinoderm larvae made by Mr. George Murray, F.R.S., during the cruise of the 'Oceana' in November 1898. Ann. Mag. Nat. Hist., London, .(Ser. 7), 11, 1903, (477-478).

m INDIAN OCEAN.

### ma OCEAN AND ISLANDS N. OF EQUATOR.

Bell, T. Actinogonidiate Echinoderms. Fauna of the Maldive and Laccadive Archipelagoes, 1, (223-233).

### • ANTARCTIC.

Koehler, R. Zoologie. Echinides et ophiures. In: Expédition antarctique belge. Résultats du voyage du S.Y. "Belgica" en 1897-99. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1902, (42, av. 8 pls.). 17.50 fr.

# 1031 TAXONOMY.

# GENERAL.

**Bell**, F. J. Report on a collection of Echinoderms from the neighbourhood of Zanzibar. Part I. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (241-248).

derms. Fanna of the Maldive and Laccadive Archipelagoes, 1, (223-233).

Greene, G. K. Contribution to Indiana palæontology. Parts XI, XV. New Albany, Ind., 1903, (98-155, with pl.). 22.8 cm.

Nichols, A. R. A list of Irish echinoderms. Being a report from the Fauna and Flora Committee. Dublin, Proc. R. Irish Acad., (Ser. 3), 24, Sect. B, 1903, (231-267, with 1 text-fig.); [abstract], London, J. R. Microsc. Soc., 1903, (728).

Norman, A. M. [Echinodermata from East Finmark.] Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (406–417).

**Busso**, A. . . . Echinodermi : studi. Catania, Atti Acc. Gioenia, (Ser. 4), **15**, (79, 1902), 1902, (93, con tav. e fig.).

Gruppi di Echinodermi viventi e fossili e loro filiazione. Conferenza. (Sunto). Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (54-58).

**Simpson**, J. Catalogue of echinoderms found at Aberdeen and neighbourhood. Tr. Aberdeen Working Men's Nat. Hist. Soc., **1901–1902**, No. 1, (39-43).

### CYSTOIDEA.

Coelocystis† n. gen., Genotype, llemicosmites subglobosus Hall. Schuchert, ('. Amer. Geol., Minneapolis, Minn., 32, 1903, (234).

Jackclocystis n. gen. J. hartlcyi<sup>†</sup> n. sp. Silurian. Schuchert, C. *l.c.* (231).

Macrocystella mariae. Fearnsides, W. G. London, Rep. Brit. Ass., 1902, (614-615).

Pseudocrinites<sup>†</sup> nn. spp. Silurian. Schuchert, C. Amer. Geol., Minneapolis, Minn., **32**, 1903, (235–238).

Sphaerocystites globularis<sup>†</sup> n. sp. Silurian. **Schuchert**, C. *l.e.* (233).

### CRINOIDEA.

### GENERAL.

Grabau, A. W. Notes on the development of the biserial arm in certain crinoids. Amer. J. Sci., New Haven, Conn., (Ser. 4), 16, 1903, (289-300).

### SPECIAL.

Camarocrinus ulrichi<sup>†</sup> n. sp. Silurian. Schuchert, C. Amer. Geol., Minneapolis, Minn., **32**, 1903, (239).

Dolatocrinus<sup>†</sup> nn. spp. et varr. Rowley in Greense, G. K. Cont. Ind. pal., Indiana, Ind., pt. **12**, 1903, (112, 113, pl. XXXV), pt. **13**, (134, 136, 137, 1 pl. XXXIX), pt. **14**, (140, 141, 143, pls. XLI, XLII), pt. **15**, (147, 149–151, pl. XLIV).

Erisocrinus lóczyi† n. sp. Brazil. **Eatser**, F. Grundzüge der Geologie des unteren Amazonasgebietes (des Staates Pará in Brazilien). Leipzig, 1903, (159, 263).

Gennacocrinus<sup>†</sup> nn. spp. **Rowley** in Greene, G. K. Contribution to Indiana paleontology. Part XI. New Albany, Ind., 1903, (99, 105–108).

Megistocrinus oppelti<sup>†</sup> n. sp. et nn. varr. **Bowley** in **Greens**, G. K. Cont. Ind. pal., New Albany, Ind., Part **11**, 1903, (102, 103, pl. XXXII), pt. **13**, (135, pl. XXIX).

Platycrinus devonicus<sup>†</sup> n. sp. Devonian, Indiana. **Rowley** in Greene, G. K. *l.c.* pt. **12**, 1903, (114, pl. XXXV).

Stemmatocrinus? veryi<sup>†</sup> n. sp. Rowley in Greene, G. K. *l.e.* pt. 13, 1903, (133, pl. XXXVIII).

Stephanocrinus<sup>†</sup> nn. spp. **Rowley** in **Greene**, G. K. *l.c.* Pt. **11**, 1903, (103, 105).

### BLASTOIDEA.

### GENERAL.

Hambach, G. Revision of the Blastoidea, with a proposed new classification, and description of new species. St. Louis, Mo., Trans. Acad. Sci., 18, 1903, (1-67, with pl.).

**Russo**, A. Sul significato delle idrospire e degli spiracoli dei Blastoidei. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (22-24, con **2** fig.).

#### SPECIAL.

Carpenteroblastus veryi<sup>†</sup> n. sp. Rowley in Greene, (J. K. Cont. Ind. pal., Indians, Ind., pt. 13, 1903, (127, pl. XXXVI).

Cidaroblastus n. gen., C. parvus<sup>†</sup> n. sp. Hambach, G. St. Louis, Mo., Trans. Acad. Sci., **13**, 1903, (45, 58, pl. III, pl. v).

Clavaeblastus<sup>†</sup> n. gen. **Hambach**, G. l.c. (44).

Cribroblastus n. gen., C. incisus<sup>†</sup>, C. schucherti<sup>†</sup>, C. tenuis<sup>†</sup>, C. tenuistriatus<sup>†</sup>, C. verrucosus<sup>†</sup> nn. spp. **Hambach**, G. Le. (39-63).

Eleutheroblastus n. nom. = Eleutherocrinus. Hambach, G. l.e. (35, 50).

Globoblastus n. gen., G. magnificus<sup>†</sup>, G. ornatus<sup>†</sup>, G. spathatus<sup>†</sup>, nn. spp. **Hambach**, G. St. Louis, Mo., Trans. Acad. Sci., **13**, 1903, (61–62).

Pentremites<sup>†</sup> nn. spp. **Hambach**, G. l.c. (1-67, 52-56, pl. IV, pl. V).

in Greene, G. K. Cont. Ind. pal., Indiana, Ind., pt. 12, 1903, (119, pl. XXXVI).

Saccoblastus n. gen., S. ventricosus<sup>†</sup> n. sp. **Hambach**, G. St. Louis, Mo., Trans. Acad. Sci., **13**, 1903, (1-67).

### ASTEROIDEA.

### GENERAL.

**Delage**, Y. Elevage des larves parthénogénétiques d'Astéries dues à l'action de l'acide carbonique. Paris, C.-R. Acad. sci., **137**, 1903, (449-451).

Garbowski, T. Contribution à l'étude de la parthénogenèse artificielle chez les astéries. (Polonais) Kraków, Rozpr. Akad., B, 43, 1903, (570-610, av. 1 pl.).

Uber parthenogenetische Entwickelung der Asteriden. Kraków, Bull. Intern. Acad., 1903, (810–830, mit 1 Taf.).

### SPECIAL.

Asterias, parthenogenesis. Greeley, A. W. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (129–136).

*vulgaris*, further studies on regeneration. **King**, Helen Dean. Bryn Mawr, Pa., Bryn Mawr Coll. Monogr. (Repr. Ser.), **1**, 1901, ([723]-737).

Phataria (Linckia) fascialis, regeneration. Monks, S. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (351).

### OPHIUROIDEA.

### GENERAL.

Grieg, J. A. Ophinroidea . . . Bergens Mus. Aarb., 1903, No. 13, (45, 4 figs.).

**Ecchler**, R. Zoologie, Echinides et ophiures. In: Expédition antarctique belge. Résultats du voyage du S. Y. "Belgica" en 1897-99. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1902, (42, av. viii pls.). fr. 17, 50.

### SPECIAL.

Ophiocoma nigra (O. F. Müller), variation. McIntosh, D. C. Biometrika, Cambridge, 2, 1903, (463-473, 10 text-figs.).

Ophioglypha lacertosa, regeneration. Zeleny, C. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 6, 1903, (12-17, with diagr.).

### ECHINOIDEA.

### GENERAL.

Delage, Y. Sur la non - régénération des sphéridies chez les oursins. Paris, C.-R. Acad. sci., 137, 1903, (681-682); [abstract], London, J. R. Microsc. Soc., 1904, (66).

**Döderlein**, L[udwig]. Bericht über die von Herrn Professor Semon bei Amboina und Thursday Island gesammelten Echinoidea. Jena, Denkschr. med. Ges., **8**, 1903, (683–726, mit 8 Taf.).

 Dencaster, L. On rearing the later stages of echinoid larvae. Cambridge, Proc. Phil. Soc., **12**, 1903, (47-49). [Author's reprints paged 48-50, Why?] [Prelim. Abstract], Nature, London, **67**, 1903, (215); [abstract], London, J. R. Microsc. Soc, **1903**, (183).

Fritel, P. H. Echinodermes fossiles. Les oursins. Naturaliste. Paris, (sér. 2), 24, 1902, (185–188, av. fig.).

Fühner, Hermann. Ueber die Einwirkung verschiedener Alkohole auf die Entwicklung der Seeigel. Arch. exper. Path., Leipzig, **51**, 1903, (1-10).

Gorham, F. P. and Tower, R. W. Does potassium cyanide prolong the life of the unfertilized egg of the seaurchin? Amer. J. Physicl., Boston, Mass. 8, 1903, (175-182).

Janssens, F. A. Production artificielle de larves géantes chez un Echinide. Paris, C.-R. Acad. sci., 137, 1903, (274-276).

**Ecchler**, R. Zoologie. Echinides et ophiures. In: Expédition antarctique belge. Resultats du voyage du S.Y. "Belgica" en 1897-99. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1902, (42, av. 8 pls.). 17.50 fr.

Lissajous. Echinides jurassiques des environs de Mâcon. Mâcon, Bul. soc. sci. nat., 2, 1903, (97-111, 157-184, av. 2 pls.).

**Bowe**, A. W. The zones of the white chalk of the English coast. III. Devon. London, Proc. Geol. Ass., **18**, 1903, (1-51, pls. I-XIII); IV. Yorkshire, *Ib*, (193-296, pls. XVII-XL). [Review]: by H. B. Woodward, Nature, 1903, (428): [also Jukes Brown], Geol. Mag., London, [4], **10**, 1903, (309-313).

Metjere, J. C. H. de. . . . Echiniden der Siboga-Expedition. Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (1-16).

Payebien, B. F. Les oursins fossiles (suite et fin). Mâcon, Bul. soc. sci. nat., 2, 1903, (114-116).

Tokunaga, S. Echinoids of Japan. [Fossil and recent]. Tokyo, J. Coll. Sci., 17, Art. 12, 1903, (1-27, with 4 pls.).

### SPECIAL.

Aphanopora n. gen., A. echinobrissoides n. sp. Meijere, J. C. H. de. Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (8). Arbacia, parthenogenesis. Greeley, A. W. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (129–136).

L.c. 5, 1903, (143–151). Hunter, S. J.

Astropyga denudata n. sp. Meijere, J. C. H. de. Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (4).

Chaetodiadoma n. gen., C. granulatum n. sp. (Julf of Siam. Mortensen, T. Kjöbenhavn, Nath. Medd., **1903**, (1-4).

Clypeaster rarispinus n. sp. Metjere, J. C. H. de. Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (7).

Cyphosoma mollense† n. sp. Kreide, Südamerika. Berlese, A. in Paulcke. N. Jahrb. Min., Stuttgart, Beilagebd, 17, .1903, (286, pl. XVII).

Dermatodiadema amphigymnum n. sp. Meijere, J. C. H. de. Helder, Tijdschr. Ned. Dierk. Ver., **8**, 1903, (2).

Echinarachnius parma, spermatozoon. Winslow, G. M. Science, New York, N.Y., (N. Ser.), **17**, 1903, (153-154).

Echinocardium cordatum Penn., résorption phagocytaire des produits génitaux inutilisés. **Gaullery**, M. et **Siedlecki**, M. Paris, C.-R. Acad. sci., **137**, 1903, (496–498).

Proporidae. Leiper, R. T. . . London, Rep. Brit. Ass., 1902, (652–653).

Echinocorys de Tercis (Landes). Arnand, H. Bordeaux, Actes. soc. linn., (sér. 6), 7, 1902, (29-39, av. 9 pl.).

Echinocyamus nn. spp. Meijere, J. C. H. de. Helder, Tijdechr. Ned. Dierk. Ver., **8**, 1903, (5, 6).

Echinus armatus n. sp. Meijere, J. C. H. de. *l.e.* (5).

esculentus, development. MacBride, E. W. London, Rep. Brit. Ass., 1902, (647).

*E*: miliaris and *H*. acutus, development. **MacBride**, *E*. W. London, Phil. Trans. R. Soc., **195** B, 1903, (285-327, pls. VII-XVI). London, (Dulau), 1903 Ss. 6d.

Fibularia cribellum n. sp. Meijere, J. C. H. de. Helder, Tijdschr. Ned. Dierk. Ver., **8**, 1903, (7). Hemiaster cubicus† Desor, et ses variations. Fourteau, R. Bul. Muséum, Paris, **1903**, (177–180).

Hemipedina indica n. sp. Meijere-J. C. H. de. Helder, Tijdschr. Ned-Dierk. Ver., 8, 1903, (3).

Homolampas rostrata n. sp. Meijere, J. C. H. de. *l.c.* (14).

Linopneustes excentricus n. sp. Meljere, J. C. H. de. l.c. (13).

Lissodiadema n. gen., L. lorioli n. sp. Mortensen, Th. Rev. Suisse, Zool., Genève, 11, 1903, (393-389, 4 figg.).

Mellita testudinata, structure, development. Grave, C. Baltimore, Md., Johns Hopkins Univ. Cir., 21, 1902, (57-59).

Micropyga violacea n. sp. Meljere, J. C. H. de. Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (3).

Neolampas tenera n. sp. Meijere, J. C. H. de. *l.c.* (8).

Palaeopneustes nn. spp. Meijere, J. C. H. de. l.c. (11, 12).

*miasicus*, Anatomie. Wagner, J. (Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 5, Lfg 1.) Jena, 1903, (1-60, mit 8 Taf.). 17 M.

Phormosoma alternane n. sp. Medjere, J. C. H. de. Helder, Tijdschr. Ned. Dierk. Ver., **8**, 1903, (2).

Phrissocystis humilis n. sp. Meijere, J. C. H. de. *l.c.* (14).

Plesiozonus n. gen., P. hirsutus n. sp. Meijere, J. C. H. de. l.c. (12).

Porocidaris maculicollis n. sp. Meijere, J. C. H. de. *l.c.* (1).

*prior*<sup>†</sup> n. sp. Blättermergel von Theben. **Oppenheim**, P. München, SitzBer. Ak. Wiss., mathphys. Cl., **32**, (1902), 1903, (451, pl. VII).

Rhabdocidaris lafayi† n. sp. Lissajous. Mâcon, Bul. soc. sci. nat., 2, 1903, (106, pl. I).

Stereopneustes n. gen., S. relictus n. sp. Meijere, J. C. H. de. Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (9).

Sternopatagus n. gen., S. sibogac n. sp. Meijere, J. C. H. de. *l.c.* (10).

# HOLOTHURIOIDEA.

# GENERAL.

Kochler, R. und A. Vaney. Entosiphon deimatis, nouveau mollusque parasite d'une Holothurie abyssale. Rev. Suisse Zool., Genève, **11**, 1903, (23–41, 1 pl.).

**Stergren**, Hjalmar. The Holothurioidea of Northern Norway. Bergens Mus. Aarb., **1902**, No. 9, [1903], (34).

**Pearson**, J. Report on the Holothurioidea collected by Professor Herdman, at Ceylon, in 1902. Rep. on Ceylon Pearl Oyster Fisheries, London, Roy. Soc., Pt. 1, Supplementary Report, V, (181-208, pls. I-III).

# SPECIAL.

Actinocucumis donnani n. sp. Pearson, J. Rep. on Ceylon Pearl Oyster Fisheries, Pt. 1, Supplementary Report, (195).

Actinopyga, exhibition and remarks on a specimen from the shallow water off Zanzibar. Bell, F. J. London, Proc. Zool. Soc., 1903, 1, (192).

J. Rep. on Ceylon Pearl Oyster Fisheries, Pt. 1, Supplementary Report, V, (199).

Colochirus quadrangularis var. mollis n. var. **Pearson**, J. l.c. V, (196).

Cucumaria filholi n. sp. Nouvelle-Zélande. **Perrier**, R. Bul. Muséum, Paris, **1903**, (144).

Havelockia n. gen., H. herdmani n. sp. Pearson, J. Rep. on the Ceylon Pearl Oyster Fisheries, Pt. 1, Supplementary Report, V, (197-198).

Holothuria gallensis n. sp. Pearson, J. l.c. (203).

Solenopsis, note on the name. Cockerell, T. D. A. Nature, London, 67, 1903, (559).

Stichopus chloronotus var. fuscus n. var. **Pearson**, J. Rep. on Ceylon Pearl Oyster Fisheries, Pt. 1, Supplementary Report, V, (204).

japonicus, habits and lifehistory. Mitsukuri, K. Annot. Zool. Jap., Tokyo, 5, 1903, (1-21).

*regalis*, contractions musculaires, réflexes. **Henri**, V. Paris, C.-R. Acad. sci., **137**, 1903, (669–670). Thyone nn. spp. **Pearson**, J. Rep. on Ceylon Pearl Oyster Fisheries, Pt. 1, Supplementary Report, V, (192-194).

Thyonidium anatinum n. sp. Nouvelle-Zélande. **Perrier**, R. Bul. Muséum, Paris, **1903**, (143).

# LIST OF NEW GENERA AND SPECIES.

Aphanopora n. gen. [Echinoidea]. Meijere, de. 65.

------ echinobrissoides. Meijere, de. 65.

ASTROPYGA [Echinoidea].

----- denudata. Meijere, de. 65.

Cidaroblastus n. gen. [Blastoidea]. Hambach. 36.

----- parvus<sup>†</sup>. Hambach. 36.

Clavaeblastus n. gen. [Blastoidea]. Hambach. 36.

Coelocystis† n. gen. [Cystoidea]. Schuchert. 88.

COLOCHIRUS [Holothurioidea]. quadrangularis var. mollis n. var. Pearson. 78.

Cribroblastus n. gen. [Blastoidea]. Hambach. 36.

------ incisus<sup>†</sup>. Hambach. 36.

----- schuchertit. Hambach. 36.

tenuis†. Hambach. 36. tenuistriatus†. Hambach.

36.

------ verrucosus<sup>†</sup>. Hambach. 36. CUCUMARIA [Holothurioidea].

filholi. Perrier. 79.

CYPHOSOMA [Echinoidea].

----- mollenset. Berlose. 75.

DERMATODIADEMA [Echinoidea]. amphigymnum. Meijere, de. **6**5. DOLATOCRINUS [Crinoidea]. arrosus var. cognatus | n. var. Rowley. 33. corbuliformist. Rowley. 33. corporosus, var. concinnus n. var. Rowley. 33. - var. decoratus† n. var. Rowley. 33. currieri<sup>†</sup>. Rowley. 33. elegantulus<sup>†</sup>. Rowley. 33. excavatus var. incarinatus† n. var. Rowley. 33. fungiferus<sup>†</sup>. Rowley. 33. multibrachiatus. Rowley. 33. multinodosus<sup>†</sup>. Rowley. 33. noduliferus<sup>†</sup>. Rowley. 33. pernodosus<sup>†</sup>. Rowley. 33. *welleri*<sup>†</sup>. Rowley. 33. ECHINOCYANUS [Echinoidea]. provectus. Meijere, de. 65. scaber. Meijere, de. 05. ECHINUS [Echinoidea]. - armatus. Meijere, de. 65. Eleutheroblastus† n. nom. [Blastoidea]. Hambach. 36. EBISOCRINUS [Crinoidea]. ----- loczyi<sup>†</sup>. Katzer. 49. FIBULARIA [Echinoidea]. cribellum. Meijere, dc. 65. GENNAEOCRINUS [Crinoidea]. ----- comptus<sup>†</sup>. Rowley. 33. var. spiniferus n. var. † Rowley. 33. facetus †. Rowley. 33. sculptus<sup>†</sup>. Rowley. 33. Gioboblastus n. gen. [Blastoidea]. Hambach. 36. magnificus<sup>†</sup>. Hambach. 36. ormatus<sup>†</sup>. Hambach. 36. spathatus<sup>†</sup>. Hambach. 36. Havelockia n. gen. [Holothurioidea] Pearson. 78. - herdmani. Pearson. 78. HEMIFEDINA [Echinoidea]. 65. ----- indica. Meijere, de. HOLOTHURIA [Holothurioidea]. \_\_\_\_\_ gallensis. Pearson, 78. HONOLAMPAS [Echinoidea]. - rostrata. Meijere, de. 65. Jackelocystis n. gen. [Cystoidea]. Schuchert. 88. hartleyi<sup>†</sup>. Schuchert. 88.

LINOPNEUSTES [Echinoidea]. - cxcentricus. Meijere, de. 65. Lissodiadema n. gen. [Echinoidea]. Mortensen. 69. lorioli. Mortensen. 69. MEGISTOCRINUS [Crinoidea]. expansus var. magnicentrus n. var.† Rowley. 33. oppelti†. Rowley. 33. rugosus var. spinuliferus† n. var. Rowley, 33. MICROPYGA [Echinoidea]. ----- ciolacea. Meijere, de. 65. NEOLAMPAS [Echinoidea]. ----- tenera. Meijere, de. 65. PALAEOPNEUSTES [Echinoidea]. fragilis. Meijere, de. 65. spectabilis. Meijere, de. 65. PENTREMITES [Blastoidea]. angustus<sup>†</sup>. Hambach. 36. \_\_\_\_ kirkii, Hambach. 36. obtusus†, Hambach. 36. rusticus†, Hambach. 36. serratus†, Hambach. 36. speciosus†, Rowley. 33. tulipaformis<sup>†</sup>. Hambach. 36. - turbinatus<sup>†</sup>. Hambach, 36. PHORMOSOMA [Echinoidea]. — alternans, Meijere, de. 65. PHRISSOCTSTIS [Echinoidea]. ------ humilis. Meijere, de. 65. PLATYCRINUS [Crinoidea]. deronicust. Rowley. 33. n. gen. [Ech Meijere, de. 65. [Echinoidea]. Plesiozonus hirsutus. Meijere, de. 65. POROCIDARIS [Echinoidea]. maculicollis. Meijere, de. \_\_\_\_\_ 65 - prior<sup>†</sup>. Oppenheim. 73. PSEUDOCRINITES [Cystoides]. ------- clarkif. Schuchert. 88. gordoni<sup>†</sup>. Schuchert. 88. perdeuci<sup>†</sup>. Schuchert. 88. stellatus<sup>†</sup>. Schuchert. 88. RHABDOCIDARIS [Echinoidea]. ----- lafayit. Lissajous. 56. Saccoblastus n. gen. [Blastoidea]. Hambach. 36. ----- ventricosust. Hambach. 36.

SPHAEROCISTITES [Cystoidea]. \_\_\_\_\_ globularist. Schuchert. 88.

# 1031

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STEMMATOCRINUS [Crinoidea].	STICHOPUS [Holothurioidea].
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STEPHANOCBINUS [Crinoides].	THYONE [Holothurioides.]
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Stereopneustes n. gen. [Echinoidea].	hornelli. Pearson. 78.
Meijere, de. 65.	Thronidica [Holothurioidea].
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Sternopatagus n. gen. [Echinoidea]. Meijere, de. 65. ————————————————————————————————————	TIARACRINUS [Cystoidea]. ————————————————————————————————————

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# 1203-1231 PLATYHELMINTHES, MESOZOA AND TRICHOPLAX.

# TITLES.

Altmann, C. A. Hydatid cyst of the beart: rupture into the left auricle. Lancet, London, **164**, 1903, (677). [1203]. 1

Anscheles - Wolownik, Baschewa. Über den multiocularen Echinokokkus mit spezieller Berücksichtigung seines Vorkommens in der Schweiz. Zürich Med. Diss. 1903-1904. Darmstadt, 1903, (16 + 1 Taf.). 8vo. [1227 di 1231]. 2

Ariola, V. Contributo per una monographia dei *Didymozoon.*—1. *Didymozoon* parassiti del tonno. Arch. parasit., Paris, 6, 1902, (90–108, av. fig.). [1231]. 3

Asam, W[ilhelm]. Taenia cucumerina bei einem Kinde. Münchener med. Wochenschr., 50, 1903, (334-335). [1231]. 4

Bergendal, D[avid]. Bemerkungen über einige Angaben, den Bau des Kopfes einiger Heteronemertinen betreffend. Zool. Anz., Leipzig, **26**, 1903, (254– 257); Berichtigung, *ib.*, (438). [1207 1231]. 5

Ueber "Sinnesgrübchen" im Epithel des Vorderkopfes bei Carinoma armandi sp. McInt. (Oudemans) nebst einigen systematischen Bemerkungen über die Arten dieser Gattung. Zool. Anz., Leipzig, **26**, 1903, (608-619). [1207 1231]. 7

**Black**, R. S. A case of *Cysticercus* cellulosae causing insanity. J. Mental Sci., London, **49**, 1903, (110-115). [1203 1231]. 8 Biatr, W. Reid. Cysticerci in wild ruminants New York, N.Y., Rep. Zool. Soc., 1902, 1903, (137–144). [1219 1231]. 9

Bohn, Georges. Sur les mouvements oscillatoires de Convoluta roscoffensis. Paris, C.-R. Acad. sci., 137, 1903, (573– 578). [1219 1231]. 10

Bossuat, Émile. Les Helminthes dans le foie. [Floriceps eaccatus dans le foie de l'Orthagoriscus mola]. Arch. parasit., Paris, 6, 1902, (161-206, av. 13 figs.). [1231 5419]. 11

**Eresslau**, E. Die Sommer- und Wintereier der Rhabdocölen des süssen Wassers und ihre biolgische Bedeutung. Verh. D. zool., Leipzig, **18**, 1903, (126-139). [1215 1231]. 12

(H. G. Bronn's Klassen u. Ordnugen des Thier-Reichs, Bd 4, Suppl., Lfg 18-22.) Leipzig (C. F. Winter), 1903, (289-384, mit Taf.). 26 cm. 7,50 M. [1203 1231]. 14

Child, C. M. Form-regulation in Coelentera and Turbellaria. Washington, D.C., Smithsonian Inst., Misc. Collect. Q. Issue, **45**, 1903, (134–143, with pl.). Separate 24.5 cm. [0211 0811 1211 1231]. 15

Studies on regulation. I. Fission and regulation in Stenostoma. II. Experimental control of formregulation in zooids and pieces of Stenostoma. Arch. EutwMech., Leipzig, 15, 1902-1903, (187-237, 355-420, 603-637, mit 5 Taf.). [1211 1231]. 16 Cholodkovsky, N. r. Kholodkovsky, N.

**Clapp**, Geo. H. Bipalium keucense Mos. [Geographical distribution]. Pittsburgh, Pa., Ann. Carnegie Mus., 1, 1901, (253-254). [1231]. 17

**Clerc**, W. Contribution à l'étude de la faune helminthologique de l'Oural. Rev. Suisse Zool., Genève, **11**, 1903, (241-368, av. 4 pls. et 6 figs.). [1227 db 1219 1231 5819]. 18

Coe, W. R. and Kunkel, B. W. A new species of Nemertean (*Cerebratulus melanopa*) from the Gulf of St. Lawrence. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (119-124). [1207 1231].

Cohn, Ludwig. Helminthologische Mittheilungen. Arch. Natg., Berlin, 69, Bd 1, 1903, (47-68, mit 1 Taf.). [1231]. 20

Zur Kenntnis einiger Trematoden. Centralbl. Bakt., Jena, Abt. 1, **34**, Originale, 1903, (35–42). [1210 1231]. 21

Curtis, W. C. Crossobothrium laciniatum and developmental stimuli in the Cestoda. Wood's Holl, Mass., Mar, Biol. Lab. Bull., 5, 1903, (125-142, with text fig.). [0215 1207 1215 1231]. 22

**Dévé**, F. Inoculations échinococciques au cobaye. Paris, C.-R. soc. biol., **55**, 1003, (122-123). [1219 1231]. 23

**Douglas**, J. J. v. Lazarus-Barlow, W. S.

Drago, U. Sull' attacco e sul parassitismo del *Distomum contortum*. ('atania, Atti Acc. Gioenia, (Ser. 4), 15, (79, 1902), 1902, (4, con fig.). [1219) 1231].

Sull' attacco e sul parassitismo del Distomum contortum. (Sunto). ('atania, Boll. Acc. Gioenia, (N. Ser.), **1902**, fasc. 74, (20). [1219 1231]. 26

Fedorov, Nathalie. L'anémie bothriocéphalique. Arch. parasit., Paris, 6, 1902, (207-214). [1203]. 27

**Pischoeder**, F. Die Paramphistomiden der Sängethiere. Zool. Jahrb., Jena, Abt. f. Syst., **17**, 1903, (485–660, mit 12 Taf.). [1231–6003]. 28

٠

Fuhrmann, O. L'evolution des ténias et en particulier de la larve des ichtyoténias. Arch. Sci. Phys., Genève, (sér. 4). **16**, 1903, (335-337). [1223 1231 5419]. 29

**Galli-Valerio**, Bruno. Notes de parasitologie. Centralbl. Bakt., Jona, Abt. 1, **35**, Originale, 1903, (81-91). [0219 0419 0431 1219 1231 1419 1431 4219]. 30

Gamble, W. and Keeble, F. The bionomics of *Concoluta rosceffensis* with special reference to its green cells. Q. J. Miscrosc. Sci., London, **47**, 1903, (363–431, pls. XXX, XXXI). [0219 1219 1231]. 31

Garbowski, Tad[däus]. Morphogenetische Studien. Als Beitrag zur Methodologie zoologischer Forschung. Jena (G. Fischer), 1903, (VIII + 189, mit 6 Taf.). 36 cm. 28 M. [0215 1231]. 32

Garlaev, V. P. Bericht über cinc Reise zur Untersuchung der Evertebratenfauna des Baikal-See's im Sommer 1900 u. 1901. (Russ.) St. Peterburg, Trd. Troick.—Kiacht. Otd. Russ. Geogr. Obsč., V, 2, 1902, [1903], (27-48, mit 1 Karte). [0627 1227 1827 2027 2227 2627 ea 0631 1231 1831 2031 2231 2631]. 33

**Gutart,** Jules. Parasitologie pratique : I. Le ver solitaire. Bul. sci. pharm., Paris, **5**, [t. **8**, Pt. profess.], 1901, (17-22, 113-117, 223-227, av. 6 pl. et fig.); Les parasites de l'intestin et leur recherche dans les matières fécales, *ib.*, **6**, 1902, (152-157, 199-208, av. fig.). [0119 1219 1231 4219]. 34

Hartmann, Max. Die Fortpflanzungsweisen der Organismen, erläutert an Protozoen, Volvocineen und Dicyemiden (Zugleich Mitteilung über den Generationswechsel der Dicyemiden). Hab.-Schr. Giessen. Leipzig (G. Thieme), 1903, (43). 23 cm. [1231 1215 0415]. 35

Haswell, W. A. On two remarkable sporceysts occurring in Mytilus latus on the coast of New Zealand. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903, (497-515, with 2 pls.). [1215 1231]. 36

Herdman, W. A. The new biologica station at Port Erin, being the 16th annual report of the Liverpool Marine Biology Committee. Liverpool, Trans. Biol. Soc., **17**, 1903, (15-67). [0827 de 5427 de 2227 de 2627 de 1227 de 1803]. 37

Hofer, Bruno. Ein Fall von perniziöser Anämie durch Octobothrium angittatum bei der Regenbogenforelle. Allg. Fischereiztg, München, 28, 1903, (38-39). [5419 1231 1219]. 38

Jameson, H. L. On the origin of pearls. [Due to a Distomum cercaria = 1. somateriae.] Nature, London, **67**, 1903, (280-282, 3 figs.). [1219 1231]. 39

Janichi, C. von. Ueber zwei neue Arten des genus Davainea aus celebensischen Säugern. Arch. parasit., Paris, 6, 1902, (257-293, av. fig.). [1227 eg 1231 6019]. 40

------ Beziehungen zwischen Chromatin und Nucleolen während der Furchung des Eies von Gyrodactylus clegans von Nordm. Zool. Anz., Leipzig, 26, 1903, (241-245). [1215 1231]. 41

Jenckel, Adolf. Ueber den Echinococcus multilocularis und sein Verhältniss zum Echinococcus hydatidosus. [In: Pathologisch-anatomische Arbeiten, J. Orth gewidmet.] Berlin, 1903, (497-514). [1231]. 42

**Easurada**, F. Einige Worte der Erwiderung an Herrn Yamagiwa [betr. *Distomum spathulatum*]. Beitr. path. Anat., Jena, **30**, 1901, (169-174). [1231]. - 43

Kholodkovsky, N. Contribution à la connaissance des ténias des ruminants. Arch. parasit, Paris, 6, 1902, (145-148, av. 1 fig.). [1231 6019]. 44

**Kowalswaki**, Mieczysław. Etudes helminthologiques. VII. (Polonais) Kraków, Rozpr. Akad., B, **43**, 1903, (197– 218, av. 3 pls.); Kraków, Bull. Intern. Acad., **1903**, (517–519, with 3 pls.). [1203 1231 1403 1431]. 45

Kunkel, B. W. v. Coe, W. R.

**Eunsemüller**, Friedrich. Zur Kenntniss der polycephalen Blasenwürmer, insbesondere des *Coenurus cerebralis* Rudolphi und des *C. serialis* Gervais. Zool. Jahrb., Jena, Abt. f. Anat., **18**, 1903, (507-538, mit 4 Taf.). [1215 1931]. Laidlaw, F. F. On a collection of Turbellaria Polycladida from the Straits of Malacca (Skeat Expedition, 1899-1900). London, Proc. Zool. Soc., 1903, 1, (301-318, pl. XXIII). [1227 cg 1231]. 48

The marine Turbellaria, with an account of the anatomy of some of the species. Fauna and Geography of the Maldive and Laccadive Archipela goes, 1, (283-310, pls. XIV and XV, textfigs. 61-73). [1207 1227 ma - 1231]. 49

———— On a land Planarian from Hulale, Male Atoll, with a note on *Leptoplana pardalis* Laidlaw. [Gardiner's] Fauna and Geography of the Maldive and Laccadive Archipelagoes, II, 1, (579, 580). [1227 ma 1231]. 50

Suggestions for a revision of the classification of the Polyclad Turbellaria. Manchester Mem. Lit. Phil. Soc., 48, 1903, (16, 2 pls.). [1231]. 51

Report on the land planarians. Fasic. Malay. Zool., 1, (115-116). [1231]. 52

On the marine fauna of Zanzibar and British East Africa, from collections made by Cyril Crossland in the years 1901 and 1902. Turbellaria Polycladida. I. The Acotylea. London, Proc. Zool. Soc., **1903**, 2, (99–113, pl. IX, text-figs. 3-7). [1227 ff 1231]. 53

Lazarus-Barlow, W. S. and Douglas, J. J. Preliminary note on a phase in the life-history of *Bilharzia haematobia*. Brit. Med. J., London, **1903**, (15). [1219 1231]. 51

Leiper, R. T. On an Accelous Turbellarian inhabiting the common hearturchin. London, Rep. Brit. Ass., **1902**, (652-653). [1019 1031 1219 1231]. 55

Linstow, [Otto] von. Parasiten, meistens Helminthen, aus Siam. Arch. Mikr. Anat., Bonn, **62**, 1903, (108-121, mit 1 Taf.). [1431 1427 ce 1231 1227 ce 0431 0427 ce]. 56

Bericht über die wissenschaftlichen Leistungen in der Naturgeschichte der Helminthen im Jahre 1897, 1898, 1899. Arch. Natg., Berlin, **62**, Bd 2, H. 3, 1896, [1903], (1-128). [1203 1403]. 57 Linstow, [Otto]von. Helminthologische Beobachtungen. Centralbl. Bakt., Jena, Abt. 1, **84**, Originale, 1903, (526-531). [1203 1231 1431]. 58

Neue Helminthen. Centralbl. Bakt., Jena, Abt. 1, **35**, Originale, 1903, (352-357). [1231 1431]. 59

Entozoa des Zoologischen Museums der Kaiserlichen Akademie der Wissenschaften zu St. Peterburg. II. St. Peterburg, Ann. mus. zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19). [1231 1431]. 60

Drei noue Tänien aus Ceylon. Centralbl. Bakt., Jena, Abt. 1, 33, Originale, 1903, (532-535). [1227 ef 1231]. 61

Looss, A. Die Distomenunterfamilie der Haploporinae. Arch. parasit., Paris, 6, 1902, (128–143, av. fig.). [1231]. 62

Lthe, M[ax]. Eine nomenclatorische Berichtigung betr. die Cestoden-Gattung Amphitretus R. Bl. Centralbl. Bakt., Jena, Abt. 1, 33, Originale, 1903, (608– 609). [1231 0070]. 63

Maclaren, Normann. Ueber die Haut der Trematoden. Zool. Anz., Leipzig, 26, 1903, (516-524). [1207 1231]. 64

Manger, Bartholomäus. Ueber einen Fall von *Echinococcus hydatidosus* der Leber und Milz. Diss. München (Druck v. Kastner & Callwey), 1903, (16). 22 cm. [1231]. 65

Marcinowski, K. Das untere Schlundganglion von Distoma hepaticum. Jenaische Zs. Natw., **37**, 1903, (544-550, mit 1 Taf.). [1207 1231]. 66

Markov, M. Sur un nouveau représentant dn genre Prostogonimus, P. anatinus n. sp. (Russ.) Charikov, Trd. (Dbčč. ispyt. prir., **37**, 1902, [1903], (287-294), av. Rés. fr. (295-291, av. 1 Tab.). [1231]. 67

Umgegend von Charkow (Südrussland). Zool. Anz., Leipzig, **26**, 1903, (221-223). [1227 db 1231]. 68

Mattiesen, E. Die Eireifung und Befruchtung der Süsswasserdendrocoelen. Zool. Anz., Leipzig, 27, 1903, (34-39). [1215 1231]. 69

Die Embryonalentwicklung der Süsswasserdendrocoelen. Zool. Anz., Leipzig, **27**, 1903, (81–87). [1215 1231]. 69A Mell, Camillo. Die Landplanarien der madagassischen Subregion. Frankfurt a. M., Abh. Senckenb. Ges., 27, 1903, (191-236, mit 3 Taf.). [1227 *fl* 1231]. 70

Mingaszini, P. Sull'esistenza di una secrezione emessa dalla superficie del corpo dei Cestodi adulti. Rassegna internazionale di Medicina moderna, Catania, 3, (1901), 1902. [1211 1231] 71

# Monticelii r. Parona.

Morgan, T[homas] H[unt]. Regeneration in *Bipalium* [with bibliography]. [Reprinted from the Archiv für Entwickelungsmechanik der Organismen 9, 1900.] Bryn Mawr, Pa., Bryn Mawr Coll. Monogr., (Repr. Ser.), 1, 1901, (563– 586). [0211 1211 1231]. 72

Regeneration in Planarians [with bibliography]. [Reprinted from Archiv für Entwickelungsmechanik der Organism, 10, 1900.] Bryn Mawr, Pa., Bryn Mawr Coll. Monogr., (Repr. Ser.), 1,1901. (1577]-119, with text fig.). [0211 1211 1231]. 73

O'Conor, J. The surgical treatment of pulmonary hydatids. Lancet, London, 164, 1903, (1433-1435). [1203]. 74

Osborn, H. L. On Cryptogonimus (n. g.) chili (n. sp.), a fluke with two ventral suckers. Zool. Anz., Leipzig, 26, 1903, (315-318). [1231 1207]. 75

On Phyllodistomum americanum (n. sp.); a new bladder distome from Amblystoma punctatum [with bibliography]. Wood't Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (252–258). [1207 1231 5631]. 76

Bunodera cornuta sp. nov.: a new parasite from the crayfish and certain fishes of Lake Chautauqua, N.Y. [with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (63-73, with fig. in text). [1219 1227 gg 1231 2631 5419]. 77

Owen, E. v. Vintras, G. C. L.

Parona, [Corrado] e Monticelli, [F. Saverio]. Sui generi Placunella e Trechopus. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (46-48). [1231].

Pearl, Raymond. Planarians. J. Appl. Microsc., Rochester, N.Y., 6, 1903, (2360-2362). [1231]. 79 Petrie, J. Bilharzia haematobia. Brit. Med. J., London, **1903**, 2, (133). [1231]. 80

Fonomaroff, Tatiana. Recherches experimentales sur la greffe des Echinocoques dans la cavité abdominale des lapine. Thèse Méd. (Lausanne), Lausanne (Guese), 1903, (40). Svo. [1219 1231 6019]. 81

Priesack, August. Ein Fall von Alveolar-Echinococcus der Leber. Diss. München (Druck v. Kastner & Lossen), 1902, (15). 22 cm. [1231]. 82

Punnett, R. C. On the nemerteans of Norway. Bergens Mus. Aarb., 1903, No. 2, (35, with 2 pl.). [1207 1227 da 1231]. 83

Ransom, B. H. On Hymenolepis curioca (Magahaes) and *H. megalops* Nitzsch), with remarks on the classification of the group. [With bibliography]. Lincoln, Stud. Zool. Lab., Univ. Nebr., No. 47, 1902, (151-172, 3 pls.). Separate. 23.5 cm. [1231]. 84

Rátz, István. Ueber wenig bekannte *Upistorchiinae.* (Ungarisch) Állatt. Közlem., Budapest, 2, 1903, (83–88, Taf. X.). [1231]. 85

Un genre nouveau de Fascicolides. Budapest, Ann. Hist. Nat. Mus. Hung., 1, 1903, (413-432, mit Taf. XVI). [1207 1231]. 86

**Beuss**, Hans. Die Cercarie und Sporocyste des *Distomum duplicatum* Baer. Zs. wiss. Zool., Leipzig, **74**, 1903, (458– 477, mit 1 Taf.). [1215 1231]. 87

**Bisso**, Agostino. La fauna elmintologica dei rettili nella provincia di Catania. Arch. parasit., Paris, **6**, 1902, (26-41). [1227 dh 1231 1427 dh 1431 5619]. 88

Rosseter, T. B. On the anatomy of Drepanidotaenia tenuirostris. London, J. Quek. Microsc. Cl., 8, No. 52, 1903, (399-406, pl. XX). [1207 1231]. 89

**Sabrasde**, J. Blutuntersuchung bei-Hydatidencysten; lokale und allgemeine Eosinophilie. Münchener med. Wochenschr., **50**, 1903, (553-554). [1231 1203]. 90

**Schneider**, Guido. Das Vorkommen von Larven des Bandwurms *Bothriotaenia proboscidea* Batsch im Magen und Darm von Osteesheringen (*Chupea harengus membras* L.). Berlin, SitzBer. (ies.

•

natf. Freunde, **1902**, (28-30). [1219 1231 5431]. 91

Schor, Marie. Contribution à l'étude du Bothriocephalus latus Brems. Sa distribution dans le canton de Vaud. Lausanne, Thèse med. 1901/1902. Lausanne, 1902, (29). 8vo. [1227 di 1231]. 92

Seager, F. R. Note on a case of hydatid cyst of the spleen. Lancet, London, 164, 1903, (655). [1203]. 93

Sekera, Emil. Erneute Untersuchungen über die Geschlechtsverhältnisse der Stenostomiden. (Vorläuf. Mitt.) Zool. Anz., Leipzig, 26, 1903, (537-544, 569-577, 601-608). [1207 1215 1231]. 94

Einige Beiträge zur Lebensweise von Vortex heluo (viridie M. Sch.). Zool. Anz., Leipzig, **26**, 1903, (703-710). [1219 1231]. 95

**Senco**, Hidemi. Studies on Cercaria. 1. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (307-311). [1231]. 96

Shipley, A. E. On the ento-parasites collected by the "Skeat Expedition" to Lower Siam and the Malay Peninsula in the years 1899-1900. London, Proc. Zool. Soc., 1903, 2, (145-156, pl. XVI). [0419 0427 eg 1431 1227 ef 1427 eg ee 1231]. 97

**Skorikov**, A. S. Zur Parasitologie der Störe. (Russ.) Věst. rybopromysl., St. Peterburg, **1903**, 18, (63–82). [0819 1219 1419 5419]. 98

Squire, J. E. A case of hydatid disease of the lung: spontaneous recovery. Lancet, London, 165, 1903, (387). [1203]. 99

**Stafford**, J. Two Distomes from Canadian Urodela. Centralbl. Bakt., Jena, Abt. 1, **34**, Originale, 1903, (822– 830, mit 1 Taf.). [1231 5603]. 100

**Stiles**, Ch[arles] W[ardell]. Notes on parasites. 56. Echinostomum bursicola Looss and E. eloncinum Braun from a nomenclatural standpoint. Science, New York, N.Y., (N. Ser.), **13**, 1901, (593-594). [1231]. 101

The dwarf tapeworm (*Hymenolepis nana*), a newly recognised and probably rather common American parasite. [Address before the medical and chirurgical faculty of Maryland delivered Sept. 24, 1903.] New York Medical Journal, New York, N.Y., **78**, 1903, ([877]-881). [1231]. 102

1903, (105). [1203]. Sullivan, W. C. A case of Cysticercus cellulosae of the brain. J. mental Sci., London, 49, 1903, (115-116). [1231 1203]. 104

Syers, H. W. Hydatid cyst of the Lancet, liver. London, **164**, 1903, (1166). [1203]. 105

Vintras, G. C. L. and Owen, E. Hydatid cyst on the under aspect of the liver. Lancet, London, 165, 1903, (97). [1203]. 106

Voigt, [Walther]. Ueberreste der Eiszeitfauna in mittelrheinischen Ge-Verh. D. GeogrTag, birgsbächen. Berlin, 14, 1903, (216-224). [1227 de]. 107

Wacke, Robert. Beiträge zur Kenntniss der Temnocephalen. (Temnocephala chilensis, Temnoccphala tumbesiana n. sp. und Temnocephala novae-zelandiae.) Zool. Jahrb., Jena, Suppl. 6, 1903, (1-116, mit 9 Taf.). [1207 1231]. 108

warren, E. On the anatomy and de-velopment of Distomum cirrigerum v. Baer. Q. J. Microsc. Sci., London, 47, 1903, (273-301, pls. XXIV - XXVI). [1207 1215 12317. 109

Winter, Bruno. Ein Fall von Cysticercus cellulosae im III Ventrikel des Gehirns. Diss. Leipzig. Münster (Druck v. J. Bredt), 1901, (29). 20 cm. [1231 1203]. 110

Yamagiwa, K. Einige Bemerkungen zu dem Aufsatz des Herrn Katsurada: Beitrag zur Kenntniss des Distomum spathulatum. Beitr. path. Anat., Jena, **30**, 1901, (155–168). [1231]. 111

Zabusov, I. P. Tricladenstudien. IV. Erster vorläufiger Bericht über die von Herrn.V. Gariajev im Baikalsee gesammelten Planarien. (Russ.) Kazaní, Trd. Obšč. jest., **36**, 1903, pt. 6 (37); dtsch. Rés., (40-58, mit 1 Taf.). [1227 ea 1231]. 112

Zacharias, Otto. Zur Kenntnis der niedern Flora und Fauna holsteinischer Moorsümpfe. Plön, ForschBer. biol. Stat., 10, 1903, (223-289, mit 1 Taf.). [0227 de 0231 1231 0431]. 113

Zinn, Wilhelm. Tödliche Anämie «lurch Bothriocephalus latus. D. med. Wochenschr., Berlin, 29, 1903, (264-266). [1231 1203]. 114

Zschokke, F[riedrich]. Fauna hel-vetica. Heft 8: Parasitische Würmer. Bibliographie der schweizerischen Fascikel IV 6. Bern Landeskunde. (K. J. Wyss), 1902, (IV + XII + 39). 8vo. [0030 1227 di 1231 1427 di 1431]. 115 Die arktischen Cestoden. (Fauna Arctica, 8.) Jena, 1903, (1-32, mit 2 Taf.) [1227 k 1231]. 116 Ein neuer Fall von Dipylidium caninum (L.) beim Menschen. Jena, Abt. 1, 84, Centralbl. Bakt., Originale, 1903, (42-43). [1231 1219].

117

#### COMPREHENSIVE AND 1203 GENERAL WORKS.

### GENERAL.

Kowalewski, Mieczysław. Études helmintologiques. VII. Kraków, Rozpr. Akad., B, **43**, 1903, (194-218 av. 3 pls.) (Polonais); Kraków, Bull. Intern. Acad., 1903, (517–519, av. 3 pls.).

Linstow, [Otto] von. Bericht über die wissenschaftlichen Leistungen in der Naturgeschichte der Helminthen im Jahre 1897, 1898, 1899. Arch. Natg., Berlin, 62, Bd 2, H. 3, 1896, [1903], (1-128).

Helminthologische Beobachtungen. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (526-531).

# TREATISES.

Nemertini (Schnur-Bürger, Otto. Würmer). (H. G. Bronn's Klassen u. Ordnungen des Thier-Reichs, Bd 4, Suppl., Lfg 18-22.) Leipzig (C. F. Winter), 1903, (289-384, mit Taf.) 26 cm. 7,50 M.

# MEDICAL.

Altmann, C. A. Hydatid cyst of the heart: rupture into the left auricle. Lancet, London, 164, 1903, (677).

Black, R. S. A case of Cysticercus cellulosae, causing insanity. J. mental Sci., London, 49, 1903, (110-115).

Fedorov, Nathalie. L'anémie bothriocéphalique. Arch. parasit., Paris, 6, 1902, (207 -214).

141

103

O'Conor, J. The surgical treatment of pulmonary hydatids. Lancet, London, 164, 1903, (1433-1435).

**Sabrasże**, J. Blutuntersuchung bei Hydatidencysten, lokale und allgemeine Eosinophilie. Munchener med. Wochenschr., **50**, 1903, (553-554).

Seager, F. R. Note on a case of hydatid cyst of the spleen. Lancet, London, 164, 1903, (655).

**Squire,** J. E. A case of hydatid discase of the lung: spontaneous recovery. *l.c.* **165**, 1903, (387).

Stiles, H. J. Operation for hydatid cyst of the liver. *l.c.* 164, 1903, (105).

Sullivan, W. C. A case of *Cysticercus* cellulosas of the brain. J. mental Sci., London, 49, 1903, (115-116).

Syers, H. W. Hydatid cyst of the liver. Lancet, London, 164, 1903, (1166).

Vintras, G. C. and Owen, E. Hydatid cyst on the under aspect of the liver. *l.c.* 165, 1903, (97).

Winter, Bruno. Ein Fall von Cysticercus cellulosae im III Ventrikel des Gehirns. Diss. Leipzig. Munster (Druck v. J. Bredt), 1901, (29). 20 cm.

**Zinn**, Wilhelm. Tödliche Anämie darch *Bothriocephalus latus*. D. med. Wochenschr., Berlin, **29**, 1903, (264– 266).

# 1207 STRUCTURE.

### GENERAL.

Bergendal, [David]. Berichtigung [zu dem Anfsatz über d. Bau des Kopfes von Heteronemertinen, Zool. Anz., Bd 26, S. 254 ff.]. Zool. Anz., Leipzig, 26, 1903, (438).

**Goe, W. R. and Kunkel**, B. W. A frew species of Nemertean (*Cerebratulus melanops*) from the Gulf of St. Lawrence. Wood's Holl, Mass., Mar. Biol. I.ab. Bull., 4, 1903, (119–124).

Curtis, W. C. Crossobothrium laciniatum and developmental stimuli in the Cestoda. *l.c.* 5, 1903, (125-142, with text fig.).

Laidlaw, F. F. The marine Turbellaria, with an account of the anatomy of some of the species. [Gardiner's] Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, (283– 310, pls. XIV-XV, text-figs. 61-73).

(N 2-9053)

**Osborn**, Henry Leslie. On Phyllodistomum americanum (n. sp.); a new bladder distome from Amblystoma punctatum [with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (252-258).

On Cryptogonimus (n. g.) chili (n. sp.), a fluke with two ventral suckers. Zool. Anz., Leipzig, 26, 1903, (315-318).

**Punnett**, R. C. On the nemerteans of Norway. Bergens Mus. Aarb., **1903**, No. 2, (35, with 2 pls.).

**Bátz**, István. Un genre nouveau de Fascicolides. (Ungarisch und Französisch) Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (413–432, Taf. XVI).

**Bossetter**, T. B. On the anatomy of *Drepanidotaenia tenuirostris*. London, J. Quek. Microsc. Cl., **8**, No. 52, 1903, (399-406, pl. XX).

Wacke, Robert. Beiträge zur Kenntniss der Tennocephalen. (Tennocephala chilensie, Tennocephala tumbesiana n. sp. und Tennocephala novae-zelandiae.) Zool. Jahrb., Jena, Suppl. 6, 1903, • (1-116, mit 9 Taf.).

Warren, E. On the anatomy and development of *Distomum cirrigerum* V. Baer. Q. J. Microsc. Sci., London, 47, 1903, (273-301, pls. XXIV-XXVI).

### TEGUMENT.

Maclaren, Normann. Ueber die Haut der Trematoden. Zool. Anz., Leipzig, 26, 1903, (516-524).

NERVOUS SYSTEM AND OBGANS OF SENSE.

Bergendal, D[avid]. Bemerkungen über einige Angaben, den Bau des Kopfes einiger Heteronemertinen betreffend. Zool. Anz., Leipzig, **26**, 1903, (254-257).

Ueber "Sinnesgrübchen" im Epithel des Vorderkopfes bei Carinoma armandi sp. McInt. (Oudemans) nebst einigen systematischen Bemerkungen über die Arten dieser Gattung. *l.e.* (608-619).

Marcinowski, K. Das untere Schlundganglion von Distoma hepaticum. Jenaische Zs. Natw., 37, 1903, (544-550, mit 1 Taf.).

# REPRODUCTIVE ORGANS.

Sekera, Emil. Erneute Untersuchungen über die Geschlechtsverhältnisse der Stenostomiden. (Vorläuf. Mitt.) Zool. Anz., Leipzig, 26, 1903, (537–544, 569– 577, 601–608).

# 1211 PHYSIOLOGY.

### GENERAL.

Mingassini, Pio. Sull'esistenza di una secrezione emessa dalla superficie del corpo dei Cestodi adulti. Rassegna internazionale di Medicina moderna . Catania, 3, (1901), 1902.

# REGENERATION.

Child, C. M. Form-regulation in Coelentera and Turbellaria. Washington, D.C., Smithsonian Inst. Misc. Collect. Q. Issue, 45, 1903, (134-143, with pl.).

Studies on regulation. I. Fission and regulation in Stenostoma. II. Experimental control of formregulation in zooids and pieces of Stenostoma. Arch. EntwMech., Leipzig, **15**, 1902-1903, (187-237, 355-420, 603-637, mit 5 Taf.).

# 1215 DEVELOPMENT.

### GENERAL.

Warren, E. On the auatomy and development of *Distomum cirrigerum* v. Baer. Q. J. Microsc. Sci., London, 47, 1903, (273-301, pls. XXIV-XXVI).

# OOGENESIS AND OVUM.

Bresslau, E. Die Sommer- und Wintereier der Rhalbdocölen des süssen Wassers und ihre biologische Bedeutung. Verh. D. zool. Ges., Leipzig, **13**, 1903, (126-139).

Mattiesen, E. Die Eireifung und Befruchtung der Süsswasserdendroccelen. Zool. Anz., Leipzig, 27, 1903, (34-39).

Sekera, Emil. Erneute Untersuchungen über die Geschlechtsverhältnisse der Stenostomiden, (Vorläuf. Mitt.) *l.c.* 28, 1903, (537-544, 569-577, 601-608). PHENOMENA OF FERTILIZATION.

Curtis, W. C. Crossobothrium laciniatum and developmental stimuli in the Cestoda. Woods Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (125-142, with text fig.).

Mattiesen, E. Die Eireifung und Befruchtung der Süsswasserdendroccelen. Zool. Anz., Leipzig, 27, 1903, (34-39).

# EMBRYOLOGY, ORGANOGENY.

**Dévé**, F. Sur l'évolution kystique du scolex échinococcique. Arch. parasit., Paris, **6**, 1902, (54-81, av. 11 fig.).

Janicki, C. von. Beziehungen zwischen Chromatin und Nucleolen während der Furchung des Eises von Gyrodactylus clegans von Nordm. Zool. Anz., Leipzig, 26, 1903, (241-245).

Kunsemüller, Friedrich. Zur Kenntniss der polycephalen Blasenwürmer, insbesondere des *Coenurus cerebralis* Rudolphi und des *C. serialis* Gervais. Zool. Jahrb., Jena, Abt. f. Anat., **18**, 1903, (507-538, mit 4 Taf.).

Mattiesen, E. Die Embryonalentwicklung der Süsswasserdendrocoelen. Zool. Anz., Leipzig, **27**, 1903, (81–87).

### CYCLES OF GENERATIONS.

Hartmann, Max. Die Fortpflanzungsweisen der Organismen, erläutert an Protozoen, Volvocineen und Dicyemiden (zugleich Mitteilung über den Generationswechsel der Dicyemiden). Hab.-Schr. Giessen. Leipzig (G. Thieme), 1903, (43). 23 cm.

LARVAL FORMS AND METAMORPHOSIS.

Haswell, W. A. . . . Sporocysis . . . in *Mytilus latus*. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **27**, (1902), 1903, (497-515, with 2 pls.).

**Bouss**, Hans. Die Cercarie und Sporocyste des Distomum duplicatum Baer. Zs. wiss. Zool., Leipzig, **74** 1903, (458-477, mit 1 Taf.)

# 1219 ETHOLOGY.

# GENEBAL.

**Clerc**, W. Contribution à l'étude de la faune helminthologique de l'Oural. Rev. Suisse Zool., Genève, **11**, 1903, (241-368, av. 4 pls. et 6 figs.).

Cohn, Ludwig. Zur Kenntnis einiger Trematoden. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (35–42).

Jameson, H. L. On the origin of pearls. [Due to a Distomum cercaria = D. somatcriae.] Nature, London, 67, 1903, (280-282, 3 figs.).

Lazarus-Barlow, W. S. and Douglas, J. J. Preliminary note on a phase in the life-history of *B*-lharsia haematobia. Brit. Med. J., London, **1903**, 1, (15).

### HABITS.

Bohn, Georges. Sur les mouvements oscillatoires de *Convoluta roscoffenis*. Paris, C.-R. Acad. sci., **137**, 1903, (573– 578).

### SYMBIOSIS.

**Gamble**, W. and **Keeble**, F. The bionomics of *Convoluta roscoffenis*, with special reference to its green cells. Q. J. Microsc. Sci., London, 47, 1903, (363-431, pls. XXX-XXXI).

Sekera, Emil. Einige Beiträge zur Lebensweise von Vortez heluo (viridis M. Sch.). Zool. Anz., Leipzig, 26, 1903, (703-710).

### PARASITISM.

**Blair**, W. Reid. *Cysticerci* in wild ruminants. New York, N.Y., Rep. Zool. Soc., **1903**, 1903, (137–144).

Dévé, F. Inoculations échinococciques au cobaye. Paris, C.-R. soc. biol., 55, 1903, (122-123).

Drago, U. Sull'attacco e sul parassitismo del *Distomum contortum*. Catania, Atti Acc. Gioenia, (Ser. 4), 15, (79, 1902), 1902, (4, con fig.). (Sunto). Boll. Acc. Gioenia, (N. Ser.), 1902, fasc. 74, (20).

Galli-Valerio, Bruno. Notes de parasitologie. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (81-91).

**Gutart**, Jules. Parasitologie pratique : I. Le ver solitaire. Bul. sci. pharm., Paris, 5, [t. 3, Pt. profess.], 1901, (17-(x 2-9053) 22, 113-117, 223-227, av. 6 pl. et fig.); Les parasites de l'intestin et leur recherche dans les matières fécales. *l.c.* 6, 1902, (152-157, 199-208, av. fig.).

Hofer, Bruno. Ein Fall von perniziöser Anämie durch Octobothrium sagittatum bei der Regenbogenforelle. Allg. Fischereiztg, München, 28, 1903, (38–39).

Letper, R. T. On an Accelous Turbellarian inhabiting the common heart-urchin. London, Rep. Brit. Ass., 1903, (652-653).

**Onborn.** Henry Leslie. Bunodera cornuta sp. nov.; a new parasite from the crayfish and certain fishes of Lake Chautauqua [with bibliography]. Woods Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (63-73, with fig. in text).

Ponomaroff, Tatiana. Recherches expérimentales sur la greffe des Echinocoques dans la cavité abdominale des lapins. Thèse Méd. (Lausanne), Lausanne (Guese), 1903, (40). 8vo.

Schneider, Guido. Das Vorkommen von Larven des Bandwurms Bothriotaenia proboscidea Batsch in Magen und Darm von Ostseeheringen (*Clupea harengus membras* L.). Berlin, SitzBer. Ges. Natf. Freunde, **1902**, (28-30).

**Skorikov**, A[leksandr] S[tepanovič]. Zur Parasitologie der Störe. (Russ.) Věst. Rybopromyšl., St. Peterburg, **1903**, 18, (63-82, mit 1 Taf.).

Zechokke, F[ritz]. Ein neuer Fall von Dipylidium caninum (L.) beim Menschen. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (42-43).

# 1223 VARIATION AND ÆTIOLOGY.

### Evolution.

Fuhrmann, O. L'évolution des ténias et en particulier de la larve des Ichthyoténias. Arch. Sci. Phys., Genève, (sér. 4), **16**, 1903, (335–337).

# **1227** GEOGRAPHICAL DISTRIBUTION.

d EUBOPE.

da SCANDINAVIA.

**Punnett**, R. C. On the nemerteans of Norway. Bergens Mus. Aarb., **1903**, No. 2, (35, with 2 pls.). db RUSSIA IN EUROPE.

**Clerc**, W. Contribution à l'étude de la faune helminthologique de l'Oural. Rev. Suisse Zool., Genève, **11**, 1903, (241-368, av. 4 pls. et 6 figs.).

Markow, Mich. Zur Turbellarienfauna der Umgegend von Charkow (Südrussland). Zool. Anz., Leipzig, **26**, 1903, (221-223).

# de GERMAN EMPIRE.

Voigt, [Walther]. Ueberreste der Eiszeitfauna in mittelrheinischen Gebirgsbächen. Verh. D. GeorgrTag, Berlin, 14, 1903, (216-224).

# de BRITISH ISLANDS.

Herdman, W. A. [Trematoda.] In: The new biological station at Port Erin, being the 10th annual report of the Liverpool Marine Biology Committee. Liverpool, Trans. Biol. Soc., **17**, 1903, (15-67).

# di SWITZERLAND.

Anscheles-Wolownik, Bascheva. Ueber den multiocularen Echinokokkus mit spezieller Berücksichtigung seines Vorkommens in der Schweiz. Zürich, Med. Diss., 1903-04, Darmstadt, 1903, (16, 1 Taf.). 8vo.

**Schor**, Marie. Contribution à l'étude du *Bothriccephalus latus* Brems. Sa distribution dans le canton de Vaud. Lausanne Thèse méd., 1901-02. Lausanne, 1902, (29). 8vo.

**Escholike**, F[riedrich]. Fauna helvetica. Heft 8: Parasitische Würmer. Bibliographie der schweizerischen Landeakunde Fascikel IV 6. Bern (K. J. Wyss), 1902, (iv + xii + 39). 8vo.

# dk AUSTRIA HUNGARY.

**Risso**, Agostino. La fauna elmintologica dei rettili nella provincia di Catania. Arch parasit., Paris, **6**, 1902, (26-41).

e Asia.

ea ASIATIC RUSSIA.

Garlaev, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal See's im Sommer 1900 u. 1901. (Russ.) St. Peterburg, Trd. Troick-Kiacht. Otd. Russ. Geogr. Obšč., ♥, 2, 1902, [1903], (27-48, mit 1 Karte).

Zabusov, I. P. Tricladenstudien IV. Erster vorläufiger Bericht über die von Herrn V. Garíajev im Baikalsee gesammelten Planarien. (Russ.) Kazaní, Trd. Oběč. jest., 36, 1903, pt. 6, (37); dtsch. Rés., (40-58, mit 1 Tat.).

# ee Siam.

Linstow, [Otto] von. Parasiten, meistens Helminthen, aus Siam. Arch. mikr. Anat., Bonn, **62**, 1903, (108–121, mit 1 Taf.).

# ef BRITISH INDIA.

Linstow, [O. F. B.] von. Drei neue Tänien aus Ceylon. Centralbl. Bakt., Jena, Abt. 1, 33, Originale, 1903, (532– 535).

**Shipley**, A. E. On the ento-parasites collected by the "Skeat Expedition" to Lower Siam and the Malay Peninsula in the years 1899–1900. London, Proc. Zool. Soc., **1903**, 2, (145–156, pl. XVI).

# eg MALAY PENINSULA.

Janicki, C. von. Ueber zwei neue Arten des genus *Davainea* aus celebensischen Säugern. Arch. parasit., Paris, 6, 1902, (257-293, av. fig.).

Laidlaw, F. F. On a collection of Turbellaria Polyeladida from the Straits of Malacca (Skeat Expedition, 1899– 1900). London, Proc. Zool. Soc., 1903, 1, (301–318, pl. XXIII).

# f AFRICA.

🕴 EAST AFRICA.

Laidlaw, F. F. On the marine fauna of Zanzibar and British East Africa, from collections made by Cyril Crossland in the years 1901 and 1902. Turbellaria Polycladida. I. The Acotylea. London, Proc. Zool. Soc., **1903**, 2, (99– 113, pl. IX, text-figs. 3–7).

# fh MADAGASCAR.

Mell, Camillo. Die Landplanarien der madagassischen Subregion. Frankfurt a. M., Abh. Senckenb. Ges., 27, 1903, (191-236, mit 3 Taf.).

# **Platyhelminthes**

g North America.

### gg NORTH-EASTERN UNITED STATES.

**Outporn**, Henry Leslie. Bunodera cornula sp. nov.: a new parasite from the crayfish and certain fishes of Lake Chautauqua[with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (63-73, with fig. in text).

k ARCTIC.

Bürger, Otto. Die Nemertinen. (Fauna Arctica, 3.) Jena, 1903, (55– 64, mit 1 Taf.).

Zschokke, F[ritz]. Die arktischen Cestoden. *l.e.* (1-32, mit 2 Taf.).

m INDIAN OCEAN.

ma OCEAN AND ISLANDS N. OF Equator.

Laidlaw, F. F. The marine Turbellaria, with an account of the anatomy of some of the species. [Gardiner's] Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, (288-310, pls. XIV-XV, text-figs, 61-73).

# 1231 TAXONOMY AND SYSTEMATIC.

### PLATYHELMINTHES.

### GENERAL.

**Rizzo**, A. La fauna elmintologica dei rettili nella provincia di Catania. Arch. parasit., Paris, **6**, 1902, (26-41).

**Zscholtke**, F. Fauna helvetica. Heft 8: Parasitische Würmer. Bibliographie der schweizerischen Landeekunde. Fascikel IV 6. Bern (K. J. Wyss), 1902, (iv + xii + 39). 8vo.

# TURBELLARIA.

# GENERAL.

Bresslau, E. Die Sommer- und Wintereier der Rhabdocölen des süssen Wassers und ihre biologische Bedeutung. Verh. D. zool. Ges., Leipzig, **13**, 1903, (126-139).

Child, C. M. Form-regulation in Coelentera and Turbellaria. Washington, D.C., Smithsonian Inst. Misc. Collect, Q. Issue, **45**, 1903, (134–143, with pl.). Separate. 24.5 cm.

Gariaev, V. P. Evertebratenfauna des Baikal Scos. (Russ.) St. Peterburg, Trd. Troick.-Kiacht. Otd. Russ. Geogr. Obšč., V, 2, 1902, [1903], (27-48, av. 1 carte).

Laidlaw, F. F. On a collection of Turbellaria Polycladida from the Straits of Malacca (Skeat Expedition, 1899– 1900). London, Proc. Zool. Soc., 1903, 1, (301–318, pl. XXIII).

Suggestions for a revision of the classification of the Polyclad Turbellaria. Manchester, Mem. Lit. Phil. Soc., 48, 1903, (16, 2 pls.).

------- Report on the land planarians. Fascic. Malay. Zool., 1, (115-116).

Leiper, R. T. On an accelous Turbellarian inhabiting the common hearturchin. London, Rep. Brit. Ass., **1902**, (652–653).

Markow, M. Zur Turbellarienfauna der Umgegend von Charkow (Südrussland). Zool. Anz., Leipzig, 26, 1903, (221-223).

Mattleson, E. Die Eireifung und Befruchtung der Süsswasserdendroccelen. *l.c.* 27, 1903, (34-39).

Die Embyronalentwicklung der Süsswasserdendrocoelen. *l.c.* **27**, 1903, (81–87).

Mell, C. Die Landplanarien der madagassischen Subregion. Frankfurt a. M., Abh. Senckenb. Ges., 27, 1903, (191-236, mit 3 Taf.).

**Pearl**, R. Planarians. J. Appl. Microsc., Rochester, N.Y., **6**, 1903, (2360– 2362).

Sekera, Emil. Erneute Untersuchungen über die Geschlechtsvorhältnisse der Stenostomiden. (Vorläuf. Mitt.). Zool. Anz., Leipzig, 26, 1903, (537-544, 569-577, 601-608).

Zabusov, J. P. Tricladenstudien IV. Erster vorläufiger Bericht über die von Herrn V. Garïajev im Baikalsee gesammelten Planarien. (Russ.) Kazaní, Trd. Obšč. jest., **36**, 1903, pt. 6, (37); dtsch Rés., (40-58, mit 1 Taf.)

### SPECIAL.

Amblyplana kükenthali n. sp. Mall, C. Frankfurt a M., Abh. Senckenb. Ges., 27, 1903, (191-236).

Asthenoceros n. gen., A. woodworthi n. sp. Malacca Straits. Laidlaw, F. F. London, Proc. Zool. Soc., 1903, 1, (315-316, pl. XXIII fig. 7).

Bergendalia n. gen., B. anomala n. sp. Malacca Straits. Laidlaw, F. F. l.c. (310-312, pl. XXIII, figs. 4, 5, 6, and 8).

Bipalium nn. spp. Mell, C. Frankfurt a. M., Abh. Senckenb. Ges., 27, 1903, (191-236).

*jalorense* n. sp. Malay Peninsula. Laidlaw, F. F. Fascic. Malay. Zool., 1, (115).

*heusnes*, geographical distribution. **Clapp**, G. H. Pittsbarg, Pa., Ann. Carnegie Mus., **1**, 1901, (253– 254).

Cestoplana nn. spp. Laidlaw, F. F. Fauna Mald. Laccad. Arch., 1, (290, 302).

filiformis n. sp. Laidlaw, F. F. London, Proc. Zool. Soc., 1903, 2, (110-111).

Convoluta roscoffensis, mouvements oscillatoires. Bohn, G. Paris, C.-R. Acad. sci., 137, 1903, (573–578).

special reference to the green cells. Gamble, F. W. and Keeble, E. Q. J. Microsc. Sci., London, 47, 1903, (363– 431, pls. XXX-XXXI).

Disparoplana n. gen., D. dubia n. sp. Laidiaw, F. F. London, Proc. Zool. Soc., 1903, 2, (103-105, pl. IX, fig. 2).

Haploplana n. gen., H. elioti n. sp. Laidlaw, F. F. l.c. (109-110, pl. IX, fig. 4).

Latocestus argus n. sp. Malacca Straits. Laidlaw, F. F. *l.c.* 1, (312-313).

Leptoplana malayana n. sp. Malacca Straits. Laidlaw, F. F. l.c. (306-308, pl. XXIII, fig. 3).

F. F. Fauna Mald. Laccad. Arch, 1, (287-290). Leptoplana pardalis, synonymous with L. subviridis. Laidlaw, F. F. l.c. II, 1, (579-580).

Notoplana n. gen., N. evansii n. sp. Malacca Straits. Laidlaw, F. F. London, Proc. Zool. Soc., 1903, 1, (302-303, XXIII, fig. 2).

Ommatoplana n. gen., O. tuberculata n. sp. Laidlaw, F. F. *l.c.* 2, (111-112, pl. IX, figs. 5-7).

Paraplanceera aurora n. sp. Laidlaw, F. F. l.c. (102–103, pl. IX, fig. 1).

Phylloplana n. gen., P. lactea n. sp. Laidlaw, F. F. l.c. (107-109, pl. IX, fig. 3).

Planaria nn. spp. Baikalsee. Zabusov, I. P. Kazani, Trd. Obšč. jest., 36, 1903, pt. 6, (47); deutsches Rés., (40-58).

Planocera nn. spp. Laidlaw, F. F. Fauna Mald. Laccad. Arch., 1, (282-286).

F. F. London, Proc. Zool. Soc., 1903, 2, (100).

Procotyla baicalensis n. sp. Baikalsee. Zabusov, I. P. Kasani, Trd. Obšč. jest., 36, 1903, pt. 6, (47); deutsches Rés., (40-58).

Prosthiostomum nn. spp. Leidlaw, F. F. Fauna Mald. Laccad. Arch., 1, (298-301).

*pallidum* n. sp. Malacca Straits **Laidlaw**, F. F. London, Proc. Zool. Soc., **1903**, 1, (317).

Pseudoceros nn. spp. Malacca Straits. Laidlaw, F. F. *l.c.* (314–315, pl. XXIII, figs. 9, 10).

Fauna Mald. Laccad. Arch., 1, (296-297).

Rhynchodemus nematoides Loman. Malay Peninsula. Laidlaw, F. F. Fascic. Malay. Zool., 1, (116).

Rimacephalus punctatus n. sp. Baikalsee. Zabusov, I. P. Kazanĭ, Trd. Obšč. jest., **36**, 1903, pt. 6, (37); deutsches Rés., (40-58).

Semonia penangensis n. sp. Malacca Straits. Laidlaw, F. F. London, Proc. Zool. Soc., 1903, 1, (308-309).

Sorocelis nn. spp. Baikaleee. **Zabu**sov, I. P. Kazani, Trd. Obšč. jest., **36**, 1903, pt. 6, (37); deutsches Rés., (40– 58). Stenostoma, regulation. Child, Ch. M. Arch. EntwMeeh., Leipzig, 15, 1902– 1903, (187–237, 355–420, 603–637, mit 5 Taf.).

*turgidum.* Zacharia, O. Plön, ForschBer. biol. Stat., 10, 1903, (223-289, 1 Taf.).

Stylochus succensis Ehrenb.?, S. zanzibaricus n. sp. Laidlaw, F. F. London, Proc. Zool. Soc., 1903, 2, (105–106).

Thyanozoon plehni n. sp. Laidlaw, F. F. Fauna Mald. Laccad. Arch., 1, (294-295).

Vortex heluo (viridis M.Sch.), Lebensweise, Symbiose. **Sekera**, E. Zool. Anz., Leipzig, **26**, 1903, (703-710).

# TREMATODA.

### GENERAL.

**Cohn**, L. Zur Kenntnis einiger Trematoden. Centralbl. Bakt., Jena, Abt. 1, **34**, Originale, 1903, (35–12).

**Pischoeder**, F. Die Paramphistomiden der Sängethiere. Zool. Jahrb., Jena, Abt. f. Syst., **17**, 1903, (485–660, mit 12 Taf.).

Linstow, O. v. Entozoa des zoologischen Museums der Kaiserlichen Akademie der Wissemschaften zu St. Peterburg. II. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19).

Looss, A. Die Distomenunterfamilie der *Haploporinae*. Arch. parasit., Paris, 6, 1902, (128–143, av. fig.).

Maclaren, N. Ueber die Haut der Trematoden. Zool. Anz., Leipzig, 26, 1903, (516-524).

**Edits**, I. Ueber wenig bekannte Opistorchiinae. (Ungarisch) Allatt. Közlem., Budapest, **2**, 1903, (83-88, Taf. X).

**Sence**, H. [*Cercariae*, found in *Paludina* and *Melania* in the district of Okayama.] (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (307–311).

### SPECIAL.

Amphistomum dolichocotyle n. sp. Cohn, L. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (35-42). Bilharzia haematobia, life-history. Lasarus-Barlow, W. S. and Douglas, J. J. Brit. Med. J., London, **1903**, 1, (15).

2, (133). Petrie, J. l.c.

Bunodera cornuta n. sp. Lake Chautauqua. Osborn, H. L. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (63-73, with fig. in text).

*Cryptogonimus* n. gen., *C. chili* n. sp. **Osborn**, H. L. Zool. Anz., Leipzig, **26**, 1903, (315-318).

Dicrogaster n. gen., D. perpusillus, D. contractus nn. spp. Loos, A. Arch. parasit., Paris, 6, 1902, (134–136, figs. 1-4).

Didymocystis n. gen. D. reniformis, D. wedli, D. pretiosus nn. spp. Artola, V. l.c. (99-108).

Didymozoon parassiti del tonno. Ariola, V. l.c. (99-108, av. fig.).

Distomum nn. spp. Linstow, O. v. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19).

cirrigerum v. Baer, anatomy and development. Warren, E. Q. J. Microsc. Sci., London, (N. Ser.), 47, 1903, (273-301, pls. XXIV-XXVI).

*contortum*, attacco e parassitismo. **Drago**, U. Catania, Atti Acc. Gioenia, (Ser. 4), **15**, (**79**, 1902), 1902, (4, con fig.). (Sunto.) Boll. Acc. Gioenia, (N. Ser.), **1902**, fasc. 74, (20).

duplicatum, Cercarie und Sporocyste. **Reuss**, H. Zs. wiss. Zool., Leipzig, **74**, 1903, (458–477, mit 1 Taf.)

*hepaticum*, das untere Schlundganglion. **Marcinowski**, K. Jenaische Zs. Natw., **37**, 1903, (544– 550, mit 1 Taf.).

*lymphaticum* n. sp. Linstow, O. von. Centralbl. Bakt., Jena, Abt. 1, **35**, Originale, 1903, (352-357).

(Leucithodendrium) somateriae Lev. giving rise to the formation of pearls in mussel shells. Jameson, H. L. Nature, London, 67, 1903, (280-282, 3 figs.).

F. Beitr. path. Anst., Jena, **30**, 1901, (169-174).

Kenntniss. Yamagiwa, K. *l.c.* (155– 168). Echinostomum, sp., sporocyst and cercaria. **Haswell**, W. A. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **27**, (1902), 1903, (497-511).

bursicola, E. cloacinun, Stiles, C. W. Science, New York, N.Y., (N. Ser.), 13, 1901, (593-594).

Epibdella producta n. sp. Linstow, O. von. Centralbl. Bakt. Jena, Abt. 1, 35, Originale, 1903, (352-357).

Gasterostomum sp., sporocyst and cercaria. **Haswell**, W. A. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903, (511-513).

Gyrodactylus elegans, Beziehungen zwischen Chromatin und Nucleolen während der Furchung des Eies. Janicki, C. von. Zool. Anz., Leipzig, 26, 1903, (241-245).

Haploporus n. gen., H. lateralis n. sp. Loos, A. Arch. parasit., Paris, 6, 1902, (134, 136–139, figs. 5-8).

Hoploderma n. gen., H. mcsocoelium n. sp. Cohn, L. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (35-42).

Lecithobotrys n. gen., L. putrescens n. sp. Loos, A. Arch. parasit., Paris, 6, 1902, (135-143, fig. 14).

Lecithocladium nn. spp. **Cohn, L.** Arch. Natg., Berlin, **69**, Bd 1, 1903, (47-68, mit 1 Taf.).

Metorchis tener n. sp. Pologne. Kowalewski, M. Kraków, Rozpr. Akad., B, 43, 1903, (194-218, av. 3 tabl.); Bull. Intern. Acad., 1903, (517).

Monocaecum n. gen., M. baryurum n. sp., Canadian Urodela. **Stafford**, J. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (822-830, mit 1 'Taf.).

Octobothrium sagittatum, ein Fall von perniziöser Anämie bei der Regenbogenforelle. Hofer, B. Allg. Fischereiztg, München, 28, 1903, (38-39).

Opistorchis tenuicollis Rud., Beschreibung, Opistorchis entri n. sp. **Ráts**, I. Allatt. Közlem., Budapest, **2**, 1903, (83-88, Taf. X).

Pegosomum n. gen. verwandt mit Echinostomum, P. saginatum Rátz, P. spiniferum n. sp., P. asperum Wright, Beschreibung. **Bátz**, I. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (417-432, Taf. XVI). Phyllodistomum americanum n. sp. from Amblystoma punctatum. Osborn, H. L. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (252-258).

Placunella. **Parona**, [C.] e **Monticelli**, [F.]. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (46-48).

Prostogonimus anatinus n. sp. (Russ.). Markov, M. Charikov, Trd. Obšč. ispyt. prir., **37**, 1902, [1903], (287–294); Rés. fr. (295–291, av. 1 Tab.).

Soccoccelium n. gen., S. obesum n. sp. Loos, A. Arch. parasit., Paris, 6, 1902, (135, 140-142, figs. 9-13).

Temnocephala chilensis, T. tumbesiana n. sp. und T. novae-zelandiae. **Wacks**, R. Zool. Jahrb., Jena, Suppl. 6, 1903, (1-116, mit 9 Taf.).

Trechopus. Parona, C. e Monticelli, F. S. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (46-48).

### CESTODA.

### GENERAL.

Black, R. S. Cysticercus cellulosae causing insanity. J. mental Sci., London, 49, 1903, (110-115).

**Blair**, W. R. Cysticerci in wild ruminants. New York, N.Y., Rep. Zool. Soc., **1902**, 1903, (137-144).

**Clerc**, W. Contribution à l'étude de la faune helminthologique de l'Oural. Rev. Suisse Zool., Genève, **11**, 1903, (241-368, av. 4 pls. et 6 figs.).

Dévé, F. Inoculations échinococciques au cobaye. Paris, C.-R. soc. biol., 55, 1903, (122-123).

Sur l'évolution kystique du scolex échinococcique. Arch. parasit., Paris, 6, 1902, (54-81, av. 11 fig.).

Fuhrmann, O, L'évolution des ténias and en particulier de la larve des ichtyoténias. Arch. Sci. Phys., Genève, (ser. 4), 16, 1903, (335–337).

**Guiart**, J. Parasitologie pratique : I. Le ver solitaire. Bul. sci. pharm., Paris, **5**, [t. **3**, Pt. profess.], 1901, (17– 22, 113–117, 223–227, av. 6 pls. et fig.); Parasites de l'intestin. *L.c.* **6**, 1902, (152– 157, 199–208, av. fig.).

**Eholodkovsky**, N. Contribution à la connaissance des ténias des ruminants. Arch. parasit., Paris, **6**, 1902, (145–148, av. 1 fig.). Linstow, O. v. Entozoa des zoologischen Museums der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg II. St. Petersburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19).

Lühe, M. Eine nomenclatorische Berichtigung betr. die Cestoden-Gattung Amphitretus R. Bl. Centralbl. Bakt., Jena, Abt. 1, 33, Originale, 1903, (608-609).

Mingassini, P. Sull'esistenza di una secrezione emessa dalla superficie del corpo dei Cestodi adulti. Rassegna internazionale di medicina moderna, Catania, 3, (1901), 1902.

**Sullivan**, W. C. *Cysticercus cellulosae* of the brain. J. mental Sci., London, **49**, 1903, (115-116).

**Zscholtke**, F. Die arktischen Cestoden. Fauna Arctica, Jena, **3**, 1903, (1-32, mit 2 Taf.).

### SPECIAL.

Acanthophallus nom. nov. Lthe, M. Centralbl. Bakt., Jena, Abt. 1, 83, Originale, 1903, (608-609).

Acanthotaenia n. gen., A. shipleyi n. sp. Ceylon. Linstow, O. F. B. von. l.e. (532-535).

Anonchotaenia bobica n. sp. in Sitta uralensis. Olerc, W. Rev. Suisse Zool., Genève, 11, 1903, (343, pl. X, figs. 54, 56, 57).

Aploparaksis n. gen. for A. filum; A. penetrans n. sp. from Tringa minuta. Clerc, W. l.c. (271, pl. VIII, figs. 10, 18, 19).

Bothriocephalus latus. Galli-Valerio, B. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (81-91).

('ontribution à l'étude et distribution dans le canton de Vaud. **Schor**, M. Lausanne, Thèse méd. 1901-02, Lausanne, 1902, (29). 8vo.

mie durch. **Zinn**, W. D. med. Wochenschr., Berlin, **29**, 1903, (264–266).

(Bothryotaenia) monorchis n. sp. Linstow, O. von. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (352-357). Bothriotaenia proboscidea Batsch, Larven im Magen und Darm von Ostseeheringen (Clupea harengus membras L.) schneider, G. Berlin, SitzBer. Ges. natf. Freunde, 1902, (28-30).

Choanotaenia brevis n. sp. in Garrulus infaustus. **Clerc**, W. Rev. Suisse Zool., Genève, **11**, 1903, (325, pl. IX, figs. 44-45).

Crossobothrium laciniatum and developmental stimuli in the Cestoda. **Ourtis**, W. C. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **5**, 1903, (125–142, with text fig.).

Darainea nn. spp. in Butco vulpinus and Tetrao tetrix. Clerc, W. Rev. Suisse Zool., 11, 1903, (359-363, pl. XI, fig. 79, 81, 82).

nn. spp. aus celebensischen Sängern. **Janicki**, C. von. Arch. parasit., Paris, **6**, 1902, (257–293, av. fig.).

Dibothriocephalus römeri n. sp. Zscholkke, F. (Fauna Arctica, 3.) Jena, 1903, (1-32, mit 2 Taf.).

Dilepis nn. spp. in Laurus canus and Tringa minuta. Clerc, W. Rev. Suisse Zool., Genève, **11**, 1903, (337, 340, pl. X, figs. 48, 50, 52, 60, 70).

Diorchis n. gen., D. acuminata n. sp. from Anas spp. **Clerc**, W. l.c. (281, pl. IX, fig. 25, pl. XI, fig. 78).

Diplocotyle cohaerens n. sp. Linstow, O. v. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19).

Diploposthe sui-generis n. sp. Pologne, Galicie. Kowalewski, M. Kraków, Rozpr. Akad., B, 43, 1903, (197-218, av. 3 pls.); Bull. Intern. Acad., 1903, (518).

Dipylidium caninum (I..), ein neuer Fall beim Menschen. Zschokke, F. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (42-43).

Drepanidotaenia musculora n. sp. in Meleagris gallopava. Clerc, W. Rev. Suisse Zool., Genève, **11**, 1903, (303, pl. VIII, figs. 17, 23, pl. IX, fig. 29).

tenuirostris, anatomy. **Rosseter**, T. B. London, J. Quek. Microsc. Cl., **8**, No. 52, 1903, (399-406, pl. XX).

Echinocotyle uralensis u. sp. in Totanus hypoleucus. Clerc, W. Rev. Suisse, Zool., Genève, **11**, 1903, (315, pl. IX, figs. 28, 32, 34, 37, 39). Floricepe saccatus dans le foie de l'Orthagorineus mola. **Bossuat**, E. Arch. parasit., Paris, **6**, 1902, (161-206, av. 13 figs.).

Gyrocotyle medusarum n. sp. Linstow, O. von. Centralbl. Bakt., Jena, Abt. 1, **34**, Originale, 1903, (526-531).

Hymenolepis spp. **Banson**, B. H. Lincoln, Stud. Zool. Lab., Univ. Nebr., No. 47, 1902, (151-172, 3 pls.).

nana. **Stiles**, C. W. New York Medical Journal, New York, N.Y., **78**, 1903, ([877]–881).

Monobothrium serpentum n. sp. Siau. Linstow, [O.] von. Arch. mikr. Anat., Bonn, 62, 1903, (119, fig. 21).

Oochoristica surinamensis n. sp. **Cohn**, L. Arch. Natg., Berlin, **69**, Bd. 1, 1903, (47-68).

Taenia nn. spp. Linstow, O. v. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (265–294, Taf. 17, 18, 19).

nn. spp. Ceylon. Linstow, [O. F. B.] von. Centralbl. Bakt., Jena, Abt. 1, **33**, Originale, 1903, (532 -535).

**Example 1** Cerebralis, T. serialis. **Tunsemüller**, F. Zool. Jahrb., Jena, Abt. f. Anat., **18**, 1903, (507–538, mit 4 Taf.).

*cucumerina* bei einem Kinde. **Asam**, W. Münchener med. Wochenschr., **50**, 1903, (334-335).

echinococcus, Vorkommen in der Schweiz. Anscheles-Wolownik, B. Zürich Med. Diss., 1903-1904, Darmstadt, 1903, (16, 1 Taf.). 8vo.

[In: Pathologisch-anatomische Arbeiten, J. Orth gewidmet.] Berlin, 1903, (497-514).

Ueber einen Fall von Echinococcus hydatidosus der Leber und Milz. Diss. München (Druck v. Kastner & Callwey), 1903, (16). 22 cm.

Ponomaroff, T. Recherches expérimentales sur la greffe des Echinocoques dans la cavité abdominale des lapins. Thèse Méd. (Lausanne). Lausanne (Guese), 1903, (40). 8vo.

Ein Fall von Alveolar-Echinococcus der

Leber. Diss. München (Druck v. Kastner & Lossen), 1902, (15). 22 cm.

Tuenia echinococcus, Blutuntersuchung bei Hydatidencysten. **Sabrasis**, J. Münchener med. Wochenschr., **50**, 1903, (553-554).

solium. Cysticercus cellulosae im III. Ventrikel des Gehirns. Winter, B. Diss. Leipzig. Münster (Druck v. J. Bredt), 1901, (29). 20 cm.

Tetrarhynchus notes, T. holothuriac n. sp. Siam and Malay Peninsula. **Shipley**, A. E. London, Proc. Zool. Soc., **1903**, 2, (146-147, pl. XVI, figs. 5, 6 and 7).

Thysanosoma pygargi n. sp. Kholodkovsky, N. Arch. parasit., Paris, 6, 1902, /145-148, av. 1 fig.).

# NEMERTINEA.

### GENERAL.

Bergendal, D. Bemerkungen über einige Angaben, den Bau des Kopfes einiger Heteronemertinen betreffend. Zool. Anz., Leipzig, **26**, 1903, (254-257).

Berichtigung [zu dem Aufsatz über d. Bau des Kopfes von Heteronemertinen. Zool. Anz., Bd. 26, S. 254 ff.]. l.e. (438).

**Bürger**, Otto. Die Nemertinen. (Fauna Artica, **3**.). Jena, 1903, (55-64, mit 1 Taf.).

Nemertini (Schnurwürmer). (H. G. Bronn's Klassen u. Ordnungen des Thier-Reichs, Bd. 4, Suppl., Lfg 18-22). Leipzig (C. F. Winter), 1903, (289-384, mit Taf.). 26 cm. 7.50 M.

### SPECIAL.

Amphiporus nu. spp. Norway. **Punnett**, R. C. Bergens Mus. Aarb., **1903**, No. 2, (29, 30, pl. I, figs. 9-12).

Carinella ambigua n. sp. Norway. Punnett, R. C. *l.c.* (8, pl. I, fig. 13).

Carinoma armandi "Sinnesgrübchen" im Epithel des Vorderkopfes, nebst systematischen Bemerkungen über die Arten dieser Gattung. Bergendal, D. Zool. Anz., Leipzig, **26**, 1903, (608-619). Cerebratulus melanops n. sp. Gulf of St. Lawrence. Coe, W. R. and Kun-bel, B. W. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (119-124).

way. Punnet, R. C. Bergens Mus. Aarb., 1903, No. 2, (24, pl. I, fig. 6, pl. 11, fig. 21).

Eunemertis nordgaardi n. sp. Norway. Punnett, R. C. l.c. (27, pl. I, fig. 1–3).

Lineus nn. spp. Norway. Punnett, R. C. *l.c.* (13, 16, 17, pl. I, figs. 4-7, pl. 11, figs. 19, 20).

Mierura nn. spp. Norway. Punnett, R. C. *l.c.* (19, 21, 22, pl. I, figs. 8, 14, pl. II, figs. 17, 18).

Nemertopsis actinophila n. sp. Bärger, O. Fauna Arctica, Jena, 3, 1903, (58, pl. III, figs. 1, 5-8).

### MESOZOA.

### DICYEMIDAE.

Hartmann, M. Die Fortpflanzungsweisen der Organismen, erläutert an Protozoen, Volvocineen und Dicyemiden (zugleich Mitteilung über den Generationswechsel der Dicyemiden). Hab. Schr. Giessen. Leipzig (G. Thieme), 1903, (43). 23 cm.

# Trichoplax.

Trichoplaz. Morphogenetische Studien. Garbowski, T. Jena (G. Fischer), 1903, (VIII + 189, mit 6 Taf.). 36 cm. 28 M.

### LIST OF NEW GENERA AND SPECIES.

- Acanthophallus n. nom. [Cestoda]. Lühe. 63.
- Acanthotaenia n. gen. [Cestoda]. Linstow. 61. - shipleyi. Linstow. 61.
- AMBLYPLANA [Turbellaria]. - kükenthali. Mell. 70.
- AMPHIPORUS [Nemertinea]. magnue. Punnett. 83. pusillus. Punnett. 83.
- AMPHISTOMUM [Trematoda]. ----- dolichocotyle. Cohn. 21.

ANONCHOTAENIA [Cestoda].

----- bobica. Clerc. 18.

Aploparaksis n. gen. [Cestoda]. Clerc. 18.

penetrans. Clerc. 18.

- Asthenoceros n. gen. [Turbellaria]. Laidlaw. 48.
  - woodworthi. Laidlaw. 48.
- n. gen. [Turbellaria]. Laidlaw. 48. Bergendalia
  - anomala. Laidlaw. 48.
- BIFALIUM [Turbellaria].
- brauni. Mell. 70.
- grandidicri. Mell. 70. jalorense. Laidlaw. 52.
- marenzelleri. Mell. 70. tau. Mell. 70.
- BOTHRIOCEPHALUS [Cestoda].
- monorchis. Linstow, von. 59.
- BÜNODERA [Trematoda].
- cornuta. Osborn. 77.
- CARINELLA [Nemertinea].

— ambigua. Punnett. 83.

- CEREBRATULUS [Nemertinea].
- melanops. Coe and Kunkel. 19.
- ----- norvegicus. Punnett. 83.
- CESTOPLANA [Turbellaria].
- ----- ceylonica. Laidlaw. 49.
- filiformis. Laidlaw. 53.
- maldivensis. Laidlaw. 49.
- CHOANOTAENIA [Cestoda]. breris. Clerc. 18.8

Cryptogonimus n. gen. [Trematoda]. Osborn. 75.

- chili. Osborn. 75.
- DAVAINEA [Cestoda].
  - celebensis. Janicki, von. 40. Janicki, von. polyc**a**lceola.
  - 40.
  - retusa. Clerc. 18.
- sphaeroides. Clerc. 18.§
- DIBOTHRIOCEPHALUS [Cestoda]. —— römeri, Zschokke. 116.
- Dicrogaster n. gen. [Trematoda]. Loos. 62
- contractus. Loos. 62. perpusillus. Loos. 62.
- Didymocystis n. gen. [Trematoda]. Ariola. 3. pretiosus. Ariola. 3.
- reniformis. Ariola. 3.
- ----- wedli. Ariola. 3.

§ Also described in N 2, i, No. 7074.

# 1231

DILEPIS [Cestoda]. - (?) cylindrica. Clerc. 18. nymphoides. Clerc. 18. Diorchis n. gen. [Cestoda]. Clerc. 18. - acuminata. Clerc. 18. DIPLOCOTYLE [Cestoda]. - cohaerens. Linstow, v. 60. DIPLOPOSTHE [Cestoda]. Kowalewski. sui-generis. 45. n. gen. [Turbellaria]. Laidlaw. 53. Disparoplana dubia. Laidlaw. 53. DISTONUM [Trematoda]. armatissimum. Linstow, v. 60. lymphaticum. Linstow, von. 59. reinhardi. Linstow, v. 60. DREPANIDOTAENIA [Cestoda]. — musculosa. Člerc. 18. ECHINOCOTYLE [Cestoda]. §------ uralensis. Clerc. 18. EPIBDELLA [Trematoda]. producta. Linstow, von. 59. EUNEMERTIS [Nemertinea]. - nordgaardi. Punnett. 83. GYROCOTYLE [Cestoda]. medusarum. Linstow, von. 58. n. gen. [Turbellaria]. Haploplana Laidlaw. 53. elioti. Laidlaw. 53. Haploporus n. gen. [Trematoda]. Loos. 62. – lateralis. Loos. 62. Hoploderma n. gen. [Trematoda]. Cohn. 21. mesocoelium. Cohn. 21. LATOCESTUS [Turbellaria]. ------ argus. Laidlaw. 48. [Trematoda]. Lecithobotrys n. gen. Loos. 62. putrescens. Loos. 62. LECITHOCLADIUM [Trematoda]. — barbatum. Cohn. 20. - excisiforme. Cohn. 20.

§ Also described in N 2, i, No. 7074.

LEPTOPLANA [Turbellaria]. ----- malayana. Laidlaw. 48. ----- pardalis. Laidlaw. 49. LINEUS [Nemertinea]. cinersus. Punnett. 83. niveus. Punnett. 83. scandinavisnsis. Punnett. 83. METORCHIS [Trematoda]. ----- tener. Kowalewski. 45. MICRURA [Nemertinea]. atra. Punnett. 83. bergenicola. Punnett. 83. varicolor. Punnett. 83. MONOBOTHRICM [Cestoda]. serpentum. Linstow, von. 56. Monocaecum n. gen. [Trematoda]. Stafford. 100. baryurum. Stafford. 100. NEMERTOPSIS [Nemertines]. - actinophila. Bürger. 13. gen. [Turbellaria]. Notoplana n, Laidlaw. 48. eransii. Laidlaw. 48. Ommatoplana n. gen. [7] Laidlaw. 53. [Turbellaria]. tuberculata. Laidlaw. 53. **OOCHORISTICA** [Cestoda]. —— surinamensis. Cohn. 20. **OPISTORCHIS** [Trematoda]. - entzi. Ratz. 85. PABAPLANOCERA [Turbellaria]. - aurora. Laidlaw. 53. Pegosomum n. gen. [Trematoda]. Rátz. 8**6**. spiniferum. Rátz. 86. PHYLLODISTONUM [Trematoda]. — americanum, Osborn, 76, n. gen. [Turbellaria]. Laidlaw. 53. Phylloplana. lactea. Laidlaw. 53. PLANARIA [Turbellaria]. armata. Zabusov. 112. dybowskyi. Zabusov. 112. grubii. Zabusov. 112. sibirica. Zabusov. 112. PLANOCERA [Turbellaria]. armata. Laidlaw. 49. crosslandi. Laidlaw. 53. langii. Laidlaw. 49. PROCOTYLA [Turbellaria]. ----- baicalensis. Zabusov. 112.

PROSTHIOST	OMUM [Turbellaria]. cooperi. Laidlaw. 49. elegans. Laidlaw. 49.	
	pallidum. Laidlaw. 48.	
PROSTOGONIE	uus [Trematoda]. anatinus. Markov. 67.	
	s [Turbellaria]. bedfordi. Laidlaw. 48.	
	collingwoodi. Laidlaw. 48. gamblei. Laidlaw. 49.	
<del></del>	gardineri. Laidlaw. 49. punctatus. Laidlaw. 49. (?) rubellus. Laidlaw. 48.	
<u> </u>	punctatus. Laidlaw. 49.	
	tigrinus. Laidlaw. 49.	
RMACEPHAL	US [Turbellaria]. punctatus. Zabusov. 112.	
SEMONIA [T	urbellaria].	
	penangensis. Laidlaw. 48.	
Soccocoeliu	m n. gen. [Trematoda]. Loos. 62. obesum. Loos. 62.	
SOROCELIS (	Furbellaria]. fungiformia Zabusov. 112.	
	fungiformis. Zabusov. 112. garjajewi. Zubusov. 112. leucocephala. Zabusov. 112.	
	leucocephala. Zabusov. 112. lineata. Zabusov. 112.	
STYLOCHUS	[Turbellaria]. zanzibaricus. Laidlaw. 53.	
TAENIA [Co		
	dahurica. Linstow, v. 60.	
	hominis. Linstow, v. 60. hoplites. Linstow, v. 60. laticollis. Linstow, v. 60. naceander. Linstow, 61.	
	laticollis. Linstow, v. 60.	
	maeander. Linstow. 61.	
	polycalcaria. Linstow. 61. retracta. Linstow, v. 60.	
TEMNOCEPH/	LA [Trematoda]. tumbesiana. Wacke. 40.	
TETRARHYNO	blothuriae. Shipley. 97.	
	[Turbellaria]. plehni. Laidlaw. 49.	
THYBANOSON	14 [Cestoda]. pygargi. Kholodkovsky. 44	
1403–1431. N E M A T H E L M I N T H E S.		

# TITLES.

Augener, Hermann. Beiträge zur Kenntnis der Gephyreen nach Untersuchung der im Göttinger Zoologischen Museum befindlichen Sipunculiden und Echiuriden. Arch. Natg., Berlin, **69**, Bd. 1, 1903, (297-371, mit 5 Taf.). [1831 1807 1431 2631 2619]. 1

### Bonnet, A. v. Conte, A.

Benjamins, C. E. Anchylostmum duodenale in Semarang und Umgegend. (Holländisch) Batavia, Geneesk Tijdschr. Ned. Ind., **43**, 1903, (828–835). [1419 1431]. 2

Brown, A. A. Animal parasites. Nematodes or round worms. (Strongylus filaria, Sclerostoma syngamus.) Vict. Journ. Dep. Agric, Melbourne, 2, 1903, (72-74, 174-76). [1419 1431]. 3

Bruce, D. The nomenclature of malaria. Brit. Med. J., **1903**, 1, (15). [0403 0070 1431]. 4

Bruns, Hayo. Die Gefahr der Infektion mit Ankylostoma duodenale im Grubenbetrieb. Münchener med. Wochenschr., 50, 1903, (474–476, 693). [1403 1431]. 5

**Camerano**, Lorenzo. Gordiens nouveuux ou peu connus du Musée Zoologique de l'Académie Imp. d. Sc. de St. Péterbourg II. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (22-29). [1431]. 6

### Castellani v. Christie.

Christie, Low and Castellani. Sleeping sickness in Africa. [Filaria perstans shown not to be the cause]. Nature, London, 67, 1903, (159). [1431 1403].

Conte, A. et Bonnet, A. Sur un nématode nouveau (Angiostoma helicis n. sp.), parasite de l'appareil génital d'Ilelix aspersa Muell. Paris, C.-R. soc. biol., 55, 1903, (198–199). [1419 1431 2219 2231]. 8

**Cooke**, J. H. Filariasis amongst the Baganda. J. trop. Med., London, **1902**, (245-248). [1403]. 9

**Daday**, Jenő. Mikroskopische Süsswasserthiere aus Turkestan. (Hung.) Math. Termt. Ért., Budapest, **21**, 1903, (324-357). [0027 *ei* 1431 2631 3031]. 10

Dehnel, Jan. Contribution à la casuistique médico-légale. (Polonais) Medyc., Warszawa, **31**, 1903, (805–809). [1403]. 11

Elliott, J. H. A preliminary note on the occurrence of a filaria in the crow [Corous]. Wood's Holl, Mass., Mar.

<sup>§</sup> Also described in N 2, i, No. 12590.

Biol. Lab. Bull., **4**, 1903, (64-65). [1419 1431 5831]. 12

**Preyssinge**, L. et **Neveu-Lemaire**, M. Rôle des moustiques dans la propagation de la filariose et de la fièvre jaune. Bul. sci. pharm., Paris, **3**, 1901, (81-92, av. fig.). [1419 1431 4210 4231].

Fülleborn. Anguillula intestinalis. Münchener med. Wochenschr., 50, 1903, (39-40). [1431]. 14

**Galli-Valerio**, Bruno. Notes de parasitologie. Centralbl. Bakt., Jena, Abt. 1, **35**, Originale, 1903, (81-91). [0219 0419 0431 1219 1231 1419 1431 4219]. 15

Sur un cas d'appendicite avec Ozyuris rermieularis L. et Trichocephalus trichiurus L. Centralbl. Bakt., Jena, Abt. 1, **35**, Originale, 1903. (350-355). [1403 1431]. 16

Goldschmidt, Richard. Histologische Untersuchungen an Nematoden. I. Die Sinnesorgane von Ascaris lumbricoides L. und A. megalocephala Cloqu. Zool. Jahrb., Jena, Abt. f. Anat., 18, 1903, (1-57, mit 5 Taf.). [1407 1431]. 17

Golovin, J. Ueber die phagocitären Zellen von *Heterakis perspicillum* Rud. (Russ.) Kazaní, Zap. Univ., **70**, XII, 1903, (119-132, Taf. 1). [1411 1431]. 18

Graybill, H. W. Some points on the structure of the Acanthocephala. [With bibliography]. Lincoln, Stud. Zool. Lab., Univ. Nebr., No. 49, 1902, (191– 200, 1 pl.). [1407 1431]. 19

Haldane. Anæmia caused by Ankylostomum duodenale in Cornwall. Nature, London, 67, 1903, (88). [1419 1431]. 20

Johne, A[lb.]. Der Trichinenschauer. Leitfaden für den Unterricht in der Trichinenschau und für die mit der Kontrolle und Nachprüfung der Trichinenschauer beauftragten Veterinärund Medizinalbeamten. 8. umgearb. Aufl. Berlin (P. Parey), 1903, (XII +-[1403 183). 23 cm. Geb. 3,50 M 1431]. 21

Jungner, J. R. Fritfliege und Stockälchen. Vorläuf. Mitteilung. Zs. Pflanzenkrankh., Stuttgart, **13**, 1903, (45-46). [1431]. 21a

Konstantinovič, M. Die Wurzelnematode nach persönlichen Beobachtungen von M. Konstantinovič, Besitzer eines Obstgartens in Moskau. (Russ.) St. Peterburg, 1903, (23, mit 8 figs.). [1419]. 22

Kowalewalci, Mieczysław. Etudes helminthologiques. VII. (Polonais) Kraków, Rozpr. Akad., B, 43, 1903, (194–218, av. 3 pls.); Bull. Intern. Acad., 1903, (517–519, av. 3 pls.) [1203 1231 1403 1431]. 23

Kulwieć, Kazimierz. [Parasites des insectes]. (Polonais) Wszechświat, Warszawa, 22, 1903, (213–217, 246– 249). [4619 4819 1419 3019]. 24

Linstow, [Otto] von. Helminthologische Beobachtungen. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (526-531). [1203 1231 1431]. 25

<u>— Neue Helmintheu. Cen</u>tralbl. Bakt., Jena, Abt. 1, **35**, Originale, 1903, (352–357). [1231 1431]. **2**6

Bericht über die wissenschaftlichen Leistungen in der Naturgeschichte der Helminthen im Jahre 1897, 1898, 1899. Arch. Natg., Berlin, **62**, Bd. 2, H. 3, 1896 [1903], (1-128). [1203 1403]. 27

Parasiten, meistens Helminthen, aus Siam. Arch. mikr. Anat., Bonn, **62**, 1903, (108–121, mit 1 Taf.). [1427 ee 1431 1227 ee 1231 0427 ee 0431]. 28

Entozoa des Zoologischen Museums der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg. II. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19). [1231 1431]. 29

------ Dorylaimus atratus n. sp. Genova, Boll. Musei Zool. anat. comp., 1901, N. 109, (2, con fig.). [1431]. 30

Long-Preusse. Praktische Anleitung zur Trichinenschau. 4. Aufl. bearb. v. M. Preusse. Berlin (R. Schoetz), 1903, (IV + 65). 22 cm. 2,50 M. [1403 1431]. 31

Looss, A[rthur]. Weiteres über die Einwanderung der Ankylostomen von der Haut aus. Centralbl. Bakt., Jena, Abt. 1, **33**, Originale, 1903, (330–343). [1419 1431]. 32

Low, (I. C. Filaria perstans. Brit. Med. J., London, **1903**, 1, (722–724, figs. 1 and 2). [1431]. 33

- v. Christie.

158

Manson, P. The life-span of Filaria medinensis. Brit. Med. J., London, 1903, 2, (10). [1419 1431]. 34

159

Martini, E. Zur Geschichte der intrauterinen Entwicklung des Cucullanus elegans Zed. Zool. Anz., Leipzig, 28, 1903, (531-532). [1415 1431]. 35

Ueber Furchung und Gastrulation bei Cucullanus elegans Zed. Zs. wiss. Zool., Leipzig, 74, 1903, (501– 556, mit 3 Taf.). [1415 1431]. 36

Marval, L. de. Les échinorhynques. Arch. Sci. Phys., Genève, (sér. 4), 14, 1902, (181–183). [1407 1431]. 37

Matthes, M[ax]. Trichinosis. [In: Lehrbuch der Inneren Medizin, hrsg. v. J. v. Mering. 2. umgearb. Aufl.] Jena, 1903, (497-501). [1403 1431]. 38

Meer, J. F. Die Verbreitung der Anchylostomiasis im Archipel. (Holländisch) Batavia, Geneesk. Tijdschr. Ned. Ind., 43, 1903, (813-817). [1419 1431]. 39

Merkel, G[ottl.]. Behandlung der Trichinenkrankheit. [In: Handbuch der Therapie innerer Krankheiten, Bd 1.] Jena, 1902, (554–569). [1403 1431]. 40

Metcalf, Haven. Cultural studies of a Nematode [*Rhabditis breviepina*] with plant decay. Lincoln, Stud. Zool. Lab., Univ. Neb., No. 54, 1903, (35-48, with 1 pl.). Separate. 23.3 c.m. [1431]. 41

Mohrsechi, S. A. Verzeichnis der Insecten und anderer wirbelloser Thiere, welche im europäischen Russland und in Kaukasus an Weinreben gefunden wurden. (Russ.) Ausg d. Minist. d. Landwirthschaft u. d. Staatsdomänen. St. Peterburg, 1903, (39). 23 cm. [1419 2419 2427]. 42

Montgomery, Thomas H[arrison]. jun. The identity of the Gordiacean species, *Chordodes morgani* and *C. puerilis.* Philadelphia, Pa., Proc. Acad. Nat. Sci., **53**, 1901, (289-292, with pl.); [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., **1301**, 1002, (289-292, with pl.). [1431].

The adult organisation of Paragordius varius (Leidy). Zool. Jahrb., Jena, Abt. f. Anat., 18, 1903, (387-474, mit 7 Taf.). [1431 1407] 44

Müller, Hermann. Beitrag zur Embryonalentwickelung der Ascaris megalocephala. Zoologica, Stuttgart, H. 41 (= Bd 17, Lfg 3. 4), 1903, (1-30, mit 5 Taf.). [1415 1431]. 45

Neuhaus, Carl. Die postembryonale Entwickelung der Rhabditie nigrozenosa. Jenaische Zs. Natw., 37, 1903, (653– 690, mit 3 Taf.). [1415 1431]. 46

Neveu-Lemaire, M. r. Freyssinge, L.

olt. Das Schmarotzerleben des bewaffneten Palissadenwurmes-Strongylus armatus-- und seine Beziehungen zur Kolik der Pferde. D. landw. Tierzucht, Leipzig, 5, 1901, (31-33). [1431 1419]. 47

Ossipow, N. Ueber histologische Veränderungen in Spätstadien der Muskeltrichinose. Beitr. path. Anat., Jena, 34, 1903, (253-268, mit 2 Taf.). [1431]. 48

Parona, C. e Stossich, M. Oesophagostomum tuberculatum n. sp. parassita dei Dasypus. Genova, Boll. Musei Zool. anat. comp., **1901**, N. 110, (3, con fig.). [1431]. 49

**Pieri**, G. Sur le mode de transmission de l'Ankylostoma duodenale. Arch. ital. biol., Paris, Torino, **37**, 1902, (269–273); Roma, Rend. Acc. Lincei, (Ser. 5), **11**, (1° sem.), 1902, (217–220). [1419 1431]. 50

Kurze Erwiderung auf Herrn Dr. Looss' Mitteilung: Weiteres über die Einwanderung der Ankylostomen von der Haut aus. Uebersetzt von M. K. ('entralbl. Bakt., Jena. Abt. 1, 34, Originale, 1903, (531-535). [1431 1419]. 51

Powell, A. A species of blood Filaria, probably hitherto undescribed. Brit. Med. J., London, **1903**, 1, (1145). [1419 1427 ef 1431]. 52

Primrose, A. Filariasis in man cured by removal of the adult worms in an operation for lymph scrotum. Brit. Med. J., London, **1903**, 2, (1262-1265, 5 figs.). [1403 1431]. 53

Ritter, Adolf v. Weinland, Ernst.

**Ritzema Bos**, [Jan]. Drei bis jetzt unbekannte, von *Tylenchus devastatriz* verursachte Pflanzenkrankheiten. Zs. Pflanzenkrankh., Stuttgart, **13**, 1903, (193–198). [1419 1431]. 54

Risso, Agostino. La fauna elmintologica dei rettili nella provincia di Catania. Arch. parasit., Paris, **6**, 1902, (26-41). [1227 dh 1231 1427 dh 1431 5619]. 55 Rouville, Etienne de. Revision des Nématodes libres, marins, de la région de Cette. Paris, C.-R. Acad. sci., 137, 1903, (1002-1003). [1427 1431]. 56

**Sambon**, L. W. Remarks on the lifehistory of *Filaria bancrofti* and *Filaria immitis*. Lancet, London, **163**, 1902, (422-426). [1419 1431]. 57

**Stripley**, A. E. On the ento-parasites collected by the "Skeat Expedition" to Lower Siam and the Malay Peninsula in the years 1899-1900. London, Proc. Zool. Soc., **1903**, 2, (145-156, pl. XVI). [0419 0427 eg 1431 1227 ef 1427 eg ee 1231]. 58.

**Skorikov**, A. S. Zur Parasitologie der Störe. (Russ.) Věst. rybopromyšl., St. Peterburg, **1903**, 18, (63–82). [0819 1219 1419 5419]. 59

**Sticker**, Anton. Untersuchungen über den Bau und die Lebensgeschichte des *Scierostomum armatum*. Arch. Thierheilk., Berlin, **27**, 1901, (187-232, mit 1 Taf.). [1431 1407]. 60

**Stiles**, Ch. Wardell. Report upon the prevalence and geographic distribution of hookworm disease (uuciniariasis or anchylostomiasis) in the United States. (Second edition). Washington, D.C., Treasury Dept., Pub. Hith. Mar. Hosp. Serv. Hyg. Lab. Bull. No. **10**, 1903, (122). 23 cm. [1427 gf hh 1431]. 61

Stossich, M. r. Parona, C.

Tenholt, [August]. Die Ankylostomiasis-Frage. Zusammenfassende Uebersicht. Centralbl. Bakt., Jena, Abt. 1, 34, Referate, 1903, (1-10, 33-50). [1431]. 62

Die Gefahr der Infektion mit Ankylostoma duodenale im Grubenbetrieb. Münchener med. Wochenschr., 50, 1903, (563-564). [1431]. 63

Türk, Fritz. Ueber einige im Golfe von Neapel frei lebende Nematoden. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (281-348, mit 2 Taf.). [1431 1407]. 64

**Vysotakij**, N. Filaria papillosa auf der serösen Hülle der Leber und Pigmentablagerungen auf der serösen Hülle des Darmes beim Pferde. (Russ.) Arch. veterin. nauk, St. Peterburg, **1902**, 12, (1046–1047). [1419 1431 6019]. 65 Weinland, Ernst. Ueber ausgepresste Extrakte von Ascaris lumbricoides und ihre [gährende] Wirkung. Zs. Biol., München, 43, 1902, (86-111). [1411 1431]. 66

Ueber die von Ascaris lumbricoides ausgeschiedene Fettsäure. Zs. Biol., München, **45**, 1903, (113–116). [1431 1411]. 67

und Ritter, Adolf. Ueber die Bildung von Glykogen aus Kohlehydraten bei *Ascaris*. Zs. Biol., München, **43**, 1902, (490-502). [1411 1431]. 68

Whittles, D. J. A case of general infection by a Nematode, accompanied by hypertrophic gingivitis. Lancet, London, 164, 1903, (1435-1437, 6 figs.); 165, 1903, (57). [1403]. 69

Wilfarth, H. und Wimmer, G. (Ref.) Untersuchungen über die Wirkung der Nematoden auf Ertrag und Zusammensetzung der Zuckerrüben. Berlin, Zs. Ver. D. Zuckerind., 53, 1903, Techn. Tl, (1-41). [1419]. 70

Wimmer, G. v. Wilfarth, H.

**Zschokke**, F[riedrich]. Fauna helvetica. Heft 8. Parasitische Würmer. Bibliographie der schweizerischen Landeskunde. Fascikel IV 6. Bern, (K. J. Wyss.) 1902, (IV + XII + 39). Svo. [0030 1227 di 1231 1427 di 1431]. 71

# 1403 COMPREHENSIVE AND GENERAL WORKS.

### GENERAL.

Kowalewski, Mieczysław. Études helmintologiques. VII (Polonais) Kraków, Rozpr. Akad., B, 43, 1903, (194–218, av. 3 pls.); Bull. Intern. Acad., 1903, (517– 519, av. 3 figs.).

Linstow, [Otto] von. Bericht über die wissenschaftlichen Leistungen in der Naturgeschichte der Helminthen im Jahre 1897, 1898, 1899. Arch. Natg., Berlin, **62**, Bd **2**, H. **3**, 1896, [1903], (1-128).

### MEDICAL.

Bruns, Hayo. Die Gefahr der Infektion mit Ankylostoma duodenale im Grubenbetrieb. Münchener med. Wochenschr., 50, 1903, (474–476, 693). Christie, Low and Castellani. Sleeping sickness in Africa. [Filaria perstans shown not to be the cause.] Nature, London, 67, 1903, (159).

Cooke, J. H. Filariasis amongst the Baganda. J. trop. Med., London, 1902, (245-248).

Dennel, J. Contribution à la casuistique médico-légale. (Polonais) Medyc., Warszawa, **31**, 1903, (805-809).

Galli-Valerio, Bruno. Sur un cas d'appendicite avec Oxyuris termicularis L. et Trichocephalus trichiurus L. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (350-355).

Johne, A[lb]. Der Trichinenschauer. Leitfaden für den Unterricht in der Trichinenschau und für die mit der Kontrolle und Nachprüfung der Trichinenschauer beauftragten Veterinär- und Medizinalbeamten. 8. ungearb. Aufl. Berlin (P. Parey), 1903, (XII + 183). 23 cm. Geb. 3,50 M.

Long-Preusse. Praktische Anleitung zur Trichinenschau. 4. Aufl. bearb. v. M. Preusse. Berlin (R. Schoetz), 1903, (IV + 65). 22 cm. 2,50 M.

Matthes, M[ax]. Trichinosis. [In: Lehrbuch der inneren Medizin, hrsg. v. J. v. Mering. 2. umgearb. Aufl.] Jena, 1903, (497-501).

**Merkel**, G[ottl.]. Behandlung der Trichinenkrankheit. [In: Handbuch der Therapie innerer Krankheiten, Bd 1.] Jena, 1902, (554-569).

**Primrose**, A. Filariasis in man cured by removal of the adult worms in an operation for lymph scrotum. Brit. Med. J., London, **1903**, 2, (1262-1265, **5** figs.).

Whittles, D. J. A case of general infection by a Nematode, accompanied by hypertrophic gingivitis. Lancet, London, 164, 1903, (1435-1437, 6 figs.); 165, 1903, (57).

### 1407 STRUCTURE.

### GENERAL.

Graybill, H. W. Some points on the structure of the Acanthocephala. [With hibliography.] Lincoln, Stud. Zool. Lab., Univ. Nebr., No. 49, 1902, (191-200, 1 pl.).

(N 2-9053)

Marval, L. de. Les échinorhynques. Arch. Sci. Phys., Genève, (sér. 4), 14, 1902, (181-183).

Montgomery, Tho[ma]s H., jun. The adult organisation of *Paragordius varius* (Leidy). Zool. Jahrb., Jena, Abt. f. Anat., **18**, 1903, (387–474, mit 7 Taf.).

Sticker, Anton. Untersuchungen über den Bau und die Lebensgeschichte des Sclerostomum armatum. Arch. Thierheilk., Berlin, 27, 1901, (187-232, mit 1 Taf.).

**Türk**, Fritz. Ueber einige im Golfe von Neapel frei lebende Nematoden. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (281-348, mit 2 Taf.). [1431].

### SENSE OBGANS.

Goldschmidt, Richard. Histologische Untersuchungen an Nematoden. I. Die Sinnesorgane von Ascaris lumbricoides L. und A. megalocephala Cloqu. Zool. Jahrb., Jena, Abt. f. Anat., **18**, 1903, (1-57, mit 5 Taf.).

### 1411 PHYSIOLOGY.

FUNCTION OF SPECIAL STRUCTURES.

Golovin, J. Ueber die phagocitären Zellen von *Hetcrakis perspicillum* Rud. (Russ.) Kazanĭ, Zap. Univ., **70**, XII, 1903, (119–132, Taf. I).

#### CHEMICAL PHYSIOLOGY.

Weinland, Ernst. Ueber ausgepressto Extrakte von Ascaris lumbricoides und ihre [gährende] Wirkung. Zs. Biol., München, 43, 1902, (86-111).

Ueber die von Ascaris lumbricoides ausgeschiedene Fettsäure. l.c. 45, 1903, (113-116).

und Ritter, Adolf. Ueber die Bildung von Glykogen aus Kohlehydraten bei Ascaris. l.c. 43, 1902, (490-502).

### 1415 DEVELOPMENT.

#### EMBRYOLOGY.

Martini, E. Zur Geschichte der intrauterinen Entwicklung des Cucullanus elegans Zed. Zool. Anz., Leipzig, 26, 1903, (531-532). Martini, E. Ueber Furchung und Gastrulation bei *Cucullanus elegans* Zed. Zs. wiss. Zool., Leipzig, 74, 1903, (501-556, mit 3 Taf.).

Müller, Hermann. Beitrag zur Embryonalentwickelung der Ascaris megaloosphala. Zoologica, Stuttgart, H. 41 (= Bd 17, Lfg 3. 4), 1903, (1-30, mit 5 Taf.).

### POSTEMBRYONIC ONTOGENY.

Neuhaus, Carl. Die postembryonale Entwickelung der *Rhabdütis nigrovenosa*. Jenaische Zs. Natw., **37**, 1903, (653–690, mit 3 Taf.).

# 1419 ETHOLOGY.

### GENERAL.

Manson, P. The life-span of Filaria medinensis. Brit. Med. J., London, 1903, 2, (10).

### HABITS.

Konstantinovič, M. Die Wurzelnematode nach persönlichen Beobachtungen von M. Konstantinovič, Besitzer eines Obstgartens in Moskau. (Russ.) St. Peterburg, 1903, (23, mit 8 Fig.). 24 cm.

Mokrischij, S. A. Verzeichnis der Insecten und anderer wirbelloser Thiere, welche im europäischen Russland und im Kaukasus au Weinreben gefunden wurden. (Russ.) Ausg. d. Minist. d. Landwirthsch. u. d. Staatsdom., St. Peterburg, 1903, (39). 23 cm.

### PARASITISM.

Benjamins, C. E. . . . Anchylostomum duodenale in Semarang und Umgegend. (Holländisch) Batavia, Geneesk. Tijdschr. Ned. Ind., **43**, 1903, (828–835).

Brown, A. A. Animal parasites, Nematodes or round worms. (Strongylus filaria, Sclerostoma syngamus). Vict. Journ. Dep. Agric., Melbourne, 2, 1903, (72-74, 174-176).

Conte, A. et Bonnet, A. Sur un nématode nouveau (Angiostoma helicis n. sp.), parasite de l'appareil génital d'Helix aspersa Muell. Paris, C.-R. soc. biol., 55, 1903, (198-199).

Elliott, J. H. A preliminary note on the occurrence of a filaria in the crow [Corrus]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (64-65).

**Freyssinge**, L. et **Neveu-Lemaire**, M. Rôle des moustiques dans la propagation de la filariose et de la fièvre janne. Bul. sci. pharm., Paris, **3**, 1901, (81-92, av. fig.).

Galli-Valerio, Bruno. Notes de parasitologie. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (81-91).

Haldane. Anaemia caused by Ankylostomum duodenale in Cornwall. Nature, London, 67, 1903, (88).

Kulwićc, K. Parasites des insectes. (Polonais) Wszechświat, Warszawa, 22, 1903, (213-217, 246-249).

Looss, A[rthur]. Weiteres über die Einwanderung der Ankylostomen von der Haut aus. Centralbl. Bakt., Jena, Abt. 1, 33, Originale, 1903, (330-343).

Meer, J. F. van der. Anchylostomiasis im[malayischen] Archipel. (Holländisch) Batavia, Ceneesk. Tijdschr. Ned. Ind., 43, 1903, (813-817).

01t. Das Schmarotzerleben des bewaffneten Palissadenwurmes — Strongylus armatus — und seine Beziehungen zur Kolik der Pferde. D. landw. Tierzucht, Leipzig, 5, 1901, (31-33).

Pierl, G. Sur le mode de transmission de l'Ankylostoma duodenale. Arch. ital. biol., Paris, Torino, **37**, 1902, (269-273); Roma, Rend. Acc. Lincei, (Ser. 5), **11**, (1° sem.), 1902, (217-220).

Kurze Erwiderung auf Herrn Dr. Looss' Mitteilung: Weiteres über die Einwanderung der Ankylostomen von der Haut aus. Uebersetzt von M. K. Centralbl. Bakt., Jena, Abt. 1, **34**, Originale, 1903, (531-535).

**Powell**, A. A species of blood *Filaria*, probably hitherto undescribed. Brit. Med. J., London, **1903**, 1, (1145).

**Sambon**, L. W. Remarks on the life-history of *Filaria bancrofti* and *Filaria immitis*. Lancet, London, **163**, 1902, (422-426).

**Brorikov**, A[leksandr] S[tepanovič]. Zur Parasitologie der Störe. (Russ.) Věst. rybopromyšl., St. Peterburg, **1903**, 18, (63-82). Vysotakij, N. Filaria papillosa suf der serösen Hülle der Leber und Pigmentablagerungen auf der serösen Hülle des Darmes beim Pferde. (Russ). Arch. veterin. nauk, St. Peterburg, **1902**, 12, (1046-1047).

### UTILITY AND HARMFULNESS.

**Bitzema Bos**, [Jan]. Drei bis jetzt unbekannte, von *Tylenchus devastatrix* verursachte Pflazzenkrankheiten. Zs. Pflanzenkrankh., Stuttgart, **13**, 1903, (193-198).

Wilfarth, H. und Wimmer, G. (Ref.) Untersuchungen über die Wirkung der Nematoden auf Ertrag und Zusammensetzung der Zuckerrüben. Berlin, Zs. Ver. D. Zuckerind., 53, 1903, Techn. Tl, (1-41).

### 1427 GEOGRAPHICAL DISTRIBUTION.

d EUROPE.

df FRANCE.

Rouville, Etienne de. Revision des Nématodes libres, marins, de la région de Cette. Paris, C.-R. Acad. sci., 137, 1903, (1002-1003).

### dh ITALY.

**Rizzo**, Agostino. La fauna elmintologica dei rettili nella provincia di Catania. Arch. parasit., Paris, **6**, 1902, (26-41).

di SWITZERLAND.

**Zschokke**, F[riedrich]. Fauna helvetica. Heft 8: Parasitische Würmer.— Bibliographie der schweizerischen Landeskunde. Fascikel IV 6. Bern (K. J. Wyss), 1902, (IV + XII + 39). 8vo.

e A811.

ee Siam.

Linstow, [Otto] von. Parasiten, meistens Helminthen, aus Siam. Arch. mikr. Anat., Bonn, 62, 1903, (108-121, mit 1 Taf.).

(N 2-9053)

**Shipley**, A. E. On the ento-parasites collected by the "Skeat Expedition" to Lower Siam and the Malay Peninsula in the years 1899–1900. London, Proc. Zool. Soc., **1903**, 2, (145–156, pl. XVI).

ef BRITISH INDIA.

**Powell**, A. A species of blood *Filaria*, • probably hitherto undescribed. Brit. Med. J., London, **1903**, 1, (1145).

### eg MALAY PENINSULA.

Shipley, A. E. On the ento-parasites collected by the "Skeat Expedition" to Lower Siam and the Malay Peninsula in the years 1899–1900. London, Proc. Zool. Soc., 1903, 2, (145–156, pl. XVI).

### g NORTH AMERICA.

gf UNITED STATES.

Stiles, Ch. Wardell. Report upon the prevalence and geographic distribution of hookworm disease (uncinariasis or anchylostomiasis) in the United States. (Second edition.) Washington, D.C., Treasury Dept., Pub. Hith. Mar. Hosp. Serv. Hyg. Lab. Bull., No. 10, 1903, (122). 23 cm.

# 1431 TAXONOMY AND SYSTEMATIC.

### GENERAL.

Jungner, J. R. Fritfliege und Stockälchen. Vorläuf. Mitteilung. Zs. Pflanzenkrankh., Stuttgart, **13**, 1903, (45-46

**Rizzo**, A. La fauna elmintologica dei rettili nella provincia di Catania. Arch. parasit., Paris, **6**, 1902, (26–41).

**Zschokke**, F. Fauna helvetica Heft 8: Parasitische Würmer. Biblio graphie der schweizerische Landes. kunde. Fasc. IV, 6. Bern (K. J. Wyss), 1902, (IV + XII + 39). 8vo.

### NEMATODA.

### GENERAL.

**Bruce**, D. Nomenclature of malaria; a suggestion. Lancet, London, **1903**, 1, (131-132); Brit. Med. J., London, **1903**, 1, (15).

M 2

Freyssinge, L. et Neveu-Lemaire, M. Rôle des moustiques dans la propagation de la filariose et de la fièvre jaune. Bul. sci. pharm., Paris, **3**, 1901, (81-92, av. fg.).

Linstow, O. v. Entozoa des zoologischen Museums der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg. II. St. Peterburg, Ann. Mas. zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19).

**Primrose**, A. Filariasis in man cured by removal of the adult worms in an operation for lymph scrotum. Brit. Med. J., London, **1903**, 2, (1262-1265, 5'figs.).

**Bouville**, E. de. Revision des Nématodes libres, marins, de la région de Cette. Paris, C.-R. Acad. sci., **137**, 1903, (1002-1003).

Stiles, Ch. W. Report upon the prevalence and geographic distribution of hookworm disease (uncinariasis or anchylostomiasis) in the United States. (Second edition). Washington, D.C., Treasury Dept., Pub. Hlth. Mar. Hosp. Serv. Hyg. Lab. Bull. No. 10, 1903, (122). 23 cm.

**Türk**, F. Ueber einige im Golfe von Neapel frei lebende Nematoden. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (281– 348, mit 2 Taf.).

### SPECIAL.

Angiostoma helicis n. sp. parasite de l'appareil génital d'*lleliz aspersa.* **Conte, A. et Bonnet, A.** Paris, C.-R. soc. biol., **55**, 1903, (198-199).

**Linstow**, O. von. Arch. mikr. Anat., Bonn, **62**, 1903, (108–121, mit 1 Taf.).

Anguillula intestinalis. Fülleborn. Münchener med. Wochenschr., 50, 1903, (39-40).

Ankylostoma, Anchylostomiasis im [malayischen] Archipel. (Holländisch) Meer, J. F. van der. Batavia, Geneesk Tijdschr. Ned. Ind., **43**, 1903, (813–817).

Einwanderung von der Haut aus. Looss, A. Centralbl. Bakt., Jena, Abt. 1, 33, Originale, 1903, (330-343).

Haut aus. Uebersetzt von M. K. Pieri, G. l.c. 34, (531-535). Ankylostoma duodenale, in Semarang und Umgegend. (Holländisch) Benjamins, C. E. Batavia, Geneesk. Tijdschr. Ned. Ind., 43, 1903, (828–835).

**Bruns**, H. Münchener med. Wochenschr., **50**, 1903, (474–476, 693).

mia in Cornwall. Haldane. Nature, London, 67, 1903, (158).

sur le mode de transmission. **Pieri**, G. Arch. ital. biol., Torino, **37**, 1902, (269-273); Roma, Rend. Acc. Lincei (Ser. 5), **11**, (1° sem.), 1902, (217-220).

Tenholt, [A.]. Münchener med. Wochenschr., 50, 1903, (563-564); Centralbl. Bakt., Jena, Abt. 1, 34, Referate, 1903, (1-10, 33-50).

Anticoma calveti n. sp. Rouville, E. de. Paris, C.-R. Acad. sci., 137, 1903, (1002).

Ascaris nn. spp. Siam. Linstow, [O.] von. Arch. mikr. Anat., Bonn, 62, 1903, (108–121, mit 1 Taf.).

nn. spp. Linstow, O. v. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (265–295, Taf. 17, 18, 79).

parasite de l'homme. **Dehnel**, J. Medyc., Warszawa, **31**, 1903, (805–809).

*phala* Cloqu. **Goldschmidt**, R. Zool. Zahrb., Jena, Abt. f. Anat., **18**, 1903, (1-57, mit 5 Taf.).

Extrakte und ihre [gährende] Wirkung. Weinland, E. Zs. Biol., München, 43, 1902, (86-111).

dene Fettsäure. Weinland, E. *l.c.* 45, 1903, (113–116).

Glykogen aus Kohlehydraten. Weinland, E. und Ritter, A. l.c. 43, 1902, (490-502).

megalocephala, Embryonalentwickelung. Müller, H. Zoologica, Stuttgart, H. 41 (= Bd 17, Lfg 3. 4), 1903, (1-30, mit 5 Taf.).

Cheilospirura nn. spp. Siam. Linstow, O. von. Arch. nikr. Anat., Bonn, 62, 1903, (111, 112).

# Nemathelminthes.

165

Chromodora dubiosa n. sp. Daday, J. Math. Termt. Ért., Budapest, 21, 1903, (336-337).

Cucullanus elegans, zur Geschichte der intrauterinen Entwicklung. **Martini**, E. Zool. Anz., Leipzig, **26**, 1903, (531– 532).

Gastrulation. **Martini**, E. Zs. wiss. Zool., Leipzig, **74**, 1903, (501–556, mit 3 Taf.).

Cylicolaimus jaegerskoeldi n. sp. Golfe von Neapel. **Turk**, F. Mitt. Zool. Stat. Neapel, Berlin, **16**, 1903, (334–340).

Dorylaimus atratus n. sp. Linstow, v. O. Genova, Boll. Musei zool. anat comp., 1901, N. 109, (2. con. fig.).

Filaria, parasitism in a crow [Corvus]. Elliott, J. H. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (64-65).

O. von. Arch. mikr. Anat., Bonn, **62**, 1903, (115-116, figs. 14, 15).

main probably n. sp. Bombay, in the blood of man. **Powell**, A. Brit. Med. J., London, **1903**, 1, (1145).

anthicola n. sp. Linstow, O. v. St. Petersburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19).

*bancrofti, F. immitis,* remarks on the life-history. **Sambon**, L. W. Lancet, London, **163**, 1902, (422-426).

*haemophila* n. sp. Linstow, O. von. Centralbl. Bakt., Jena Abt. 1, **35**, Originale, 1903, (352–357).

medinensis, the life-span. Manson, P. Brit. Med. J., London, 1903, 2, (10).

*parbomucronata* n. sp. Italy. **Bizzio**, A. Arch. parasit., Paris, **5**, 1902, (26-41).

perstans shown not to be the cause of sloeping sickness in Alrica. Christie, Low and Castellani. Nature, London, 67, 1903, (158).

[cause of sleeping sickness]. Low, G. C. Brit. Med. J., London, 1903, 1, (722-724, figs. 1, 2). Gephyronema n. gen., G. laeve n. sp. Linstow, von in Augener, H. Arch. Natg., Berlin, **69**, Bd 1, 1903, (359, pl. XX, fig. 29).

*Heterakis* nn. spp. Siam. Linstow, O. von. Arch. mikr. Anat., Bonn, 62, 1903, (110, figs. 5, 6).

perspicillum Rud. Golovin, J. Kazani, Zap. Univ., 70, XII, 1903, (119-132, mit 1 Taf.).

Leptosomatum papillatum n. sp. Linstow, O. v. St. Petersburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19).

Lissonema n. gen., L. rotundatum n. sp. Siam. Linstow, O. von. Arch. mikr. Anat., Bonn, **62**, 1903, (117, figs. 16-20).

Mermis nn. spp. Linstow, O. von. Centralbl. Bakt., Jena, Abt. 1, 34, Originale, 1903, (527, figs. 1-6).

Monohystera labiata n. sp. Daday, J. Math. Termt. Ért., Budapest, 21, 1903, (335-336).

Oesophagostomum tuberculatum n. sp., parassita dei Dasypus. Parona, C. e Stossich, M. (tenova, Boll. Musei zool. anat. comp., **1901**, N. 110, (3, con figg.).

Oxysoma tuberculatum n. sp. Siam. Linstow, O. von. Arch. mikr. Anat. Bonn, 62, 1903, (114, fig. 13).

Oxymris nn. spp. Siam. Linstow, O. von. *l.c.* (113, 114, figs. 12, 13).

annulata n. sp. Italy. Riszio, A. Arch. parasit., Paris, 6, 1902, (26-41).

cernicularis et Trichocephalus trichiuris, un cas d'appendicite. Genu-Valerio, B. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (350-355).

*Physaloptera* caucasica n. sp. **Linstow**, O. v. St. Peterburg, Ann. Mus. Zool. Ac. Sc., **8**, 1903, (265–294, Taf. 17, 18, 19).

Rhabditis brevispina, cultural studies Metcalf, H. Lincoln, Stud. Zool. Lab., Univ. Neb., No. 54, 1903, (35–48, with 1 pl.).

nigrozenosa, postembryonale Entwickelung. Neuhaus, C. Jenaische Zs. Natw., 37, 1903, (653-690, mit 3 Taf.). Rictularia paradoza n. sp. Linstow, O. v. St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19).

Sabatieria n. gen. Rouville, E. de. Paris, C.-R. Acad. sci., 137, 1903, (1002).

Sclerostoma syngamus. Brown, A. A. Vict. Journ. Dep. Agric., Melbourne, 2, 1903, (175–176).

geschichte. **Sticker**, A. Arch. Thierheilk., Berlin, **27**, 1901, (187-232, mit 1 Taf.).

Stronyylus? n. sp. Italy. Rizzio, A. Arch. parasit., Paris, 6, 1902, (26-41).

armatus, Schmarotzerleben und Beziehungen zur Kolik der Pferde. Olt. D. landw. Tierzucht, Leipzig, 5, 1901, (31-33).

catanensis n. sp. Italy. **Riszio**, A. Arch. parasit., Paris, **6**, 1902, (26-41).

filaria. Brown, A. A. Vict. Journ. Dep. Agric., Melbourne, 2, 1903, (73-74).

. Thoracostoma nn. spp. Golf von Neapel: Turk. F. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (284-330).

Trichina spiralis. Johne, A. Der Trichinenschauer. Berlin, 1903, (XII+ 183).

Praktische Anleitung zur Trichinenschau. 4. Aufl. bearb. v. M. Preusse Berlin (R. Schoetz), 1903, (IV + 65).

histologische Veränderungen in Spätstadien. Osalpow, N. Beitr. path. Anat., Jena, 34, 1903, (253-268, mit 2 Taf.).

Trichinosis. [In: Lehrbuch der inneren Medizin, hrsg. v. J. v. Mering. 2. umgearb. Aufl.] Jena, 1903, (497-501).

[In: Handbuch der Therapie innerer Krankheiten, Bd 1.] Jena, 1902, (554– 569).

*Trichosoma* nn. spp. Pologne, Galicie. **Kowalewski**, M. Kraków, Rozpr. Akad., B, **43**, 1903, (194–218, av. 3 pls.); Bull. Intern. Acad., **1903**, (517–519, av. 3 pls.). Trichosoma hepaticum. Galli-Valerio, B. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (81-91).

<u>mingazzinii</u> n. sp. Catania. **Rizzio**, A. Arch. parasit., Paris, **6**, 1902, (26-41).

Tylenchus devastatrix, Pflanzenschädling. **Ritzema Bos**, [J.]. Zs. Pflanzenkrankh., Stuttgart, **13**, 1903, (193-198).

### NEMATOMORPHA.

### GENERAL.

**Camerano**, L. Gordiacea nouveaux ou peu connus du Musée Zoologique de l'Académie Imp. d. Sc. de St. Péterbourg II. St. Peterburg, Ann. Mus. zool. Ac. Sc.; **8**, 1903, (22-29).

### SPECIAL.

Chordodes spp. Montgomery, T. H., jun. Philadelphia, Pa., Proc. Acad. Nat. Sci., 53, 1901, (289-292, with pl.); [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, (289-292, with pl.).

**Camerano**, L. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (22-29).

Paragordius varius, adult organisation. Montgomery, T. H., jun. Zool. Jahrb., Jans, Abt. f. Anst., 18, 1903, (387-474, mit 7 Taf.).

### ACANTHOCEPHALA.

### GENERAL.

Graybill, H. W. Some points on the structure of the Acanthocephala. [With bibliography.] Lincoln, Stud. Zool. Lab., Univ. Nebr., No. 49, 1902, (191-200, 1 pl.).

Linstow, O. v. Entozoa des zoologischen Museums der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg. II. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (265-294, Taf. 17, 18, 19).

Marval, L. de. Les échinorhynques. Arch. Sci. Phys., Genève, (sér. 4), 14, 1902, (181-183). Echinorhynchus nn. spp. Siam and Malay Peninsula. Shipley, A. E. London, Proc. Zool. Soc., 1903, 2, (149– 152, pl. XVI).

Cestodicola n. sp. Linstow, O. v. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (265-294, Taf. 17, 18, 19).

# LIST OF NEW GENERA AND SPECIES.

ANGIOSTOMA [Nematoda]. ANTICOMA [Nematoda]. calveti. Rouville. 56. ASCARIS [Nematoda]. centridermichthyos. Linstow. 29. clupeae-ponticae. Linstow. Ź9. dipsadomorphi. Linstow. 28. euxina. Linstow. 29. infundibulicola. Linstow. 28. pallisii. Linstow. 29. septangularis. Linstow. 29. solitaria. Linstow. 28. CHEILOSPIBURA [Nematoda]. ----- ophthalmica. Linstow. 28. siamensis. Linstow. 28. CHOBDODES [Nematomorpha]. --- skorikovi. Camerano. 6. CHROMODORA [Nematoda]. ----- dubiosa. Daday. 10. CYLICOLAIMUS [Nematoda]. — jaegerskoeldi. Turk. 64. DOBYLAINUS [Nematoda]. ----- atratus. Linstow. 30. ECHINORHYNCHUS [Acanthocephala]. - bufonis. Shipley. 58. cestodicola. Linstow. 29. patani. Shipley. 58. tigrinae. Shipley. 58 xenopeltidis. Shipley. 58. FILARIA [Nematoda]. anthicola. Linstow. 29. haemophila. Linstow. 26. longicirrata. Linstow. 28. parpomucronata. Rizzio. 55. sciuri. Linstow. 28. Gephyronema, n. gen. [Nematoda]. Linstow, von. 1. laeve. Linstow, von. 1.

HETERAKIS [Nematoda].
arcularis. Linstow, von. 28.
rimula. Linstow, von. 28.
LEPTOSOMATUM [Nematoda].
papillatum. Linstow, v. 29.
Lissonema n. gen. [Nematoda]. Lin-
stow, von. 28. rotundatum. Linstow, von. 28.
MERMIS [Nematoda].
minghiling Tington you 95
nigra. Linstow, von. 25.
MONOHYSTERA [Nematoda]. ————————————————————————————————————
OESOPHAGOSTOMUM [Nematoda].
tuberculatum. Parona e
Stossich. 49.
OXYSOMA [Nematoda].
tuberculatum. Linstow, von. 28.
OXYURIS [Nematoda].
annulata. Rizzio. 55. coronata. Linstow, von. 28.
eoronata. Linstow, von. 28.
siamensis. Linstow, von. 28.
PHYSALOPTERA [Nematoda].
caucasica. Linstow, v. 29.
RICTULARIA [Nematoda].
paradoza. Linstow, v. 29.
Sabatieria n. gen. [Nematoda]. Rou- ville, de. 56.
STRONGYLUS [Nematoda].
catanensis. Rizzio. 55.
THORACOSTOMA [Nematoda].
comes. Turk. 64.
strasseni. Turk. 64.
TRICHOSOMA [Nematoda].
mingazzinii. Rizzio. 55.
parile. Kowalewski. 23.
simile. Kowalewski, 23.

1603-1631.	
CHETOGNATHA	
ROTIFERA.	
GASTROTRICHA	
KINORHYNCHA	(or
ECHINODERA).	

### TITLES.

Bryce, D. On two new species of *Philodina*. London, J. Quek. Microsc. Cl., **8**, 1903, (523-530, pl. XXVII). [1631]. 1

Collin, Ant[on]. Bericht über die Rotatorien- und Gastrotrichen-Litteratur im Jahre 1895. Arch. Natg., Berlin, 62, Bd 2, H. 3, 1896, [1903], (131-144). [1603]. 2

Dixon Nuttall, F. R. and Freeman, R. I. The Rotatorian genus *Diaschiza*: a monographic study, with description of a new species. London, J. R. Microsc. Soc., **1903**, (1-14, 129-141, pls. I-IV). [1631 1607].

Freeman, R. v. Dixon Nuttall, F. R.

Günther, R. T. On the distribution of mid-water Chætognatha in the North Atlantic during the month of November. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (334-337). [1619 1631]. 4

Hilgendorf, F. W. The Rotifera of New Zealand. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (267-271). [1631].

Jennings, H[erbert] S[pencer]. Rotatoria of the United States. 2. A monograph of the *Rattulidae*. [With bibliography.] Washington, D.C., Bull. U. S. Fish Com., 22, (1902), 1903, (273-352, with text fig. and pl.). [1627 gf 1631].

Krumbach, Thilo. Ueber die Greifhaken der Chätognathen. Eine biologische Studie. Gleichzeitig ein Beitrag zur Systematik dieser Thiergruppe. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (579-646). [1607 1631]. 7

Lo Bianco, Salvatore. Le pesche abissali eseguite da F. A. Krupp col Yacht Puritan nelle adiacenze di Capri ed in altre località del Mediterraneo. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (109-279, mit 3 Taf.). [0431 1631 2231 2631 0227 dm 0219 0231]. 8

Lucks, R. Die Floscularien. Eine naturgeschichtliche Studie. Natw. Wochenschr., Jena, 18, 1903, (589-594). [1631]. 9

Marks, K. I. and Wesché, W. Further observations on male Rotifers. London, J. Quek. Miorosc. Cl., 8, 1903, (505-512, pl. XXVI). [1619 1631]. 10

Montgomery, Thomas H[arrison], jun. On the morphology of the Rotatorian family *Flosculariidae*, [with bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (363-395, with pl.). [1607 1631]. 11

On Floscularia conklini nov. spec., with a key for the identification of the known species of the genus [with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (233-238). [1631]. 12

Piovanelli, S. Two new Bdelloida commensal in the branchial cavities of *Telphusa fluviatilis* Lmk. London, J. Quek. Microsc. Cl., 8, 1903, (521–522). [1619 1631 2619]. 13

**Bousselet**, Charles F. Liste der bis jetzt bekannt gewordenen männlichen Rädertiere. Plön, ForschBer. biol. Stat., **10**, 1903, (172–176). [1619 1631]. 14

**Skorikov**, A. S. Note sur trois espèces nouvelles de Rotateurs. (Russ.) St. Peterburg, Ann. Mus. Zool. Ac. Sc., **8**, 1903, (X1X ·XXI). [1631]. 15

**Stevens**, N. M. On the cogenesis and spermatogenesis of *Sagitta bipunctata*. Zool. Juhrb., Jena, Abt. f. Anat., **16**, 1903, (227-240, mit 2 Taf.). [1615 1631]. 16

Vallentin, R. Observations on the Plankton of Loce pool. Truro, J. R. Inst. Cornwall, **15**, 1903, (328–344). [0219 1619 2619]. 17

Volgt, Max. Eine neue Gastrotrichenspecies (Chaetonotus arguatus) aus dem Schlossparkteiche zu Plön. Plön, ForschBer. biol. Stat., **10**, 1903, (90–93). [1631 1627 dc]. 18

Wesché, W. v. Marks, K. I.

**Zernov**, S. A. Ueber das Zooplankton des Aral-Sees auf Grund der von L. S. Berg im Jahre 1900 gesammelten Materialien. (Russ.) Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., **3**, livr. III, 1903, (1-38). [0227 0427 1627 1631 2627 ea 2631]. 19

### 1603 ('OMPREHENSIVE AND GENERAL WORKS.

Collin, Ant[on]. Bericht über die Rotatorien- und Gastrotrichen-Litteratur im Jahre 1895. Arch. Natg., Berlin, 62, Bd 2, H. 3, 1896, [1903], (131-144).

# 1607 STRUCTURE.

**Dixon Nuttall**, F. R. and **Freeman**, R. The Rotatorian genus *Diaschiza*: a monographic study, with description of a new species. **Krumbach**, Thilo. Ueber die Greifhaken der Chätognathen. Eine biologische Studie. Gleichzeitig ein Beitrag zur Systematik dieser Thiergruppe. Zool. Jahrb., Jena, Abt. f. Syst., **18**. 1903, (579-646).

Montgomery, Thomas H[arrison], jun. On the morphology of the Rotatorian family *Flosculariidae*, [with bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (363–395, with pl.).

### 1615 DEVELOPMENT.

**Stevens**, N. M. On the oogenesis and spermatogenesis of *Sagitta bipunctata*. Zool. Jahrb., Jena, Abt. f. Anat., **18**, 1903, (227-240, mit 2 Taf.).

### 1619 ETHOLOGY.

Günther, R. T. On the distribution of mid-water Chaetognatha in the North Atlantic during the month of November. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (334-337).

Marks, K. I. and Wesché, W. Further observations on male Rotifers. London, J. Quek. Microsc. Cl., 8, 1903, (505-512, pl. XXV).

**Piovanelli**, S. Two new Bdelloida commensal in the branchial cavities of *Telphusa fluviatilis* Lmk. *l.c.* (521– 522).

Vallentin, R. Observations on the plankton of Looe Pool. Truro, J. R. Inst. Cornwall, 15, 1903, (328-344).

### 1627 GEOGRAPHICAL DISTRIBUTION.

- d EUROPE.
- de GERMAN EMPIRE.

Voigt, Max. Eine neue Gastrotrichenspecies (*Chaetonotus arquatus*) aus dem Schlossparkteiche zu Plön. Plön, Forsch-Ber. biol. Stat., **10**, 1903, (90-93).

c ASIA.

### ea ASIATIC RUSSIA.

Zernov, S. A. Ueter das Zooplankton des Aral-Sees, auf Grund der von L. S. Berg im Jahre 1900 gesammelten Materialien. (Russ.) Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., **3**, livr. III, 1903, (1-38).

North America.

gf UNITED STATES.

Jennings, H[erbert] S[pencer]. Rotatoria of the United States. 2. A monograph of the *Ratulidae*. [With bibliography]. Washington, D.C., Bull. U. S. Fish Com., **22**, (1902), 1903, (273-352, with text fig. and pl.).

ATLANTIC.

la N. ATLANTIC,

Günther, R. T. On the distribution. of mid-water Chaetognatha in the North Atlantic during the month of November. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (334-337).

# 1631 TAXONOMY AND SYSTEMATIC.

### CHAETOGNATHA.

### GENERAL.

Krumbach, T. Ueber die Greifhaken der Chätognathen. Eine biologische Studie. Gleichzeitig ein Beitrag zur Systematik dieser Thiergruppe. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (579-646).

### SPECIAL.

Sugitta bipunctata, oogenesis and spermatogenesis. **Stevens**, N. M. Zool. Jahrb., Jena, Abt. f. Anat., **18**, 1903, (227-240, mit 2 Taf.).

Spadella nn. spp. Mediterranean. Lo Bianco, S. Mitt. zool. Stat. Nespel, Berlin, 16, 1903, (109-279).

### ROTIFERA.

### GENERAL.

A key to the Rotifera, for the amateur. The American monthly microscopical journal, Washington, D.C., 23, 1902, (89-114).

g

1

Hilgendorf, F. W. List of New Zealand Rotifera. Wellington, Trans. N. Zeal. Inst., 35, 1903, (267-271).

Jennings, H. S. Rotatoria of the United States. 2. A monograph of the *Rattulidae*. [With bibliography.] Washington, D.C., Bull. U. S. Fish. Com., 22, (1902), 1903, (273-352, with text fig. and pl.).

Lucks, R. Die Floscularien. Eine naturgeschichtliche Studie. Natw. Wochenschr., Jens, 18, 1903, (589-594).

Marks, K. I. and Wesché, W. Further observations on male Rotifers. London, J. Quek. Microsc. Cl., 8, 1903, (505-512, pl. XXVI).

Montgomery, T. H., jun. On the morphology of the Rotatorian family *Flosculariidae*, [with bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (363-395, with pl.).

Bousselet, Charles F. Liste der bis jetzt bekannt gewordenen männlichen Rädertiere. Plön, ForschBer. biol. Stat., 10, 1903, (172–176).

**Zernov**, S. A. Ueber das Zooplankton des Aral-Sees . . . (Russ.) Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., III, livr. III, 1903, (1-38).

### SPECIAL.

Anomopus n. gen., A. telphusas n. sp. Piovanelli, S. London, J. Quek. Microsc. (Cl., 8, 1903, (521-522).

Anuraea brevispina Crosse 5. Marks, K. I. and Wesché, W. l.c. (509, fig. 2).

Brachionus quadratus Rons. 3. Marks, K. I. and Wesché, W. *l.c.* (508– .509, fig. 1).

Callidina cancrophila n. sp. Italy. Piovanelli, S. l.c. (521-522).

Diaschiza, monographic study with description of *D. derbyi* n. sp. **Dixon Nuttall** and **Freeman**, R. London. J. R. Microsc. Soc., **1903**, (1-14, 129-141, pls. I-IV).

Diurella nn. spp. Jennings, H. S. Washington, D.C., Bull. U. S. Fish. Com., 22, (1902), 1903, (273-352).

Floscularia, key for the identification of higher species, F. conklini n. sp. Montgomery, T. H., jun. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (233-238). Floscularia discophora n. sp. Ladogu and Newa. **Skorikov**, A. S. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (XIX).

Mastigocerca minima n. sp. Ladoga, Newa and Wolga. **Skorikov**, A. S. *l.c.* (XXI).

Notholca triarthroides n. sp. Newa Skorikov, A. S. *l.c.* (XX).

Pedalion oxyure n. sp. Aral-See. Zernov, S. A. Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., **3**, livr. III, 1903, (1-38).

Philodina nn. spp., nn. varr. Bryce, D. London, J. Quek. Microsc. Cl., 8, 1903, (523-530, pl. XXVII).

Pterodina patina Ehr. S. Marks, K. I. and Wesché, W. *l.e.* (509-510, fig. 3).

### GASTROTRICHA.

Chaetonotus arquatus, eine neue Gastrotrichenspecies aus dem Schlossparkteiche zu Plön. Votgt, M. Plön, ForschBer. biol. Stat., **10**, 1903, (90-93).

### LIST OF NEW GENERA AND SPECIES.

- CALLIDINA [Rotifera].

------ cancrophila. Piovanelli. 13.

- DIURELLA [Rotifera]. dizon-nuttalli, Jennings. 6. weberi, Jennings. 6.

MASTIGOCERCA [Rotifera]. ——— minima. Skorikov. 15.

PEDALION [Rotifera]. ------ oxyure. Zernov. 19.

PHILODINA [Rotifera].
nemoralis. Bryce. 1.
rugosa. Bryce. 1.
rugosa var. callosa n. var Bryce. 1.
rugosa var. coriacea n. var Bryce. 1.
SPADELLA [Chaetognatha].

 musculosa.	Lo Bianco.	8.
 p <b>rofun</b> da.	Lo Bianco.	8.

# 1803-1831.

A B C HIA N N E LIDA. POLYCHAETA. MYZOSTOMARIA. OLIGOCHAETA. HIBUDINEA. GEPHYREA. PHOBONIS.

### TITLES.

Augener, Hermann. Beiträge zur Kenntnis der Gephyreen nach Untersuchung der im Göttinger zoologischen Museum befindlichen Sipunculiden und Echiuriden. Arch. Natg., Berlin, **69**, Bd 1, 1903, (297-371, mit 5 Taf.). [1831 1807 1431 2631 2619]. 1

Beddard, F. E. On a new genus and two new species of earthworms of the family *Eudrilidae* with some notes upon other African Oligochaeta. London, Proc. Zool. Soc., **1905**, 1, (210-222, figs. 35-38). [1827 f 1831]. 2

The earthworms of the Maldive and Laccadive Islands. [Gardiner's] Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, (374-375). [1827 ma 1831]. 3

Benham, W. B. On some new species of aquatic Oligocheta from New Zealand. London, Proc. Zool. Soc., 1903, 2, (202-232, pls. XXIV-XXVI). [1827 ik 1831]. 4

On a new species of earthworm from Norfolk Island. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (273-274). [1831 1827 *ik*]. 5

Auckland Islands. Notiodrilus aucklandicus. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (275-277). [1831 1827 *ik*].

Benham, W. B. On the old and some new species of earthworms belonging to the genus *Plagiochaeta*. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (277-290). [1837]. 7

Bergmann, W[illy]. Ueber das spätere Schicksal der Zwitterdrüssen von Hesione sicula. (Vorläuf. Mitt.). Zool. Anz., Leipzig, **26**, 1903, (415–417). [1807 1831]. 8

Bohn, Georges. Des localisations respiratoires chez les Annélides. Paris, C.-R. soc. biol., 55, 1903, (306-308). [1811]. 9

De l'indépendance fonctionnelle des zoïdes d'un Annélide, à propos des phénomènes de rotation présentés par les Hirudinées. Bul. Muséum, Paris, **1903**, (26–30). [1819 0219 1831]. 10

Bortolotti, C. Nota preventiva sulla funzione delle cellule cloragogene nei generi Lumbricus ed Allolobophora. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1902, (449-451). [1811 1831]. 12

Brandes, G[ustav]. Ueber ein Vorkommen von *Hirudo medicinalis* in Thüringen. Zs. Natw., Stuttgart, **76**, 1903, (143-144). [1827 de 1831]. 13

**Bretscher**, K. Beobachtungen über die Oligochaeten der Schweiz. VI, VII Folge. Rev. Suisse Zool., Genève, **10**, **1902**, (1-29, mit **4** Taf.); **11**, 1903, (21, mit 1 Taf.). [1827 di 1819 1831]. 14

Bykowaki, L. Contributions à l'anatomie des Polychètes sédentaires. Matériaux pour servir à la connaissance des néphridies et des organes chloragogènes. (Polonais) Kosmos, Lwów, 28, 1903, (67-87, av. 1 pl.). [1807 1831]. 16

**Clarke**, John M[ason]. Some Devonic worms. Albany Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (1234–1238, with pl.). [1827 gg]. 17

Collin, Ant. Verzeichniss der von Professor R. Semon bei Amboina und Thursday Island gesammelten Polychäten. Jena, Denkschr. med. (ies., 8, 1903, (739-742). [1827 ia 1831]. 18

**Coupin**, Henri. Les Géphyriens. Nature, Paris, (1<sup>er</sup> sem.), **81**, 1903, (91-92, av. fig.). [1831–1819–1815]. 19

**Cowles,** R. P. Notes on the rearing of the larvae of *Polygordius appendiculatus* and on the occurrence of the adult on the Atlantic coast of America. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (125-128). [1815 1827 gg gh 1831]. 20

**Crossland,** C. On the marine fauna of Zanzibar and British East Africa, from collections made by Cyril Crossland in the years 1901 and 1902. Polycheta. London, Proc. Zool. Soc., **1903**, 1. (169-176, pls. XVI, XVII). [1827 ff 1831]. 21

Polychæta, II. London, Proc. Zool. Soc., **1903**, 2, (129-144, pls. XIV, XV, text figs. 12-15). [1831 1827 **f**]. 22

Crossman, R. W. v. Weed, C. M.

Duserre, C. Ueber die Einwirkung der Regenwürmer auf die chemische Zusammensetzung des Bodens. Landw. Jahrb. Schweiz., Bern, **16**, 1902, (75–78). [1819 1831]. 23

Enriques, [Paolo]. Note fisiologiche sul Sipunculus nudus. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (51– 52). [1811 1831]. 24

Eury, J. Présence d'un lombric dans un œuf de poule [Allolobophora fatida]. Bul. sci. pharm., Paris, 4, 1902, (99-100). [1819 1831 5819]. 25

Fauvel, P. Les Néphridies. Réponse à M. Cosmovici. Bul. sci. France Belgique, Paris, **36**, 1902, (167–177). [1807]. 26

Forbes, H. O. Leeches and worms. Nat. Hist. Sokotra, (443). [1827 ff 1831]. 27

Franz, Friedrich. Ueber den die Blutgerinnung aufhebenden Bestandteil des medicinischen Blutegels [Herudin]. Arch. exper. Path., Leipzig, **49**, 1903, (342-366). [1831 1811]. 28

Galvagni, Egon. Histologie des genus Cicnodritus Clap. Wien, Arb. Zool. Inst. Univ., 15, 1903, (47-80, 2 Taf.) [1807 1831]. 29 Gardiner, J. S. The breaking-up of coral rock by organisms in the Tropics. London, Rep. Brit. Ass., 1902, (654– 655). [Prelim. Abstract], Nature, London, 66, 1902, (641). [1019 1819 0819]. 30

Gariaev, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal-Sees im Sommer 1900--1901. (Russ.) St. Peterburg. Trd. Troick.-Kiacht. Otd. Russ. geogr. Obšč.. V, 2, 1902, [1903], (27-48, mit 1 Karte). [0627 1227 1827 2027 2227 2627 0631 1231 1831 2031 2231 2031]. 31

Gineste. Sur la structure histologique des canaux resophagiens du Siponcle. Bordeaux, Actes soc. linn. 58, 1903, (Proc.-verb., CIV-CXVIII). [1807 1831]. 32

Quelques observations sur les vésicules énigmatiques de la cavité générale du Siponcle. Bordeaux, Actes soc.linn., 58, 1903, (Proc.-verb., CLVIII-CI.XXI, av. fig.). [1807 1831]. 33

Etude des urnes libres de la cavité générale du Sipunculus nudus. Bordeaux, Actes soc. linn., 58, 1903, (Proc.-verb., CLXXIV-CLXXXIV, av. fig.). [1807 1831]. 34

**Grönberg**, Gösta. Einige Studien über die Regeneration des vorderen Körperendes bei den Oligochaeten. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, VI Section, (16-18). [1811 1831]. 35

Herdman, W. A. The new biological station at Port Erin, being the 16th annual report of the Liverpool Marine Biology Committee. Liverpool, Proc. biol. Soc., **17**, 1903, (43). [0827 de 5427 de 2227 de 1803 2627 de 1227 de]. 36

Hérubel, Marcel A. Observations physiologiques et histologiques sur les Géphyriens (dérivés endothéliaux et granules pigmentaires). Paris, C.-R. Acad. sci., **136**, 1903, (971–973). [1807 1811 1831]. 37

Holmgren, Nils. Bemerkungen zur Schepotieff'schen Abhandlung: Untersuchungen über den feineren Bau der Borsten einiger Chätopoden und Brachiopoden. Anat. Anz., Jena, 24, 1903, (205-208). [1807]. 38 Horst, R. New species of the genus Euphrosyne from the Siboga-expedition, with a table of the species hitherto known. Leiden, Notes Mus. Jentink, 23, 1903, (213-222). [1827 eg ia 1831]. 39

Hutton, W. K. On the anatomy of the Gephyrean *Phaseclosoma teres* n. sp. London, Proc. Zool. Soc., **1903**, 1, (29– **41**, with 3 pls.). [1807 1831]. 40

Iteda, Iwaji. On the development of the sexual organs and of their products in *Phoronis*. (Japanese) Annot. Zool. Jap., Tokyo, 4, 1903, (141–153, with pl.). [1815 1831]. 41

**Isuka**, Akira. On Nereis mictodonta, Marenz. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (427-431). [1807 1831]. 42

On a new Polygordius from Misaki (P. ijimain. sp.). (Japanese) Annot. Zool. Jap., Tokyo, 4, 1903, (137– 139). [1807 1831]. 43

Japanese Palolo, Ceratocephale osaucai, n. sp. (Japanese) Tokyo, J. Coll. Sci., 17, Art. 11, 1903, (1-37, with 2 pls.). [1815 1819 1831].

Johnston, J[ohn] B[lack]. On the blood vessels, their valves, and the course of the blood in Lumbrieus. [Studies from the Zoölogical laboratory of West Virginia University No. 8, 1903]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (74-84, with text-figs.). [1807 1831]. 45

**Kesteven**, H. Leighton. A new species of *Dendrostoma*. Sydney, N.S.W., Rec. Austr. Mus., **5**, 1903, (69–73, with 1 pl. and 1 text-fig.). [1827 ie 1831]. 46

**Erceber**, Johanna. An experimental demonstration of the regeneration of the pharynx of Allolobophora from endoderm. [Reprint from Wood's Holl, Mass., Mar. Biol. Lab. Bull., 2, 1900, (105-110)] Bryn Mawr, Pa., Coll. Monogr., (Repr. Ser.), 1, 1901, (105-110). [0211 1811 1831]. 47

Lamplugh, G. W. and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., 59, 1903, (234-265). [1027 de 2027 de 2031 2231 2227 de 1827 de]. Lang, Arnold. Beiträge zu einer Trophocöltheorie. Betrachtungen und Suggestionen über die phylogenetische Ableitung der Blut- und Lymphbehälter, insbesondere der Articulaten. Mit einem einleitenden Abschnitt über die Abstammung der Anneliden. Jenaische Zs. Natw., **38**, 1903, (1-373, mit 6 Taf.). [0207 1823]. 49

Lang, W. D. On a fossiliferous bed in the Selbornian of Charmouth. Geol. Mag., London, [4], 10, 1903. (388-392, with 1 fig.). [1827 de 2027 de 2227 de 0827 de]. 50

Leschke, M. Beiträge zur Kenntniss der pelagischen Polychaetenlarven der Kieler Föhrde. Wiss. Meeresunters., Kiel, (N. F.), 7, Abt. Kiel, 1903, (111– 136, mit 2 Taf.). [1815 1827 do]. 51

Livanow, N. Untersuchungen zur Morphologie der Hirudineen. Zool. Jahrb., Jena, Abt. f. Anat., **19**, 1903, (29-90, mit **4** Taf.). [1807 1831]. 52

M'Intosh, W. C. Notes from the Gatty Marine Laboratory, St. Andrews. No. XXIV. Part iii. On the British Eunicidae. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (553-565). [1827 de 1831]. 53

Marine Laboratory, St. Andrews. XXV, i. On the Eunicidae dredged by H.M.S. "Porcupine" in 1869 and 1870. ii. On Canadian Eunicidae dredged by Dr. Whiteaves, of the Canadian Geological Survey, in 1871-1873. iii. On Norwegian Eunicidae collected by Canon Norman, D.C.L., F.R.S. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (128-166, pls. X-XIII, with 9 text-figs.). [1827 gb da 1831]. 54

Magnus, R[udolf]. Pharmakologische Untersuchungen an Sipunculus nudus. Arch. exper. Path., Leipzig, 50, 1903, (86-122). [1811 1831]. 55

Masiarski, Stanisław. Recherches cytologiques sur les organes segmentaires des vers de terre. Arch. polon. biol. méd., Lwów, 2, 1903, (1-81, av. 3 pls.); Pols. arch. biol. lek., Lwów, 2, 1903, (1-78, av. 3 pls.). [1807 1831]. 56

Michaelsen, W. Die Oligochäten Nordost-Afrikas, nach den Ausbeuten der Herren Oscar Neumann und Carlo Freiherr von Erlanger. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (435–556, mit 4 Taf.). [1827 fb 1831]. 57 Michaelsen, W. Eine neue Haplotaxiden Art und andere Oligochaeten aus dem Telezkischen See im nördlichen Altai. Hamburg, Verh natw. Ver., (3. F.), **10**, (1902), 1903, (1-7). [1831 1827 eb]. 58

Neue Oligochaeten und neue Fundorte altbekannter. Hamburg, Jahrb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (1-51, mit 1 Taf.). [1831]. 59

Oligochaeten. (Hamburgische Elb-Untersuchung.) Hamburg, Jahrb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (169-210, mit 1 Taf.). [1827 de 1831]. 60

Die geographische Verbreitung der Oligochaeten. Berlin (R. Friedländer u. S.), 1903, (VI + 186, mit 11 Kart.). 27 cm. 12 M. [1827 a 1831]. 61

Moore, J[ohn] Percy. Polychaeta from the coastal slope of Japan and from Kamchatka and Bering sea. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490, with pl.). [1827 ea ce ne 1831]. 62

The Hirudinea of Illinois. [With bibliography.] Urbana, Bull. Ill. Lab. Nat. Hist., **5**, 1901, (479-547, with pl.); [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., **1901**, 1902, (479-547, with pl.). [1827 gg 1831]. 63

Mrázek, A[lois] v. Vejdovský, F.

Norman, A. M. Notes on the Natural History of East Finmark. [Polychaeta]. Aun. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (281-286). [1827 db 1831]. 64

**Pearcey**, F. G. Notes on the Marine deposits of the Firth of Forth, and their relation to its animal life. Glasgow, Trans. Nat. Hist. Soc., **6**, 1903, (217-251, with map). [0427 de 0827 de 2227 de 2627 de 5427 de 1827 dc]. 65

Petch, T. The marine fauna of the Humber district and the Holderness coast. Hull, Trans. Sci. F. Nat. Cl., 3, 1903, (27-41). [1027 de 2227 de 2627 de 0827 de]. 66

Marine zoology at Filey. Naturalist, London, **1903**, (351). [0627 de 0827 de 1827 de 2027 de 2627 de 2227 de 5427 de 1027 de]. 67 Pierantoni, Umberto. Studii anatomici su Michaelsena macrochaeta Pierant. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (409-444, mit 2 Taf.). [1831 1807]. 68

Golfo di Napoli. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (40-42). [1831]. 69

Poche, Franz. Ueber den richtigen Namen der Gattung Phoronis Str. Wright. Zool. Anz., Leipzig, **26**, 1903, (466–467). [1831]. 70

Poll, Heinrich und Sommer, Alfred. Ueber phaeochrome Zellen im Centralnervensystem des Blutegels. Arch. Anat. Physiol., Leipzig, Physiol. Abt., 1903, (549-550). [1807 1831]. 71

Polowzow, Wera. Ueber kontraktile Fasern in einer Flimmerepithelart und ihre funktionelle Bedeutung. Arch. mikr. Anat., Bonn, **63**, 1903, (365–388, mit 1 Taf.). [1807]. **7**2

**Bosa**, D. Il cloragogo tipico degli Oligocheti. Torino, Mem. Acc. Sc., (Ser. 2), **52**, (1901–1902), 1902, (119– 144, con. tav.); [résumé], Arch. ital. biol., Torino, **37**, 1902, (454–456). [1807 1811 1831].

**Budolph**, Max. Ueber die Begattung der Regenwürmer. Aus d. Heimat, Stuttgart, **16**, 1903, (70–71). [1831 1819]. **74** 

Saint-Joseph, Baron de. Liste des Annélides polychètes trouvés par M. Adrien Dollfus à Saint-Raphaël, en juin 1902. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (202). [1831 1827 df]. 75

**Schepotieff**, Alexander. Untersuchungen über den feineren Bau der Borsten einiger Chätopoden und Brachiopoden. Zs. wiss. Zool., Leipzig, **74**, 1903, (656– 710, mit 4 Taf.). [1807 2007]. 76

**Scott**, G. W. Periods of susceptibility in the differentiation of unfertilized eggs of *Amphitrite*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **5**, 1903, (35-41, with text fig.). [1811 1831].

**Shipley**, A. E. On the Gephyrea. Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar, by W. A. Herdman. Part I, No. iii, (169–176, 1 pl.). [1827 cf. 1831]. 78 Shrubsole, O. A. On the probable source of some of the pebbles of the Triassic Pebble-beds of South Devon and of the Midland Counties. London, Q. J. Geol. Soc., 59, 1903, (311-333). [1827 de 0827 de 2027 de]. 79

**Stegel.** Die geschlechtliche Entwicklung von Haemogregarina stepanovi im Rüsselegel Placobdella catenigera. (Vorläuf. Mitt.). Arch. Protistenkunde, Jena, **2**, 1903, (339-342). [0431 0415 1831]. 80

Sommer, Alfred v. Poll, H.

**Spices**, Camille. L'appareil digestif de la sangsue (*Hirudo medicinalis*, Lin.). Recherches morphologiques, histologiques, et physiologiques. Rev. Suisse Zool., Genève, **11**, 1903, (951-952, av. 3 pls.). [1807 1831]. 81

La structure intime de l'appareil digestif de la sangsue. Verh. Schweiz. Natf. Ges., Aarau, **85**, 1902, (78-79); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (548-552). [1807 1831]. 82

**štolc**, Antonín. Versuche betreffend die Frage, ob sich auf ungeschlechtlichem Wege die durch mechanischen Eingriff oder das Milieu erworbenen Figenschaften vererben. Arch. Entw-Mech., Leipzig, **15**, 1903, (638-668). [1811 1823]. 83

Sukatschoff, Boris. Beiträge zur Entwicklungsgeschichte der Hirudineen. II. Ueber die Furchung und Bildung der embryonalen Anlagen bei Nephelis zulgaris Moqu. Tand. (Herpobdella atomaria). Zs. wiss. Zool., Leipzig, 73, 1903, (321-367, mit 3 Taf.). [1815 1831]. 84

**Todd**, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., **6**, 1903, (541– 561). [5003 5027 de 2219 2227 dc 2603 1827 de 0060 1019 1027 de 0827 de 0819 0227 de]. 85

Torrey, John Cutler. The early embryology of *Thalassema mellita* (Com). [Ph.D., Columbia University]. New York, N.Y., Ann. Acad. Sci., 14, 1903, (165-246, with pl.). [0215 1815 1831]. 86

**Treadwell**, Aaron L[ouis]. Notes on the nature of "artificial parthenogenesis" in the egg of *Polake obscura*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **3**, 1902, (235–240). [1815 1831 0211 0215]. 87

Uexitill, J. von. Studien über den Tonus. I. Der biologische Bauplan von Sipunculus undus. Ze. Biol., München, 44, 1903, (269-344, mit 1 Taf.). [1811 1831]. 88

**Vejdovnký**, F[ranz] und **Mrázek**, A[lois]. Umbildung des Cytoplasma während der Befruchtung und Zellteilung. Nach den Untersuchungen am *Rhynchelmis*-Eie. Mit einer Vorbemerkung von F. Vejdovský. Arch. mikr. Anat., Boun., **62**, 1903, (431-579, mit 6 Taf.). [1815 1831]. 89

### Walker, J. F. r. Lamplugh, G. W.

Ward, Henry B[aldwin]. Report of the zoologist. Notes on the leeches of Nebraska. [With bibliography.] [Reprinted from the Report of the State Board of Agriculture for 1901]. Lincoln, Stud. Zool. Lab., Univ. Nebr. No. 51, 1002, (229-242, with pl.). Separate. 23.5 cm. [1827 gi 1831]. 90

**Watson**, A. T. Observations on the habits of the *Onuphidae* (Polychæta) and on the internal structures with which they fortify their homes. Liverpool, Trans. biol. Soc., **17**, 1903, (303-318, with 1 pl.). [1807 1819 1831]. 91

Weed, ('. M. and Crossman, R. W. A laboratory guide for beginners in Zoology. London (Heath & Co.), 1903, (xxiv + 105). [Review], Nature, London, 68, 1903, (319). [0030 0803 0807 1803 0403]. 92

### 1803 COMPREHENSIVE AND GENERAL WORKS.

Herdman, W. A. [Vermes] In: The new biological station at Port Erin, being the 16th annual report of the Liverpool Marine Biology Committee. Liverpool, Proc. biol. Soc., 17, 1903, (43).

Weed, C. M. and Grossman, R. W. A laboratory guide for beginners in Zoology. London (Heath & Co.), 1903, (xxiv + 105). [Review], Nature. London, 63, 1903, (319).

# 1807 STRUCTURE.

### GENERAL.

Augener, Hermann. Beiträge zur Kenntnis der Gephyreen nach Untersuchung der im Göttinger zoologischen Museum befindlichen Sipunculiden und Echiuriden. Arch. Natg., Berlin, **69**, Bd 1, 1903, (297-371, mit 5 Taf.)

Beddard, F. E. [On a (?) new species of *Pareudrilus*]. London, Proc. Zool. Soc., **1903**, 1, (216-219).

Bykowski, L. Contributions à l'anatomie des Polychètes sédentaires; matériaux pour servir à la connaissance des néphridies et des organes chloragogènes. (Polonais) Kosmos, Luxów, 28, 1903, (67-87, av. 1 pl.).

Fauvel, P. Les Néphridies. Réponse à M. Cosmovici. Bul. sci. France, Belgique, Paris, **36**, 1902, (167-177).

**Hutton**, W. K. On the anatomy of the Gephyrean *Phaseolosoma teres* n. sp. London, Proc. Zool. Soc., **1903**, 1, (29-41, with 3 pls.).

Isuka, Akira. . . Polygordius ijimai n. sp., described. Annot. Zool. Jap., Tokyo, 4, 1903, (137-139).

Marenz. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (427-431).

Livenow, N. Untersuchungen zur Morphologie der Hirudineen. Zool. Jahrb., Jena, Abt. f. Anat., **19**, 1903, (29-90, mit 4 Taf.).

Pierantoni, Umberto. Studii anatomici su Michaelsena macrochaeta Pierant. Mitt. 2001. Stat. Neapel, Berlin, 16, 1903, (409-444, mit 2 Taf.).

**Watson**, A. T. Observations on the habits of the *Onuplidae* (Polychaeta) and on the internal structures with which they fortify their homes. Liverpool, Trans. biol. Soc., **17**, 1903, (303-318, with 1 pl.).

### TEGUMENT.

Galvagni, E. Histologie des Genus Ctenodrilus Clap. Wien, Arb. Zool. Inst. Univ., 15, 1903, (47-80, 2 Taf.).

Holmgren, Nils. Bemerkungen zur Schepotieff'schen Abhandlung: Untersuchungen über den feineren Bau der Borsten einiger Chätopoden und Brachiopoden. Anat. Anz., Jena, 24, 1903, (205-208).

**Polowzow**, Wera. Ueber kontraktile Fasern in einer Flimmerepithelart und ihre funktionnelle Bedeutung. Arch. mikr. Anat., Bonn, **63**, 1903, (365–388, mit 1 Taf.).

**Schepotieff**, Alexander. Untersuchungen über den feineren Bau der Borsten einiger Chätopoden und Brachiopoden. Zs. wiss. Zool., Leipzig, **74**, 1903, (650-710, mit 4 Taf.).

### NERVOUS SYSTEM.

**Poll**, Heinrich und **Sommer**, Alfred. Ueber phaeochrome Zellen im Centralnervensystem des Blutegels. Arch. Anat. Physiol., Leipzig, Physiol. Abt., **1903**, (549-550).

### COELOM.

**Gineste**. Quelques observations sur les vésicules énigmatiques de la cavité générale du Siponcle. Bordeaux, Actes soc. linu., **58**, 1903, (Proc.-verb., CLVIII--CLXXI, av. fig.).

Etude des urnes libres de la cavité générale du Sipunculus nudus. l.c. (Proc.-verb., CLXXIV-CLXXXIV, av. fig.).

**Hérubel**, Marcel A. Observations physiologiques et histologiques sur les Géphyriens (dérivés endothéliaux et granules pigmentaires). Paris, C.-R. Acad. sci., **136**, 1903, (971–973).

**Rosa**, D. Il cloragogo tipico degli Oligocheti. Torino, Mem. Acc. Sc., (Ser. 2), **52**, (1901-1902), 1902, (119-144, con tav.); [résumé], Arch. ital. biol., Torino, **87**, 1902, (454-456).

### ALIMENTARY SYSTEM.

**Spiess**, Camille. La structure intime de l'appareil digestif de la sangsue. Verh. Schweiz. Natf. Ges., Aarau, **85**, 1902, (78-79); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (548-552).

L'appareil digestif de la sangsue (*Hirudo medicinalis*, Lin.) Recherches morphologiques, histologiques and physiologiques. Rev. Suisse Zool., Genève, **11**, 1903, (151-239, av. 3 pls.).

# 1815

### CIECULATORY AND RESPIRATORY ORGANS.

Gineste. Sur la structure histologique des canaux œsophagiens du Siponcle. Bordeaux, Actes soc. linn., 58, 1903, (Proc.-verb., CIV-CXVIII).

Johnston, J[ohn] B[lack]. On the blood vessels, their valves and the course of the blood in *Lumbricus* [Studies from the zoological laboratory of West Virginia university, No. 8, 1903]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (74-84, with text-fig.).

### SPECIAL GLANDS.

Bergmann, W[illy]. Ueber das spätere Schicksal der Zwitterdrüsen von *Hesione* sieula. (Vorläuf. Mitt.). Zool. Anz., Leipzig, **26**, 1903, (415–417).

### EXCRETORY ORGANS.

Maxiarski, Stanisław. Recherches cytologiques sur les organes segmentaires des vers de terre. Arch. polon. biol. méd., Lwów, 2, 1903, (1-81 av. 3 pls.); Pols. arch. biol. lek., Lwów, 2, 1903, (1-78, av. 3 pls.).

# 1811 PHYSIOLOGY.

### GENEBAL.

**Hérubel**, Marcel A. Observations physiologiques et histologiques sur les Géphyriens (dérivés endothéliaux et granules pigmentaires). Paris, C.-R. Acad. sci., **136**, 1903, (971–973).

**Uexküll**, J. von. Studien über den Tonus. I. Der biologische Bauplan von Sipunculus nudus. Zs. Biol., München, 44, 1903, (269-344, mit 1 Taf.).

### PARTHENOGENESIS.

**Scott**, J. W. Periods of susceptibility in the differentiation of unfertilized eggs of *Amphitrite*. Wood's Holl, Mass., Mar. Biol. Lab. Bull, **5**, 1903, (35-41, with text fig.).

# FUNCTION OF SPECIAL STRUCTURES.

Bortolotti, Ciro. Nota preventiva sulla funzione delle cellule cloragogene nei generi Lumbrieus ed Allolobophora. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1902, (449-451).

(N 2-9053)

Franz, Friedrich. Ueber den die Blutgerinnung aufhebenden Bestandteil des medicinischen Blutegels [Herudin]. Arch. exper. Path., Leipzig, **49**, 1903, (342-366).

**Rosa**, D. Le chloragogue typique des Oligochètes. Arch. ital. biol., Paris, **37**, 1902, (454-456); Torino, Mem. Acc. Sc., (Ser. 2), **52**, (1901-1902), 1902, (119-144, con tav.).

### RESPIRATION.

Bohn, Georges. Des localisations respiratoires chez les Annélides. Paris, C.-R. soc. biol., 55, 1903, (306–308).

### REGENERATION.

**Grönberg**, Gösta. Einige Studien über die Regeneration des vorderen Körperendes bei den Oligochaeten. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, VI Section, (16–18).

**Kroeber**, Johanna. An experimental demonstration of the regeneration of the pharynx of *Allolobophora* from endoderm [Reprint from Wood's Holl, Mass., Mar. Biol. Lab. Bull., **2**, 1900, (105–110)] Bryn Mawr, Pa., Coll. Bryn Mawr, Monogr., (Repr. Ser.), **1**, 1901, (105–110).

**Štolo**, Antonín. Versuche betreffend die Frage, ob sich auf ungeschlechtlichem Wege die durch mechanischen Eingriff oder das Milieu erworbenen Eigenschaften vererben. Arch. Entw-Mech., Leipzig, **15**, 1903, (638-668).

### EXPERIMENTAL PHYSIOLOGY.

Magnus, R[udolf.] Pharmakologische Untersuchungen an Sipunculus nudus. Arch. exper. Path., Leipzig, 50, 1903, (86-122).

### 1815 DEVELOPMENT.

### GENERAL.

**Coupin**, Henri. Les Géphyriens. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (91– 92, av. fig.).

**Cowles**, R. P. Notes on the rearing of the larvae of *Polygordius appendiculatus* and on the occurrence of the adult

on the Atlantic coast of America. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (125-128).

**Ikeda**, Iwaji. Development of the sexual organs and of their products in *Phoronis*. Annot. Zool. Jap., Tokyo, 4, 1903, (141-153, with pl.).

Isuka, Akira. Observations on the Japanese Palolo. Ceratocephale osawai, n. sp. Tokyo, J. Coll. Sci., 17, Art. 11, 1903, (1-37, with 2 pls.).

### OVUM.

Vejdovský, F[ranz] und Mrázek, A[lois]. Umbildung des Cytoplasma während der Befruchtung und Zellteilung. Nach den Untersuchungen am *Rhynchelmis*-Eie. Mit einer Vorbemerkung von F. Vejdovský. Arch. mikr. Anat., Bonn, **62**, 1903, (431-579, mit 6 Taf.).

### SPERMATOGENESIS.

**Beddard**, F. E. [On a (?) new species of *Pareudrilus*.] London, Proc. Zool. Soc., **1903**, 1, (219–220).

### FERTILIZATION.

Vejdovský, F[ranz] und Mrázek, A[lois]. Umbildung des Cytoplasma während der Befruchtung und Zellteilung. Nach den Untersuchungen am *Rhynchelmis*-Eie. Mit einer Vorbemerkung von F. Vejdovský. Arch. mikr. Anat., Bonn, **62**, 1903, (431-579, mit 6 Taf.).

### EMBRYOLOGY.

Sukatschoff, Boris. Beiträge zur Entwicklungsgeschichte der Hirudineen. II. Ueber die Furchung und Bildung der embryonalen Anlagen bei Nephelis vulgaris Moqu. Tand. (Herpobdella atomaria). Zs. wiss. Zool., Leipzig, 78, 1903, (321-367, mit 3 Taf.).

Torrey, John Cutter. The early embryology of *Thalassema mellita* (Conn.) [Ph.D., Columbia University]. New York, N.Y., Ann. Acad. Sci., **14**, 1903, (165-246, with pl.).

**Treadwell**, Aaron L[ouis]. Notes on the nature of "artificial parthenogenesis" in the egg of *Podake obscura*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **3**, 1902, (235-240). METAMORPHOSIS AND LARVAL FORMS.

Leschke, M. Beiträge zur Kenntniss der pelagischen Polychastenlarven der Kieler Föhrde. Wiss. Meeresunters., Kiel, (N. F.), 7, Abt. Kiel, 1903, (111– 130, mit 2 Taf.).

### 1819 ETHOLOGY.

### GENERAL.

**Bohn**, Georges. De l'indépendance fonctionnelle des zoldes d'un Annélide, à propos des phénomènes de rotation présentés par les Hirudinées. Bul. Muséum, Paris, **1903**, (26-30).

Ubservations biologiques sur les Arénicoles. *l.c.* (62-73, av. fig.).

Bretscher, K. Beobachtungen über die Oligochaeten der Schweiz. VI. Folge. Rev. Suisse Zool., Genève, **10**, 1902, (1-29, mit **4** figs.).

**Coupin**, Henri. Les Géphyriens. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (91– 92, av. fig.).

Duserre, C. Ueber die Einwirkung der Regenwürmer auf die chemische Zusammensetzung des Bodens. Landw. Jahrb. Schweiz, Bern, **16**, 1902, (75-78).

**Eury**, J. Présence d'un lombric dans un œuf de poule. [Allolobophora fœtida]. Bul. sci. pharm., Paris, **4**, 1902, (99– 100).

Isuka, Akira. Observations on the Japanese Palolo, *Ceratocephale osawai*, n. sp. Tokyo, J. Coll. Sci., **17**, Art. 11, 1903, (1-37, with 2 pls.).

### HABITS.

Gardiner, J. S. The breaking-up of coral rock by organisms in the Tropics. London, Rep. Brit. Ass., 1902, (641– 655) [Prelim. Abstract], Nature, London, 66, 1902, (641).

**Watson**, A. T. Observations on the habits of the *Onuphidae* (Polychaeta) and on the internal structures with which they fortify their homes. Liverpool, Trans. biol. Soc., **17**, 1903, (303–818, with 1 pl.).

**Budolph**, Max. Ueber die Begattung der Regenwürmer. Aus d. Heimat, Stuttgart, **16**, 1903, (70–71).

### 1823 VARIATION AND ÆTIOLOGY.

Lang, Arnold. Beiträge zu einer Trophocöltheorie. Betrachtungen und Suggestionen über die phylogenetische Ableitung der Blut- und Lymphbehälter, insbesondere der Articulaten. Mit einem einleitenden Abschnitt über die Abstammung der Anneliden. Jenaische Zs. Natw, 38, 1903, (1-373, mit 6 Taf.).

**Štole**, Antonín. Versuche betreffend die Frage, ob sich auf ungeschlechtlichem Wege die durch mechanischen Eingriff oder das Milieu erworbenen Eigenschaften vererben. Arch. Entw-Mech., Leipzig, **15**, 1903, (638–668).

# **1827** GEOGRAPHICAL DISTRIBUTION.

a EARTH AS A WHOLE.

Michaelsen, W. Die geographische Verbreitung der Oligochaeten. Berlin (R. Friedländer u. S.), 1903, (VI + 186, mit 11 Kart.). 27 cm. 12 M.

d EUROPE.

# da SCANDINAVIA.

McIntosh, W. C. . . . XXV. i. On the Eunicidae dredged by H.M.S. "Porcupine" in 1869 and 1870. iii. On Norwegian Eunicidae collected by Canon Norman, D.C.L., F.R.S. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (128-166, pls. X-XIII, with 9 text-figs.).

### db RUSSIA IN EUROPE.

Norman, A. M. Notes on the natural history of East Finmark. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (281-286).

### de German Empire.

Brandes, G[ustsv]. Ueber ein Vorkommen von *Hirudo medicinalis* in Thüringen. Zs. Natw., Stuttgart, **76**, 1903, (143-144).

(n 2-9053)

Michaelsen, W. Oligochaeten. (Hamburgische Elb-Untersuchung.) Hamburg, Jahrb wiss. Anst., **19**, (1901), Beih. 2, 1903, (169-210, mit 1 Taf.).

### de BRITISH ISLANDS.

Lamplugh, G. W. and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., 59, 1903, (234-265).

Lang, W. D. On a fossiliferous bed in the Selbornian of Charmouth. Geol. ' Mag., London, [4], 10, 1903, (388-392, with 1 fig.).

M'Intosh, W. C. Notes from the Gatty Marine Laboratory, St. Andrews. No. XXIV. Part III. On the British Eunicidae. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (553-565).

**Pearcey**, F. G. Notes on the marine deposits of the Firth of Forth, and their relations to its animal life. Glasgow, Trans. Nat. Hist. Soc., **6**, 1903, (217-251, with map).

Petch, T. The marine fauna of the Humber district and the Holderness coast. Hull, Trans. Sci. F. Nat. Cl., 3, 1903, (27-41).

Marine Zoology at Filey. Naturalist, London, **1903**, (351).

**Shrubsole**, A. On the probable source of some of the pebbles of the Triassic Pebble-beds of South Devon and of the Midland Counties. London, Q. J. Geol. Soc., **59**, 1903, (311-333).

Todd, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., 6, No. 4, 1903, (541-561).

### df FRANCE.

**Saint-Joseph**, baron de. Liste des Annélides polychètes trouvés par M. Adrien Dollfus à Saint-Raphaël, en juin 1902. Feuille jeunes natural., Paris-(sér. 4), **33**, 1903, (202).

### di SWITZERLAND.

Bretscher, K. Beobachtungen über die Oligochaeten der Schweiz. VI Folge. Rev. Suisse Zool., Genève, **10**, 1902. (1-29, mit figs.); VII Folge. *l.e.* **11**, 1903, (1-21, mit 1 pl.).

N 2

Bretscher, K. Oligochaeten aus Graubünden. *l.e.* (113-122).

### do BALTIC AND ISLANDS.

Leschke, M. Beiträge zur Kenntniss der pelagischen Polychaetanlarven der Kieler Föhrde. Wiss. Meeresunters., Kiel, (N.F.), 7, Abt. Kiel, 1903, (111– 136, mit 2 Taf.).

e Asia.

ea ASIATIC RUSSIA.

Gariaev, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal See's im Sommer 1900 u. 1901. (Russ.) St. Peterburg, Trd. Troick.-KYacht. Otd. Russ. Geogr. Obšč. V, 2, 1902, [1903], (27-48, mit 1 Karte).

Moore, John Percy. Polychaeta from the coastal slope of Japan and from Kamchatka and Behring sea. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490, with pl.).

### eb CHINA AND DEPENDENCIES.

Michaelsen, W. Eine neue Haplotaxiden-Art und andere Oligochaeten aus dem Telezkischen See im nördlichen Altai. Hamburg, Verh. natw. Ver., (3 F.), 10, (1902), 1903, (1-7).

### cc JAPANESE ISLANDS.

Moore, John Percy. Polychaeta from the coastal slope of Japan and from Kamchatka and Bering sea. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490, with pl.).

### ef BRITISH INDIA.

**Singley**, A. E. On the Gephyrea. Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar, by W. A. Herdman, Part I, No. iii, (169-176, 1 pl.).

# eg. MALAY PENINSULA.

Horst, R. . . Siboga-expedition. New species of *Euphrosyne*. . . . Leiden, Notes Mus. Jentink, 23, 1903, (213-222). f AFRICA.

**Beddard**, F. E. On a new genus and two new species of earthworms of the family *Eudrilidae*, with some notes upon other African Oligochaeta. London, Proc. Zool. Soc., **1903**, 1, (210-222, figs. 35-38).

### fb NORTH EAST AFRICA.

Michaelsen, W. Die Oligochäten Nordost-Afrikas, nach den Ausbeuten der Herren Oscar Neumann und Carlo Freiherr von Erlanger. Zool. Jahrb. Jena, Abt. f. Syst., **18**, 1903, (±35–556, mit **4** Taf.).

### ff EAST AFRICA.

**Grossland**, C. On the marine fauna of Zanzibar and British East Africa, from collections made by Cyril Crossland in the years 1901 and 1902. Polychaeta. London, Proc. Zool. Soc., **1903**, 1, (169-176, pls. XVI, XVII).

Polychaeta, II. *l.c.* 2, (129–144, pls. XIV, XV, text-figs. 12–15).

Forbes, H. O. Leeches and worms. Nat. Hist. Sokotra, (443).

# g NORTH AMERICA.

gb CANADA.

McIntosh, W. C. XXV. II. On Canadian *Eunicidae* dredged by Dr. Whiteaves, of the Canadian Geological Survey, in 1871-1873. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (128-166, pls. X-XII, with 9 text-figs.).

### gg NORTH EASTERN UNITED STATES.

Clarke, John M[ason]. Some Devonic worms. Albany Univ., N.Y., Bull. St. Mus., No. 69, 1903, (1234–1238, with pl.).

**Cowles,** R. P. Notes on the rearing of the larvae of *Polygordius appendiculatus* and on the occurrence of the adult on the Atlantic coast of America. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (125-128); Baltimore, Md., Johns Hopkins Univ. Cir., **32**, 1903, (21-22, with pl.). 181

Moore, J[olm] Percy. The Hirudinea of Illinois. [With bibliography.] Urbana, Bull. Ill. Lab. Nat. Hist., 5, 1901, (479-547, with pl.); [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, (479-547, with pl.).

# gh SOUTH EASTERN UNITED STATES.

**Cowles,** R. P. Notes on the rearing of the larvae of *Polygordius appendiculatus* and on the occurrence of the adult on the Atlantic coast of America. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (125-128); Baltimore, Md., Johns Hopkins Univ. Cir., **22**, 1903, (21-22, with pl.).

gi WESTERN UNITED STATES.

ward, Henry B[aldwin]. Report of the zoologist. Notes on the leeches of Nebraska. [With bibliography.] Reprinted from the Report of the State Board of Agriculture for 1901]. Lincoln, Stud. Zool. Lab., Univ. Nebr., No. 51, 1902, (229-242, with pl.). Separate. 23.5 cm.

# i AUSTRALASIA.

### ia New Guinea with Islands from Wallace's Line.

**CoHin**, Ant. Verzeichniss der von Professor R. Semon bei Amboina und Thursday Island gesammelten Polychäten. Jena, Denkschr. med. Ges., 8, 1903, (739-742).

Horst, R. . . Siboga - expedition. New species of *Euphrosyne* . . . Leiden, Notes Mus. Jentink, 23, 1903, (213-222).

# ie NEW SOUTH WALES.

Kesteven, H. Leighton. A new species of *Dendrostoma*. Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (69-73, with 1 pl. and 1 text fig.).

# ik NEW ZEALAND.

Benham, W. B. On some new species of aquatic Oligochaeta from New Zealand. London, Proc. Zool. Soc., 1903, 2, (202-232, pls. XXIV-XXVI).

worm from Norfolk Island. Wellington,

Trans. N. Zeal. Inst., **35**, 1903, (273–274).

Benham, W. B. On an earthworm [Notiodrilus aucklandicus] from Auckland Islands. *l.c.* (275-277).

------ On the old and some new species of earthworms belonging to the genus *Plagiochaeta*. *l.c.* (277-290).

m INDIAN OCEAN.

ma OCEAN AND ISLANDS N. OF EQUATOR.

**Beddard**, F. E. The earthworms of the Maldive and Laccadive Islands. [Gardiner's] Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, (374–375).

### n PACIFIC.

nc BERING SEA.

**Moore**, J[ohn] Percy. Polychaeta from the coastal slope of Japan and from Kamchatka and Bering Sea. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (401-490, with pl.).

# 1831 TAXONOMY AND SYSTEMATIC.

### GENERAL.

Forbes, H. O. Leeches and worms. Nat. Hist. Sokotra, 1903, (443).

### ARCHIANNELIDA.

Polygordius appendiculatus, rearing of larvae. Atlantic coast. **Cowles**, R. P. Baltimore, Md., Johns Hopkins Univ. Cir., **22**, 1903, (21-22, with pl.); Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (125-128).

*ijimai* n. sp. Isuka, A. Annot. Zool. Jap., Tokyo, 4, 1903, (137– 139).

### POLYCHAETA,

### GENERAL.

Bohn, G. Observations biologiques sur les Arénicoles. Bul. Muséum, Paris, 1903, (62-73, av. fig.). 182

Bykowski, L. Contributions à l'anatomie des Polychètes sédentaires. Matériaux pour servir à la connaissance des néphridies et des organes chloragogènes. (Polonais) Kosmos, Lwów, 28, 1903, (67-87, av. 1 pl.).

**Collin**, Ant. Verzeichniss der von Professor R. Semon bei Amboina und Thursday Island gesammelten Polychäten. Jena, Denkschr. med. Ges., 8, 1903, (739-742).

**Grossland**, C. On the marine fauna of Zanzibar and British East Africa, from collections made by Cyril Crossland in the years 1901 and 1902. Polychaeta. London, Proc. Zool. Soc., **1903**, 1, (169-176, pls. XVI-XVII).

*Eunicidae* from Zanzibar and British East Africa collected by Cyril Crossland 1901 and 1902. *l.e.* 2, (129-144, pls. XIV, XV, text figs. 12-15).

McIntosh. Notes from the Gatty Marine Laboratory, St. Andrews. No. XXV. I. On the *Eunicidae* dredged by H.M.S. "Porcupine" in 1869 and 1870. II. On Norwegian *Eunicidae* collected by Canon Norman, D.C.L., F.R.S. III. On Canadian *Eunicidae* dredged by Dr. Whiteaves, of the Canadian Geological Survey in 1871-73. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (128-164).

Moore, J. P. Polychaeta from the coastal slope of Japan and from Kamchatka and Bering sea. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490, with pl.).

Norman, A. M. [Polychaeta] In: Notes on the natural history of East Finmark. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (280-286).

Pierantoni, [U.]. Sui Syllidi gestanti del Golfo di Napoli. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (40-42).

Saint-Joseph, baron de. Liste des Annélides polychètes trouvés par M. Adrien Dollfus à Saint Raphaël, en juin 1902. Feuille jeunes natural., Paris (sér. 4), 83, 1903, (202).

**Watson**, A. T. Observations on the habits of the *Onuphidae* (Polychaeta) and on the internal structures with which they fortify their homes. Liverpool, Trans. biol. Soc., **17**, 1903, (303-318, with 1 pl.).

### SPECIAL.

Amphitrite, parthenogenesis. Scott, J. W. Wood's Holl. Mass., Mar. Biol Lab. Bull., 5, 1903, (35-41, with text fig.).

*bifurcata* n. sp. **Moore**, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (401–490).

Aricia fimbriata n. sp. Moore, J. P. l.c. (401-490).

Axiothea campanulata n. sp. Moore, J. P. l.c. (401-490).

Ceratocephale osawai n. sp., observations on. Isuka, A. Tokyo, J. Coll. Sci., 17, Art. 11, 1903, (1-37, with 2 pls.).

Chaetozone spinosa n. sp. Moore, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490).

Cirratulus gibbosus n. sp. **Moore**, J. P. l.c. (401-490).

Clymene mirabilonga n. sp. **Moore**, J. P. l.c. (401–490).

Ctenodrilus, Histologie. Galvagni, E. Wien, Arb. Zool. Inst. Univ., 15, 1903, (47-80, 2 Taf.).

Drilonereis canadensis n. sp. Gulf of St. Lawrence. McIntosh. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (161-164, 1 text fig.).

Eumidia caeca n. sp. Moore, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490).

Eunice nn. spp. Moore, J. P. l.c. (401-490).

sp. description. McIntosh. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (155-158, 1 text fig.)

*jeffreysii* n. sp. Tangiers Bay. Description and allied forms. **McIntosh.** *l.c.* (137-146).

Euphrosyne nn. spp. Siboga-expedition. Horst, R. Leiden, Notes Mus. Jentink, 23, 1903, (213-222).

Goniada nn. spp. Moore, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490).

Hesione sicula, das spätere Schicksal der Zwitterdrüsen. Bergmann, W. Zool. Anz., Leipzig, **26**, 1903, (415-417). Hylosynda nn. spp. Moore, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490).

Laetmatonice pellucida n. sp. Moore, J. P. l.c. (401-490).

Laranda robusta n. sp. Moore, J. P. l.c. (401-490).

Lepidonotus nn. spp. Moore, J. P. l.c. (401-490).

Loimia arborea n. sp. Moore, J. P. l.e. (401-490).

Lumbriconereis nn. spp. McIntosh. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (146-149, 158-159).

Maldane coronata n. sp. Moore, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490).

Marphysa nn. spp., M. mossambica Peters. Zanzibar. Crossland, C. London, Proc. Zool. Soc., 1903, 2, (135-143).

Nephthys brachycephala n. sp. Moore, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401–490).

Nereis nn. spp. Moore, J. P. l.c. (401-490).

(Japanese) Isuka, A. Dobuts. Z., Tokyo, 15, 1903, (427–431).

Nicomache (?) inornata n. sp. Moore, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490).

Ninoe kinbergi Ehlers. McIntosh. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (159-161, 2 text-figs.).

*palmata* n. sp. **Moore**, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (401–490).

Northia geophiliformis n. sp. Moore, J. P. ' l.c. (401-490).

Notocirrus zonata n. sp. **Moore**, J. P. *l* c. (401–490).

Onuphis cirrobranchiata n. sp. Moore, J. P. l.c. (401-490).

(Diopatra) brevibrachiata Ehlers? description and allied species. McIntosh. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (133-136).

Paranorthia n. gen., P. brevieornuta n. sp. Moore, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490).

Phyllochaetopterus nn. spp. Zanzibar and British East Africa. **Grossland**, C. London, Proc. Zool. Soc., **1903**, 1, (172– 175, pls. XVI–XVII).

Podake obscura. Treadwell, A. L. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 3, 1902, (235-240).

Polymnia nesidensis (Del. Ch.) Marenz. var. japonica n. var. Moore, J. P. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (401-490).

Polynoe semierma n. sp. Moore, J. P. l.c. (401-490).

Restio n. gen., R. aenus n. sp. Moore, J. P. *l.e.* (401-490).

Scalesetosus formosus n. sp. Moore, J. P. l.c. (401-490).

Scionella n. gen., S. japonica n. sp. Moore, J. P. l.c. (401–490).

Terebellides stroemi Sars. var. japonica n. var. Moore, J. P. l.c. (401-490).

Trichobranchus bibranchiatus n. sp. Moore, J. P. l.c. (401-490).

### OLIGOCHAETA.

### General.

**Beddard**, F. E. The earthworms of the Maldive and Laccadive Islands. [Gardiner's] Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, (374-375).

Bretscher, K. Beobachtungen über die Oligochaeten der Schweiz. VI, VII Folge. Rev. Suisse Zool., Genève, **10**, 1902, (1-29, mit 4 figs.); **11**, 1903, (1-21, mit 1 Taf.).

Digochaeten aus Graubünden. *l.c.* (113-122).

Dussere, A. Ueber die Einwirkung der Regenwürmer auf die chemische Zusammensetzung des Bodens. Landw. Jahrb. Schweiz, Bern, **16**, 1902, (75-78).

Forbes, H. O. Leeches and worms. Nat. Hist. Sokotra, (443).

Gariaev, V. P. Evertebratenfauna des Baikal-Sees . . (Russ.). St. Peterburg, Trd. Troick.-Kĭacht. Otd. Russ. Geogr. Obšč., V, 2, 1902, [1903], (27-48, mit 1 Karte). Grönberg, G. Einige Studien uber die Regeneration des vorderen Körperendes bei den Oligochaeten. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, 1903, VI Section, (16-18).

Maxiaraki, Stanisław. Recherches cytologiques sur les organes segmentaires des vers de terre. Arch. polon. biol. méd., Lwów, 2, 1903, (1-81, av. 3 pls.); Pol. arch.-biol. lek., Lwów, 2, 1903, (1-78, av. 3 pls.).

Michaelsen, W. Die Oligochäten Nordost-Afrikas, nach den Ausbeuten der Herren Oscar Neumann und Carlo Freiherr von Erlanger. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (435-556, mit 4 Taf.).

Oligochaeten. (Hamburgische Elb-Untersuchung.) Hamburg, Jahrb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (169-210, mit 1 Taf.).

Eine neue Haplotaxiden-Art und andere Oligochaeten aus dem Telezkischen See im Nördlichen Altai. Hamburg, Verh. natw. Ver., (3 F.), 10, (1902), 1903, (1-7).

Die geographische Verbreitung der Oligochaeten. Berlin (R. Friedländer u. S.), 1903, (VI + 186, mit 11 Karte). 27 cm. 12 M.

**Bosa**, D. . . Oligocheti : il cloragogo tipico [di essi]. Torino, Mem. Acc. Sc., (Ser. 2), **52**, (1901–1902), 1902, (con. tav.); [résumé], Arch. ital. biol., Torino, **37**, 1902, (454–456).

### SPECIAL.

Achaeta maorica n. sp. New Zealand. Benham, W. B. London, Proc. Zool. Soc., 1903, 2, (221–223, pl. XXV, figs. 23, 24).

vejdovskyi n. sp. Suisse. Bretscher, K. Rev. Suisse Zool., Genève, 10, 1902, (27).

Allolobophora, nota preventiva sulla funzione delle cellule cloragogene. Bortolotti, C. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1902, (449–451).

düggelii n. sp. Suisse. Bretscher, K. Rev. Suisse Zool., Genève, 11, 1903, (20).

foetida, dans un œuf de poule. Eury, J. Bul. sci. pharm., Paris, 4 1902, (99-100). Alma budgetti n. sp., closely allied to A. stuhlmanni. Victoria Nyanza. Beddard, F. E. London, Proc. Zool. Soc., 1903, 1, (221-222).

Bettonia n. gen., B. lagariensis n. sp. British Central Africa. Beddard, F. E. l.c. (213-216, figs. 36, 37).

Dero incisa n. sp. Michaelsen, W. Hamburg, Jahrb. wiss. Anst., 19, 1901, Beih. 2, 1903, (182, fig. 3).

Dichogaster nn. spp. Nordost-Africa. Michaelsen, W. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (443-458, pl. XXIV, figs. 1-11).

W. Hamburg, Jahrb. wiss. Anst., 19, (1901), Beih. 2, 1903, (20, figs. 7, 8).

Diporochaeta aquatica n. sp. New Zealand. Benham, W. B. London, Proc. Zool. Soc., 1903, 2, (226-228, pl. XXVI, figs. 29-31).

Drawida burchardi n. sp. Michaelson, W. Hamburg, Jahrb. wiss. Anst., 19, (1901), Beih. 2, 1903, (7).

Eisenia nn. spp. Michaelsen, W. l.c. (40, 41).

Eminoscolex nn. spp. Nordost-Afrika. Michaelsen, W. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (482–495, pl. XXV, figs. 26–34).

Enchytraeus nn. spp. Suisse. Bretscher, K. Rev Suisse Zool., Genève, 10, 1902, (18, 19).

simulans n. sp. New Zealand. Benham, W. B. London, Proc. Zool. Soc., 1903, 2, (219-221, pls. XXV, XXVI, figs. 25-28).

Eudichogaster n. gen., E. ashrorthi n. sp. Michaelsen, W. Hamburg, Jahrb. wiss. Anst., **19**, (1901). Beih. 2, 1903, (14).

Eudrilus kamerunensis n. sp. Michaelsen, W. l.c. (28, fig. 6).

Fredericia nn. spp. Suisse. Bretscher, K. Rev. Suisse Zool., Genéve, **10**, 1902, (19, 20, 24–26); **11**, 1903, (18, 117).

Gardullaria n. gen. (Eminoscoler), G. armata n. sp. Nordost-Afrika. Michaelsen, W. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (498, pl. XXV, figs. 23-25).

Glyphidrilus malayanus n. sp. Michaelsen, W. Hamburg, Jahrb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (35). Haplotaxis heterogyne n. sp. New Zealand. Benham, W. B. London, Proc. Zool. Soc., 1903, 2, (223-226).

Helodrilus nn. spp. Michaelsen, W. Hamburg, Jahrb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (43, 47).

Henlea nn. spp. Bretscher, K. Rev. Suisse Zool., Genève, **10**, 1902, (15); **11**, 1903, (115).

*Iridodrilus preussi* n. sp. **Michaelsen**, W. Hamburg, Jahrb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (23, figs. 4, 5).

Kaffania n. gen. (~ Ewdrilus), K. neumanni n. sp. Nordost-Afrika. Michaelsen, W. Zool. Jahrb. Jena, Abt. f. Syst., 18, 1903, (480, pl. XXIV, fig. 17).

Limnodrilus nn. spp. and description of imnature specimens. New Zealand, Benham, W. B. London, Proc. Zool. Soc., 1903, 2, (213-219, pls. XX-XXV, figs. 10-22).

neucaensis n. sp. Michaelsen, W. Hamburg, Jahrb. wiss. Anst., 19, (1901), Beih. 2, 1903, (3, fig. 12).

Lumbricus, nota preventiva sulla funzione delle cellule cloragogene. Bortolotti, C. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1902, (449-451).

J. B. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (74-84, with text figs.).

Malodrilus n. gen. (~ Eudrilus), M. neumanni, M. gardullaensis nn. spp. Nordost-Afrika. Michaelsen, W. Zool. Jahrb. Jena, Abt. f. Syst., 18, 1903, (471, pl. XXIV, figs. 14-16).

Megascolex laingii n. sp., from Norfolk Island. Benham, W. B. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (273– 274).

Mesenchytraeus tigrina n. sp. Suisse. Bretecher, K. Rev. Suisse Zool., Genève, 10, 1902, (16).

Metschaina n. gen. (~ Platydrilus), M. suctoria n. sp. Nordost-Afrika. Michaelsen, W. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (463, pl. XXV, figs. 21, 22). Michaelsena macrochaeta Pierant., studii anatomici. **Pierantoni**, U. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (409-144, mit 2 Taf.).

Microchaetus griseus n. sp. Michaelsen, W. Hamburg, Jahrb. wiss. Anst., 19, (1901), Beih. 2, 1903, (33).

Naidium bilobatum n. sp. Bretscher, K. Rev. Suisse Zool., Genève, **11**, 1903, (11).

Neumanniella n. gen. (~Gardullaria), N. siphonochaeta, N. tenuis, N. pallida, N. gracilis. nn. spp. Nordost-Afrika. **Michaelsen**, W. Zool. Jahrb., Jena, Aht. f. Syst., **18**, 1903, (501-509, pl. XXV, figs. 35, 36, 39, 40, 45, 47, 48).

Notiodrilus aucklandicus n. sp. Auckland Islands. **Benham**, W. B. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (275-277).

Pareudrilue, anatomy, especially of reproductive organs. Beddard, F. E. London, Proc. Zool. Soc., 1903, 1, (216-221, fig. 38).

Pelodrilus ignatovi n. sp. aus dem Telezkischen See im nördlichen Altai. Michaelsen, W. Hamburg, Verh. natw. Ver., (3. F.), **10** (1902), 1903, (1-7).

Pheretima dunckeri n. sp. Michaelsen, W. Hamburg, Jahrb. wiss. Anst., 19, (1901), Beih. 2, 1903, (9).

Phreodrilus nn. spp. New Zealand. Benham, W. B. London, Proc. Zool. Soc., 1903, 2, (207-208).

Plagiochaeta nn. spp. with notes on some old species. **Benham**, W. B. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (277-290).

Plutellus lacustris n. sp. New Zealand. Benham. W. B. London, Proc. Zool. Soc., 1903, 2, (228-230, pl. XXVI, figs. 32-40).

Pontodrilus laccadivensis n. sp. Beddard, F. E. Fauna Mald. Laccad. Arch., 1, (374).

Pygmaeodrilus neumannin. sp. Nordost-Afrika. Michaelsen, W. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (460, pl. XXIV, fig. 13).

Rhynchelmis limosella, Umbildung des Cytoplasma während der Befruchtung und Zellteilung. Vejdovský, F. und **Erisek**, A. Arch. mikr. Anat., Bonn, **62**, 1903, (431-579, mit 6 Taf.). Stuhlmannia asymmetrica n. sp. Nordost-Afrika. **Michaelsen**, W. Zool. Jahrb., Jena, Abt. f, Syst., **18**, 1903, (467, pl. XXIV, fig. 12).

michaelseni n. sp. Africa. Beddard, F. E. London, Proc. Zool. Soc., 1903, 1, (210-213, fig. 35).

Taupodrilus n. gen., T. simplex n. sp. New Zealand. Benham, W. B. l.c. 2, (209-213, pl. XXIV, figs. 1-9).

Teleudrilus nn. spp. Nordost-Afrika. Michaelsen, W. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (512-541, pl. XXVI, figs. 41-44, 49, pl. XXVII, figs. 50-60).

Teleutoreutus n. gen. (Teleudrilus), T. neumanni n. sp. Nordost-Afrika. Michaelsen, W. l.c. (548, pl. XXVI, figs. 37, 38).

Thamnodrilus nn. spp. Michaelsen, W. Hamburg, Jahrb. Wiss. Anst., 19, (1901), Beih. 2, 1903, (30, 31).

Tubifex, description of immature specimens. New Zealand. Benham, W. B. London, Proc. Zool. Soc., 1903, 2, (219).

Vejdovskyella n. nom. = Bohemilla Vejd. Michaelsen, W. Hamburg, Jahrb. wiss. Anst., 19, (1901), Beih. 2, 1903, (184).

Zapotesia keiteli n. sp. Michaelsen, W. l.c. (16, fig. 3).

### GEPHYREA.

### GENERAL.

Augener, Hermann. Beiträge zur Kenntnis der Gephyreen nach Untersuchung der im Göttinger zoologischen Museum befindlichen Sipunculiden und Echiuriden. Arch. Natg., Berlin, **69**, Bd. 1, 1903, (297-371, mit 5 Tat.).

Coupin, H. Les Géphyriens. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (91-92, av. fig.).

Gineste. Sur la structure histologique des canaux œsophagiens du Siponcle. Bordeaux, Actes soc. linn., 58, 1903, (Proc.-verb., CIV-CXVIII).

Quelques observations sur les vésicules énigmatiques de la cavité générale du Siponcle. *l.c.* (Proc.-verb., CLVIII-CLXXI, av. fig.).

Hérubel, M. A. Observations physiologiques et histologiques sur les Géphyriens (dérivés endothéliaux et granules pigmentaires). Paris, C.-R. Acad. sci., **136**, 1903, (971–973).

**Shipley**, A. E. On the Gephyrea. Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar, by W. A. Herdman. Part I, No. III, (169-176, 1 pl.).

### SPECIAL.

Aspidosiphon nn. spp. Augener, H. Arch. Natg., Berlin, **69**, Bd 1, 1903, (322-328).

Centrosiphon n. gen., C. herdmani n. sp. **Shipley**, A. E., in Herdman. Report on the Pearl Oyster Fisheries. Part 1, No. III, (169-176, 1 pl.).

Dendrostoma dehamata n. sp. New South Wales. **Kesteven**, H. L. Sydney, N.S. W., Rec. Austr. Mus., 5, 1903, (69-73, with 1 pl. and 1 text fig.).

Phascolosoma schüttei n. sp. Augener, H. Arch. Natg., Berlin, **69**, Bd 1, 1903, (335–337, pls. XVII, XVIII, figs. 17, 18).

Firth of Clyde. Hutton, W. K. London, Proc. Zool. Soc., 1903, 1, (39).

*Phymosoma thomense* n. sp. **Augener**, H. Arch. Natg., Berlin, **69**, Bd 1, 1903, (343, pl. XVIII, fig. 19).

Sipunculus nudus, note fisiologiche. **Enriques**, [P.]. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (51– 52).

libres de la cavité générale. Gineste. Bordeaux, Actes soc. linn., 58, 1903, (Proc.-verb., CLXXIV-CLXXXIV, av. fig.).

gische Untersuchungen. Magnus, R. Arch. exper. Path., Leipzig, 50, 1903, (86-122).

Bauplan. **Uexktill**, J. von. Zs. Biol., München, **44**, 1903, (269–344, mit 1 Taf.).

Thalassema mellita, embryology. Torrey, J. C. New York, N.Y., Ann. Acad. Sci., 14, 1903, (165-246, with pl.).

# Phoronis.

Phoronis, sexual organs. IReda, I. Annot. Zool. Jap., Tokyo, 4, 1903, (141-153, with pl.).

der Gattung. Poche, F. Zool. Anz., Leipzig, 26, 1903, (466–467).

### HIRUDINEA.

### GENERAL.

Bohn, G. De l'indépendance fonctionnelle des zoldes d'un Annélide à propos des phénomènes de rotation présentés par les Hirudinées. Bul. Muséum, Paris, **1903**, (26-39).

Forbes, H. O. Leeches and worms. Nat. Hist. Sokotra, (443).

Livanow, N. Untersuchungen zur Morphologie der Hirudineen. Zool. Jahrb., Jena, Abt. f. Anat., **19**, 1903, (29-90, mit 4 Taf.).

Moore, J. P. The Hirudinea of Illinois. [With bibliography.] Urbana, Bull. Ill. Lab. Nat. Hist., 5, 1901, (479-547, with pl.); [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, (479-547, with pl.).

Ward, H. B. Report of the Zoologist. Notes on the leeches of Nebraska. [With bibliography.] [Reprinted from the Report of the State Board of Agriculture for 1901.] Lincoln, Stud. Zool. Lab., Univ. Nebr., No. 54, 1902, (229-242, with pl.). Separate. 23.5 cm.

### SPECIAL.

*Hirudo medicinalis.* Brandes, G. Zs. Natw., Stuttgart, **76**, 1903, (143-144).

ueber den die Blutgerinnung aufhebenden Bestandteil. Franz, F. Arch. exper. Path., Leipzig, 49, 1903, (342-366).

Zellen im Centralnervensystem. Poll, H. und Sommer, A. Arch. Anst. Physiol., Leipzig, Physiol. Abt., 1903, (549-550).

la structure intime de l'appareil digestif. **Spiess**, C. Verh. Schweiz. Natf. Ges., Aarau, **85**, 1902, (78-79); Arch. Sci. Phys., Genève, (sér 4), 14, 1902, (548-552); Rev. Suisse Zool., Genève, 11, 1903, (151-239, av. 3 pls.).

Nephelis vulgaris, Embryologie. Sukatschoff, B. Zs. wiss. Zool., Leipzig, 73, 1903, (321–367, mit 3 Taf.).

Placobdella catenigera, geschlechtliche Entwicklung von Haemogregarina stepanori. **Siegel**. Arch. Protistenkunde, Jena, **2**, 1903, (339–342).

### LIST OF NEW GENERA AND SPECIES.

ACHAETA [Oligochaeta]. — maorica. Benham. 4. rejdovskyi. Bretscher. 14. ALLOLOBOPHORA [Oligochaeta]. düggelii. Bretscher. 14. ALNA [Oligochaeta]. budgetti. Beddard. 2. AMPHITRITE [Polychaeta]. bifurcata. Moore. 62. ARICIA [Polychaeta]. fimbriata. Moore. 62. ASPIDOSIPHON [Gephyrea]. ambonensis. Augener. 1. brocki. Augener. 1. AXIOTHEA [Polychaeta]. campanulata. Moore. 62. Bettonia n. gen. [Oligochaeta]. Beddard. 2. Beddard. 2. lagariensis, Centrosiphon n. gen. [Gephyrea]. Shipley. 78. herdmani. Shipley, 78. CERATOCEPHALE [Polychaeta]. - osawai. Izuks. 44. CHAETOZONE [Polychaeta]. spinosa. Moore. 62. CIRBATULUS [Polychaeta]. gibbosus. Moore. 62. CLYMENE [Polychaeta]. mirabilonga. Moore. 62. DENDROSTOMA [Gephyrea]. - dehamata. Kesteven. 46. DICHOGASTER [Oligochaeta]. — cultrifera. Michaelsen. 57. — dokoensis. Michaelsen. 57. ----- erlangeri. Michaelsen, 57

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TOOT		
DICHOGASTI	R [Oligochaeta]. gardullaensis. Michaelsen. 57.	FREDERICIA [Oligochaet ————————————————————————————————————
	gofaensis. Michaelsen. 57.	irregularis.
	greeffi. Michaelsen. 59.	parva. Br
	kaffaeneis Michaelsen 57	quadriglobu
	lituifana Michaelsen 57	15.
	kaffaensis. Michaelsen. 57. lituifera. Michaelsen. 57. modesta. Michaelsen. 57.	rariata. B
	mulataensis. Michaelsen.	
Dinonomia	57. ETA [Oligochaeta].	Gardullaria n. gen Michaelse
	aquatica. Benham. 4.	armata. N
		GLYPHIDRILUS [Oligocha
	Oligochaeta]. burchardi. Michaelsen. 59.	——— malayanus.
DRILONERE	is [Polychaeta].	GONIADA [Polychaeta].
	canadensis. McIntosh. 54.	distorta. I
EISENIA [O	ligochaeta].	foliacea.
<u>`</u>	kučenkoi. Michaelsen. 59. skorikowi. Michaelsen. 59.	HAPLOTAXIS [Oligochae]
EMINOSCOL	EX [Oligochaeta].	HELODRILUS [Oligochae
	affinis. Michaelsen. 57.	acustie M
		acystis. M attemsi. M
	kaffaensie Michaelson 57	antanhianaia
	montanus, Michaelsen, 57.	
	montanus. Michaelsen. 57. silvestris. Michaelsen. 57.	HENLEA [Oligochaeta].
	variabuls. Michaelsen. 57.	HENLEA [Oligochaeta]. ————————————————————————————————————
ENCHYTRAE	us [Oligochaeta].	HYLOSYNDA [Polychaeta
	alpestris. Bretscher. 14.	carinata.
	alpestris. Bretscher. 14. simulans. Benham. 4. parvulus. Bretscher. 14.	magnacorn
	parvulus. Bretscher. 14.	
Eudichoga	ster n. gen. [Oligochaeta]. Michaelsen. 59.	IRIDODRILUS [Oligochae
<u> </u>	ashuorthi. Michaelsen. 59.	Kaffania n. gen.
EUDRILUS [	Oligochaeta].	Michaels
	kamerunensis. Michaelsen. 59.	neumanni.
EUMIDIA T	Polychaeta].	LAETMATONICE [Polycha
	caeca. Moore. 62.	pellucida.
EUNICE [P	olvchaeta].	LARANDA [Polychaeta].
<u> </u>	gracilis. Moore. 62. jeffrevsii. McIntosh. 54.	robusta. I
		LEPIDONOTUS [Polychae
	medicina. Moore, 62.	
	mucronata. Moore. 62.	branchifer caelorus.
	northioidea. Moore. 62.	
	northioidea. Moore. 62. quinquifida. Moore. 62.	chitoniform vexillarius.
	E [Polychaeta].	
	affinis. Horst. 39.	LIMNODRILUS [Oligocha
	affinis. Horst. 39. hystriz. Horst. 39.	lucasi. Be
	Imainetona Horst 39	newaensis.
	longisetosa. Horst. 39. maculata. Horst. 39.	vejdovskyan
	maculata. Horst. 30. mucosa. Horst. 39. obiensis. Horst. 39. pelagica. Horst. 39. pilosa. Horst. 39.	LOIMIA [Polychaeta].
	obiensis, Horst, 39	arborea. 1
	pelagica. Horst. 39.	
	milosa. Horst 39	LUMBRICONEREIS [Polycl
	pilosa. Horst. 39. sibogae. Horst. 39.	acutifrons.
FREEPRICE		brevipes.
L REDERICIT	A [Oligochaeta].	MALDANE [Polychaeta].
•	biglobulata. Bretscher. 15.	malbane (1 orychaeta).

connata. Bretscher. 14.

RICIA [Oligochaeta]. - emarginata. Bretscher. 14. \_ exserta. Bretscher. 14. - irregularis. Bretscher. 14. - parva. Bretscher. 14. quadriglobulata. Bretscher. 15. - rariata. Bretscher. 14. n. gen. [Oligochaeta]. Michaelsen. 57. llaria - armata. Michaelsen, 57. DRILUS [Oligochaeta]. malayanus. Michaelsen. 59. DA [Polychaeta]. — distorta. Moore. 62. — foliacea. Moore. 62. TAXIS [Oligochaeta]. - heterogyne. Benham. 4. RILUS [Oligochaeta] – acystis. Michaelsen. 59. – attemsi. Michaelsen. 59. sotschiensis. Michaelsen. 59. A [Oligochaeta]. - dorsalis. Bretscher. 14. rhaetica. Bretscher. 15. YNDA [Polychaeta]. --- carinata. Moore. 62. — magnacornuta. Moore. 62. RILUS [Oligochaeta]. preussi. Michaelsen. 59. -----[Oligochaeta]. da. gen. n. Michaelsen. 57. neumanni. Michaelsen. 57 ATONICE [Polychaeta]. — pellucida. Moore. 62. DA [Polychaeta]. robusta. Moore. 62. NOTUS [Polychaeta]. — branchiferus. Moore. 62. - caelorus. Moore. 62. - chitoniformia. Moore. 62. - vexillarius. Moore. 62. DRILUS [Oligochaeta]. — lucasi. Benham. 4. newaensis. Michaelsen. 59. vejdovskyanus. Benham. 4. [Polychaeta]. - arborea. Moore. 62. ICONEREIS [Polychaeta]. acutifrons. McIntosh. 54. brevipes. McIntosh. 54.

coronata. Moore. 62.

Malodrilus	n. gen. [Oligochaeta]. Michaelsen. 57.
	gardullaensis. Michaelsen. 57.
	neumanni. Michaelsen. 57.
MARPHYSA [.	Polychaeta]. furcellata. Crossland, 22. macintoshi. Crossland. 22.
MEGASCOLEX	simplex. Crossland. 22. [Oligochaeta]. laingii. Benham. 5.
	tigrinus. Bretscher. 14.
Metschaina	· · · · · ·
MICBOCHAET	ros [Oligochaeta]. griseus. Michaelsen. 59.
NALDIUM [O]	ligochaeta]. bilobatum. Bretscher. 14.
NEPHTHYS [	Polychaeta]. brachycephala. Moore. 62.
NEREIS [Poi	lychaeta]. paucidentata. Moore. 62. pusilla. Moore. 62.
Neumannie	bla n. gen. [Oligochaeta]. Michaelsen. 57.
	gracilis. Michaelsen. 57. pallida. Michaelsen. 57. siphonochaeta. Michaelsen. 57.
NICOMACHE	tenuis. Michaelsen. 57. (?) [Polychaeta]. inornata. Moore. 62.
NINOE [Pol	
Northia [P	Polychaeta]. geophiliformis. Moore. 62.
Notiodrile	s [Oligochaeta]. aucklandicus. Benham. 6.
Notocirrus	s [Polychaeta]. zonata. Moore. 62.
ONUPHIS [P	
Paranorthi	n. gen. [Polychaeta]. Moore. 62.
	brevicornuta. Moore. 62.
	Gligochaeta]. <i>ignatori.</i> Michaelsen. 58.
<b>Phascolosc</b>	MA [Gephyrea]. schüttei. Augener. 1. teres. Hutton. 40.

PHERETINA [Oligochaeta]. dunckeri. Michaelsen. 59. PHREODRILUS [Oligochaeta]. ----- lacustris. Benham. 4. ----- mauianus. Benham. 4. PHYLLOCHAETOPTERUS [Polychaeta]. ------ elioti. Crossland. 21. ------ pictus. Crossland. 21. PLAGIOCHAETA [Oligochaeta]. — lateralis. Benham. 7. — montana. Benham. 7. — ricardi. Benham. 7. — rossii. Benham. 7. PLUTELLUS [Oligochaeta]. —— lacustris. Benham. 4. POLYGORDIUS [Archiannelida]. —— ijimai. Izuka. 43. POLYMNIA [Polychaeta]. nesidensis var. japonica n. var. Moore. 62. POLYNOE [Polychaeta]. semierma. Moore. 62. PONTODRILUS [Oligochaeta]. ------ laccadivensis. Beddard. 3. PYGMAEODRILUS [Oligochaeta]. ---- neumanni. Michaelsen. 57. SCALESETOSUS [Polychaeta]. — formosus. Moore. 62. Scionella n. gen. [Polychaeta]. Moore. 62. japonica. Moore. 62. STUHLMANNIA [Oligochaeta]. asymmetrica. Michaelsen. 57. michaelseni. Beddard. 2. Taupodrilus n. gen. [Oligochaeta]. Benham. 4. simplex. Benham. 4. TELEUDRILUS [Oligochaeta]. abassiensis. Michaelsen. 57. annulicystis. Michaelsen. 57. ------ arussiensis. Michaelsen. 57. assimilis. Michaelsen. 57.
 beddardi. Michaelsen. 57.
 diddaensis. Michaelsen. 57. - ellenbecki. Michaelsen. 57. - erlangeri. Michaelsen. 57. - fumigatus. Michaelsen. 57.

TELEUDRILUS	[Oligochaeta].
-	-lla Mishaalusu

		Michaelsen.	57.
<u>.                                    </u>	parous.	Michaelsen.	57.
	rosae.	Michaelsen.	57.

---- suctoris. Michaelsen. 57.

- TEREBELLIDES [Polychaeta].
  - ----- stroemi var. japonica n. var. Moore. 62.

Vejdovskyella n. nom. [Oligochaeta]. Michaelsen. 60.

ZAPOTESIA [Oligochaeta]. ———— keiteli. Michaelsen. 59.

# POLYZOA (OR BRYOZOA).

# TITLES.

BRACHIOPODA.

Andersson, K. A. Eine Wiederentdeckung von *Cephalodiscus* (M. Intosh). (Vorläuf. Mitt.) Zool. Anz., Leipzig, 26, 1903, (368–369). [2031]. 1

Arnold, Ralph. The paleontology and stratigraphy of the marine Pliocene and Pleistocene of San Pedro, California. (Dissertation . . . Leland Stanford Junior University . . . degree . . . Ph. D.). [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3.] in Stanford University, Cal., Leland Stanford Jr. Univ. Hopkins Seaside Lab., Cont. Biol., No. 34, 1903, (1-420, with pl.). [0227 gi 0231 0831 2031 2231]. 2

Barnes, J. On a fossil Polyzoon, from the mountain limestone, Castleton. Manchester, Trans. Geol. Soc., 28, 1903, (243-245). [2027 de 2031]. 3

Baseler, Ray S. The structural features of the Bryozoan genus *Homotrypa* with descriptions of species from the Cincinnatian group [with bibliography]. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (565-591, with 6 pl.). Separate. 24.3 cm. [2031].

Clarke, John M[ason] and Ruedemann, Rudolf. Guelph fauna in the state of New York [with nn. spp. in Brachiopoda and Mollusca]. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (295, with pl.). 29.8 cm. [0227 gg 2031 2231]. 5

Condra, G. E. On Rhombopora lepidodendroides Meek. [from the Permian of Nebraska]. Amer. Geol., Minneapolis, Min., **31**, 1903, (22-24, with pl.). [2031]. 6

**Cumings**, Edgar R. A section of the Upper Ordovician at Vevay, Indiana. [Faunal lists, with descriptions of new species of Bryozoa.] Amer. Geol., Minneapolis, Minn., **28**, 1901, (361-380, with 2 pl.). [2031 0227 gg]. 7

**Cumings**, Edgar R. The morphogenesis of *Platystrophia*. A study of the evolution of a Paleozoic Brachiopod [with bibliography]. Amer. J. Sci., New Haven, Conn., (Ser. 4), **15**, 1903, (1-48, 121-132, with pl.). [2023 2031]. 8

Dacqué, Edgar. Mittheilungen über den Kreidecomplex von Abu Roash bei Cairo. Palaeontographica, Stuttgart, 30, II, 1903, (337-392). [0231 0831 2027 fb 2031 2231]. 9

**Dall**, William Healey. Contributions to the Tertiary fauna of Florida with especial reference to the silex beds of Tampa and the Pliocene beds of the Caloosahatchie river, including in many cases a complete revision of the generic groups treated of and their American Tertiary species. Part 6, concluding the work. [Pelcoypoda (concluded) and Brachiopoda, with discussion of geology]. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, ((i-xiv) + (1219-1654) with pls.). Separate. 28.5 cm.[2027 gh 2031 2227 gh 2231]. 10

Drevermann, Fritz. Die Fauna der oberdevonischen Tuffbreccie von Langenaubach bei Haiger. Berlin, Jahrb. geol. Landesanst., 21, 1901, Abh. auss. st. Pers., (99-207, mit 5 Taf.). [0231 2031 2231 2831]. 104

Foslie, M. The Lithothamnia of the Maldives and Laccadives. [Mentions some Bryozoa on which Lithothamnion grows.] In: Gardiner's Fauna and geography of the Maldive and Laccadive Archipelagoes, 1, (460-477, pls. XXIV-XXV). [2019 0819 0831]. 11

Gardiner, J. S. Lagoon deposits. I. General account. II. Report on certain deposits. Sir J. Murray. Fauna and Geography of the Maldive and Laccadive Archipelagoes, **II**, i, (581-588, pl. XXXIV). [0819 0827 ma 0831 2031]. 12

Gariaev, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal-Sees im Sommer 1900 u. 1901. (Russ.) St. Peterburg, Trd. Troick.-Kischt. Otd. Russ. Geogr. Obšč., V. 2, 1902, [1903], (27-48, mit 1 Karte). [0627 1227 1827 2027 2227 2627 0631 1231 1831 2031 2231 2631]. 13

**GHIL**, E. L. Note on the occurrence of Keisley Linestone-Pebbles in the red sandstone-rocks of Peel (Isle of Man). London, Q. J. Geol. Soc., **59**, 1903, (307-310). [2827 de 2027 de 1027 de 2227 de 0827 de]. 14

Gordon, Maris M. O. The geological structure of Monzoni and Fassa. Edinburgh, Trans. Geol. Soc., 8, 1903, (Spec. part X, + 180, with 18 pls., 2 maps and 33 text-figs.). [1027 dk 2027 dk 0827 dk].

Grabau, A. W. Stratigraphy of Becraft mountain, Columbia county, New York. [List of fossils, with nn. spp. of Brachiopoda]. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (1030-1079, with map). [0227 gg 2027 gg 2031]. 18

Graeffe, Ed[uard]. Uebersicht der Fauna des Golfes von Triest nebst Notzen über Vorkommen, Erscheinungs- und Laichzeit der einzelnen Arten. Wien, Arb. Zool. Univ., 15, 1903, (97-112). [0227 dk 2019 2027 dk 5019 5027 dk]. 17

Hamilton, A. On the occurrence of Paludicella in N. Zealand. Wellington, Trans. N. Zeal. Inst., 35, 1903, (262-264). [2027 ik 2031]. 18

Hind, W. Life-zones in the British Carboniferous rocks. Report of the Committee. London, Rep. Brit. Ass., 1903, (288-296). [1027 de 5427 de 2027 de 2227 de]. 19

Joubin, L. Zoologie. Brachiopodes dans: Expédition antarctique Belge. Résultats du voyage du S.Y. "Belgica" en 1897-99. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1902, (13, av. figs. et 2 pls.). 5 fr. [2027 o 2031]. 20 Jukes-Browne, A. J. The Cretaceous Rocks of Britain. Vol. II. The Lower and Middle Chalk of England. Mem. Geol. Surv. U. K., London, **1903**, (xiii + 568). [0427 de 0627 de 2027 de 2227 de]. 21

Chalk in Suffolk. [Unimportant.] London, Proc. Geol. Ass., **18**, 1903, (85-94, with 1 map). [1027 de 0627 de 5427 de 2027 de 0827 de]. 22

Devonshire in the time of the Lower Chalk. Plymouth, Rep. Devon. Ass., **35**, 1903, (787-799, 1 pl.). [1027 de 2027 de 2227 de]. 23

**Eatser,** Friedrich. Grundzüge der Geologie des unteren Amazonasgebietes (des Staates Pará in Brasilien). Leipzig (M. Weg), 1903, (III + 298, mit Portr., 1 Karte). 20 cm. 14 M. [1031 0227 hh 2031 2831]. 24

Enipović, N. M. Zoologische Ergebnisse der russischen Expeditionen nach Spitzbergen. Mollusca und Brachiopoda IV Nachtrag. St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (133-143). [2027 kd 2031 2227 kd 2231]. 25

Lamplugh, G. W. and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). Iondon, Q. J. Geol. Soc., 59, 1903, (234-265, pls.XVI-XVIII). [1027 de 1827 de 2031 2231 2027 de 2227 de]. 26

Lang, W. D. On a fossiliferous bed in the Selbornian of Charmouth. Geol. Mag., London, [4], 10, 1903, (388-392, with lfg.). [2027 de 2227 de 1827 de 0827 de]. 27

Loomis, F. B. The dwarf fauna of pyrite layer at the horizon of the Tully limestone in Western New York. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920, with 5 pls.). [0227 gg 2031 2231 2631]. 28

Meissner, Maximilian. Bericht über die Brachiopoden-Litteratur des Jahres 1894. Arch. Natg., Berlin, **62**, Bd 2, H. 3, 1896, [1903], (129–130). [2003]. 29

Liste der von Herrn Professor Semon bei Amboina und Thursday Ialand gesammelten Bryozoen. Jena, Denkschr. med. Ges., **8**, 1903, (727-731, mit 1 Taf.). [2027 ia 2031]. 30

Murray, Sir J. r. Gardiner, J. S.

of the Midland Counties. London, Q.J. Geol. Soc., 59, 1903, (311-333). [0827 de

2019

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Walker, J. F. v. Lamplugh, G. W.

1827 de 2027 de].

Walther, Karl. Das Unterdevon zwischen Marburg a. L. und Herborn (Nassau). N. Jahrb. Min., Stuttgart, Beilagebd. 17, 1903, (1-75, mit 4 Taf.). [0231 2031 2231]. 42

### 2003 COMPREHENSIVE AND GENERAL WORKS.

Meissner, Maximilian. Bericht über die Brachiopoden-Litteratur des Jahres 1894. Arch. Natg., Berlin, **62**, Bd 2, H. 3, 1896, [1903], (129-130).

schuchert, Charles. Morse on living brachiopods. [Observations on Living Brachiopoda. By Edward S. Morse.] Amer. Geol., Minneapolis, Minn., 31, 1903, (112-121).

### 2007 STRUCTURE.

Norman, A. M. Notes on the Natural History of East Finmark. [Polyzoa.] Ann. Mag. Nat. Hist., (Ser. 7), 11, 1903, (567-598, pl. XIII); 12, 1903, (87-128, pls. VIII-IX).

### 2015 DEVELOPMENT.

**Ostroumoff**, A[leksěj]. Sur le développement du cryptocyste et de la chambre de compensation. (Communication préliminaire.) Zool. Anz., Leipzig, **27**, 1903, (96-97).

**Robertson**, Alice. Embryology and embryonic fission in the genus *Crisia*. [Dissertation . . Ph.D. . . Univ. of Cal.] Berkeley, Univ. Cal., Pub. Zool., 1, 1903, (115–156, with 4 pls.). Separate. 27 cm.

# 2019 ETHOLOGY.

Foslie, M. The Lithothamnia of the Maldives and Laccadives. Mentions some Bryozoa on which Lithothamnion grows. In: Gardiner's Fauna and geography of the Maldive and Laccadive Archipelagoes, 1, (460-471, pls. XXIV-XXV).

**Nickles**, John M. The Richmond group in Ohio and Indiana and its subdivisions, with a note on the genus *Strophomena* and its type. Amer. Geol., Minneapolis, Minn., **32**, 1903, (202-218). [2031].

Noetling, Fritz. Ueber die Sculptur des Productus abichi Waagen. Centralbl. Min., Stuttgart, **1903**, (529-531). [2031]. 32

Norman, A. M. Notes on the Natural History of East Finmark. Polyzoa. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (567-598, pl. XIII); 12, 1903, (87-128, pls. VIII-IX). [2007 2027 db 2031]. 33

Ostroumoff, A[leksěj]. Sur le développement du cryptocyste et de la chambre de compensation. (Communication préliminaire.) Zool. Anz., Leipzig, 27, 1903, (96-97). [2015]. 34

Petch, T. Marine zoology at Filey. Naturalist, London, **1903**, (351). [1027 de 0627 de 1827 de 2027 de 2627 de 0827 de 2227 de 5427 de]. 35

**Bowe**, A. W. The zones of the white chalk of the English coast. III. Devon. London, Proc. Geol. Ass., **18**, 1903, (1-51, pls. I-XIII). IV. Yorkshire. *Ib.*, (193-296, pls. XVII-XL). [0627 *de* 0827 *de* 1027 *de* 1031 2027 *de*]. 36

Ruedemann, Rudolf v. Clarke, John, M.

**Schepotieff**, Alexander. Untersuchungen über den feineren Ban der Borsten einiger Chätopoden und Brachiopoden. Zs. Wiss. Zool., Leipzig, **74**, 1903, (656– 710, mit 4 Taf.). [1807 2007]. 37

Schuchert, Charles. On the Hilderbergian fossils near Montreal, Canada. [Descriptions of two new species of *Chonostrophia* from Quebec and New York.] Amer. Geol., Minneapolis, Minn., 27, 1901, (245-253). [2027 gd 2031]. 38

Morse on living brachiopods. [Observations on Living Brachiopoda. By Edward S. Morse] Amer. Geol., Minneapolis, Minn., **31**, 1903, (112-121). [2003]. 39

On the Manlius formation of New York. Amer. Geol., Minneapolis, Minn., **31**, 1903, (160–178). [0227 gg 0831 2031] 40

**Shrabsole**, O. A. On the probable source of some of the pebbles of the Triassic Pebble-beds of South Devon and

(x 2-9053)

**Graeffe**, E. [Brachiopoden- und Bryōzoen-] Fauna des Golfes von Triest. Wien, Arb. Zool. Inst. Univ., **15**, 1903, (97-112).

# 2023 VARIATION.

**Cumings**, Edgar Roscoe. The morphogenesis of *Platystrophia*. A study of the evolution of a Paleozoic Brachiopod [with bibliography]. Amer. J. Sci., New Haven, Conn., (Ser. 4), **15**, 1903, (1-48, 121-136, with pl.).

# **2027** GEOGRAPHICAL DISTRIBUTION.

d Europe.

db RUSSIA IN EUROPE.

Norman, A. M. Notes on the natural history of East Finmark. Ann. Mag. Nat. Hist., (Ser. 7), 11, 1903, (567-598, pl. XIII).

de BRITISH ISLANDS.

Barnes, J. On a fossil Polyzoon from the mountain limestone, Castleton. Manchester, Trans. Geol. Soc., 28, 1903, (243-245).

**GHII**, L. Note on the occurrence of Keisley Limestone pebbles in the Red Sandstone Rocks of Peel (Isle of Man). London, Q. J. Geol. Soc., **59**, 1903, (307– 310).

Hind, W. Life-zones in the British Carboniferous Rocks. Report of the Committee. London, Rep. Brit. Ass., **1902**, (210-224).

Jukes-Browne, A. J. The Cretaceous Rocks of Britain. Vol. II. The Lower and Middle Chalk of England, Mem. Geol. Surv. U.K., London, **1903**, (xiii + 568).

On the zones of the Upper Chalk in Suffolk. [Unimportant.] London, Proc. Geol. Ass., **18**, 1903, (85-94, with 1 map).

Devonshire in the time of the Lower Chalk. Plymouth, Rep. Devon. Ass., **35**, 1903, (787-799, 1 pl.). Lamplugh, G. W. and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., 59, 1903, (234-265, pls. XVI-XVIII).

Lang, W. D. On a fossiliferous bed in the Selbornian of Charmouth. Geol. Mag., London, [4], **10**, 1903, (388-392, with 1 fig.).

Petch, T. Marine Zoology at Filey. Naturalist, London, **1903**, (351).

**Bowe**, A. W. The zones of the white chalk of the English coast. III. Devon. London, Proc. Geol. Ass., **18**, 1903, (1-51, pls. I-XIII). IV. Yorkshire, *Ib.*, (193-296, pls. XVII-XL).

**Shrubsole**, O. A. On the probable source of some of the pebbles of the Triassic Pebble-beds of South Devon and of the Midland Countes. London, Q. J. Geol. Soc., **59**, 1903, (311-333).

# dk AUSTRIA-HUNGARY.

Gordon, M. M. O. The geological structure of Monzoni and Fassa. Edinburgh, Trans. Geol. Soc., **8**, 1903, (sp. part X + 180, with 18 pls., 2 maps and 33 text-figs.).

Graeffe, E. [Brachiopoden und Bryozoen] des Golfes von Triest . . . Wien, Arb. Zool. Inst. Univ., 15, 1903, (97-112).

### ASIA.

ea ASIATIO RUSSIA.

Gariaev, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal Sees im Sommer 1900 u. 1901. (Russ.) St. Peterburg, Trd. Troick.-Klächt. Otd. Russ. Geogr. Obšč., V, 1902, [1903], (27-48, mit 1 Karte).

### f AFBICA.

### fb Egypt.

**Dacqué**, Edgar. Mittheilungen über den Kreidecomplex von Abu Roash bei Cairo. Palaeontographica, Stuttgart, **30**, II, 1903, (337-392). Brachiopoda, etc.

# g North America.

### gd CANADA.

schuchert, Charles. On the Helderbergian fossils near Montreal, Canada. [Descriptions of two new species of *Chonostrophia* from Quebec and New York]. Amer. Geol., Minneapolis, Minn., 27, 1901, (245-253).

# gg North-eastern United States.

Grabau, A. W. Stratigraphy of Becraft mountain, Columbia county, New York. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (1030-1079, with map).

### gh SOUTH-EASTERN UNITED STATES.

Dall, William Healey. Contributions to the Tertiary fauna of Florida with especial reference to the silex beds of Tampa and the Pliocene beds of the Caloosahatchie river, including in many cases a complete revision of the generic groups treated of and their American Tertiary species. Part 6, concluding the work [Pelecypoda (concluded) and Brachiopoda, with discussion of geology]. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, ((i-xiv) + (1219-1654) with pl.). Separate. 28.5 cm.

# i AUSTRALASIA.

# ia New Guinea with Islands from Wallace's Line.

Meissner, Maximilian. Liste der von Herrn Professor Semon bei Amboina und Thursday Island gesammelten Bryozoen. Jena, Denkschr. med. Ges., 8, 1903, (727-731, mit 1 Taf.).

### ik New Zealand.

Hamilton, A. Paludicella in New Zealand. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (262-264).

# k AROTIC.

kd Islands north of Europe and Asia.

Knipović, N. M. Zoologische Ergebnisse der russischen Expeditionen nach (x 2-9053) Spitzbergen. Mollusca and Brachiopoda. IV. Nachtrag. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (133-143).

### o ANTABOTIC.

Joubin, L. Zoologie. Brachiopodes. In: Expédition antarctique Belge. Résultats du voyage du S. Y. "Belgica" en 1897–99. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1902, (13, av. figs. and 2 pls.).

# 2031 TAXONOMY AND SYS-TEMATIC.

# BRACHIOPODA.

### GENERAL.

**Clarke**, J. M. and **Ruedomann**, R. Guelph fauna in the state of New York. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (295, with pl.). 29.8 cm.

**Dall**, W. H. Contributions to the Tertiary fauna of Florida with especial reference to the silex beds of Tampa and the Pliocene beds of the Caloosahatchie river, including in many cases a complete revision of the generic groups treated of and their American Tertiary species. Part 6, concluding the work [Pelecypoda (concluded) and Brachiopoda, with discussion of geology]. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, ((i-xiv) + (1210-1654) with pl.). Separate. 28.5 cm.

Joubin, L. Zoologie. Brachiopodes dans: Expédition antarctique Belge. Résultats du voyage du S. Y. "Belgica" en 1897-99. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1902, (13, av. figs et 2 pls.).

**Enipovic**, N. M. Zoologische Ergebnisse der russischen Expeditionen nach Spitzbergen. Mollueca und Brachiopoda. IV. Nachtrag. St. Petersburg, Ann. Mus. Zool. Ac. Sc., **8**, 1903, (133– 143).

Lamplugh, G. W. and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., 59, 1903, (234-265, pls. XVI-XVIII, 2 text-figs.). Loomis, F. B The dwarf fauna of the pyrite layer at the horizon of the Tully limestone in western New York [nn. spp. of Brachiopoda, Mollusca and Crustacea]. Albany, Univ. N.Y., Bull. St. Mus., No. 69, 1903, (892-920, with 5 pis.).

## Special.

Amboccelia umbonata Conrad. mut. pygmaea† n. mut., mut. pluto† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892–920).

Argyrotheca schucherti † n. sp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219–1654).

Athyris<sup>†</sup> nn. spp. Deutschland, oberdevonisch. Drevermann, F. Berlin, Jahrb. geol. Landesanst., **21**, 1901, Abh. auss. st. Pers., (99–207).

Camarotoechia hudsonica<sup>†</sup> n. sp. Becraft Mountain, N.Y. Grabau, A. W. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (1030-1079).

Chonostrophia<sup>†</sup> nn. spp. Quebec and New York. Schuchert, C. Amer. Geol., Minneapolis, Minn., 27, 1901, (245-253).

Cramia lecontei n. sp. South Polar regions. Joubin, L. in Expédition antarctique Belge, 1902, (13, av. figs. et 2 pls.).

Cyrtina hamiltonensis Hall, mut. pygmaea<sup>†</sup> n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892–920).

Kingena blanckenhorni<sup>†</sup> n. sp. **Dacqué**, E. Palaeontographica. Stuttgart, **30**, II, 1903, (337-392, 3 Taf.).

neutonii<sup>†</sup> n. sp. Lamplugh, G. W. and Walker, J. F. London Q. J. Geol. Soc., 59, 1903, (258).

Magas latestriata<sup>†</sup> n. sp. Lamplugh, G. W. and Walker, J. F. *l.c.* (254).

Monomerella noveboracum<sup>†</sup> n. sp. Upper Silurian, New York. **Clarke**, J. M. and **Ruedemann**, R. Albany, Univ., N.Y., Mem. St. Mus., No. **5**, 1903, (195).

Nucleospira concinna Hall, mut. pygmaea† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892–920), Orthis tectiformist n. sp. Unterdevon, Marburg. **Walther**, K. N. Jahrb. Min. Stuttgart, Bellagebd, **17**, 1903, (1-75).

Orthotichia poechi<sup>†</sup> n. sp. Brazil. **Eatser**, F. Grundzüge der Geologie des unteren Amazonasgebietes. Leipzig, 1903.

*Platystrophia*, morphogenesis. **Cumings**, E. R. Amer. J. Sci., New Haven, Conn., (Ser. 4), **15**, 1903, (1-48, 121-136, with pl.).

Productella spinulicosta Hall, mut. pygmaea† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892–920).

Productus abichi<sup>†</sup> Waagen, Sculptur. Nostling, F. Centralbl. Min., Stuttgart, 1903, (529-531).

amazonicus<sup>†</sup> n. sp. Brazil, **Katser**, F. Grundzüge der Geologie des unteren Amazonasgebietes. 1903.

Rhynchonella<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

nn. spp. South polar regions. Joubin, L. Zoologie. Brachiopodes in Expedition antarctique Belge. 1902, (13 pp., 3 figs., 2 pls.).

litchfieldensis† n. sp. New York, Silurian. Schuchert, C. Amer. Geol., Minneapolis, Minn., 31, 1903, (160-178).

nn. varr., R. leightonensis n. sp. Lamplugh, G. W. and Walker, J. F. London, Q. J. Geol. Soc., 59, 1903, (260-261).

Rhynchospira excarata<sup>†</sup> n. sp. Becraft Mountain, N.Y. Grabau, A. W. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (1030–1079).

Spirifer piracanensis† n. sp. Brazil. Katzer, F. Grundzüge der Geologie des unteren Amazonasgebietes. Leipzig, 1903.

fimbriatus Conrad, mut. simplicissimus† n. mut.; S. fimbriatus Conrad mut. pygmaeus† n. mut., S. medialis Hall, mut. pygmaeus† n. mut. S. marcyi Hall, mut pygmaeus† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

Strophalosia truncata Hall, mut. pygmaea<sup>+</sup> n. mut. Loomis, F. B. *l.e.* (892–920).

Strophomena<sup>†</sup> Ohio and Indiana, Ordovician. Nickles, J. Amer. Geol., Minneapolis, Minn., **32**, 1903, (202-218).

Terebratalia smithi<sup>†</sup> n. sp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3.**] in Stanford Univernity, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No, **31**, 1903, (1-420).

Terebratella menardi<sup>†</sup> Lamarck var. pterygotos n. var. Lamplugh, G. W. and Walker, J. F. London, Q. J. Geol. Soc., 59, 1903.

Terebratula depressa† Lam. var. shenleyensis n. var. Bedfordshire. Lamplugh, G. W. and Walker, F. J. *l.e.* (251).

Terebrirostra lyra Sowerby var. incurvirostrum † n. var. Lamplugh, G. W. and Walker, J. F. l.c. (206).

Trigeria lepida Hall, mut. pygmaea<sup>†</sup> n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892-920).

Tropidoleptus carinatus Conrad, mut. pygmaeus† n. mut. Loomis, F. B. l.c. (892-920).

Zeilleria convexiformis<sup>†</sup> n. sp. Lamplugh, G. W. and Walker, J. F. London, Q. J. Geol. Soc., 59, 1903, (253).

### BRYOZOA.

#### GENERAL.

Barnes, J. On a fossil Polyzoon, from the mountain limestone, Castleton. Manchester, Trans. Geol. Soc., 28, 1903, (243-245).

Cumings, E. R. A section of the Upper Ordovician at Vevey, Indiana. [Faunal lists, with descriptions of new species of Brachiopoda]. Amer. Geol., Minneapolis, Minn., 28, 1901, (361-380, with 2 pls.).

Gardiner, J. S. Lagoon deposits. I. General account. II. Report on certain deposits. Sir J. Murray. Fauna and Geography of the Maldive and Laccadive Archipelagoes, **II**, 1, (581-588, pl. XXXIV).

Gariaev, V. P. Evertebratenfauna des Baikal-Sees. . . (Russ.) St. Peterburg, Trd. Troick.-Kfacht. Otd. Russ. Geogr. Obšč.. V, 2, 1902, [1903], (27-48, mit 1 Karte).

Meissner, M. Liste der von Herrn Professor Semon bei Amboina und Thursday Island gesammelten Bryozoen. Jena, Denkschr. med. Ges., **8**, 1903, (727-731, mit 1 Taf.).

Norman, A. M. Notes on the natural history of East Finmark. [Polyzos.] Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (567-598, pl. XII); 12, 1903, (87-123, pls. VIII, IX).

## ECTOPROCTA.

## GYMNOLAEMA.

## Cyclostomata.

Amplexopora multispinosa<sup>†</sup> n. sp. Indiana Ordovician. Cumings, E. R. Amer. Geol., Minneapolis, Minn., 28, 1901, (361-380, with 2 pls.).

Ceriopora multiformis<sup>†</sup> n. sp. Mayer-Eymar. **Dacqué**, E. Palaeontographica, Stuttgart, **30**, II, 1903, (337–372, 3 Taf.).

Crisia, embryology and embryonic fission. **Robertson**, A. Berkeley, Univ. Cal., Pub. Zool., 1, 1903, (115–156, with 4 pls.).

Dekayella cystata<sup>†</sup> n. sp. Indiana. Ordovician. **Cumings**, E. R. Amer. Geol., Minneapolis, Minn., **28**, 1901, (361-380).

Dekayia magna† n. sp. Indiana. Ordovician. **Cumings**, E. R. *l.c.* (361–380).

Eridotrypa vevayensis† n. sp. Indiana. Ordovician. Cumings, E. R. *l.e.* (361-380).

Homotrypa<sup>†</sup> structure, nn. spp. Ordovician, Cincinnati. **Basaler**, R. S. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903 (565–591, with 6 pls.).

Rhombopora lepidodendroides<sup>†</sup>. Nebraska, Permian. **Condra**, G. E. Amer. Geol., Minneapolis, Minn., **31**, 1903, (22-24, with pl.).

## Cheilostomata.

Alderina n. gen. East Finmark. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser 7), **11**, 1903, (596).

Ammatophora n. gen. East Finmark. Norman, A. M. l.c. (88-89, pl. VIII, figs. 5-7).

Amphiblestrum flemingii Busk, A. trifolium (Busk). Norman, A. M. l.c. (596-597, pl. XIII, figs. 5, 6).

Antropora n. gen., type A. nodulosa. East Finmark. Norman, A. M. l.c. (87-88, pl. VIII, fig. 4).

Callopora unitearesii n. sp. and notes on described species. East Finmark. Norman, A. M. *l.c.* (588-595, pl. XIII).

Carbasea solanderi n. nom. with remarks on genus. Norman, A. M. East Finmark. *l.c.* (581-583).

Cauloramphus n. gen. and description of species. East Finmark. Norman, A. M. l.c. (587-588).

Cribrilina, description of old and new species. East Finmark. Norman, A. M. *l.c.* (101-104, pls. VIII-IX).

Doryporella n. gen., type D. spalulifera Smitt. East Finmark. Norman, A. M. l.c. (106).

Electra Lamouroux, type E. verticillata Lamouroux. East Finmark. Norman, A. M. l.e. (586-587).

Ellisina, type E. (Membranipora) levata Hincks. East Finmark. Norman, A. M. l.c. (596).

Eschara fascialis Pallas, var. foliacea Ell and Sol. East Finmark. Norman, A. M. l.c. (112).

Escharella, species found in East Finmark. Norman, A. M. l.c. (117-118).

Escharina Milne-Edwards, type E. vulgaris Moll. East Finmark. Norman, A. M. *l.e.* (109).

Evactinopora castletoniensis † n. sp. Barnes, J. Manchester, Trans. Geol. Soc., 28, 1903, (243–245).

Gephyrotes (Cribrilina) nitido-punctata Smitt. East Finmark. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (100-101, pl. VIII, figs. 12-13).

Harmeria n. gen., type H. scutulata (Busk). East Finmark. Norman, A. M. l.c. (107). Hincksina n. gen. East Finmark. Norman, A. M. l.c. (585).

Hippothoa, species found in East Finmark. Norman, A. M. I.e. (108).

Larnacicus n. gen. (= Membranipora cornigera), type L. corniger. Norman, A. M. l.c. (87, pl. VIII, fig. 3).

Leieschara, species found in East Finmark. Norman, A. M. l.c. (110).

Lepralia, species from East Finmark. Norman, A. M. l.c. (122-123).

Johnston, new to East Finmark. Norman, A. M. l.c. (100, pl. V111, fig. 8).

Membranipora Lamouroux, type M. membranacea (Linné). East Finmark. Norman, A. M. *l.e.* (585).

Microporella arctica n. sp. East Finmark. Norman, A. M. I.c. (105).

Monoporella spinulifera Hincks, found in East Finmark. Norman, A. M. l.c. (115).

Mucronella sincera (Smitt), M. labiata Boeck, found in East Finmark. Norman, A. M. l.c. (118-119).

Oochilina n. gen., O. tensa n. sp. East Finmark. *l.e.* (595-596, pl. XIII, fig. 12).

Porella princeps n. sp., and old species from East Finmark. Norman, A. M. l.e. (112-115, pl. IX, figs. 8-11).

Pseudoflustra solida Stimpson, found in East Finmark. Norman, A. M. l.c. (124-125).

Ramphonotus, type R. minax (Busk). East Finmark. Norman, A. M. l.c. (597-598, pl. XIII, fig. 7).

Reptadeonella Busk. East Finmark. Norman, A. M. *l.c.* (104-105).

Rosseliana (Flustra) rosselii (Audouin). East Finmark. Norman, A. M. l.e. (89-90).

Schizoporella unicornis Johnston, found in East Finmark. Norman, A. M. *l.c.* (109).

Scrupocellaria scabra van Beneden. var. paenulata n. nom., S. seabra var. septentrionalis n. nom., subvar. congesta n. nom. East Finmark. Norman, A. M. Le. (579-580). Smittia porifera (Smitt), S. lineata Nordgaard, in East Finmark. Norman, A. M. l.e. (121-122, pl. IX, figs. 14, 15).

Smittina n. nom., type S. landsbrovii Johnston, and species from East Finmark. Norman, A. M. l.c. (120-121).

## Ctenostomata.

Paludicella, occurrence in New Zealand. Hamilton, A. Wellington, Trans. N. Zeal. Inst., 35, 1903, (262-264).

### INCERTAE SEDIS.

Radulina n. gen., R. semoni n. sp. Meismer, M. Jens, Denkschr. med. Ges., 8, 1903, (727-731, 1 Taf.).

#### LIST OF NEW GENERA AND SPECIES.

- Alderina n. gen. [Bryozoa]. Norman. 33.
- Ammatophora n. gen. [Bryozoa]. Norman. 33.
- AMPLEXOPOBA [Bryozoa].
- **Antropora** n. gen. [Bryozos]. Norman.
- 33. ARGYBOTHECA [Brachiopoda].
- schucherti<sup>†</sup>. Dall. 10.
- CALLOPORA [Bryozoa]. ------- uhitearesii. Norman. 33.
- CARBASEA [Bryozoa].
  - ----- solanderi n. nom. Norman. 33.
- Cauloramphus n. gen. [Bryozoa]. Norman. 33.
- CERIOPORA [Bryozoa].
- ------ multiformis [. Dacqué. 9. CHONOSTROPHIA [Brachiopoda].
- \_\_\_\_\_ jerrensis †. Schuchert. 38. \_\_\_\_\_ montrealensis†. Schuchert. 38.

- CRIBRILINA [Bryozoa].
- ------ annulata var. spitzbergensis n. nom. Normau. 33. ------ eryptoaecium. Norman. 33.
- DEKAYELLA [Bryozos]. ------- cystata<sup>†</sup>. Cumings. 7.
- Doryporella n. gen. [Bryozoa]. Norman. 33.
- EBIDOTEVPA [Bryozoa]. -------- vevayensis<sup>†</sup>. Cumings. 7.
- Harmeria n. gen. [Bryozoa]. Norman. 33.
- Hincksina n. gen. [Bryozoa]. Norman. 33.
- cincinnationsis |. Bassler. 4. communis<sup>†</sup>. Bassler. 4. curvata var. praecipta† n. var. Bassler. 4. cylindrica<sup>†</sup>. Bassler. 4. dumosu<sup>†</sup>. Bassler. 4. flabell ris var. spiniferat n. var. Bassler. 4. frondosa†, Bassler, 4. grandis†, Bassler, 4. libana†, Bassler, 4. nicklesi†, Bassler, 4. nitida†, Bassler, 4. 4. nodulosa<sup>†</sup>. Bassler. 4. nodulosa<sup>†</sup>. Bassler. 4. nodulosa<sup>†</sup>. Bassler. 4 pulchra<sup>†</sup>. Bassler. 4. ramulosa†. Bassler. 4. richmondensis<sup>†</sup>. Bassler. 4. splendens<sup>†</sup>. Bassler. 4. wortheni var. intercellata<sup>†</sup> n. var. Bassler. 4. var. prominens n. var. Bassler. 4. KINGENA [Brachiopoda].
- ------ blanckenhorni†. Dacqué. 9. ------ neutonii†. Lamplugh and Walker. 26.
- Larnacicus n. gen. [Bryozoa]. Norman. 33.
- MAGAS [Brachiopoda].
  - ------ latestriata<sup>†</sup>. Lamplugh and Walker. 26.

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MICROPORELLA [Bryozoa]. - — arctica. Norman. 33. Occhilina n. gen. [Bryozoa]. Norman. 33. - tensa. Norman. 33. ORTHIS [Brachiopoda]. tectiformist. Walther. 42. **OBTHOTICHIA** [Brachiopoda]. poechi<sup>†</sup>. Katzer. 24. PORELLA [Bryozoa]. princeps. Norman. 33. PRODUCTUS [Brachiopoda]. - amazonicus†. Katzer. 24. Radulina n. gen. [Bryozoa]. Meissner. 30. - semoni. Meissner. 30. RHYNCHONELLA [Brachiopoda]. coronula<sup>†</sup>. Drevermann. 10<sub>A</sub>. gerlachei. Joubin. 20. grasiana var. shenleyensis n. Lamplugh and var. Walker. 26. holmesiit. Dall. 10. leightonensis. Lamplugh and Walker. 26. lineolata (?) var. mirabilis n. Lamplugh var. and Walker. 26. litchfieldensis<sup>†</sup>. Schuchert. 40. racovitzae. Joubin. 20. salpinx<sup>†</sup>. Dall. 10.

RHYNCHOSPIRA [Brachiopoda]. – excavata t. Grabau. 16. SCRUPOCELLARIA [Bryozoa]. ---- scabra var. septentrionalis n. nom. Norman. 33. var. paenulata n. nom. Norman. 33. - var. septentrionalis, subvar. congesta n. nom. Norman. 33. SPIRIFER [Brachiopoda]. piracanensis<sup>†</sup>. Katzer. 24. Smittina n. nom. [Bryozoa]. Norman. 33. TEREBRATALIA [Brachiopoda]. --- smithit. Arnold. 2. TEREBRATELLA [Brachiopoda]. menardi var. pterygotos† n. var. Lamplugh and Walker. 26. TEREBRATULA [Brachiopoda]. depressa var. shenleyensis† n. var. Lamplugh and Walker. 26. TEREBRIROSTRA [Brachiopoda]. lyra var. incurvirostrum n. var. Lamplugh and Lamplugh and Walker. 26. ZEILLERIA [Brachiopoda]. convexiformis<sup>†</sup>. Lamplugh and Walker. 26.

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# 2203–2231 MOLLUSCA.

## TITLES.

Adams, L. E. v. Woodward, B. B.

Aldrich, T[ruman] H[eminway]. Two new species of Eccene fossils from the lignitic of Alabama [nn. spp. in Umbraculum (Ecsinica n. subg.) and Gastrochaena]. Nautilus, Boston, Mass., 17, 1903, (19-20). [2227 gh 2231]. 1

Ancel, P. Histogenèse et structure de la glande hermaphrodite d'*llelix pomatia* (Linn.), Arch. biol., Paris-Liège. **19**, 1903, (391-652, av. 7 pls.). [2215 2207 2231]. 2

Sur les premières phases du développement de la glande génitale et du canal hermaphrodite chez *Heliz pomatia*. (Note préliminsire.) Bibliogr. anat., Nancy, **10**, 1902, (160–162). [2207 2215 2231].

Sur les premières différenciations cellulaires dans la glande hermaphrodite d'*Helix pomatia*. Bibliogr. anat., Nancy, **11**, 1902, (17-20). [2215 2231]. 4

La réduction numérique des chromosomes dans la spermatogenèse d'Helix pomatia. Bibliogr. anat., Nancy, 11, 1902, (145-148). [2215 2231]. 5

Sur le Nebenkern des spermatocytes d'*Helix pomatia*. Bibliogr. anat., Nancy, **11**, 1902, (234–240). [2215 2231]. 6

Ancey, C. F. On some new land Mollusca from Middle America. [nn. spp. in *Streptostyla*]. Nautilus, Boston, Mass., **17**, 1903, (56-57). [2227 h 2231]. 7

New land snails from South America. [nn. spp. in Porphyrobaphe and Bulimulus]. Nautilus, Boston, Mass., 17, 1903, (82-83, 89-90). [2227, h 2231]. 8 Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, 51, 1903, (39-47). [2231 2227 lc nb]. 9

Faune malacologique terrestre de l'11e des Cocos dans l'Océan Pacifique. J. conchyliol., Paris, **51**, 1903, (97-104). [2227 nb 2231]. 10

Etude sur la faune malacologique des îles Sandwich (5° partie). J. conchyliol., Paris, **51**, 1903, (295-307, av. 1 pl.). [2227 nd 2231]. 11

Andreae, A. Land- und Süsswasserschnecken aus Zentral- und Ostasien. [In: K. Futterer, Durch Asien. Bd. 3.] Berlin, 1903, (41-90, mit 1 Taf.). [2227 e 2231]. 12

Andrasov, A. A. Studien über die Brackwassercardiden. Lieferung 1. St. Peterburg, Mém. Ac. Sc., (8 F.), **13**, No. 3, 1903, (82, mit 2 Fig. + 7 Taf.). [2219 2227 eh dn 2231]. 13

Arnold, Ralph. The paleontology and stratigraphy of the marine Pliocene and Pleistocene of San Pedro, California. (Dissertation . . . Leland Stanford Junior University . . . degree . . . Ph.D.). [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (1-420, with pl.). Separate. 30.8 cm. [0227 gi 0231 2031 0831 2231]. 14

Baker, Frank Collins. Rib variation in Cardium. Amer. Nat., Boston, Mass., 37, 1903, (481-488). [2223 2231]. 15

Pleistocene mollusks of White Pond, New Jersey. Nautilus, Boston, Mass., 17, 1903, (38-39). [2227 gg]. 16 Baker, Frank Collins. A partial list of the marine mollusks of San Salvador, Bahamas. Nautilus, Boston, Mass., 17, 1903, (57). [2227 hc]. 17

 Note on Murex marcoensis

 Sowerby.
 Nautilus, Boston, Mass., 17, 1903, (88-89).

 [2231].
 18

Shells of land and water, a familiar introduction to the study of the Mollusks. Chicago (A. W. Mumford), 1903, (XVII + 175, with illustr., 8 col. pls.). 28 cm. [2203]. 19

Baldwin, D. D. Descriptions of new species of Achatinellidae from the Hawaiian islands. Nautilus, Boston, Mass., 17, 1903, (34-36). [2227 nd 2231]. 20

Barfuss, J. Zur Vertilgung der Saatschnecken. Schweiz.-Bauer, Bern, 56, No. 30, 1902, (5). [2203]. 21

**Barnard**, F. G. A. Excursion to Launching Place [Victoria]. [14 species]. Vict. Nat., Melbourne, **19**, 1903, (147– 148). [2227 if 2231 2627 if 2631 4827 if 4831]. 22

Bartsch, Paul. A new landshell [Sonorella volcottiana n. sp.] from California. Washington, D.C., Proc. Biol. Soc., 16, 1903, (103–104). Separate. 23.3 cm. [2227 gi 2231]. 23

A new Scissurella [S. dalli n. sp.] from Patagonia. Nautilus, Boston, Mass., **17**, 1903, (90-91). [2227 hi 2231]. 24

Bavay, A. Note sur quelques espèces du genre *Pecten*, nouvelles ou mal connues. J. conchyliol., Paris, **50**, 1902, (399-406, av. fig. et pl.). [2231]. 25

Description d'une espèce nouvelle du genre Marginella. J. conchyliol., Paris, 50, 1902, (407-408, av. fig. et pl.). [2231]. 26

et Dautsenberg, Ph. Description de coquilles nouvelles de l'Indo-Chine (3<sup>e</sup> suite). J. conchyliol., Paris, 51, 1903, (201-236, av. 8 pls.). [2227 ed 2231]. 27

Bellini, R. Contribuzione alla conoscenza della fauna dei molluschi marini dell'Isola di Capri. Napoli, Boll. Soc. Nat., 15, (1901), 1902, (85-121). [2227 dh]. 28

Bergmann, W[illy]. Ueber den Bau des Ovariums bei Cephalopoden und einige Nachträge zur Eibildung derselben. Arch. Natg., Berlin, **69**, Bd 1, 1903, (227-236, mit 1 Taf.). [2207 2215 2231]. 29

Bergmann, W[illy]. Ein Receptaculum seminis bei Octopus de filippi und einige biologische Beobachtungen. Berlin, SitzBer. Ges. natf. Freunde, 1903, (104-109). [2207 2219 2231]. 30

**Bigelow**, R[obert] P[ayne] and **Rathbun**, Eleanor P. On the shell of *Littorina litorea* as material for the study of variation. [With bibliography]. Amer. Nat., Boston, Mass., **37**, 1903, (171-184). [2223 2231]. 31

Billups, A. C. Fossil land shells of the Old Forest bed of the Ohio river. Nautilus, Philadelphia, Pa., 16, 1902, (50-52). [2227 gg 2231]. 32

Adaptation of mollusks to changed conditions. Nautilus, Philadelphia, Pa., **16**, 1903, (112–114). [2211]. 33

[Pologyra profunda Say in Hamilton Co., Ohio]. Nautilus, Philadelphia, Pa., **16**, 1903, (119). [2227 gg 2231]. 34

A proposed study of Goniobasis. Nautilus, Boston, Mass., 17, 1903, (22-24). [2231]. 35

Bistram, A. Freiherr von. Beiträge zur Kenntniss der Fauna des unteren Liss in der Val Solda. Geologischpaläontologische Studien in den Comasker Alpen. I. Freiburg i. B., Ber. natf. Ges., 13, 1903, (116-214, mit 8 Taf.). [0231 0631 2231]. 36

Blackburn, E. P. Dispersal of shells by beetles. Hull, Trans. Sci. F. Nat. Cl., 3, 1903, (101). [2219]. 37

Blake, J. H. The geology of the country around Reading. Mem. Geol. Surv. Eng., London, **1903**, (Explanation of sheet 268), (92). [1027 de 2227 de]. 38

Blanford, W. T. Notes on Mr. W. M. Daly's collections of land and freshwater Mollusca from Siam. London, Proc. Malac. Soc., 5, 1903, (274-284, pl. VIII). [2227 ee 2231]. 39

Note on the supposed locality "Sulgranees," whence Dr. J. E. Gray's type-specimens of Indian Jurassic Ammonites were said to have been obtained. London, Proc. Malac. Soc., 5, 1903, (345). [2227 ef]. 40 **Bioomer**, H. H. The anatomy of certain species of *Ceratisolen* and *Solecurtus*. J. Malac., London, **10**, 1903, (31-40, pl. II). [2207 2231]. 42

Classification of the British species of the genus Solen Linné. J. Malac., London, 10, 1903, (41-43). [2231]. 43

On the origin and function of the fourth aperture in some Pelecypoda. J. Malac., London, **10**, 1903, (43-45). [2207 2211 2231]. 44

Mote on a malformed specimen of Ceratisolen legumen. J. Malac., London, 10, 1903, (104). [2223 2231].

The anstomy of Pharella orientalis Dunker and Tagelus rufus Spengler. J. Malac., London, **10**, 1903, (114-121, pl. X). [2207 2231]. 46

**Bochenek**, Adam. Contribution à l'étude du système nerveux des gastropodes (*Helix pomatia* Linn.). Anatomie fine des cellules nerveuses. Louvain (A. Uystpruyt), 1901, (33, av. pls hors texte). 8vo. 2 fr. 50. [2207]. 47

Boettger, O. Ueber die tertiären Landschnecken aus der Gattung Vallonia im Mainzer Becken und über einen neuen Landschnecken-Fundpunkt im Untergrunde von Frankfurt a. M. Frankfurt a. M., NachrBl. D. malakozool. Ges., 85, 1903, (72-76). [2227 do 2231]. 48

Zwei neue Landschnecken aus dem Tertiärkalk von Hochheim. Frankfurt a. M., NachrBl. D. malakozool. Ges., 35, 1903, (182–184). [2231]. 49

Ueber den wissenschaftlichen Wert der Schnecken- und Muschelschalen. Vortrag. . . Frankfurt a. M., Ber. Senckenb. Ges., **1903**, Tl 2, (177-186). [2203]. 50

Bolau, Hermann. Ueber den Fang, die Präparation und die Aufbewahrung einheimischer Mollusken. Naturfreund, Witten, **1**, 1902–3, (131, 147, 170–171, 185–186). [2203]. 51 Boutan, Louis. L'origine réelle des perles fines. Paris, C.-R. Acad. sci., 187, 1903, (1073-1075). [2219 2231]. 52

Brady, G. S. Report on dredging and other marine research off the north east coast of England in 1901. Newcastle, Traus. Nat. Hist. Soc., 14, 1903, (87-101). [2227 de 2231 2627 de 2631]. 53

<u>Neomenia</u> carinata (?) Tullberg. Newcastle, Trans. Nat. Hist. Soc., **14**, 1903, (102). [2231]. 54

Bridgman, F. G. On the want of a knowledge of the animals of the genus Oliva as a means to the determination of the species. London, Proc. Malac. Soc., 5, 1903, (346-347). [2231]. 55

Brockmeier, Heinr. Wie gewinnen unsere Landschnecken den Kalk für ihre Gehäuse? Naturfreund, Witten, 1, 1903, (174–176, 182–184). [2219]. 56

Brown, L. B. Notes on the land and freshwater shells of Barbadoes. J. Conch., Leeds, 10, 1903, (266-273). [2227 hc 2231]. 57

Brüning. Hydra und Limnaea im Aquarium. Natur u. Haus, Dresden, 11, 1903, (135-138). [0819 0831 2219 2231]. 58

Bruyne, C. de. Contribution à l'étude de la cellule folliculaire des glandes génitales des Gastéropodes. Bruxelles, Bul. Acad. roy., **1903**, (115-135). [2207]. 59

Buckman, S. S. Two Toarcian Ammonites. London, Q. J. Geol. Soc., 59, 1903,(459–462, pls. XXVII–XXVIII). [2231]. 60

Bullen, R. A. Notes on the Pleistocene non-marine Mollusca at Portland Bill; and on Holocene Mollusca from (1) West Harnham, Wilts; (2) Harlton, Cambridgeshire; (3) the down above Durdle Barn Door, Dorset; and (4) Folkestone. London, Proc. Malac. Soc., 5, 1903, (317-319). [2227 de]. 61

A late Keltic Cemetery at Harlyn Bay. London, 1903, (16). From Tunbridge Wells, Rep. S. E. U. Sci. Soc., 1903. [2227 de]. 62

Burne, R. H. On the renal organs of *Nucula nucleus* Linn. London, Proc. Malac. Soc., **5**, 1903, (300–304, pl. X). [2207 2231]. 63 Button, F. L. West American Cypraeidae. J. Conch., Leeds, 10, 1903, (254-258). [2227 g h 2231]. 64

Carlson, A. J. v. Jenkins, O[liver] P[eebles].

**Casey**, Thomas L[incoln]. Notes on the Conrad Collection of Vicksburg fossils, with descriptions of new species. Philadelphia, Pa., Proc. Aca !. Nat. Sci., **55**, 1903, (261-283). [2231]. 65

Carlot, commandant. Comparaison des faunes malacologiques terrestres de la Corse et de la Sardaigne. Feuille jeunes natural., Paris, (sér. 4), 33, 1902, (10-11); Paris, C.-R. Ass. franç., avanc. sci. (Ajaccio), 1902, (571-576). [2227 df]. 66

Etude sur quelques coquilles de la région circum-méditerranéenne, établie avec le concours de M. Fagot. *Helix niciensis*. Etude des espèces du groupe. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (10-13). [2231 2227 df]. 67

*Helix niciensis.* Note complémentaire. Feuille jeunes natural., Paris. (sér. 4), **34**, 1903, (35). [2231]. 68

Liste des mollusques aquatiques vivant dans la Fontaine, à Nimes. Nimes, Bul. soc. étud. sci. nat., (n. sér.), **29**, 1901, [1902], (14-19). [2227 df 2219]. 69

**Chadwick**, W. H. Self-fecundation in *Planorbis vortex*. J. Conch., Leeds, **10**, 1903, (265). [2215 2231]. 70

Chaster, G. W. Mollusca. In Brit. Assoc. Handbook to Southport, 1903, (146-154). [2203]. 71

and **Tomlin**, B. The rediscovery of Vertigo lillejeborgi in Ireland. Irish Nat., Dublin, **12**, 1903, (13-14). [2227 de 2231]. 72

Chemnitz v. Martini.

**Chun**, Carl. *Rhynchoteuthis* [n. gen.]. Eine merkwürdige Jugendform von Cephalopoden. Zool. Anz., Leipzig, **26**, 1903, (716–717). [2231]. 73

Ueber Leuchtorgane und Augen von Tiefsee-Cephalopoden. Verh. D. zool. Ges., Leipzig, **13**, 1903, (67-91). [2207 2219 2231]. 74 **Clapp**, Geo. H. Exotic Mollusca in the Phipps Conservatory, Schenley Park, Pittsburgh. Pittsburg, Pa., Ann. Carnegie Mus., 1, 1901, (252). [2219]. 75

Vitrina depositing eggs. Nautilus, Boston, Mass., 17, 1903, (91). [2219 2231]. 76

**Clarke**, John M[ason]. Torsion of the Lamellibranch shell. An illustration of Noetling's law. Albany Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (1228-1233). [2207 2231]. 77

and Ruedemann, Rudolf. Guelph fauna in the state of New York [with nn. spp. in Brachiopoda and Mollusca]. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (195, with pl.). [0227 g 2031 2231]. 78

**Cleland**, Herdman Fitzgerald. A study of the fauna of the Hamilton formation of the Cayuga Lake section in Central New York [with bibliography]. Washington, D.C., U. S. Dept. Int. Bull. Geol. Surv., No. **206**, 1903, (112, with pl.). 23.2 cm. [0227 gg 2231]. 78A

**Cockerell**, T[heodore] D[ru] A[lison]. Variations in the snail-genus Ashmunella. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (615-616). [2223 2231]. 79

Some homonymous generic names : [Dalliella Simpson (n. n. Simpsonella), Aurora. Simp. (n. n. Diaurora), Carinella Mabille, Geyeria Buckman, Paratropsis Boettger, Paramenia Pruvot (n. n. Pruvotina), Ischnodactylus, Cossman, and Gygaenopsis Rochebrune]. Nautilus, Boeton, Mass., **16**, 1903, (118). [2231].

Ashmunella thomsoniana cooperae [at Pecos, New Mexico.] Nautilus, Boston, Mass., 17, 1903, (36). [2227 gi 2231]. 83

and **Cooper**, Mary. Notes on *Ashmunella*. Nautilus, Philadelphia, Pa., **15**, 1902, (109–110). [2231]. 83A

**Collinge**, W. E. Some notes on the genus *Prisma* Simroth. J. Malac., London, 9, 1902, [1903], (129-132, with pl.). [2231]. 84

Collinge, W. E. On some species of slugs collected by Mr. H. Fruhstorfer. J. Malac., London, 10, 1903, (16-17, pl. I). [2231]. 85

Notes on slugs and sluglike Molluscs. 1. On the Limax umbrosus of Philippi. 2. On a species of Arion from New Zealand. 3. On the dispersal of Microparmarion, sp. 4. Variations in the foot-fringe of Arion empiricorum. J. Malac., London, **10**, 1903, (17-19). [2219 2223 2231]. 86

Contributions to a knowledge of the Mollusca of Borneo. J. Malac., London, 10, 1903, (79-82, pls. VII, VIII). [2227 eg 2231]. 87

Malay Peninsula. Fascic. Malay. Zool., **II**, 1903, (205-216). [2227 eg 2231].

**Conktin**, Edwin G[rant]. The individuality of the germ nuclei during the cleavage of the egg of *Crepidula*. [With bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull. **2**, 1901, (257-265, with text fig.); [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., **1901**, 1902, (257-265, with text fig.). [0215 2215 2231]. 89

Centrosome and sphere in the maturation, fertilization and cleavage of *Crepidula*. [Reprint]. Philadelphia, Cont. Zool. Lab., Univ. Pa., **1901**, 1902, [[280]-287, with text fig.). [2215 2231]. 90

Conte, A. et Bonnet, A. Sur un nématode nouveau (Angiostoma helicis n. sp.), parasite de l'appareil génital d' Helix aspersa Muell. Paris, C.-R. soc. biol., 55, 1903, (198-199). [1419 1431 2219 2231]. 91

Cook, T. A. Spirals in Nature and Art. London, 1903, (200 with figs.). 8vo. [2207]. 92

**Cooper**, Mary v. Cockerell, T[heodore] D[ru] A[lison].

Cort, Hugo de. Ueber den Handelswerth und den Grad der augenblicklichen Seltenheit der *Pleurotomaria beyrichi*. Uebers. aus Bull. soc. r. malacol. d. Belg. 2. III. 01 . . . v. D. F. Heynemann. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (14–16). [2203 2231]. 93

Commann, M. Faune pliocénique de Karikal (Inde française). J. conchyliol., Paris, 51, 1903, (105–173, av. 4 pls.). [2227 ef 2231]. 94 **Cretté de Palluel**, Albert. Ennemis peu connus des oiseaux d'eau. Ornis, Paris, **12**, 1902–1903, (118). [2219 5419 5819]. 95

205

Orick, G. C. Note on Dr. J. E. Gray's type-specimens of Jurassic Ammonites from India. London, Proc. Malac. Soc., 5, 1903, (285-289). [2231 2227 ef]. 96

On Ammonites robustus (R. Strachey, MS.) H. F. Blanford, from the Himalayas. London, Proc. Malac. Soc., 5, 1903, (290-295, with fig.). [2227 ef 2231]. 97

Notes on some specimens of straight-shelled Nautiloides collected by the Rev. Samuel Couling, M.A., Ching Chow fu, Kiaochow, North Chins. Geol. Mag., London [4], 10, 1903, (481-485, pl. XXII). [2231 2227 ef]. 98 Note on Vestinautilus crassimarginatus A. H. Foord. Geol.

Crassinarginatus A. H. Foord. Geol. Mag., London [4], **10**, 1903, (552–555). [2231]. 99

**Crowther**, J. E. A list of the Mollusca of the Parish of Halifax. Halifax Nat., 8, 1903, (48-52). [2227 de]. 100

**Catlki**, Ernő. Drei neue Clausilien aus Ungarn. (Hung.) Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (107-108). [2227 dk 2231]. 101

Dacqué, Edgar. Mittheilungen über der Kreidecomplex von Abu Roash bei Cairo. Palaeontographica, Stuttgart, 30, 11, 1903, (337-392). [0231 0831 2031 2231]. 102

Dall, William H[ealey]. Review of the classification of the Cyrenacea. Washington, D.C., Proc. Biol. Soc., 16, 1903, (5-8). Separate. 23.3 cm. [2231]. 103

Diagnoses of new species of mollusks from the Santa Barbara channel, California. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (171-176). Separate. 23.3 cm. [2227 g 2231]. 103a

Synopsis of the family Astartidae, with a review of the American species. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (933-951, with 2 pls.). Separate. 24.3 cm. [2231]. 104

Synopsis of the Carditacea and of the American species [with bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, 1903, (696-716). [2227 gh 2231]. 105 **Dall**, William H[ealey]. Contributions to the Tertiary fauna of Florida, with especial reference to the silex beds of Tampa and the Pliocene beds of the Caloosahatchie river. Part 6, concluding the work [Pelecypoda (concluded) and Brachiopoda, with discussion of geology]. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, ((i-xiv) + (1219-1654), with pl.). Separate. 28.5 cm. [2027 gh 2031 2227 gh 2231]. 106

[Miodontiscus n. n. (= Miodon Carpenter, preoccupied by Miodon Duméril)]. Nautilus, Philadelphia, Pa., **16**, 1903, (143). [2231]. 107

Two new mollusks from the west coast of America. [Sigaretus noyesii n. sp. from Colombia and Tonicia arnheimi n. sp. from Galapagos Islands] Nautilus, Boston, Mass., 17, 1903, (37-38). [2227 he nq 2231]. 108

A new species of Metzgeria. [M. californica n. sp.] Nautilus, Boston, Mass., 17, 1903, (51–52). [2231]. 110

 
 Note on the family Septidae.
 Natilus, Boston, Mass., 17, 1903, (55-56).
 111

A new genus of Trochidae [from Hawaii] [Stylobates aeneus n. gen. and sp.]. Nautilus, Boston, Mass., 17, 1903, (61-62). [2227 nd 2231]. 112

Daniels, L. E. A check list of Indiana Mollusca, with localities. Indiana, Rep. Dept. Geol. Nat. Res., Indianapolis, 27, 1902, [1903], (629-652). [2227 gg]. 113 ------ v. Blatchley, W[illis]

S[tanloy].

Dautsenberg, Ph. Revision des Cypraeidae de la Nouvelle-Calédonie. J. conchyliol., Paris, 50, 1902, (291-384, av. 1 pl.). [2231 2227 il]. 114

Contribution à la faune malacologique terrestre et d'eau douce des îles Obi et Iolo. J. conchyliol., Paris, **51**, 1903, (5-20, av. 1 pl. et fig.). [2227 eg 2231]. 115

Description de mollusques nouveaux provenant de l'ile Obi (Moluques). Naturaliste, Paris, (sér. 2), **24**, 1902, (247-248, av. fig.). [2231 2227 *ia*]. 116

Description de trois mollusques nouveaux provenant de l'état indépendant du Congo. Bruxelles, Ann. Soc. roy. malac., **26**, 1901, (3-7). [2227 fd 2231]. 117 **Davenport**, C[harles] B[enedict]. Quantitative studies in the evolution of *Pecten*. III. Comparison of *Pecten opercularis* from three different localities of the British isles. Boston, Mass., Proc. Amer. Acad. Arts Sci., **39**, 1903, (121-159). [2223 2331]. 118

Davis, C. A. v. Hale, D. J.

Davis, J. R. A. and Pleure, H. J. L. M. B. C. Memoirs on Typical British Marine Plants and Animals. No. x. *Patella* (the Common Limpet). London, 1903, (84, with 4 pls.). 8vo. [2207 2231]. 119

**Dean**, Bashford. Japanese oysterculture. Washington, D.C., Bull. U.S. Fish Com,, **22**, (1902), 1903, (13–37, with text fig. and pl.) [2203 2227 ec 2231]. 120

Diener, C. Palaeontologia Indica. Series XV. Himalayan Fossils. Vol. II. Part I. The Cephalopoda of the Lower Trias. Calcutta (Geol. Survey Office). London (Kegan Paul & Co.) (1-181, pls. i-xxiii). [Review], Ann. Mag. Nat. Hist., Iondon, (Ser. 7), 11, 1902, (241-244). [2227 ef 2231]. 121

Digby, L. Preliminary note on the anatomy of the genus Cataulus. London, Proc. Malac. Soc., 5, 1903, (261). [2207 2231]. 122

Dimon, A. C. Quantitative study of the effects of environment upon the forms of Nassa obsoleta and N. trivittata from Cold Spring Harbour, Long Island. Biometrika, Cambridge, 2, 1903, (24-43). [2223 2231]. 123

Dollfus, Gustave, F. Une grande Vénus du miocène supérieur de l'Anjou. J. conchyliol., Paris, 50, 1902, (423– 428). [2231]. 124

Drevermann, F. Die Fauna der oberdevonischen Tuffbreccie von Langenaubach bei Haiger. Berlin, Jahrb. geol. Landesanst., 21, 1901, Abh. auss. St. Pers., (99-207, mit 5 Taf.). [0231 2031 2231 2831]. 125

**Drummond**, J. M. Notes on the development of *Paludina vivipara*, with special reference to the urinogenital organs and theories of Gastropod torsion. Q. J. Microsc. Sci., London, (Ser. 2), **46**, 1903, (97-143, with 3 pls.). [2215 2231]. 126

207

Dubois, Raphael. Sur la formation de la pourpre de *Purpura lapillus*. Paris, C.-R. Acad. sci., **136**, 1903, (117-118). [2211 2231]. 127

L'origine des perles chez le Mytilus gallo-provincialis. Paris, C.-R. Acad. sci., 136, 1903, (178-179). [2219 2231]. 128

Sur l'acclimatation et la culture des Pintadines ou hultres perlières vraies, sur les côtes de France et sur la production forcée des perles fines. Paris, C.-R. Acad. sci., **137**, 1903, (611– 613). [2219 2231]. 129

Sur le venin de la glande à pourpre des Murez. Paris, C.-R. soc. biol., 55, 1903, (81). [2211 2231]. 130

Sur la purpurase de Purpura ; à propos d'une Note de M. A. Letellier. Paris, C.-R. soc. biol., 55, 1903, (82). [2211 2231]. 131

Dybowski, W. Beschreibung einer neuen Süsswasser - Schnecke Limnaea (Limnus) lagorii n. sp. St. Peterburg, Ball. Ac. Sc., (5 F.), 18, No. 3, 1903, (113-116, mit 6 Figs.). [2231]. 132

Molluskenfauna Kamtschatkas. St. Peterburg, Ann. Mus. zool, Ac. Sc., **8**, 1903, (40–55, mit 8 figs.). [2227 ea 2231]. 133

didae Clessin. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (76-83). [2227 db 2231] 135

Bemerkungen über die gegenwärtige Systematik der Süsswasserschnecken. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (130-145). [2231]. 136

v. Dybovskij, W.

Eliot, Sir C. On some Nudibranchs from East Africa and Zanzibar. London, Proc. Zool. Soc., **1903**, 2, (250– 385). [2207 2227 **f** 2231]. 137

Notes on some new or little-known members of the family *Doridiidae*. London, Proc. Malac. Soc., **5**, 1903, (331-337, pl. XIII). [2231]. 138 Ellot, Sir C. Nudibranchiata, with some remarks on the families and genera, and description of a new genus, *Doridomorpha*. In Fauna and Geography of the Maldive and Laccadive Archipelagoes, Vol. ii, 1903, (540-573, pl. XXXII). [2227 ma 2231]. 139

**Eirod**, Morton J[ohn]. Notes on Pyramidula elrodi Pils. Nautilus, Philadelphia. Pa., **16**, 1903, (109–112). [2231]. 140

------ Montana shells. Nature study lesson. Missoula, Bull. Univ. Mont., No. 17, Biol. Ser. No. 5, 1903, (255-262, with pl.). [2203 2227 gi]. 142

Enriques, P. Ricerche osmotiche sulla *Limnaea stagnalis*. Roma, Rend. Acc. Lincei, (Ser. 5), **11**, 1° Sem., 1902, (440–448). [2211 2231]. 143

Le foie des mollusques et ses fonctions. (Resumé). Arch. ital. biol., Torino, **37**, 1902, (177–199). [2207 2211]. 144

Evans, W. Helix lamellata Jeff., in Midlothian, and Planorbis spirorbis Mull., in Fife. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (120-121). [2227 de 2231]. 145

**Evermann**, Barton Warren and **Goldsborough**, Edmund Lee. Notes on the fishes and mollusce of Lake Chautauqua, New York. Washington, D.C., Rep. U.S. Com. Fish, **1901**, 1902, (169–175). [2227 gg 5427 gg]. 146

Notes on the fishes and mollusks of Lake Chautauqua, New York. New York, Forest Fish Game Com. Rep. Albany, **1900**, 1901, (357-366, with col. pl. and text-fig.). [2227 gg 5427 gg]. 147

Fahringer, Josef. Ueber das Vorkommen einer Speicherniere bei Carinaria mediterranea Per. u. Les. Zool. Anz., Leipzig, 27, 1903, (7-12). [2231 2207]. 148

Fall, Delos v. Hale, D. J.

Farran, G. P. The Nudibranchiate Molluscs of Ballynakill and Bofin Harbours, Co. Galway. Rep. Fish. Ireland for 1901, Part II, (123–132, pls. XVIII-XIX). [2227 de 2231]. 149 **Faussek**, V. Parasitismus der Anodonta-Larven (Russ.) St. Peterburg, Mém. Ac. Sc., (8 F.), **13**, No. 6, 1903, (132), mit dtscher Tafelerklärung (133– 141, mit 8 Taf.). [2219 2231 5419 5619].

Ficalbi, E. Doratopsis vermicularis e larva di Chiroteuthis veranyi. Mon. Zool. ital., Firenze, **13**, 1902, (37–39). [2231].

**Pischer**, H. A propos du type de l'Helix prunum Férussac. J. conchyliol., Paris, **50**, 1902, (385-386). [2231]. 152

Description d'un Olira nonveau provenant des Nouvelles-Hébrides. J. conchyliol., Paris, 50, 1902, (409-411, av. fig. et pl.) [2227 il 2231]. 153

et **Chatelet**, C. Description d'une espèce nouvelle du genre *Glandina*. J. conchyliol., Paris, **51**, 1903, (321-322, av. fig. et pl.). [2231 2227 ha]. 154

Fleure, H. J. v. Davis, J. R. A.

Forel, F[rancois] A[lphonse]. Mouette et anodonte. Lausanne, Bul. Soc. Sci.. Nat.. **38**, 1902, (XXI); Arch. Sci. Phys., Genève, (sér. 4), **13**, 1902, (605). [2219 2231 5831]. 155

Frans, Viktor. Ueber "Nautilus bidorsatus" und seine Verwandten. N. Jahrb. Min., Stuttgart, Beilagebd 17, 1903, (486-497). [2231]. 156

**Prierson**, L. S. The specific value of Unio declivis, Say. Nautilus, Boston, Mass., **17**, 1903, (49–51, with pl.). [2231]. 157

Observations on the byssus of Unionidae. Nautilus, Boston, Mass., **17**, 1903, (76-77). [2207 2231]. 158

**Fritel**, P. H. Céphalopodes fossiles. Les Ammonés. Naturaliste, Paris, (sér. 2), **25**, 1903, (65–68, 113–115, av. fig.). [2231]. 159

Fulton, H. Figures and descriptions of supposed new species and varieties of Ennea, Macrochlamys, Cochlostyla, Strophocheilus (Borus), Odontostomus, (Moricaudia), Leptopoma, Cataulus, Coptocheilus, and Tropidophora. J. Malac., London, 10, 1903, (99–103, pl. IX). [2231]. 160

- v. Sowerby, G. B.

Gariaev, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal-Sees im Sommer 1900 u. 1901. (Russ.) St. Peterburg, Trd. Troick.-Kiacht. Ótd. Russ. Geogr. Obšč., V, 2, 1902, [1903], (27–48, mit [0627 1227 1827 **2**027 1 Karte). 2627 2227 0631 1231 1831 2031 2231 2631]. 161

Garstang, W. and Sorby, H. C. Mollusca (part of Marine Zoology). In the Victoria County History of Essex, Vol. 1, (81-86). [2227 de]. 162

Gatliff, J. H. Additions to the lists of Victorian marine Mollusca. [41 species.] Vict. Nat., Melbourne, 20, 1903, (89–91). [2227 if 2231]. 163

----- v. Pritchard, G. B.

Geret, P. Variété nouvelle de Cypraea provenant de la Nouvelle-Calédonie. J. conchyliol., Paris, 51, 1903, (28). [2231 2223 2227 il]. 164

Germain, Louis. Etude sur les mollusques terrestres et fluviatiles vivants des environs d'Angers et du département de Maine-et-Loire. Nantes, Bul. soc. sci. nat., (sér. 2, 3), 13, 1903 (1-112). [2227 df 2231]. 165

Gessard, C. Sur les oxydases des seiches. Paris, C.-R. Acad. sci., **136**, 1903, (631–632). [2211 2231]. 166

Geyer. Malakologische Streifzüge in Württemberg. Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (315-324). [2227 dc]. 167

**Ghigi**, [Alessaudro]. Il nidamento della *Tiedemannia neapolitana*. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (24-27, con 2 fig.). [2219 2231]. 168

Giard. Curieuse station de Theodoxia fluviatilis L. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (223). [2219 2231]. 169

Gill, E. L. Note on the occurrence of Keieley Limestone-Pebbles in the red sandstone-rocks of Peel (Isle of Man). London, Q. J. Geol. Soc., 59, 1903, (307-310). [2827 de 2027 de 1027 de 2227 de 0827 de]. 170

Girardot, Abel v. Loriol, P[erceval] de.

Giamann, G. Anatomisch-systematische Beiträge zur Kenntniss de Tracheopulmonaten. Zool. Jahrb., Jena, Abt. f. Anat., 17, 1903, (679-762, mit 6 Taf.). [2207 2231]. 171 Glaser, O[tto] ('. The nematocysts of nudibranch mollusce. Baltimore, Md., Johns Hopkins Univ. Cir., 22, 1903, (22-24). [2207 2231]. 172

Godfrey, R. Vertigo pygmaea, etc., in Mid Perth. Ann. Scot. Nat. Hist., Edinburgh, 1903, (246). [2231]. 173

Godwin-Austen, H. H. On the anatomy of two land Molluscs (Helicarion (?) villeyana and H. (?) woodwardi, n. spp.) from New Britain and Lifu, Loyalty Islands, collected by Dr. Arthur Willey, F.R.S., in 1895-97. London, Proc. Malac. Soc., 5, 1903, (296-299, pl. IX). [2207 2227 il 2231]. 174

Further description of the animal of Damayantia carinata Collinge, shewing its similarity to D. smithi Collinge and G.-A., with remarks on this genus of Issel, Collinge. London, Proc. Malac. Soc., 5, 1903, (311-316, pl. XI). [2207 2231]. 175

Morphological observations on species belonging to the families *Cyclostomidae* and *Helicidae*. In "The Nat. Hist. Sokotra and Abd-el-Kuri," edited by H. O. Forbes (159-174, pl. XIIIa). [2207 2231]. 176

Goldsborough, Edmund Lee v. Evermann, Barton Warren.

Grabau, Amadeus W. Studies of Gastropoda. 2, Fulgur and Sycotypus. Amer. Nat., Boston, Mass., 37, 1903, (515-539). [2223 2231]. 177

Granger, Albert. Revision des espèces françaises du genre *Helix*. Bordeaux, Actes soc. linn., 58, 1903, (1-60). [2231 2227 df]. 178

Gratacap, I{ouis] P[ope]. Catalogue of the Binney and Bland collection of the terrestrial air-breathing mollusks of the United States and territories in the American museum of Natural History, with enumeration of types and figured specimens, and supplementary notes. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 14, 1901, (335-403, with 6 maps). Separate. 23.5 cm. [2227 gf 2231]. 179

Gravier, Ch. Sur le système nerveux du Nautile. Paris, C.-R. Acad. sci., 136, 1903, (618–621, av. fig.). [2207 2231]. 180

v. Perrier, E. (x 2-9053)

Gredler, Vinc[enz]. Localer Beitrag zur Conchvlienfauna von Kärnten. Carinthia II, Klagenfurt, 92, 1902, (156-158). [2227 dk]. 181

Grierson, P. H. Notes on the Mollusca of Co. Kilkenny. Irish Nat., Dublin, 12, 1903, (307-311). [2227 de]. 182

Griffin, Lawrence Edmonds. The anatomy of Nautilus pompilius [with bibliography] . . Dissertation . . . Ph.D. . . Johns Hopkins Univ. (Reprinted from the Memoirs of the National Academy of Sciences). Baltimore, Md., Mem. Biol. Lab., Johns Hopkins Univ., 5, 1903, (1-230, with 17 pls.). [2207 2231]. 183

Gude, G. K. Descriptions of some new forms of helicoid land-shells. London, Proc. Malac. Soc., 5, 1903, (202-266, pl. VII). [2231]. 184

Additions to the genus Streptaxis. London, Proc. Malac. Soc., 5, 1903, (322-327, pl. XII). [2231].

A classified list of the helicoid land shells of Asia. J. Malac., London, 10, 1903, (5-16, 45-62, 83-98, 129-136, pl. III). [2227 e 2231]. 186

Günther, R. On the structure and affinities of *Menestra parasites* Krohn; with a revision of the classification of the *Cladonemidae*. Mitt. Zool. Stat. Neapel, Berlin, **16**, 1903, (35-64, mit 2 Taf., 280). [0831 0819 2219 2231]. 187

**Hale**, David J. and others. [C. A. Davis, Bryant Walker, B. B. Lathbury, A. C. Lane, Delos Fall and Richard L. Humphrey]. Marl (bog lime) and its application to the manufacture of Portland cement. Michigan, Geol. Surv. Lansing, **8**, Part 3, 1903, (XI + 399, with 23 pls. and 45 figs.). [2203]. 188

Hamilton, S. H. Habits of Acanthopleura granulata [showing development of megalapores]. Nautilus, Philadelphia, Pa., 16, 1903, (138). [2219 2231]. 189

Hamlyn-Harris, Ronald. Die Statocysten der Cephalopoden. Zool. Jahrb., Jena, Abt. f. Anat., 18, 1903, (327–358, mit 5 Taf.). [2207 2231]. 190

Hamy, E. T. Une rocaille [en Strombus] du vieux Marly. Bul. Muséum, Paris, **1903**, (55-56). [2203]. 191.

Р

Heath, Harold. The function of the Chiton subradular organ. Anat. Anz., Jena, 23, 1903, (92-95). [2211 2231]. 192

**Hedley**, C. Studies on Australian Molusca. Part VII. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **27**, (1902), 1903, (596-619, with 4 pls.). [2231 2227 i]. 193

The effect of the Bassian Isthmus upon the existing Marine Fauna; a study in ancient geography. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (876-883, with 1 map). [2227 ie]. 194

Mollusca. Part II. Scaphopoda and Gastropoda. Scientific results of the trawling expedition of H.M.C.S. "Thetis" off the coast of New South Wales in February and March, 1898. Sydney, N.S.W., Mem. Austr. Mus., 4, 1903, (327-402, with 3 pls. and 53 text-figs.). [2227 ie 2231]. 195

The Mollusca. Notes on the Zoology of Paanopa or Ocean Island and Nauru or Pleasant Island, Gilbert Group. Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (4, 5). [2227 ib]. 196

**Herdman**, W. A. The biological station at Port Erin, being the 16th annual report of the Liverpool Marine Biology Committee. Liverpool, Trans. Biol. Soc., **17**, 1903, (15–67). [0827 de 5427 de 2227 de 2627 de 1227 de 1803]. 107

The Pearl Fisheries of Ceylon. Nature, London, **68**, 1903, (620-622). [2203]. 198

The pearl oyster parasite in Ceylon. Nature, London, **69**, 1903, (126–127). [2219]. 199

Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar. Part I. Pearl Oyster Report. London, 1903, (146). 40. [2203 2219 2231]. 200

Hersche r. Heuscher, J.

Hescheler, Carl. Der gemeine Tintenfisch (Sepia officinalis L.) Zürich, Neujahrbl. Natf. Ges., 104, 1902. [2203 2231]. 201

Sepia àfficinalis L. Der gemeine Tintenfisch. Ein Beispiel der Untersuchung eines Tieres auf vergleichend-anatomischer Grundlage. Zurich, (Zürcher & Furrer), 1902, (IV + 40, mit 2 Taf. und 11 Fig.). 4to. [2207 2231]. 202

Hey, W. C. Shore-collecting near Scarborough and Filey. Naturalist, London, 1903, (344-348). [2627 de 1027 de 2227 de]. 203

Hind, W. On a new species of Solenopeis [Solenomorpha] from the Pendleside Series of Hodder Place, Stonyhurst (Lancashire). London, Q. J. (ieol. Soc., 59, 1903, (334-336, with fig.). [2227 de 2231]. 204

A Monograph of the British Carboniferous Lamellibranchiats. Vol. II. London, Monogr. Palaeont. Soc., **1903**, (35-124, pls. VII-XXI). [2231]. 205

Life-zones in the British ('arboniferous Rocks. Report of the Committee. London, Rep. Brit. Ass., **1903**, (210-224). [1027 de 5127 de 2027 de 2227 de]. 206

Hinkley, A. A. A proposed study of *Coniobasis*. Nautilus, Boston, Mass., 17, 1903, (32-34). [2231]. 207

Hirase, Y. Catalogue of land shells of Japan to be had of Y. Hirase. Shimochoja-Machi, Karasumaru, Kijota, Japan, 1903, ([1]-24, with pl.). Nantilus, Philaelphia, Pa., **16**, 1903. [2227 cc 2231]. 208

A[ugustine].

Hollerbach, Christoph. Linse aud Corpus epitheliale im Cephalopodenauge and ihre Entwicklung. Bern Vet.-med. Diss. 1903-1904. Oppenheim a. Rh. s.a., (40, 2 Taf.). 8vo. [2207 2231]. 209

Holt, E. W. L. The public oyster beds on the coasts of Counties Wicklow and Wexford. Rep. Fish. Ireland for 1901, Part II, (4-36). [2203]. 210

A Norwegian method of Oyster culture (Translations of papers and reports in Norwegian). Rep. Fish. Ireland for 1901, Part II, (77-103, with 10 pls.). [2203]. 211

**Hoyle**, W. E. Notes on the type specimen of *Loligo eblanac* Ball. Manchester, Mem. Lit. Phil. Soc., 47, No. 9, 1903, (10, with 1 pl.); also issued as Notes Manchester Mus., No. 14. [2231]. 212

Humphrey, R. L. v. Hale, D. J.

Hunt, A. R. Notes and comments on the raised beaches of Torbay and Sharkham Point. Plymouth, Trans. Devon Ass., **35**, 1903, (318–337). [2227 de].

213

Hyatt, Alpheus. Pseudoceratites of the Cretaceous. Edited by T. W. Stanton [with bibliography]. Washington, D.C., Dept. Int. U.S. Geol. Surv. Monogr., 44, 1903, (351 + iii, with pl.). 30 cm. [2231]. 214

Issel, Raffaele. Ancistridi del Golfo di Napoli. Studio monografico sopra una nuova famiglia di Cigliati, commensali di molluschi marini. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (63-108, mit 2 Taf.). [0431 0419 2219]. 215

Jacot, [E.]. Etude sur les mollusques. Messager Suisse Rom., Fribourg, 16, 1903, (132-133, 140-141, 173-174, 188). [2203 2231]. 216

Janensch, Werner. Die Jurensisschichten des Elsass. Diss. Strassburg i. E. (Strassb. Druckerei u. Verlagsanst.), 1902, (153, mit 12 Taf.). 26 cm. [= Abh. geol. Specialkarte Els.-Lohr., (N. F.), H. 5.] [2227 de]. 217

Jenkins, Oliver Peebles and Carlson, A. J. The rate of nervous impulse in certain Molluscs. Amer. J. Physiol., Roston, Mass., 8, 1903, (251 – 268). [2211]. 218

Johansen, A. C. Remarks on the molluscan fauna (in marine diluvium near Hostrup in Salling). (Danish) Kjöbenhavn, Nath. Medd., **1903**, (124-131). [2227 da]. 219

Johnson, Chas. W. Some notes on the genus *Fulgur*. Nautilus, Boston, Mass., **17**, 1903, (73–75). [2231]. 220

Johnson, J. P. Notes on fossil and recent shells obtained on a visit to Cornwall. Geol. Mag., London, [4], 10, 1903, (25-28). [2203 2227 de]. 221

Jonbin. Sur quelques céphalopodes recueillis pendant la dernière campagne de S. A. S. le Prince de Monaco (1901-1902). Paris, C.-R. Acad. sci., **136**, 1903, (100-102). [2231]. 222

Jukes-Browne, A. J. Devonshire in the time of the Lower Chalk. Plymouth, Rep. Devon. Ass., **35**, 1903, (787-799, 1 pl.). [1027 de 2027 de 2227 de]. 223

The Cretaceous Rocks of Britain. Vol. II. The Lower and (N 2-9053) Karpov, Vladimir. Bericht über eine Reise an das Schwarze Meer zum Studium der Austernwirthschaft. (Russ.) Vést. ryboprunyěl., St. Peterburg, **1903**, 18, (260-345). [2203 2231]. 225

Keer, P[aul] M[artinus]. Beitrag zur Kenntnis des Schiffsbohrwurmes. (Holländisch) Leiden (P. W. M. Trap, 1903, (58, mit 4 Taf.). 29 cm. [2207 2231]. 226

Kellogy, James L. Feeding habits and growth of Venus mercenaria. Albany Univ., N.Y., Ball. St. Mus., No. 17, 1903, (27, with pl.). [2219 2231]. 227

Kennard, A. S. Observations on the organic remains and the nature of the soil associated with the Pile Structures in the Walbrook near London Wall. Archaeol. J., London, **60**, 1903, (230-235). [2227 de]. 228

and Warren, S. H. The Blown Sands and Associated Deposits of Towan Head, near Newquay, Cornwall. (icol. Mag., London, [4], 10, 1903, (19-25). [2227 de]. 229

On a section of the Thames Alluvium in Bermondsey. Geol. Mag., London, [4], 10, 1903, (456-460, 525). [2227 de 6027 de 4227 de]. 230

and Woodward, B. B. Mollusca. In "The Exploration of the Caves of Kesh, County Sligo." Dublin, Trans. R. Irish Acad., **32**, 1903, (181– 183). [2227 de]. 231

Control Contro

Mollusca of the River Lea Alluvian at Walthamstow. Stratford, Essex Nat. 13, 1903, (13-21, 115-116, with figs.). [2227 de 2231]. 233

tions in the Lea Valley at Canning Town. Stratford, Essex Nat., 18, 1903, (77-79). [2227 de]. 234

p 2

**Emmard**, A S. and **Woodward**, B. B. Note on the occurrence of freshwater Mollusca in a water-main at Poplar. Stratford. Essex Nat., **13**, 1903, (80–81). [2219 2231]. 235

Holocene deposits at Clifton Hampden, near Oxford. II. Zoology. Mollusca. Gloucester, Proc. Cotteswold Nat. F. Cl., 14, 1903, (198-203). [2227 de]. 236

**Ecsteven**, H. Leighton. Notes on Prosobranchiata. No. ii. Littorinacea. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **27** (1902), 1903, (620–636, with 1 pl.); No. iii. The neanic shell of *Melo diadema*, Lamk., and the definition of the nepionic stage in the Gasteropod Mollusc. ib. **28**, 1903, (443–452). [2207 2215 2231]. 237

Kew, H. W. Note on a two-banded shell of *Helicigona arbustorum* from Wensleydale. Naturalist, London, **1908**, (341-342, with fig.). [2223 2231]. 238

**Enipovič**, N. M. Zoologische Ergebnisse der russischen Expeditionen nach Spitzbergen. Mollusca und Brachiopoda IV Nachtrag. St. Peterburg, Ann. Mus. Zool. Ac. Sc., **8**, 1903, (133-143). [2027 kd 2031 2227 kd 2231]. 240

Kobelt, W[ilhelm]. Diagnosen neuer Cerastus-Arten. Frankfurt a. M., NachrBl. D. malakozool. Ges., 35, 1903, (33-35). [2231]. 241

Diagnosen neuer Arten. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (88-91, 145-151). [2231]. 242

Condinus. [C. tener n. sp.] Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (91). [2231]. 243

Unsere Kenntnis der Fauna europaea. Frankfurt a. M., NachrBl. D. mslakozool. Ges., **35**, 1903. (113-121). [2227 d]. 244

dorff. J. Malac., London, 10, 1903, (122-125, pl. XI). [0010 2203]. 245

und Möllendorff, O[tto] von. Catalog der Fanilie Buliminidae. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (36-60, 65-71). [2231]. 246 Kochler, R. et C. Vaney, C. Entosiphon deimatis, nouveau mollusque parasite d'une Holothurie abyssale. Rev. Suisse Zool., Genève, 11, 1903. (23-41, 1 pl.-[2219 2231 1019 1031]. 247

Kormos, Tivodar. Paläontologische Mitteilungen. (Ungarisch und Deutsch) Földt. Közl., Budapest, 33, 1903, (451– 462, 496–508, Taf. XIII). [2231]. 248

Krogh, A. On shells floating on the surface of the sea. London, Proc. Malac. Soc., 5, 1903, (341-342). [2219]. 249

**Künkel**, Karl. Zur Locomotion unserer Nacktschnecken. Zool, Auz., Leipzig, **26**, 1903, (566–568). [2211 2219]. 250

Zuchtversuche mit linksgewundenen Weinbergschnecken (*Helix* pomatia). Zool. Anz., Leipzig, **26**, 1903, (656–664). [2223–2231]. 251

Kwistniewski, C. Alcune osservazione intorno agli Pteropodi (Hinnosomi del Mare Mediterraneo. Padova, Atti Soc. ven. trent., (Ser. 2), 4, fasc. 2°, (1900-1902), 1902, (39-58). [2231 2227 dh dm]. 252

Lameere. Discours du président sur l'évolution des mollusques. Bruxelles, Bul. soc. roy. malac., 38, 1903, (XXX-XLVI). [2223]. 253

Lampingh, G. W. Belemnites of Farringdon "Sponge-Gravels." (ieol. Mag., London, [4], 10, 1903, (32-34). [2231]. 254

Lamy, Ed. De l'identité d'une Arche figurée par Savigny (Arca pharaonis P. Fischer), avec l'A. ehrenbergi. J. conchyliol., Paris, **51**, 1903, (323-325). [2231]. 255

Sur le prétendu genre Sarignyarca Jousseaume (Lamellibranche). Bul. Muséum, Paris, **1903**, (140-142). [2231]. 256

Lane, A. C. v. Hale, D. J.

Lang, W. D. On a fossiliferous bed in the Selbornian of Charmouth. Geol. Mag., London, [4], 10, 1903, (388-392, with 1 fig.). [2027 de 2227 de 1827 de 0827 de]. 257

Lathbury, B. B. v. Hale, D. J.

Latter, O. H. The nervous system of *Anodonta cygnea*. Nature, London, **68**, 1903, (623). [2207 2231]. 258 Lawessari. Liste des coquilles recueillies au Val-André (Côtes-du-Nord). J. conchyliol., Paris, 51, 1903, (29-34). [2227 df 2231]. 259

Léger, Louis. Sporozoaire parasite des moules et autres Lamellibranches comestibles. Paris, C.-R. Acad. sci., 137, 1903, (1003-1005). [0119 0431 2219]. 260

Lenssen, J. Système nerveux, système circulaire, système respiratoire et système excréteur de la Neritina fluciatilis (fragments d'un travail monographique sur cette espèce). Louvain (A Uystpruyst), Lierre (J. Van In et Cie), 1903; Cellule, Louvain. 20, 1903, (287-333, pls. I-III). [2207 2231]. 261

Letacq, A. L. Liste des mollusques recueillis dans les cantons de Fresnay et de Saint-Paterne. Mans (le), Bul. soc. agricult. (sér. 2, 30), 38, 1901-1902, (136-143). [2231 2227 df]. 262

List, Theodor. Die Mytiliden des Golfes von Neapel und der angrenzenden Meeres-Abschnitte. TI 1. (Fauna und Flora des Golfes von Neapel. 27. Monographie [Jg 20.]) Berlin, 1902, (X + 312, mit 22 Taf.). 33 cm. 120 M. [2231 2207]. 263

Lo Bianco, Salvatore. Le pesche abissali eseguite da F. A. Krupp col Yacht "Puritan" nelle adiacenze di Capri ed in altre località del Mediterraneo. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (109-279, mit 3 Taf.). [0219 0227 dm 0231 0431 1631 2231 2631]. 264

Locard, Arnould. Description de mollusques nouveaux appartenant à la faune souterraine de France et d'Italie. Bul. Museam, Paris, **1902**, (608-611, av. fig.). [2219 2227 df dh 2231]. 265

Description d'une nouvelle espèce de *Lartetia*. Nimes, Bul. soc. étud. sc. nat. (n. sér.), **29**, 1901, [1902], (10-13). [2231]. 266

Notices conchyliologiques, LVII. Les Ptéropodes testacés des mers d'Europe. Echange, Lyon, **1902**, (67-68, 74-75). [2231 2227 d]. 267

------ Notices conchyliologiques. Echange, Lyon, **19**, 1903, (95–96, 101– 103, 110–111). [2231]. 268 Loeb, Jacques. Artificial parthenogenesis in Mollusce. Berkeley, Univ. Cal. Pub. Physiol., 1, 1903, (7-9). Separate. 26.5 cm. [0211 0215 2215]. 269

Lomas, J. Report on the Sea bottoms and Calcretes, collected by Prof. Herdman. In: Report Pearl Oyster Fisheries of the Gulf of Manaar. London, 1903, (147-162). [2227 ef 0427 ef]. 270

Loomis, F. B. The dwarf faune of the pyrite layer at the horizon of the Tully limestone in Western New York. Albany Univ., N.Y., Bull. St. Mus., No. 69, 1903, (802-920, with 5 pls.). [0227 gg 2231 2031 2631]. 271

Lorenzen, A. Die Einwanderung der Klaffmuschel (*Mya arenaria* L.) in unsere Meere. Prometheus, Berlin, **15**, 1903, (61-62). [2219 2231]. 272

Loriol, P[erceval] de. Etude sur les mollusques et brachiopodes de l'Oxfordien supérieur et moyen du Jura bernois accompagnée d'une notice stratigraphique par F(rédéric) Koby. Genève (W. Kündig et fils), 1901, (119, av. 7 pls.). 4to. [2227 di]. 273

et **Girardot**, Abel. Etude sur les mollusques et brachiopodes de l'Oxfordien supérieur et moyen du Jura lédonien. Première parie. Basel. Abh. Schweiz. Pal. Ges., **29**, 1902, (76, av. 5 pls. et 2 figs.). [2227 di **1**2231]

Lowe, Herbert N. Notes on the Mollusk fauna of San Nicholas island. [Cal.] Nautilus, Boston, Mass., 17, 1903, (66-69). [2227 gi]. 275

M'Intosh, W. C. Notes from the Gatty Marine Laboratory, St. Andrews. No. XXIV. On the frequency of the occurrence of pearls in the mussel (Mytilus edulis), etc. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (549-551). [2219]. 276

Madoulé, Aug. Double observation sur le mode de distribution des mollusques terrestres, vivant soit en colonies, soit plus ou moins isolément. Elbeuf, Bul. soc. étud. sci. nat., 21, (1902), 1903, (46-49). [2231 2219]. 277

Marquand, G. B. v. Tomlin, J. R. le B.

Marshall, J. T. Additions to "British Conchology." Part VII. Torquay, 1903, (59). 8vo. [2203]. 278

Martens, E[duard] von. Neue Meer-Conchylien aus den Sammlungen der deutschen 'Tiefsee-Expedition. (Abdr. aus: Borlin, SitzBer. Ges. natf. Freunde, Jg 1902, N. 9.) Frankfurt a. M., Nachr-Bl. D. malakozool. Ges., 35, 1903, (97-105). [2231]. 279 Griechische Mollusken, gesammelt von Eberh. von Oertzen. Arch. Natg., Berlin, **69**, Bd. 1, 1903, (372-374). [2227 dl 2231]. 280 Ueber einige Schnecken der Cocosinsel. Berlin, SitzBer. (tes. natf. Freunde, 1902, (59-62). [2227 mb 2231]. 281 Die geographische Verbreitung von Pomatias septemspiralis Raz (maculatus Drap.). Berlin, SitzBer. Ges. natf. Freunde, 1902, (62-73). [2231 2227 d]. 282 Die Meeres-Conchylien der Cocos-Insel. Berlin, SitzBer. Ges. natf. Freunde, 1902, (137-141, 253). [2227 mb 2231]. 283 Eine für die Provinz Brandenburg neue Süsswasserschnecke. Physa acuta Drap. Berlin, SitzBer. Ges. nati. Freunde, 1902, (166-168). [2227 dc]. 284 Einige neue Arten von Meer-Conchylien aus den Sammlungen der deutschen Tiefsee-Expedition. Berlin, SitzBer. Ges. natf. Freunde, 1902, (237–244). [2231]. 285 - Süsswasser-Conchylien vom Südufer des Tsad-Sees. Berlin, SitzBer. Ges. natf. Freunde, 1903, (5-10). [2227 fd 2231]. 286 Die Verbreitung der Meer-Conchylion an den Küsten von Westund Süd-Afrika. Berlin, SitzBer. Ges. natf. Freunde, 1908, (188-193). [2227 f h]. 287 Durchbohrte Schalen von Landschnecken. Berlin, SitzBer. Ges. natf. Freunde, 1903, (393-396). [2219]. 288 Vorkommen der Helix (Campylaea) presli und Pupa edentula bei Reichenhall. Berlin, SitzBer. Ges. natf. Freunde, 1908, (396-399). [2227 dc]. 289 Land- und Süsswasser-Conchylien von Ost-Borneo. Berlin, SitzBer. Ges. natf. Freunde, 1903,

(416-428). [2227 eg 2231]. 290 ————— und **Thiele**, [Johannes].

Die beschalten Gastropoden der deut-

schen Tiefsee-Expedition 1898-1899. A. Systematisch-geographischer Teil v. von Marteus. B. Anatomisch-systematische Untersuchungen einiger Gastropoden. Von Joh. Thiele. (Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1. Jena. 1903, (1-146, mit 5 Taf.; 147-180, mit 4 Taf.) [2231 2227]. 291

Martini und Chemnits. Systematisches ('onchylien-Cabinet . . . neu hrsg. u. vervollständigt v. H. C. Küster, Mag. 1. Volvolstaning V. H. C. Ruster, nach dessen Tode fortgesetzt von W. Kobelt. I.fg 464 = Bd 1, H. 166 (S. 989-1028, mit Taf.); Lfg 465 = Bd 6, H. 15 (S. 1-24, mit Taf.); Lfg 466 =Bd 1, H. 167 (S. 1029-1060, mit Taf.); Lfg 466 =Bd 1, H. 167 (S. 1029-1060, mit Taf.); Ifg 467. 468. - Bd 1, H. 168. 169 (S. 773-836, mit Taf.); Ifg 469 -Bd 1, H. 170 (S. 401-448, mit Taf.); Lfg 470 = Bd 1, H. 171 (S. 837-884, mit Taf.); Lfg 471 = Bd 6, H. 16 (S. 25-32, 81-104 + 2 Bl., 241-273, mit Taf.); I.fg 472 = Bd 1, H. 17256, mit Taf.); Lfg 477 = Bd 1, H. 176 (1061-1092, mit Taf.); Lfg 478 = Bd 6, H. 18 (8. 57-80, mit Taf.); Lfg 479 = Bd 1, H. 177 (S. 1-32. mit Taf.); Lfg 480 = Bd 6, H. 19 (S. 81-104, mit Taf.); Lfg 481 = Bd 6, H. 20 (S. 1–32, mit Taf.); Lfg 482 = Bd 6, H. 21, (S. 33-64, mit Taf.); Lfg 483 = Bd 6, H. 178 (S. 57-88, mit Taf.); Lfg 484 = Bd 6, H. 22 (S. 65-96, mit Taf.); Lfg 485 = Bd 6, H. 179 (S. 89-120, mit Nürnberg (Bauer & Raspe), 03. 30 cm. Die Lig 9 M. Taf.). 1901-1903. [2203 Auch in Sectionen zu 27 M. 2231]. 292

Masarelli, G. Ricerche intorno alla struttura delle larve libere dei Gasteropodi opistobranchi. Milano, Rend. Ist. lomb., (Ser. 2), **35**, 1902, (715-732, con. fig.). [2215 2231]. 293

Meisenheimer, Johannes. Ueber ein neues Genus der gymnosomen Pteropoden aus dem Material der deutschen Tiefsee-Expedition (Schizobrachium). Zocl. Anz., Leipzig, **26**, 1903, (410-412). [2231]. 294

Melvill, J. C. A revision of the Columbellidue of the Persian Gulf and North Arabian Sea, with description of C. calliope n. sp. J. Malac., London, 10, 1903, (27-31, with fig.). [2227 el 2231]. 295

and **Standen**, R. Descriptions of sixty-eight new Gastropoda from the Persian Gulf, Gulf of Oman, and North Arabian Sea, dredged by Mr. F. W. Townsend, of the Indo-European Telegraph Service, 1901-1903. Ann. Mag. Nat. Hist, London, (Ser. 7), 12, 1903, (289-324, pls. XX-XXIII). [2227 el 2231]. 298 \_\_\_\_\_\_ The genus

Scala (Klein) Humphrey, as represented in the Persian Gulf, Gulf of Oman, and North Arabian Sea, with descriptions of new species. J. Conch., Leeds, 10, 1903, (340-351, pl. VII). [2227 el 2231]. 299

and Sykes, E. R. Description of Marginella lateritia n. sp., from the Andaman Islands. London, Proc. Malac. Soc. 5, 1903, (410, with fig.). [2227 ma 2231]. 300

Mesnil, F. v. Laveran, A.

Meunier, Stanislas. Sur une coquille nouvelle de Pierrefitte, près Etampes. Naturaliste, Paris, (sér. 2), 25, 1903, (55-56, av. fig.). [2231]. 301

Meves, Friedrich. Ueber die sog. wurmförmigen Samenfäden von Paludina und über ihre Entwickelung. Anat. Anz., Jena, **19**, ErgH., 1901, (23-37). [2215 2231].

L'eber die sog. wurmförmigen Samenfäden von *Paludina* und über ihre Entwicklung. Kiel, Mitt. Ver. schlesw.-holst. Aerzte, (N.F.), **10**, 1901, (5-9, 36-39, 49-52). [2215 2231]. 303

Mirabella, [R.]. Osservazioni sull' accrescimento degli oociti di Heliz asporsa. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (58-59). [2215 2231]. 304

Ricerche sull' accrescimento di *Heliz aspersa*. Palermo (tip. Verzi), 1902, (40). [2215 2231]. 305 Möllendorff, O[tto] von. Neue Landschnecken von Niederländisch-Indien. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (156). [2227 eg 2231]. 306

### ----- v. Kobelt, W.

Molisch, Hans. Notiz über eine blaue Dintomee. Berlin, Ber. D. bot. Ges., 21, 1903, (23-26, mit 1 Taf.). [2231]. 307

Molyneux, A. J. E. Fossils in : The sedimentary deposits of Southern Rhodesia. London, Q. J. Geol. Soc., 59, 1903, (280-281). [2231]. 308

Murdoch, R. On the anatomy of Paryphanta urnula Pfr., with notes on P. hochstetteri Pfr. and Rhytida greenwoodi Gray. London, Proc. Malac. Soc., 5, 1903, (270-273, with fig.). [2207 2231]. 309

Anatomy of Paryphanta busbyi (Gray). Wellington, Trans. N. Zeal. Inst., **35**, 1903, (258–262). [2207 2231]. 310

Murie, J. Report on the sea fisheries and fishing industries of the Thames estuary. I. Kent and Essex Sea Fisheries Committee. London, 1903, (250, with figs. 1 pl.). 8vo. [2203 5419 5427 dc 6031]. 311

Naegele. Helix pomatia L. [Linkswindung der Schale.] Frankfurt a. M., NachrBl. D. malakozool. Ges., 35, 1903, (24-27). [2231 2207]. 312

Einiges aus Vorderasien. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (168–177). [2227 ei 2231]. 313

Nekrassoff, A. Untersuchungen über die Reifung und Befruchtung des Eies von Cymbulia peronii. Vorläufige Mitteilung. Anat. Anz., Jena, 24, 1903, (119-127). [2215 2231]. 314

Newton, R. B. Notes on some Jurassic shells from Borneo, including a new species of *Trigonia*. London, Proc. Malar. Soc., 5, 1903, (403–409, pl. XVI). [2227 cg 2231]. 315

Nierstrag, H. F. Neue Solenogastren. Zool. Jahrb., Jena, Abt. f. Anat., 18, 1903, (359-386, mit 2 Taf.). [2231 2207]. 316

Das Herz der Solenogastren. Amsterdam, Verh. K. Akad. Wet., 2e Sect., 10, No. 2, [1903], (52, mit 3 Taf.). [2207 2231]. 317 Nordenakiöld, Erland. Ueber die Trockenzeitanpassung eines Ancylus von Südamerika. Zool. Anz., Leipzig, 26, 1903, (590-593). [2219 2231]. 318

Nordmann, V. A conglomeration of mollusk shells from the bottom of the sea at Læsö. (Danish) Kjöbenhavn, Medd. Geol., 9, 1903, (37-44). [2231 2227 da]. 319

The extension of the oyster in the sea around Denmark in the present and past. (Danish) Kjöbenhavn, Medd. Geol., **9**, 1903, (45-60). [2219 2231]. 320

**Oppenheim**, Paul. Ueber die Fossilien der Blättermergel von Theben. München, SitzBer. Ak. Wiss., math.-phys. Cl., **32**, (1902), 1903, (435-456, mit 1 Taf.). [0231 1027 fb 1031 2231]. 321

**Oroutt**, C. R. Shells of western lake and stream. The West American Scientist, San Diego, Cal., **12**, 1901, ([33]-40). [2227 gi]. 322

West American Mollusca. The West American Scientist, San Diego, Cal., **12**, 1901, (67-68, 78-80, [105]-108). [2227 gi]. 323

Ortmann, A[rnold] E[dward]. Illex illecebrosus [Lesueur], the "Squid from Onondaga lake, N.Y." Science, New York, N.Y., (N. See.), **17**, 1903, (30–31). [2227 gg 2231]. 3?4

**Overton**, H. Some notes on the socalled appendix of *Helicella barbara* (L.). J. Malac., London, **10**, 1903, (126– 128). [2207 2231]. 325

Pace, S. On the anatomy of the Prosobranch genus *Pontiothauma* E. A. Smith. J. Linn. Soc. Zool., London, 28, 1903, (455-462, pl. XLII). [2207 2231]. 326

 Note on the genus Pseuda 

 mycla Pace.
 London, Proc. Malac. Soc.,

 5, 1903, (267-269).
 [2231].
 327

Critical notes on Hervier's monograph of the Columbellidae of New Caledonia with C. hervieri nom. nov. J. conchyliol., Paris, **50**, 1902, (412-422). [2231 2227 il]. 328

Palfy, Mór. Zwei nene Inoceramus-Riesen aus den oberen Kreide-Schichten der siebenbürgischen Landesteile. (Ungarisch) Földt. Közl., Budapest, **33**, 1903 (445-451, 489-495, Taf. XI-XII). [2227 dk 2231]. 329 
 Pallary, Paul.
 Exploits d'escargots.

 J. conchyliol., Paris, 50, 1902, (387-388).
 [2219 2231].

Pannell, J. Additional notes upon the land and freshwater Mollusca of Surrey. J. Conch., Leeds, 10, 1903, (331-334). [2227 de]. 331

Park, J. Marine Mollusca of Totaranui Bay, Nelson. Wellington, Trans. N. Zeal. Inst., 35, 1903, (299-304). [2231]. 332

Patterson, A. The Mollusca of the Great Yarmouth district. Zoologist, London, (Ser. 4), 7, 1903, (182-188). [2227 de]. 333

Paulcke, W. Ueber die Kreideformation in Südamerika und ihre Beziehungen zu anderen Gebieten. Tl 1. (Beiträge zur Geologie und Palaeontologie von Südamerika. Unter Mitwirkung von Fachgenossen hrsg. v. G. Steinmann, X.) N. Jahrb. Min., Stuttgart, Beilagebd. 17, 1903, (252-312, mit 3 Taf.). [0231 1031 1027 h 2231]. 334

Pearce, S. S. The association of Helix nemoralis and Helix hortensis. J. Conch., Leeds, 10, 1903, (300-301). [2219 2231]. 335

Pearcey, F. G. Notes on the marine deposits of the Firth of Forth, and their relation to its animal life. Glasgow, Trans. Nat. Hist. Soc., 6, 1903, (217-251, with map). [0427 de 0827 de 2227 de 2627 de 5427 de 1827 de]. 336

Perrier, Edm. Remarques à propos de la communication de M. Raphaël Dubois, du 19 octobre 1903, "Sur les huîtres perlières vraies." Paris, C.-R. Acad. sci., 137, 1903, (682). [2219 2231]. 337

et **Gravier**, Ch[arles]. Sur les causes physiologiques qui ont déterminé la constitution du type mollasque. Paris, C.-R. Acad. sci., **136**, 1903, (727-731). [2223]. 338

Petch, T. Marine zoology at Filey. Naturalist, London, 1903, (351). [1027 de 0627 de 1827 de 2027 de 2627 de 2227 de 5427 de 0827 de]. 339

The Marine Fauna of the Humber District and the Holderness Coast. Hull, Trans. Sci. F. Nat. Cl., **3**, 1903, (27-41). [1027 de 2227 de 2627 de 1827 de 0827 de]. 340 **Peyrot.** Note sur quelques fossiles des faluns de la Touraine (Helvétien infér.) et des environs d'Orthez (Helvétien supér.). Feuilles jeunes natural., Paris, (ser. 4), **33**, 1903, (46–49, 53–56, 69–73, av. pl.). [2227 df]. 341

Pilabry, Henry Augustine. New land Mollusca from Idaho [Pristiloma iduhoense n. sp.]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (593). [2227 gi 2231]. 342

Mollusca of western Arkansas and adjacent states, with a revision of *Paravitrea*. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (193–214, with pl.). [2227 gi 2231]. 343

Additions to the Japanese land snail fauna. No. 8 [nn. spp. in Clausilia]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (315–319, with pl.). [2227 ce 2231]. 344

A new Japanese Pleurotomaria. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (496). [2227 ec 2231]. 345

New land shells of the Japanese Empire. Nautilus, Philadelphia, Pa., 16, 1902, (21-22). [2227 ec 2231]. 346

Zonitoides arboreus (Say) in Japan. Nautilus, Philadelphia, Ps., 16, 1903, (119). [2227 ec. 2231]. 347

A new Pleurotomaria. [P. hirasei n. sp.]. Nautilus, Boston, Mass., 17, 1903, (36). [2231]. 348

Land shells of Curucao. Nautilus, Boston, Mass., 17, 1903, (48). [2227 he 2231]. 349

The use of the generic name *Helicostyla*. Nautilus, Boston, Mass., **17**, 1903, (58). [2231]. 350

Notes on Polyplacophora of the Conchylien Cabinet. [by S. Clessin]. Nautilus, Boston, Mass., 17, 1903, (58-59). [2231]. 351

Zweiter Beitrag zur Binnenconchylienfauna des Miocäns von Oppeln in Schlesien. [Von Prof. Dr. A. Andreze]. Nautilus, Boston, Mass., **17**, 1903, (59-60). [2227 de 2231]. 352

A new Jamaican Colobostylus. Nautilus, Boston, Mass., 17, 1903, (65-66). [2227 hc 2231]. 353 Plisbry, Henry Augustine. New Japanese marine mollusks. Nautilus, Boston, Mass., 17, 1903, (69–71). [2227 cc 2231]. 354

The greatest American Planorbis. [Planorbis magnificus n. sp.]. Nautilus, Boston, Mass., 17, 1903, (75-76). [2231]. 355

<u>A new Guppya.</u> [G. miamiensis n. sp.] from Florida. Nautilus, Boston, Mass., **17**, 1903, (77-78). [2227 gh 2231]. 356

Shells of Douglas co., central Washington. Nautilus, Boston, Mass, 17, 1903, (84). [2227 gi]. 357
 and Hirase, Y. New land shells of the Japanese empire. Nautilus, Philadelphia, Pa., 16, 1903, (114-117).

[2227 ec 2231]. 358 \_\_\_\_\_\_ Descriptions of new Japanese land shells. Nautilus, Philadelphia, Pa., **16**, 1903, (134–136); **17**, 1903, (31–32). [2227 ec 2231]. 359

 Japanese land shells.
 Notices of new

 Mass., 17, 1903, (44-46).
 [2227 ec

 2231].
 360

land shells of the Japanese empire. Nautilus. Boston, Mass., **17**, 1903, (52-55). [2227 ec 2231]. 361

of the Japanese empire. Nautilus, Boston, Mass., **17**, 1903, (78-79). [2227 ec 2231]. 362

Ponsonby, J. H. r. Melvill, J. C.

Preston, H. B. Supposed new species of *Helicina* and *Bulimulus* from Costa Rica. J. Malac., London, **10**, 1903. (4, with figs.). [2227 lib 2231]. 363

Descriptions of two supposed new species of *Cyathopoma*. London, Proc. Malac. Soc., **5**, 1903, (340, with figs.). [2231]. 364

Pritchard, G. B. and Gatliff, J. H. On some new species of Victorian Mollusca. Melbourne, Proc. R. Soc. Vict., 16, (N. Ser.), 1903, (92-95, pl. XV). [2227 ib 2231]. 365

Catalogue of the Marine Shells of Victoria, Pts. VI, VII. Melbourne, Proc. R. Soc. Vict., (N. Ser.), 15, 1903, (176-223); 16, 1903, (96-139). [2227 if 2231]. 366 Prots, A. Zur Binnenmolluskenfauna der Provinz Ostpreussen. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (1-6). [2227 dc]. **36**7

Ramanan, V. V. On the respiratory and locomotory habits of Ampullaria globosa Swainson. J. Malac., London, 10, 1903, (107–113). [2219 2231].

368

Rathbun, Eleanor P. v. Bigelow, R[obert] P[ayne].

**Raymond**, William J. Writings of James G. Cooper, M.D., on conchology and palaeontology, with lists of species described by him. Nautilus, Boston, Mass., **17**, 1903, (6-12). [0010 0030 2203]. 369

A new Californian Trivia [T. ritteri n. sp.]. Nautilus, Boston, Mass., 17, 1903, (85-86). [2227 gi 2231]. 370

**Beid**, C. The geology of the country near Chichester. Mem. Geol. Surv. Eng., London, **1903**, (Explanation of sheet 317), (IV + 52, with 14 text figs.). [1027 de 2227 de]. 371

Reynell, A. Note on the occurrence of *Planorbis marginatus* Drap. and *Limnaca pereger* (Müll.) in the Post-Pliocene of Bognor, Sussex. London, Proc. Malac. Soc., 5, 1903, (344-345). [2227 de 2231]. 372

**Ridewood**, W. G. On the structure of the gills of the Lamellibranchia. London, Phil. Trans. R. Soc., **194**B, 1903. (147-284, with figs.). [2207 2231]. **373** 

Rivers, J. J. Pandora (Kennerlia) grandis Dall. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, (69). [2231]. 374

**Böhm**, Joh. Ueber cretaceische und eocäne Versteinerungen aus Fergana. [In : K. Futterer, Durch Asien. Bd 3.] Berlin, 1903, (93-112, mit 1 Taf.). [2231]. 375

Rolle, H. Einige neue Binnenmollusken von den Molukken. Frankfurt a. M., NachrBl. D. malakozool. Ges., 35, 1903, (23-24). [2227 eg/ 2231]. 376

Neue Amphidromus-Formen. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (156–157). [2231]. 377 Rosen, O. Baron von. Zur Kenntnis der Molluskenfauna der Stadt Charkow und ihrer nächsten Umgebungen. [Aus. d. Russ.] Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (152-155). [2227 db]. 378

Meue Arten aus dem Kaukasus und Zentralasien. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (178-182). [2227 ea 2231]. 379

Rossmässler, E. A. Iconographie der Land- und Süsswasser-Mollusken mit vorzüglicher Berücksichtigung der europäischen noch nicht abgebildeten Arten. Fortges. v. W[ilhelm] Kobelt. N. F. Bd 9. Lfg 3,4. 5/6 [Schluss des Bandes]. Color. u. schwarze Ausg. Wiesbaden (C. W. (Kreidel), 1901, 1902, (25-86, mit 20 Taf.). Die Lfg der color. Ausg. 8 M., der schwarz. Ausg. 4,60 M. *Ib.* Bd 10, Lfg 1. 2. (1-32, mit 10 Taf.). [2231]. 380

**Buedemann**, Rudolf. Noetling on morphology of the pelecypods. [Fritz Noetling : Beiträge zur Morphologie der Pelecypoden.] Amer. Geol., Minneapolis., Minn., **31**, 1003, (34-40, with pl.). [2207 2231]. 381

Professor Jackel's theses on the mode of existence of Orthoceras and other Cephalopods [with annotations by John M. Clarke]. Amer. Geol., Minneapolis, Minn., **31**, 1903, (199-217). [2219 2231]. 382

- v. Clarke, John M[ason].

**B[uotsalai]nen**, A. Einiges über Limnaea stagnalis L. (Finnisch) Luonnon Ystävä, Helsingfors, **1903**, 11–12, (272–274). [2219 2231]. 383

**Sardeson**, Frederick W[illiam]. The phylogenic stage of the Cambrian Gastropoda. Chicago, Ill., J. Geol. Univ. Chic., **11**, 1903, (469-492, with 2 pls.). [2231]. 384

**Sohellwien**, E[rnst]. Palaeozoische und triadische Fossilien aus Ostasien. In : K. Futterer, Durch Asien, Bd 3, Berlin, 1903, (125-174, mit 5 Taf.). [0227 e 0431 2231]. 385

Schepman, M[attheus] M[arinus]. Description of three new species of Oliva from the Siboga-expedition. Helder, Tijdschr. Ned. Dierk. Ver., (Ser. 2), 8, [1903], (67-69). [2227 eg ia 2231]. 386 ----- Neritina subocellata

(Marts.) Schepm. Frankfurt a. M.,

219

NachrBl. D. malakozool. Ges., **35**, 1903, (20-22). [2231]. 387

Schnabel, H. Ueber die Embryonalentwicklung der Radula bei den Mollusken. II. Die Entwicklung der Radula bei den Gastropoden. Zs. wiss. Zool., Leipzig. 74, 1903, (616–655, mit 3 Taf.). [2215]. 388

Schweikart, Alexander. Ueber die Bildung der Micropyle und des Chorions bei den Cephalopoden. Zool. Anz., Leipzig. 26, 1903, (214-221). [2215 2231]. 389

**Sell**, Henrik. Beiträge zur Kenntniss der Molluskenfauna Dänemarks. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (105–113). [2227 da]. 390

**Shattuck**, George Burbank. The mollusca of the Buda limestone. [Texas]. [Dissertation (Ph.D.), Johns Hopkins university], with an appendix on the corals of the Buda limestone by Thomas Wayland Vaughan, Washington, D.C., Bull. Dept. Int., U. S. Geol. Surv., No. **205**, 1903, (9-40, with pl.). Separate, 22.8 cm. [2231 2227 gi]. 391

**Silantiev**, A. A. Die Schneeke Nassa reticulata L. als Feind des Fischfanges am kaukasischen Ufer des Schwarzen Meeres. (Russ.) Vest. rybopromyšl., St. Peterburg, **1903**, 18, (445–446). [2219 2231]. 392

**Simroth**, H[einrich]. [Kritisches Referat über] Frandsen, P., Studies on the reactions of *Limax maximus* to direct stimuli. Zool. Centralbl., Leipzig, **10**, 1903, (269-275). [2211 2231]. 393

[Kritisches Referat über] Thiele, Joh. Die systemat. Stellung der Solenogastren u. die Phylogenie der Mollasken. Zool. Centralbl., Leipzig, 10, 1903, (844-863). [2231]. 394

**Smith**, S. A. Note on some Mollusks of the family *Bulimulidae* from Matto Grosso. London, Proc. Zool. Soc., **1903**, 2, (70-71). [2227 hh 2231]. 395

Note on an abnormal specimen of Argonauta argo. London, Proc. Malac. Soc., 5, 1903, (310, with fig.). [2223 2231]. 396

On Xylophaga prostans n. sp., from the English Coast. London, Proc. Malac. Soc., 5, 1903, (328-330, with figs.) [2227 de 2231]. 397

A list of species of Mollusca from South Africa, forming an appendix to (†. B. Sowerby's 'Marine Shells of South Africa.' London, Proc. Malac. Soc., 5, 1903, (354-402, pl. XV). [2227 fg 2203 2231]. 398

**Smith**, S. A. Land and fresh-water mollusca. Fauna of the Maldive and Laccadive Islands, 1, (141-145). [2227 ma 2231]. 399

Marine Mollusca. In "Fauna and Geography of the Maldive and Laccadive Archipelagoes," II, (589-630, pls. XXXV-XXXVI). [2227 ma 2231]. 400

Description of a new species of *Gomphina* from New Zealand. J. Malac., London, **9**, 1902, [1903], (109-110, mit fig.). [2227 ia 2231]. 401

Descriptions of new species of land shells from Central Africa. J. Conch, Leeds, 10, 1903, (315-319, pl. IV). [2227 ff 2231]. 402

 Note on Macron trochlea.

 J. Conch., Leeds, 10, 1903, (351).

 [2231].

A new species of Modiola from Malacca. J. Conch., Leeds, 10, 1903, (368, with fig.). [2227 eg 2231]. 404

Land and fresh-water shells. In 'Nat. Hist. Sokotra and Abdel-Kuri,' **1903**, (111–135, pls. XII--XIII), 8vo. [2227 ff 2231]. 405

**smith**, James Perrin. The Carboniferous Ammonoids of America [with bibliography]. Washington, D.C., Dept. Int. U. S. Geol. Surv. Monogr., **42**, 1903, (211 + iii, with pl.). 30 cm. [2231 2227 g]. 406

Sorby, H. C. v. Garstang, W.

**Sowerby**, G. B. Descriptions of fourteen new species of marine Mollusca from Japan. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (496-501). [2227 *ec* 2231]. 408

Descriptions of new species of Nassa, Purpura, Latirus, Voluia, Conus, Stomatella, and Spondylus. J. Malac, London, **10**, 1903, (73-77, pl. V). [2231]. 409

Lamk. perforating a shell of Mitra interlirata Reeve. London, Proc. Malac. Soc., 5, 1903, (345, pl. XVI). [2219 2231]. 410a

**Stafford-Toronto**, J. Die Clamfischerei in der Passamaquoddy-Bay. Berlin, Mitt. D. Seefischereiver., **18**, 1902, (457–461). [2231–2203]. 411

Standen, R. v. Melvill, J. C.

**Stanton**, Timothy W. A new freshwater Molluscan faunule from the Cretaceous of Montana. Philadelphia, Pa., Proc. Amer. Phil. Soc., **42**, 1903, (188-199, with 1 pl.). [2227 gi 2231].

**Stauffacher**, Hch. Einiges über Zellund Kernstrukturen. Zs. wiss. Zool., Leipzig, **78**, 1903, (368–376, mit 1 Taf.). [2207]. 413

**Stearns**, Robt. E. C. Mollusks occuring in Southern California. Nautilus, Philadelphia, Pa., **16**, 1903, (133-134). [2227 gi]. 414

**Stebbing,** W. P. D. Excursion to Salisbury and the Vale of Wardour . . Old Sarum and Stonehenge. London, Proc. Geol. Ass., **18**, 1903, (146-149). [1027 de 2227 de]. 415

**Sterki**, V[ictor]. Notes on the Unionidae and their classification. Amer. Nat., Boston, Mass., **37**, 1903, (103-113). [2223 2231]. 416

Boston, Mass., 17, 1903, (20-22, 79-82). [2231]. 417

<u>New North American</u> *Pisidia.* Nautilus, Boston, Mass., 17, 1903, (42-43). [2227 gf 2231]. 418

**Stiamy**, Gustav. Die Niere der Weinbergschnecke. Zool. Anz., Leipzig, **26**, 1903, (334-344). [2207 2231]. 419

**Streich**, Hermann. Die Schneckenzucht. Ausführliche Beschreibung der Weinbergschnecke . . nebst Anhang: Die Schneckenküche. Heilbronn (O. Weber), [1903], (V + 58) 18 cm. 0,75 M. [2203 2231]. 420

**Sturany**, R[udolf]. Ueber eine neue Höhlenschnecke. Wien, Verh. ZoolBot. Ges., **51**, 1901, (761-762). [2231]. 421

**Sturm**, Friedrich. Der Sandstein von Kieslingswalde in der Grafschaft Glatz und seine Fauna. Berlin, Jahrb. geol. Landesanst., **21**, 1901, Abh. auss. st. Pers., (39–98, mit 10 Taf.). [2231]. 422 Suter, H. On the systematic positions of Patella kermacedensis Pilsbry. J. Malac., Londou, 9, 1902, [1903], (111, with pl.). [2231]. 423

On a new genus and species of the family *Phenacohelicidae*. J. Malac., London, **10**, 1903, (62-64, pl. IV). [2207 2231]. 424

**Sykes**, E. R. On the land operculate Mollusca collected during the "Skeat Expedition" to the Malay Peninsula in 1899–1900. London, Proc. Zool Soc., **1903**, 1, (194–199, pl. XX). [2227 eg 2231]. 425

Note on monstrosity of Riesoa parca Da Costa. London, Proc. Malac. Soc., 5, 1903, (260). [2223 2231]. 426

Description of Cerastus dinshavi n. sp., from Aden, with a note on Otopoma clausum Sby. and O. yemenicum Brgt. London, Proc. Malac. Soc., 5, 1903, (338-339, with figa). [2227 ei 2231]. 427

 Notes
 on
 some
 British

 Eulimidae.
 London, Proc.
 Malac.
 Soc.,

 5, 1903, (348–353, pl. XIV).
 [2227 de

 2231].
 428

Malacological Notes. 13. The value of the name *Rhodina* de Morgan. 14. Description of *Leptachatina henshauxi*, n sp. 15. On the name *Cataulus*. J. Malac., London, **10**, 1903, (1-3, with fig.). [2231]. 429

Descriptions of new land shells from the Austro-Malayan Region. J. Malac., London, **10**, 1903, (64-67). [2227 ia 2231]. 430

Notes on, with illustrations of, Austro-Malayan land shells. J. Malac., London, 10, 1903, (78, pl. VI). [2227 eg 2231]. 431

\_\_\_\_\_ On the name Lina elliptica. J. Malac., London, **10**, 1903, (104). [2231]. 432

On a small collection of marine shells from Surprise Island. J. Malac., London, **10**, 1903, (137–138). [2203 2227 *il*]. 433

Digesta Malacologica. No. II. A summary of the Annals and Magazine of Natural History and its forerunners. Part I (1829-1863). London, 1903, (VIII + 76). 8vo. [2203]. 434 Sykes, E. R. On the Polyplacophora. In Herdman, Report . . . Pearl Oyster Fisheries of the Gulf of Manaar. Part I. Suppl. Rep. IV. London, 1903, (177-180, with pl.). 4to. [2231]. 435

- v. Melvill, J. C.

**Takeshita**, Takematsu. Notes on *Pecten laquaetus*. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (359–365). [2219 2231]. 436

Teichmann, E. Die frühe Entwicklung der Cephalopoden. Verh. D. zool. (ies., Leipzig, 13, 1903, (42-52). [2215 2231]. 437

Tesch, J. J. Vorläufige Mittheilung über Thecosomata und Gymnosomata der Siboga-Expedition. Helder, Tijdschr. Ned. Dierk. Ver., (Ser. 2), 8, [1903], (111-117). [2227 gg ia 2231]. 438

Thesing, Curt. Zur Kenntnis der Spermatogenese bei den Cephalopoden. Zool. Anz., Leipzig, 27, 1903, (1-7). [2215 2231]. 439

**Thiele**, Johannes. Proneomenia amboineneis n. sp. Jena, Denkschr. med. Ges., **8**, 1903, (733-737, mit 1 Taf.). [2231]. 440

---- v. Martens, Eduard von.

Thompson, B. The junction beds of the Upper Lias and Inferior Oolite in Northamptonshire. Pt. II: Stratigraphical and Palaeontological. Northampton, J. Nat. Hist. Soc., 11, 1903, (197-216, 235-244); 12, 1903, (54-69). [0427 de]. 441

**Todd**, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., **6**, No. 4, 1903, (541-561). [5003 5027 de 2219 2227 de 2603 1827 de 1027 de 1019 0827 de 0819 0227 de 0060]. 442

**Tomlin**, B. A new Irish Vertigo. Irish Nat., Dublin, **12**, 1903, (110). [2227 de 2231]. 443

----- v. Chaster, G. W.

Tornquist, A[lexander]. Die Daonellen des deutschen Muschelkalkes. N. Jahrb. Min., Stuttgart, **1903**, 2, (83-92, mit 1 Taf.). [2231]. 446

Uchiyama, Ryūtarō. Illustrated notes on Japanese molluscs. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (9-12, with pl.). [2203 2227 ec]. 447

Van Stone, J. H. Note on the embryonic shell of *Planorbis*. London, Proc. Malac. Soc., 5, 1903, (344). [2215 2231]. 448

**Vayasière**, A. Sur les Hétéropodes recueillis pendant la campagne de l'*Hirondelle* et de la *Princesse-Alice*, faites sous la direction de S. A. le Prince de Monaco. Paris, C.-R. Acad. sci., **137**, 1903, (346-348). [2231]. 449

**Vignal**, L. Sur les variétés du *Cerithium zebruni* Kiever. J. conchyliol., Paris, **51**, 1903, (21-27, av. fig. et 1 pl.). [2223 2231]. 450

Voines, J. Ueber die Entwicklung der Kiemen der Najaden. Diss. München (Druck v. M. Ernst), 1903, (45, mit 4 Taf.). 22 cm. [2215 2231]. 451

**Walker**, Bryant. Notes on Eastern American Ancyli. Nautilus, Boston, Mass., **17**, 1903, (13–19, 25-31, with pl.). [2227 gg 2231]. 452

- v. Hale, D. J.

Walker, P. F. v. Lamplugh, G. W.

Walther, Karl. Das Unterdevon zwischen Marburg a. L. und Herborn (Nassau). N. Jahrb. Min., Stuttgart, Beilagebd, 17, 1903, (1-75, mit 4 Taf.). [0231 2031 2231].

Warren, S. H. v. Kennard, A. S.

Waterston, J. Mollusca observed at Stromness, Orkney. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (52-53). [2227 de 2203]. 454

Weeks, Wm. H., jun. Shell collecting on Cliff island, Casco Bay, Maine. Nautilus, Boston, Mass., 16, 190?, (119– 120). [2227 gq]. 455

Welch, R. The association of Helix nemoralis and Helix hortensis. J. Conch., Leeds, 10, 1903, (302-303). [2219 2231]. 456

Pockets of land-shells Bannmouth Dunes, Portstewart. J Conch., Leeds, **10**, 1903, (338-339) [2227 de]. 457 Weller, Stuart. The Stokes collection of Antarctic fossils, Mollusca and Crustacea. Chicago, Ill. J. Geol. Univ. Chic., 11, 1903, (413-419, with pl.). [2203 2603]. 458

Wettstein, Ernst. Zur Anatomie von Cryptoplax larvaeformis Burrow. Jenaische Zs. Natw., **38**, 1903, (473-504, mit 3 Taf.). [2231 2207]. 459

Whitheld, R[obert] P[arr]. Notice of six new species of Unios from the Laramic group [Montana]. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (483-487, with 3 pls.). Separate. 24.5 cm. [2227 gi 2231]. 460

Willey, A. Zoological results based on material from New Britain, New Guinea, Loyalty Islands and elsewhere, collected during the years 1895, 1896 and 1897 by Arthur Willey. Part VI. Cambridge, 1902. 4to. [Review] Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1902, (133-135). [0203 2203]. 461

Williamson, Mrs. M. Burton. A monograph on *Pecten aequisulcatus* Cpr. class Pelecypoda. Los Angeles, Bull., So. Cal. Acad. Sci., **1**, 1902, ([50]-61, with pl.). [2231]. 462

Wittich, E. Beitrag zur Kenntniss der alt-alluvialen Fauna im Mainthal. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (11-14). [2227 dc]. 463

Wohlberedt, Otto. Nachtrag zur Molluskenfauna von Montenegro und Nord-Albanien. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (83-86). [2227 dl]. 461

Neue Fundorte für Helix pomatia L. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (86-88). [2231]. 465

Wollemann, A. Die Fauna des Senons von Bie wende bei Wolfenbüttel. Berlin, Jahrb. geol. Landesanst., **31**, 1901, Abh. auss. St. Pers., (1-30). [0231 2231]. 466

Woodcook, H. M. Report, in Report of the Committe on investigations made at the Marine Biological Laboratory, Plymouth. London, Rep. Brit. Ass., 1902, (271-272). [1019 0419 2219]. 467

Woods, H. A monograph of the cretaceous Lamellibranchia of England. Vol. I. London, Monogr. Palaeont. Soc., 1903. (197-232, pls. XXXIX-XI.II). 468 Woodsworth, J. B. On the sedentary impression of the animal whose trail is known as *Climactichnites*. [Suggestion of molluscan origin]. Albany Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (959 966, with pl.). [0231 2231] 469

Woodward, B. B. Note on the nepionic shell of *Melo indicus* Gmel. London, Proc. Malac. Soc., 5, 1903, (260). [2207 2231]. 470

Note on the dates of publication of J. E. Gray's "Catalogue of Palmonata . . . in the . . . British Museum," Pt. i, 12mo, 1855; and of A. Moquin-Tandon's "Histoiro Naturelle des Mollusques terrestres et fluviatiles de France," 2 vols., 1855, 8vo. London, Proc. Malac. Soc., 5, 1903, (26). [2203]. 471

 Note on the generic name

 Buliminus.
 London, Proc.
 Malac.
 Soc.,

 5, 1903, (309-310).
 [2231].
 472

Vitrea rogersi n. sp., a British form hitherto misidentified with *Heliz glabra* Studer, and *Hyalinia hel*vetica Blum. J. Conch., Leeds, **10**, 1903, (309-311, pl. V). [2207 2231]. 473

List of British non-marine Mollusca. J. Conch., Leeds, **10**, 1903, (352-367). [2227 de]. 474

Mollusca. In the "Victoria History of the County of Cumberland," 1901, (99-100). [2227 de]. 475

Mollusca. In the "Victoria History of the County of Essex," 1, (89-90). [2227 de]. 476

Mollusca. In the "Victoria History of the County of Hertford," 1, 1902, (81-82). [2227 de]. 477

Mollusca. In the "Victoria History of the County of Norfolk," 1, 1901, (87-88). [2227 de]. 478

Mollusca. In the "Victoria History of the County of Surrey," 1, 1902, (71-72). [2227 de]. 479

Mollusca. In the "Victoria History of the County of Worcestershire," 1, 1901, (81–82). [2227 de]. 480

and Adams, L. E. Mollusca. In the "Victoria History of the County of Northampton," 1, 1902, (87-88). [2227 de]. 481

- v. Kennard, A. S.

Woodward, H. B. Excursion to Royston, Hertfordshire, May 16th, 1903. London, Proc. Geol. Ass., 18, 1903, (166-170). [1027 de 2227 de]. 482

Wüst, Ewald. Zur Ausbreitung der Heliz (Xerophila) obvia Hartm. in Deutschland. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (185– 186). [2231 2227 dc]. 483

Pleistozäne Flussablagerungen mit Succinea schumacherii Andr. in Thüringen und im nördlichen Harz-Vorlande. Zs. Natw., Stuttgart, 75, (1902), 1903, (312-324, mit 1 Taf.). [2227 de 2231]. 484

Yabe, Hisakatu. Cretaceous Cephalopoda from the Hokkaidö. (Japanese) Tokyo, J. Coll., Sci. 18, Art. 2, 1903, (1-55, with 7 pls.). [2227 cc 2231]. 485

Yung, Emile. Le sens olfactif de l'escargot (*Helix pomatia*). Paris, C.-R. Acad. sci., **137**, 1903, (720-721). [2211 2231]. 486

Siège du sens olfactif chez les Gastéropodes pulmonés terrestres. Verh. Schweiz. Natf. Ges., Aarau, **85**, 1902, (78); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (535-537). [2211 2231]. 487

La structure histologique de la grande corne de l'escargot. (Helix pomatia). Arch. Sci. Phys., Genève, (er. 4), 16, 1903, (754). [2207 2231]. 488

## 2203 COMPREHENSIVE AND GENERAL WORKS.

### GENERAL.

Boettger, O[akar]. Ueber den wissenschaftlichen Wert der Schneckenund Muschelschalen. Vortrag . . . Frankfurt a. M., Ber. Senckenb. Ges., 1903, Tl 2, (177-186).

**Chaster**, (†. W. Mollusca. In Brit. Assoc. Handbook to Southport, 1903, (146-154).

**Etrod**, Morton John. Montana shells. Nature study lesson. Missoula, Bull. Univ. Mont., No. **17**, Biol. Ser. No. 5., 1903, (255-262, with pl.).

Hamy, E. T. Une rocaille [en Strombus] du vieux Marly. Bul. Muséum, Paris, 1903, (55-56). Jacot, [E.]. Etude sur les mollusques. Messager Suisse Rom., Fribourg, 16, 1903, (132-133, 140-141, 173-174, 188).

Johnson, J. P. Notes on fossil and recent shells obtained on a visit to Cornwall. (Jeol. Mag., London, [4], 10, 1903, (25-28).

Marshall, J. T. Additions to 'British Conchology.' Part VII. Torquay, 1903, (59). 8vo.

**Smith**, E. A. A list of species of Mollusca from South Africa, forming an appendix to G. B. Sowerby's "Marine Shells of South Africa." London, Proc. Malac. Soc., 5, 1903, (354-402, pl. XV).

Uchiyama, Ryūtarō. . . . Molluscs of Japan. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (9-12, with pl.).

Waterston, J. Mollusca observed at Stromness, Orkney. Ann. Scot. Nat. Hist., Edinburgh, 1903, (52-53).

Willey, A. Zoological results based on material from New Britain, New Guinea, Loyalty Islands, and elsewhere, collected during the years 1895, 1896, and 1897 by Arthur Willey. Part VI. Cambridge, 1902. 4to. [Review] Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1902, (133-135).

Woodward, B. B. Notes on the dates of publication of J. E. Gray's "Catalogue of Pulmonata . . . in the . . . British Museum," Pt 1, 12mo, 1855; and of A. Moquin-Tandon's "Histoire Naturelle des Mollusques terrestres et fluviatiles de France," 2 vols. 1855. 8vo. London, Proc. Malac. Soc., 5, 1903, (261).

### TREATISES.

**Baker**, Frank Collins. Shells of land and water, a familiar introduction to the study of the mollusks. Chicago (A. W. Mumford), 1903, (**xvii** + 175, with illustr., 8 col. pls.). 28 cm.

## ECONOMICS.

Barfuss, J. Zur Vertilgung der Saatschnecken. Schweiz.-Bauer, Bern, 56, 1902, No. 30, (5). Cort, Hugo de. Ueber den Handelswerth und den Grad der augenblicklichen Seltenheit der *Pleurotomaria* beyrichi. Uebers. aus Bull. Soc. E. malacol. d. Belg. 2. III 01 . . . v. D. F. Heynemann. Frankfurt a. M., NachrBl. D. malukozool. Ges., **35**, 1903, (14-16).

Dean, Bashford. Japanese oysterculture. Washington, D.C., Bull. U. S. Fish. Com., 22, 1902, 1903, (13-37, with text fig. and pl.).

**Hale**, David J. and others. [C. A. Davis, Bryant Walker, B. B. Lathbury, A. C. Lane, Delos Pall, and Richard L. Humphrey.] Marl (bog lime) and its application to the manufacture of Portland cement. Michigan, Geol. Surv. Lansing, **8**, Part 3, 1903, (xi + 399, with 23 pls. and 43 figs.).

Herdman, W. A. Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar. Part I. Pearl Oyster Report. London, 1903, (146). 4to.

The Pearl Fisheries of ('eylon. Nature, London, **68**, 1903, (620-622).

Holt, E. W. I. The public oyster beds on the coasts of Counties Wicklow and Wexford. Rep. Fish. Ireland for 1901, Part II, (4-36).

A Norwegian method of oyster culture (Translations of papers and reports in Norwegian). *l.c.* (77-103, with 10 pls.).

**Karpov**, Vladimir. Bericht über eine Reise an das Schwarze Meer zum Studium der Austernwirthschaft. (Russ.) Věst. rybopromyšl., St. Peterburg, **1903**, 18, (269-345).

**Stafford-Toronto**, J. Die Clamtischerei in der Passamaquoddy Bay. Berlin, Mitt. D. Seefischereiver, **18**, 1902, (457-461).

**Streich**, Hermann. Die Schneckenzucht. Ausführliche Beschreibung der Weinbergschnecke. . . Nebst e. Anhang: Die Schneckenküche. Heilbronn (O. Weber), [1903] (V + 58). 18 cm. 0,75 M.

### Collections and Technique.

Bolau, Hermann. Ueber den Fang, die Präparation und die Aufbewahrung einheimischer Mollusken. Naturfreund, Witten, 1, 1902/3, (131, 147, 170–171, 185–186).

Martini und Chemnitz. Systematisches Conchylien-Cabinet . . . . neu hrsg. u. vervollständigt v. H. C. Küster, nach dessen Tode fortgesetzt von W. Kobelt, Lfg 464 = Bd 1, H. 166 (S. 989-1028, mit Taf.): Lfg 465 = Bd 6, H. 15 (S. 1-24, mit Taf.); Lfg 466 = Bd 1, H. 167 (S. 1929-1060, mit Taf.); Lfg 467. 468. = Bd 1, H. 168. 169 (S. 773-836, mit Taf.); Lfg 469 = Bd 1, H. 170 (S. 401-448, mit Taf.); Lfg 470 = Bd1, H. 171 (S. 837-884, mit Taf.); Lfg 471 = Bd 6, H 16 (S. 25-32, 81-104 + 2 Bl., 241-273, mit Taf.); Lfg 472 = Bd 1, H. 172 (S. 1-24, 885–900); Lfg 473 = Bd 1, H. 173 (S. 901–956, mit Taf.); Lfg 474 = Bd 6, H. 17 (S. 33– 56, mit Taf.); Lfg 475 = Bd 1, H. 174, (2 Bl., S. 957-1051); Lfg 476 = Bd 1, H. 175 (S. 25-56, mit Taf.); Lfg 477 = Bd 1, H. 176 (1061-1092, mit Taf.); Lfg 478 = Bd 6, H. 18 (S. 57-80, mit Taf.); Lfg 479 = Bd 1, H. 177 (S. 1-32, mit Taf.); Lfg 480 = Bd 6, H. 19 (S. 81-104, mit Taf.); Lfg 481 = Bd 6, H. 20 (S. 1-32, mit Taf.); Lfg 482 = Bd 6, H. 21 (S. 33–64. mit Taf.); Lig 483 = Bd 6, H. 178 (S. 57–88, mit Taf.); Lig 484 = Bd 6, H. 178 (S. 57–88, mit Taf.); Lig 484 = Bd 6, H. 22 (S. 65–96, mit Taf.); Lig 485 = Bd 6, H. 179 (S. 89– 120, mit Taf.). Nürnberg (Bauer & 1201 Journal Journal State 1997) (S. 1997) 1201 Journal State 1997) (S. 1997) 1202 Journal State 1997) (S. 1997) 1203 Journal State 1997) (S. 1997) (S. 1997) (S. 1997) 1204 Journal State 1997) (S. 1997) ( Raspe), 1901-1903. 30 cm. Die Lfg 9 M. Auch in Sectionen zu 27 M.

Sykes, E. R. On a small collection of marine shells from Surprise Island. J. Malac., London, **10**, 1903, (137-138).

Weller, S. The Stokes collection of Antarctic fossils. Chicago, Ill., J. Geol. Univ. Chic., 11, 1903. (413-419, with pl).

#### HISTORY, BIBLIOGRAPHY.

Kobelt, W. Otto Franz von Moellendorff. J. Malac., London, **10**, 1903, (122-125, pl. XI).

**Raymond**, William J. Writings of James G. Cooper, M.D., on conchology and palaeontology, with list of species described by him. Nautilus, Boston, Mass., **17**, 1903, (6-12).

Sykes, E. R. Digesta Malacologica. No. 11. A summary of the Annals and Magazine of Natural History and its forerunners, Part I (1829-1863). London, 1903, (VIII -- 76). 8vo.

## 2207 STRUCTURE.

## GENEBAL.

**Bloomer**, H. H. The anatomy of certain species of *Ceratisolen* and *Solecurtus*. J. Malac., London, **10**, 1903, (31-40, pl. II).

On the origin and function of the fourth aperture in some Pelecypoda. l.c. (43-45).

The anatomy of Pharella orientalis Dunker and Tagelus rufus Spengler. l.c. (114-121, pl. X).

**Cook**, T. A. Spirals in Nature and Art. London, 1903, (200, with figs.). Svo.

**Davis**, J. R. A. and **Floure**, H. J. J. M.B.C. Memoirs on typical British marine plants and animals. No. X. *Patella*, (the Common Limpet). London, 1903, (84, with 4 pls.).

Digby, L. Preliminary note on the anatomy of the genus Cataulus. London, Proc. Malac. Soc., 5, 1903, (261).

**Etiot**, Sir C. On some nudibranchs from East Africa and Zanzibar. London, Proc. Zool. Soc., **1903**, 1, (250– 257), 2, (354–385).

Glamann, G. Anatomisch-systematische Beiträge zur Kenntniss der Tracheopulmonaten. Zool. Jahrb., Jena, Abt. f. Anat., **17**, 1903, (679-762, mit 6 Taf.).

Godwin-Austen, H. H. On the anatomy of two land Molluscs (*Heli*carion (?) uilleyana and H (?) uooduardi nu. spp.) from New Britain and Lifu, Loyalty Islands, collected by Dr. Arthur Willey, F.R.S., in 1895-97. London, Proc. Malac. Soc., 5, 1903, (296-299, pl. IX).

Morphological observations on species belonging to the families Cyclostomidae and Helicidae. In the "Natural History of Sokotra and Abdel-Kuri," edited by H. O. Forbes, (159-174, pl. XIII A.).

Griffin, Lawrence Edmonds. The anatomy of Nautilus pompilius. [with (x 2-9053) bibliography] . . . Dissertation . . . Ph. D. . . Johns Hopkins Univ. (Reprinted from the Memoirs of the National academy of sciences.) Baltimore, Md. Mem. Biol. Lab., Johns Hopkins Univ., **5**, 1903, (1-230, with 17 pls.).

**Hoyle**, W. E. Notes on the type specimen of *Loligo eblanae* Ball. Manchester Mem. Lit. Phil. Soc., 47, No. 9, 1903, (10, with 1 pl.); also issued as Notes Manchester Mus., No. 14.

Keer, P. M. Beitrag zur Kenntnis des Schiffsbohrwurmes. (Holländisch) Leiden (P. W. M. Trap), 1903, (58, mit 4 Taf.). 29 cm.

Kenteven, H. Leighton. Notes on Prosobranchista. No. ii. Littorinacea. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903 (620-636, with 1 pl.).

Lenssen, J. Système nerveux, système circulaire, système respiratoire et système excréteur de la *Neritina flutiatilis* (fragments d'un travail monographique sur cette espèce). Louvain (A Uystpruyst), Lierre (J. Van In et Cie), 1903; Cellule, Louvain, **20**, 1903, (287-333, pls. I-III).

List, Theodor. Die Mytiliden des Golfes von Neapel und der angrenzenden Meeres-Abschnitte. Tl 1. (Fauna und Flora des Golfes von Neapel. 27 Monographie [Jg 20.]) Berlin, 1902, (X + 312, mit 22 Taf.). 33 cm. 120 M.

Murdoch, R. On the anatomy of Paryphanta urnula Pfr., with notes on P. hochstetteri Pfr. and Rhytida greenucodi Gray. London, Proc. Malac. Soc., 5, 1903, (270-273, with fig.).

Anatomy of Paryphanta busbyi Gray. Wellington, Trans. N. Zeal. Inst., 35, 1903, (258-262).

Wierstrasz, H. F. Neue Solenogastren. Zool. Jahrb., Jena, Abt. f. Anst., 18, 1903, (359-386, mit 2 Taf.).

Pace, S. On the anatomy of the Prosobranch genus Pontiothauma E. A. Smith. London, J. Linn. Soc., Zool., 28, 1903, (455-462, pl. XLII).

**Buedemann**, Rudolf. Noetling on the morphology of the Pelecypods. [Fritz Noetling: Beiträge zur Morphologie der Pelecypoden.] Amer. Geol., Minneapolis, Minn., **31**, 1903, (34–40, with pl.). Suter, H. On a new genus and species of the family *Phenacohelicidae*. J. Malac., London, **10**, 1903, (62-64, pl. 1V).

Wettstein, Ernst. Zur Anatomie von Cryptoplax larcaeformis Burrow. Jenaische Zs. Natw., **38**, 1903, (473-504, mit 3 Taf.).

Woodward, B. B. Vitrea rogersi n. sp., a British form hitherto misidentified with *Helix glabra* Studer, and *Hyalmia* heltetica Blum. J. Conch., Leeds, **10**, 1903, (309-311, pl. VI).

### COMPARATIVE ANATOMY.

Hescheler, Carl. Sepid officinalis L. Der gemeine Tintenfisch. Ein Beispiel der Untersuchung eines Tieres auf verkleichende anatomischer Grundlage. Zürich (Zürcher & Turrer), 1902, (IV + 40, mit 2 Taf. und 11 Fig.). 4to.

### TEGUMENT AND ITS ORGANS.

Glaser, O[tto] C. The nematocysts of nudibranch molluscs. Baltimore, Md., Johns Hopkins Univ. Cir., 22, 1903, (22-24).

**Stauffacher**, Hch. Einiges über Zellund Kernstrukturen. *l.c.* **73**, (368–376, mit 1 Taf.).

Yung, Emile. La structure histologique de la grand corne de l'escargot (*Helix pomatia*). Arch. Sci., Phys., Genève, (sér. 4), **16**, 1903, (754).

## NERVOUS SYSTEM AND ORGANS OF SENSE.

Bochenek, Adam. Contribution à l'étude du système nerveux des gastéropodes; anatomie fine des cellules nerveuses. Vol III. Névraxe, 1901, (83-104).

**Chun**, Carl. Ueber Leuchtorgane und Augen von Tiefsee-Cephalopoden. Vorh. D. zool. Ges., Leipzig, **13**, 1903, (67-91).

Gravier, Ch. Sur le système nerveux du Nautile. Paris, C.-R. Acad. sci., 136, 1903, (618-621, av. fig.).

Hamlyn-Harris, Ronald. Die Statocysten der Cephalopoden. Zool. Jahrb., Jena, Abt. f. Anat., 18, 1903, (327-358, mit 5 Taf.). Hollerbach, Christoph. Linse and Corpus epitheliale im Cephalopodenauge and ihre Entwicklung. Bern. Vet.-med. Diss. 1903-04, Oppenheim a Rh. s. a., (40, 2 Taf.). 8vo.

Latter, O. H. The nervous system of Anodonta cygnea. Nature, London, 68, 1903, (623).

### SKELETAL STRUCTURE OF INVERTEBRATES.

Naegele. *Helix pomatia* L. [Linkswindung der Schale.] Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (24-27).

Woodward, B. B. Note on the nepionic shell of *Melo indicus* Grnel. London, Proc. Malac. Soc., 5, 1903, (260).

## ALIMENTARY SYSTEM.

Enriques, Paolo. Le foie des mollusques et ses fonctions. (Résumé). Arch. ital. biol., Torino, **37**, 1902, (177– 199).

CIRCULATORY AND RESPIRATORY ORGANS.

Nierstrass, H[ugo] F[rederik]. Das Herz der Solenogastren. Amsterdam, Verh. K. Akad. Wet., 2<sup>e</sup> Sect., **10**, No. 2, [1903], (52, mit 3 Taf.).

**Ridewood**, W. G. On the structure of the gills of the Lamellibranchia. London, Phil. Trans. R. Soc., **194 B**, 1903, (147-284, with figs.).

## EXCRETORY ORGANS.

Burne, R. H. On the renal organs of Nucula nucleus Linn. London, Proc. Malac. Soc., 5, 1903, (300-304, pl. X).

**Fahringer**, Josef. Ueber das Vorkommen einer Speicherniere bei *Carinaria mediterranea* Per. u. Les. Zool. Anz., Leipzig, **27**, 1903, (7-12).

stiasny, Gustav. Die Niere der Weinbergschnecke. *l.c.* 26, (334-344).

### SPECIAL GLANDS.

Frierson, L. S. Observations on the byssus of Unionidae. Nautilus, Boston, Mass., 17, 1903, (76-77).

REPRODUCTIVE ORGANS.

Ancel, P. Histogenèse et structure de la glande hermaphrodite d'*Helix pomatia* (Linn.). Arch. biol., Paris-Liège, **19**, 1903, (391-652, av. 7 pls.).

Sur les premières phases du développement de la glande génitale et du canal hermaphrodite chez *Helix pomatia*. (Note préliminaire.) Bibliogr. anat., Nancy, **10**, 1902, (160-162).

Bergmann, W[illy]. Ueber den Bau des Ovariums bei Cephalopoden und einige Nachträge zur Eibildung derselben. Arch. Natg., Berlin, **69**, Bd 1, 1903, (227-236, mit 1 Taf.).

Ein Receptaculum seminis bei Octopus de filippii und einige biologische Beobachtungen. Berlin, Sitz-Ber. Ges. natf. Freunde, **1903**, (104-109).

Bruyne, C. de. Contribution à l'étude de la cellule folliculaire des glaudes génitales des Gastéropodes. Bruxelles, Bul. Acad. roy., **1903**, (115-135).

**Overton**, H. Some notes on the socalled appendix of *Helicella barbara* (I.). J. Malac., London, **10**, 1903, (126-128).

SPECIAL EXTERNAL CHARACTERS.

**Clarke**, John M[sson]. Torsion of the Lamellibranch shell. An illustration of Noetling's law. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (1228-1233).

## 2211 PHYSIOLOGY.

NERVOUS SYSTEM AND SENSE ORGANS.

Jenkins, O[liver] P[eebles] and Carlson, A. J. The rate of nervous impulse in certain Molluscs. Amer. J. Physiol., Boston, Mass., 8, 1903, (251-268).

Yung, Emile. Siège du sens olfactif chez les Gastéropodes pulmonés terrestres. Verb. Schweiz. Natf. Ges., Aarau, **85**, 1902, (78); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (535-537).

## FUNCTION OF SPECIAL OBGANS AND STRUCTURES.

**Bloomer**, H. H. On the origin and function of the fourth aperture in some (x 2-9053) Pelecypoda. J. Malac., London, 10, 1903, (43-45).

Dubois, Raphaël. Sur la formation de la pourpre de *Purpura lapillus*. Paris, C.-R. Acad. sci., **136**, 1903, (117-118).

Sur le venin de la glande à pourpre des *Murez*. Paris, C.-R. soc. biol., **55**, 1903, (81).

Jura ; à propos d'une Note de M. A. Letellier. l.c. (82).

Enriques, P. Ricerche osmotiche sulla *Limnaea stagnalis*. Roma, Rend. Acc. Lincei, (Ser. 5), 11, 1° Sem., 1902, (440-448).

Le foie des mollusques et ses fonctions (Résumé). Arch. ital. biol., Torino, **37**, 1902, (177-199).

Gessard, C. Sur les oxydases des seiches. Paris, C.-R. Acad. sci., 136, 1903, (631-632).

Heath, Harold. The function of the *Chiton* subradular organ. Anat. Anz., Jena, 23, 1903, (92-95).

Künkel, Karl. Zur Locomotion unserer Nacktschnecken. Zool. Anz., Leipzig, 26, 1903, (560-566).

Yung, Emile. Le sens olfactif de l'Escargot (*Helix pomatia*). Paris, C.-R. Acad. sci., **137**, 1903, (720–721).

#### ENVIRONMENTAL EFFECTS.

Billups, A. C. Adaptation of Mollusks to changed conditions. Nautilus, Philadelphia, Pa., 16, 1903, (112-114).

**Simroth**, H[einrich]. [Kritisches Referat über] Frandsen, P., Studies on the reactions of *Limax maximus* to direct stimuli. Zool. Centralbl., Leipzig, **10**, 1903, (269-275).

## 2215 DEVELOPMENT.

### GENERAL.

**Drummond**, J. M. Development of *Paludina vivipara*, with special reference to the urinogenital organs and theories of gastropod torsion. Q. J. Microsc. Sci., London, (Ser. 2), **46**, 1903, (97-143, with 3 pls).

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## OOGENESIS AND OVUN.

Bergmann, W[illy]. Ueber den Bau des Ovariums bei Cephalopoden und einige Nachträge zur Eibildung derselben. Arch. Natg., Berlin, **69**, Bd 1, 1903, (227-236, mit 1 Taf.).

Mirabella, [R.]. Osservazioni sull' accrescimento degli oociti di *Helir asperea*. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (58-59).

Nekrassoff, A. Untersuchungen über die Reifung und Befruchtung des Eies von Cymbulia peronii. Vorläufige Mitteilung. Anat. Anz., Jena, 24, 1903, (119-127).

Schweikart, Alexander. Ueber die Bildung der Micropyle und des Chorions bei den Cephalopoden. Zool. Anz., Leipzig, 26, 1903, (214-221).

### SPERMATOGENESIS,

**Ancel**, P. La réduction numérique des chromosomes dans la spermatogenèse d'*Helix pomatia*. Bibliogr. anat., Nancy, **11**, 1902, (145-148).

Sur le Nebenkern des spermatocytes d'Helix pomutia. l.e. (234-240).

Moves, Friedrich. Ueber die sog. wurmförmigen Samenfäden von Paludina und über ihre Entwickelung. Anat. Anz., Jena, 19, ErgH., 1901, (23-27); Kiel, Mitt. Ver. schlesw.-holst. Aerzte, .(N.F.), 10, 1901, (5-9, 36-39, 49-52).

Thesing, Curt. Zur Kenntnis der Spermatogenese bei den Cephalopoden. Zool. Anz., Leipzig, 27, 1903, (1-7).

## FERTILIZATION.

Chadwick, W. H. Self-fecundation in *Planorbis vortex*. J. Conch., Leeds, **10**, 1903, (265).

**Conktin**, Edwin G[rant]. Centrosome and sphere in the maturation, fertilization and cleavage of *Crepidula*. [Reprint]. Philadelphia, Cont. Zool. Lab., Univ. Pa., **1901**, 1902, ([280]-287, with text fig.).

Nekrassoff, A. Untersuchungen über die Reifung und Befruchtung des Eies von Cymbulia peronii. Vorläufige Mitteilung. Anat. Anz., Jena, **24**, 1903, (119-127).

## EMBRYOLOGY.

**Conklin**, Edwin G[rant]. The individuality of the germ nuclei during the cleavage of the egg of *Crepidula*. [With bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **2**, 1901. (257-265, with text fig.); [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., **1901**, 1902, (257-265, with text-fig.).

Kesteven, H. Leighton. The neanic shell of *Melo diadema* Lamk., and the definition of the Nepionic stage in the Gasteropod Mollusc. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (443-452).

Schnabel, H. Ueber die Embryonalentwicklung der Radula bei den Mollusken. II. Die Entwicklung der Radula bei den Gastropoden. Zs. wiss. Zool., Leipzig, 74, 1903, (616-655, mit 3 Taf.).

Teichmann, E. Die frühe Entwicklung der Cephalopoden. Verh. D. zool. (les., Leipzig, 13, 1903, (42-52).

**Van Stone**, T. H. Note on the embryonic shell of *Planorbis*. London, Proc. Malac. Soc., **5**, 1903, (344).

## EXPERIMENTAL EMBRYOLOGY.

Loeb, Jacques. Artificial parthenogenesis in molluscs. Berkeley, Univ. Cal. Pub., Physiol., 1, 1903, (7-9). Separate. 26.5 cm.

## METAMORPHOSIS AND LARVAL FORMS.

Faussek, V. Parasitismus der Anodonta-Larven (Russ.) St. Peterburg, Mém. Ac. Sc., (8F.), **13**, No. 6, 1903, (132, mit deutscher Tafelerklär. 133–141, mit 8 Taf.).

## POSTEMBRYONIC ONTOGENY.

Ancel, P. Sur les premières phases du développement de la glande génitale et du canal hermaphrodite chez *Helix pomatia*. (Note préliminaire.) Bibliogr. anat., Nancy, **10**, 1902, (160-162).

Ancel, P. Histogenèse et structure de la glande hermaphrodite d'Helix pomatia (Linu.) Arch. biol., Paris-Liège, 19, 1903, (391-652, av. 7 pls.).

**Massarelli**, G. Ricerche intorno alla struttura delle larve libere dei Gasteropodi opistobrauchi. Milano, Rend. Ist. lomb., (Ser. 2), **35**, 1902, (715-732, con fig.).

Mirabella, R. Ricerche sull'accrescimento di *Helix aspersa*. Palermo (tip. Verzi), 1902, (40).

Voinea, J. Ueber die Entwicklung der Kiemen der Najaden. Diss. München (Druck v. M. Ernst), 1903, (15, mit 4 Taf.), 22 cm.

## 2219 ETHOLOGY.

#### GENERAL.

**Blackburn**, E. P. Dispersal of shells by beetles. Hull, Trans. Sci. F. Nat. Cl., **3**, 1903, (101).

Boutan, Louis. L'origine réelle des perles fines. Paris, C.-R. Acad. sci., 137, 1903, (1073-1075).

Brockmeier, Heinr. Wie gewinnen unsere Landschnecken den Kalk für ihre Gehäuse? Naturfreund, Witten, 1, 1903, (174-176, 182-184).

**CLAPP**, (Ieo. H. Exotic Mollusca in the Phipps Conservatory, Schenley Park, Pittsburg. Pittsburg, Pa., Ann. Carnegie Mus., **1**, 1901, (252).

Dubois, Raphaël. L'origine des perles chez le Mytilus gallo-provincialis. Paris, C.-R. Acad. sci., 136, 1903, (178-179).

**Faussek**, V. Parasitismus der Anodonta-Larven. (Russ.) St. Peterburg, Mém. Ac. Sc. (8 F.), **13**, N. 6, 1903, (132, mit dtsch. 'Tafelerklär. 133-141, mit 8 Taf.).

Fore1, F[rançois] A[lphonse]. Mouette et anodonte. Lausanne, Bul. Soc. Sci. Nat., **38**, 1902, (XXI); Arch. Sci. Phys., Genève, (sér. 4), **13**, 1902, (605).

Pallary, I'aul. Exploits d'escargots. J. conchyliol., Paris, 50, 1902, (387-388).

**Buedemann**, Rudolf. Professor Jackel's theses on the mode of existence of *Orthoceras* and other Cephalopods. [With annotations by John M. Clarke.] Amer. Geol., Minneapolis, Minn., **31**, 1903, (199-217). **R[uotsalai]nen**, A. [Einiges über Limnaea stagnalis. L.] (Finnisch) Luonnon Ystävä, Helsingfors, **1903**, 11-12, (272-274).

Woodcock, H. M. Report, in Report of the Committee on investigations made at the Marine Biological Laboratory, Plymouth. London, Rep. Brit. Ass., 1902, (271-272).

### HABITS.

Brüning. Hydra und Limnaca im Aquarium. Natur u. Haus, Dresden, 11, 1903, (135-138).

**Collinge**, W. E. Notes on slugs and slug-like Molluscs. 1. On the *Limax umbrosus* of Philippi. 2. On a species of *Arion* from New Zealand. 3. On the dispersal of *Microparmarion* sp. 4. Variation in the footfringe of *Arion empiricorum*. J. Malac., London, **10**, 1903, (17-19).

**Cretté de Palluel**, Albert. Ennemis peu connus des oiseaux d'eau. Ornis, Paris, **12**, 1902–1903, (118).

Giard. Curieuse station de Theodoxia fluciatilis L. Feuille jeunes natural., Paris, (sér. 4), 38, 1903, (223).

**Hamilton**, S. H. Habits of Acanthopleura granulata [showing development of megalapores]. Nautilus, Philadelphia, Pa., **16**, 1903, (138).

Karpov, Vladimir. Bericht über eine Reise an das Schwarze Meer zum Studium der Austernwirthschaft. (Russ.) Vöst. rybopromyšl., St. Peterburg, **1903**, 18, (269-345).

Kellogg, James L. Feeding habits and growth of Venus mercenaria. Albany Univ., N.Y., Bull. St. Mus., No 71, 1903, (27, with pl.). 23 cm.

Kew, H. W. Snails and spiders on towers. Naturalist, London, 1903, (342-343).

Künkel, Karl. Zur Locomotion unserer Nacktschnecken. Zool. Anz., Leipzig, 26, 1903, (560-566).

**Pearce**, S. S. The association of *Helix nemoralis* and *Helix hortensis*. J. Conch., Leeds, **10**, 1903, (300–301).

Ramanan, V. V. On the respiratory and locomotory habits of *Ampullaria* globosa Swainson. J. Malac., London, 10, 1903, (107-113). Takeshita, T. Notes on the habits of Pecten laquaetus. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (359–365).

Todd, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., 6, 1903, (541-561).

Welch, R. The association of Helix nemoralis and Helix hortensis. Conch., Leeds, 10, 1903, (302-303).

#### MIGRATION.

Lorenzen, A. Die Einwanderung der Klaffmuschel (*Mya arenaria* L.) in unsere Meere. Prometheus Berlin, **15**, 1903, (61-62).

#### PABENTAL RELATIONS.

**Ghigi**, [Alessandro]. Il nidamento della *Tiedemannia neapolitana*. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (24-27, con 2 figg.).

#### SEXUAL RELATIONS.

Bergmann, W. Ein Receptaculum seminis bei Octopus de filippii und einige biologische Beobachtungen. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (104-103).

#### OVIPOSITION.

Clapp, Geo. H. Vitrina depositing eggs. Nautilus, Boston, Mass., 17, 1903, (91).

## LUMINOSITY.

**Chun**, Carl. Ueber Leuchtorgane und Augen von Tiefsee-Cephalopoden. Verh. D. zool. Ges., Leipzig, **13**, 1903, (67-91).

#### HABITAT.

Andrusov, N. Studien über die Brackwassercardiden. Lieferung I. St. Peterburg, Mém. Ac. Sc. (8 F.), 13, No. 3, 1903, (82, mit 2 Fig. und 7 Taf.).

**Gaziot.** Liste des mollusques aquatiques vivant dans la Fontaine, à Nimes. Nimes, Bul. soc. étud. sci. nat., (n. sér.), **29**, 1901, [1902], (14-19). **Eennard**, A. S. and **Woodward**, B. B. Note on the occurrence of fresh-water Mollusca in a water-main at Poplar. Stratford, Esser Nat., **13**, 1903, (80-81).

**Krogh**, A. On shells floating on the surface of the sea. London, Proc Malac. Soc., 5, 1903, (341-342).

Locard, Arnould. Description de mollusques nouveaux appartenant à la faune souterraine de France et d'Italie. Bul. Museum, Paris, **1902**, (608-611, av. fig.).

Madoulé, Aug. Double observation sur le mode de distribution des mollusques terrestres, vivant soit en colonies, soit plus ou moins isolément. Elbeuf, Bul. soc. étud. sci. not., 21, (1902), 1903, (46-49).

Nordmann, V. The spreading of the oyster in the sea around Denmark in the present and the past. (Danish) Kjöbenhavn, Medd. Geol., 9, 1903, (45-60).

#### SYMBIOSIS.

**Issel**, Raffaele. Ancistridi del Golfo di Napoli. Studio monografico sopra una nuova famiglia di Cigliati, commensali di molluschi marini. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (63-108, mit 3 Taf.).

## PABASITISM.

Conte, A. et Bonnet, A. Sur un nématode nouveau (Angiostoma helicis n. sp.), parasite de l'appareil génital d'Heliz aspersa Muell. Paris, C.-R. soc. biol., 55, 1903, (198-199).

Gunther, R. T. [The relation of the Menestra to the Phyllirho<sup>2</sup>]. Mitt. zool. Stat. Neapel, Berlin, **16**, 1903, (35-62, 280).

Koehler, R. et Vaney, C. Entosiphon deimatis, nouveau mollusque parasite d'une Holothurie abyssale. Rev. Suisse Zool., Genève, 11, 1903, (23-41, 1 pl.).

Léger, Louis. Sporozoaire parasite des moules et autres lamellibranches comestibles. Paris, C.-R. Acad. sci., 137, 1903, (1003-1005).

### DEFENSIVE PROCESSES,

Nordenskiöld, Erland. Ueber Trockenzeitanpassung eines Ancylus von Südamerika. Zool. Auz., Leipzig, 26, 1903, (590-593).

#### ENEMIES.

Martens, [Eduard] von. Durchbohrte Schalen von Landschnecken. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (393– 396).

Sowerby, G. B. and Fulton, H. C. Note on a specimen of *Fistulana clava* Lamk., perforating a shell of *Mitra interlirata* Reeve. London, Proc. Malac. Soc., 5, 1903, (345, pl. XVI).

#### UTILITY AND HARMFULNESS.

**Dubois**, Raphaël. Sur l'acclimatation et la culture des Pintadines ou huitres perlières vraies, sur les côtes de France et sur la production forcée des perles fines. Paris, C.-R. Acad. sci., **137**, 1903, (611-613).

Herdman, W. A. The pearl-oyster parasite in Ceylon. Nature, London, 69, 1903, (126-127).

Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar. Part I. Pearl Oyster Report. London, 1903, (146). 4to.

M'Intosh, W. C. Notes from the Gatty Marine Laboratory, St. Andrews. No. XXIV. On the frequency of the occurrence of pearls in the mussel (*Mytilus edulis*), etc. Anu. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (549-551).

**Perrier**, Edn. Remarques à propos de la communication de M. Raphaël Dubois, du 19 octobre 1903. "Sur les hutres perlières vraies." Paris, C.-R. Acad. sci., **137**, 1903, (682).

**Bilantiev**, A. A. Die Schnecke Nassa reticulata L. als Feind des Fischfanges am kaukasischen Ufer des Schwarzen Meeres. (Russ.) Vöst. rybopromyšl., St. Peterburg, **1903**, 18, (445–446).

## 2223 VARIATION AND AETIO-LOGY.

### GENERAL.

**Bigelow**, R[obert] P[ayne] and **Rathbun**, Eleanor P. On the shell of *Littorina litorea* as material for the study of variation. [With bibliography.] Amer. Nat., Boston, Mass., 37, 1903, (171-184).

**Bloomer**, H. H. On the origin and function of the fourth aperture in some Pelecypoda. J. Malac., London, **10**, 1903, (43-45).

**Cockerell**, T[heodore] D[ru] A[lison]. Variations in the snail-genus Ashmunclla. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (615-616).

**Collinge**, W. E. Notes on slugs and slug-like Molluscs. 1. On the *Limax* umbrosus of Philippi. 2. On a species of Arion from New Zealand. 3. On the dispersal of Microparmarion, sp. 4. Foot fringe of Arion empiricorum. J. Malac., London, **10**, 1903, (17-12).

Geret, P. Variété nouvelle de Cypraca provenant de la Nouvelle-Calédonie. J. conchyliol., Paris, **51**, 1903, (28).

Grabau, Amadeus W. Studies of Gastropoda. 2. Fulgur and Sycotypus. Amer. Nat., Boston, Mass., 37, 1903, (515-539).

Perrier, Edmond et Gravier, Ch[arles]. Sur les causes physiologiques qui ont déterminé la constitution du type mollusque. Paris, C.-R. Acad. sci., **136**, 1903, (727-731).

**Sterki**, V. Notes on the Unionidae and their classification. Amer. Nat., Boston, Mass., **37**, 1903, (103-113).

**Vignals**, L. Sur les variétés du *Cerithium zebruni* Kiever. J. conchyliol., Paris, **51**, 1903, (21-27, av. fig. et 1 pl.).

#### SUBSTANTIVE VARIATION.

**Dimon**, A. C. Quantitative study of the effect of environment upon the forms of *Nassa obsoleta* and *N. trivittata* from Cold Spring Harbour, Long Island. Biometrika, Cambridge, **2**, 1903, (23-43).

Kew, H. W. Note on a two-banded shell of *Helicigona arbustorum* from Wensley-dale. Naturalist, London, **1903**, '341-342, with fig.).

## MERISTIC VARIATION.

Baker, Frank Collina. Rib variation in Cardium. Amer. Nat., Boston, Mass., 37, 1903, (481-488). **Bloomer**, H. H. Note on a malformed specimen of *Ceratisolen legumen*. J. Malac., London, **10**, 1903, (104).

**smith**, E. A. Note on an abnormal specimen of *Argonauta argo*. London, Proc. Malac. Soc., **5**, 1903, (310, with fig.).

Sykes, E. R. Note on a monstrosity of *Risson parta* Da Costa. *l.c.* (260).

#### HEREDITY.

Künkel, Karl. Zuchtvorsuche mit linksgewundenen Weinbergschnecken (Helix pomatia). Zool. Anz., Leipzig, 26, 1903, (656-664).

#### EVOLUTION.

**Davenport**, C[harles] B[enedict]. Quantitative studies in the evolution of *Pecten*. III. Comparison of *Pecten* opcrcularies from three different localities of the British isles. Boston, Mass., Proc. Amer. Acad. Arts Sci., **39**, 1903, (121-159). Separate. 243 cm.

Lameere. Discours du président sur l'évolution des mollusques. Bruxelles, Bul. soc. roy. malac., **38**, 1903, (XXX-XI.VI).

#### 2227 GEOGRAPHICAL DISTRI-BUTION.

#### C OCEAN AS A WHOLE.

Martens, [Eduard] von und Thiele, [Johannes]. Die beschalten Gastropoden der deutschen Tiefsee-Expedition 1898-1899. A. Systematisch-geographischer Teil v. von Martens. B. Anatomisch-systematische Untersuchungen einiger Gastropoden. Von Joh. Thiele. (Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, 1.fg 1. Jena, 1903, (1-116, mit 5 Taf.; 117 180, mit 4 Taf.).

d Europe.

**Kobelt**, W[ilhelm]. Unsere Kenntnis der Fauna europaea. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (113-121). Locard, Arnould. Notices conchyliologiques, LVII. Les Ptéropodes testacés des mers d'Europe. Echange, Lyou, 1902, (67-68, 74-75).

Martens, [Eduard] von. Die geographische Verbreitung von Pomatias septemspiralis Raz (maculatus Drap.). Berlin, SitzBer. Ges. natf. Freunde, 1902, (62-73).

# da SCANDINAVIA.

Johansen, A. C. Remarks on the molluscan fauna (in the marine diluvium near Hostrup in Salling). (Danish) Kjöbenhavn, Nath. Medd., **1903**, (121-131).

Nordmann, V. A conglomeration of mollusk shells from the bottom of the sea at Læsö. (Danish) Kjöbenhavn, Medd. Geol., 9, 1903, (37-44).

**Sell**, Henrik. Beiträge zur Kenntniss der Molluskenfauna Dänemarks. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (105-113).

# db RUSSIA IN EUROPE.

Dybowski, W. Fauna der Binnenmollusken Littauens. I. Familia Cycladidae Clessin. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (76-83).

Rosen, O. Baron von. Zur Kenntnis der Molluskenfauna der Stadt Charkow und ihrer nächsten Umgebungen. [Aus d. Russ.] *l.e.* (152–155).

# de GERNAN ENPIRE.

Boettger, O. Ueber die tertiären Landschnocken aus der Gattung Vallonia im Mainzer Becken und über einen neuen Landschnecken-Fundpunkt im Untergrunde von Frankfurt a. M. Frankfurt a. M., NachrBl. D. malakozool. Ges., **85**, 1903, (72-76).

Geyer. Malakologische Streifzüge in Württemburg. Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (315-324).

Janensch, W. Die Jurensisschichten des Elsass. Diss. Strassburg i. E. (Strassb. Druckerei u. Verlagsanst.), 1902, (153, mit 12 Taf.). 26 cm. [= Abb. geol. Specialkarto Els.-Lothr., (N.F.), H. 5.] Martens, [Eduard] von. Eine für die Provinz Brandenburg neue Süsswasserschnecke. *Physa acuta* Drap. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (166-168).

(Campylaca) presli und Pupa edentula bei Reichenhall. l.c. **1903**, (396-399).

Plisbry, H[enry] A[ugustine]. Zweiter Beitrag zur Binnenconchylienfauna des Miocäns von Oppeln in Schlesien. [Von Prof. Dr A. Andreæ.] Nautilus, Boston, Mass., 17, 1903, (59-60).

**Prots**, A. Zur Binnenmolluskenfauua der Provinz Ostpreussen. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (1-6).

Wist, Ewald. Pleistozäne Flusablagerungen mit Succinca schumacherii Andr. in Thüringen und im nördlichen Harz-Vorlande. Zs. Natw., Stuttgart, **75**, (1902), 1903, (312-324, mit 1 Taf.).

Zur Ausbreitung der Helix (Xerophila) obvia Hartm. in Deutschland. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (185-186).

de BRITISH ISLANDS.

Blake, J. H. The geology of the country around Reading. Mem. Geol. Surv. Eng., London, 1903, (Explanation of sheet 268), (92).

Brady, G. S. Report on dredging and other marine research off the N.E. coast of England in 1901. Newcastle, Trans. Nat. Hist. Soc., 14, 1903, (87-101).

**Bullen**, R. A. Notes on the Pleistocene non-marine Mollusca at Portland-Bill, and on Holocene Mollusca from (1) West Harnham, Wilts, (2) Harlton, Cambridgeshire, (3) the down above Durdle Barn Door, Dorset, and (4) Folkestone. London, Proc. Malac. Soc., 5, 1903, (317-319).

A late Keltic Cemetery at Harlyn Bay. London, 1903, (16). From Rep. Tunbridge Wells, S.E.U. Sci. Soc., 1903.

Chaster, G. W. and Tomlin, B. The re-discovery of *Vertigo lilljeborgi* in Ireland. Irish Nat., Dublin, **12**, 1903, (13-14).

**Crowther, J. E.** A list of the Mollusca of the parish of Halifax. Halifax Nat., **8**, 1903, (48-52). **Evans**, W. Helix lumcllata Jeff., in Midlothian, and Planorbis spirorbis Mull., in Fife. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (120-121).

Farran, (4. P. Marine Fauna of the west coast of Ireland. Nudibranchiate Mollusca of Ballynakill and Bofin Harbours, Co. Galway. Rep. Fish Ireland, for 1901, pt. II, (123-132, 1 pl.).

Garstang, W. and Sorby, H. C. Mollusca (part of Marine Zoology). In the Victoria History of Essex, Vol. I, (81-86).

**Gill**, L. Note on the occurrence of Keisley Limestone pebbles in the Red Sandstone Rocks of Peel (Isle of Man). London, Q. J. Geol. Soc., **59**, 1903, (307-310).

Grierson, P. H. Notes on the Mollusca of Co. Kilkenny. Irish Nat., Dublin, 12, 1903, (307-311).

Herdman, W. A. [Molluscs] in: The new biological station at Port Eriu, being the 16th annual report of the Liverpool Marine Biology Committee. Liverpool, Trans. Biol. Soc., **17**, 1903, (15-67).

Hey, W. C. Shore-collecting near Scarborough and Filey. Naturalist, London, **1903**, (344-348).

**Hind**, W. Life-zones in the British Carboniferous Rocks. Report of the Committee. London, Rep. Brit. Ass., **1902**, (210-224).

On a new species of Solenopsis [Solenomorpha] from the Pendleside Series of Hodder Place, Stonyhurst (Lancashire). London, Q. J. Geol. Soc., **59**, 1903, (334-336, with fig.).

Hunt, A. R. Notes and comments on the raised beaches of Torbay and Sharkham Point. Plymouth, Trans. Devon Ass., **35**, 1903, (318–337).

Johnson, J. P. Notes on fossil and recent shells obtained on a visit to Cornwall. Geol. Mag., London, [4], 10, 1903, (25-28).

Jukes-Browne, A. J. The Cretaccous rocks of Britain. Vol. II. The Lower and Middle Chalk of England. Mem. Geol. Surv. U.K., London, **1903**, (xiii + 568).

Devonshire in the time of the Lower Chalk. Plymouth, Rep. Devon Ass., 35, 1903, (789-799, 1 pl.). Kennard, A. S. Observations on the organic remains and nature of the soil associated with the Pile Structures in the Walbrook near London Wall. Archaeological J., London, **60**, 1903, (230-235).

and **Warren**, S. H. The Blown Sands and Associated Deposits of Towan Head, near Newquay, Cornwall. Geol. Mag., London, [4]. **10**, 1903, (19-25).

of the Thames Alluvium n Bermondsey. *l.c.* (456-460, 525).

and Woodward, B. B. Mollusca. In "The Exploration of the Caves of Kesh, County Sligo." Dublin, Trans. Irish Acad., **32**, 1903, (181– 183).

On the occurrence of Neritina grateloupiana Fér. (hitherto misidentified as N. fluriatilis) in the Ploistocene gravels of the Thames at Swanscomb. London. Proc. Malac. Soc., 5, 1903, (320-321)

Holocene deposits at Clifton Hampden, near Oxford. II. Zoology. Mollusca. Gloucester, Proc. Cotteawold, Nat. F. Cl., 14, 1903, (198-203).

Mollusca of the River Lea Alluvium at Walthamstow. Stratford, Essex Nat., 13, 1903, (13-21, 115-116, with figs.).

tions in the Lea Valley at Canning Town. l.c. (77-99).

Lampingh, G. W. and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., 59, 1903, (234-265, pls. XVI-XVIII).

Lang, W. D. On a fossiliferous bed in the Selbornian of Charmouth. Geol. Mag., London, [4], 10, 1903, (388-392, with 1 fig.).

**Pannell**, J. Additional notes upon the land and freshwater Mollusca of Surrey. J. Conch., Leeds, **10**, 1903, (331).

**Patterson**, A. The Mollusca of the Great Yarmouth district. Zoologist, London, (Ser. 4), 7, 1903, (182-188).

**Pearcey**, F. G. Notes on the marine deposits of the Firth of Forth, and their relation to its animal life. Glasgow, Trans. Nat. Hist. Soc., **6**, 1903, (217–251, with map).

Petch, T. Marine zoology at Filey. Naturalist, London, **1903**, (351).

The Marine Fauna of the Humber District and the Holderness ('oast. Hull, Trans. Sci. F. Nat. Cl., **3**, 1903, (27-41).

**Beid**, C. The geology of the country near Chichester. Mem. Geol. Surv. Eng., London, **1903**, (iv  $\pm$  52, with 14 text figs.).

**Beynell**, A. Note on the occurrence of *Planorbis marginatus* Drap. and *Limnaea pereger* (Müll.) in the Post-Pliocene of Bognor, Sussex. London, Proc. Malac. Soc. Soc., **5**, 1903, (344– 345).

**Smith**, E. A. On *Xylophaga praestans* n. sp. from the English Coast. *l.e.* (328-330, with figs.).

**Stebbing**, W. P. D. Excursion to Salisbury and the Oak of Wardour . . . Old Sarum and Stonehenge. London, Proc. Geol. Ass., **18**, 1903, (146–149).

Sykes, E. R. Notes on some British Eulimidae. London, Proc. Malac. Soc., 5, 1903, (348-353, pl. XIV).

Thompson, B. The junction beds of the Upper Lias and Inferior Oolite in Northamptonshire. Pt. II : Stratigraphical and Palaeontographical. Northampton, J. Nat. Hist. Soc., 11, 1903, (197-216, 235-244); 12, 1903, (54-69).

**Todd**, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., **6**, 1903, (541-561).

Tomlin, B. A new Irish Vertigo. Irish Nat., Dublin, **12**, 1903, (110).

Tomlin, J. R. le B. and Marquand, G. D. The land and freshwater shells of the Channel Islands. J. Conch., Leeds, 10, 1903, (285-294).

Vertigo heldi in Ireland. l.c. (307-308).

Waterston, J. Mollusca observed at Stromness, Orkney. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (52-53). Welch, R. Pockets of land-shells, Bannmouth Dunes, Portstewart. J. Conch., Leeds, 10, 1903, (338-339).

Wittich, E. Beitrag zur Kenntnis der alt-alluvialen Fauna im Mainthal. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (11-14).

Woodward, B. B. List of British non-marine Mollusca. J. Conch., Leeds, 10, 1903, (352-367).

Mollusca. In the "Victoria History of the County of Cumberland." 1, 1901, (99, 100).

Mollusca. In the "Victoria History of the County of Essex." 1, (89-90).

Mollusca. In the "Victoria History of the County of Hertford." 1, 1902, (81-82).

------ Mollusca. In the "Victoria History of the County of Surrey." 1, 1902, (71-72).

——— Mollusca. In the "Victoria History of the County of Worcestershire," 1, 1901, (81–82).

and Adams, I. E. Mollusca. In the "Victoria History of the County of Northampton," 1, 1902, (87– 88).

Woodward, H. B. Excursion to Royston, Hertfordshire, May 16, 1903. London, Proc. Geol. Ass., 18, 1903, (166-170).

df FRANCE.

**Carlot**, commandant. Comparaison des faunes malacologiques terrestres de la Corse et de la Sardaigne. Feuille jeunes natural., Paris (sér. 4), 33, 1902, (10-11); Paris, C.-R. A-S. franç., avanc. sci. (Ajaccio), 1902, (571-576).

. — Etude sur quelques coquilles de la région circum-méditerranéenne, établie avec le concours de M. Fagot. *Helix niciensis*. Etude des espèces du groupe. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (10-13).

Liste des mollusques aquatiques vivant dans la Fontaine, à Nimes. Germain, Louis. Etude sur les mollusques terrestres et fluviatiles vivants des environs d'Angers et du département de Maine-et-Loire. Nantes, Bul. soc. sci. nat., (sér. 2, 3), 13, 1903, (1-112).

Granger, Albert. Revision des espèces françaises du genre *Heliz*. Bordeaux, Actes soc. linn., 58, 1903, (1-60).

Lawerzari. Liste des coquilles recueillies au Val-André. (('ôtes-du-Nord). J. conchyliol., Paris, 51, 1903, (29-34).

Letacq, A. L. Liste des mollusques recueillis dans les cantons de Fresnay et de Saint-Paterne. Mans (le), Bul. soc. agricult., (sér. 2, 30), 38, 1901, 1902, (136-143).

Locard, Arnould. Description de mollusques nouveaux appartenant à la faune souterraine de France et d'Italie. Bul. Museum, Paris, **1902**, (608-611, av. fig.).

**Peyrot.** Note sur quelques fossiles des faluns de la Touraine (Helvétien infér.) et des environs d'Orthez (Helvétien supér.). Feuille jeunes natural., Paris, (sér. 4). **33**, 1903, (46-49, 53-56, 69-73, av. pl.).

dh ITALY, WITH SICILY AND SARDINIA.

Bellini, R. Contribuzione alla conoscenza della fauna dei molluschi marini dell'Isola di Capri. Napoli, Boll. Soc. nat., 15, (1901), 1902, (85-121).

**Ewietniewski**, C. Alcune osservazioni intorno agli Pteropdi Gimnosomi del Mare Mediterraneo. Padova, Atti Soc. ven. trent., (Ser. 2), 4, fasc. 2', (1900– 1902), 1902, (39–58).

Locard, Arnould. Description de mollusques nouveaux appartenant à la faune souterraine de France et d'Italie. Bul. Museum, Paris, **1902**, (608-611, av. fig.).

di SWITZERLAND.

Loriol, l'[erceval] de. Etude sur les mollusques et brachiopodes de l'Oxfordien supérieur et moyen du Jura bernois accompagnée d'une notice stratigraphique par F[rédéric] Koby. Genève (W. Kündig & fils), 1901, (119, av. 7 pls.). 4to.

et **Girardot**, Abel. Etude sur les mollusques et brachiopodes de l'Oxfordien supérieur et moyen du Jura lédonien. Première partie. Basel, Abh. Schweiz. Pal. Ges., **29**, 1902, (76, av. 5 pls. et 2 figs.).

### dl: AUSTRIA-HUNGARY.

**Osiki**, Ernő. Drei neue Clausilien aus Ungarn. (Ungarisch) Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (107–108).

Gredler, Vinc[enz]. Localer Beitrag zur Conchylienfauna von Kärnten. Carinthia II, Klagenfurt, **92**, 1902, (156– 158).

Pálty, Mór. Zwei neue Inoceramus-Riesen aus den oberen Kreide-Schichten der siebenbürgischen Landesteile. (Ungarisch u. Deutsch) Földt. Közl., Budapest, 33, 1903, (445-451, 489-495, mit Taf. XI-XII).

dl BALKAN PENINSULA.

Martens, E[duard] von. Griechische Mollusken, gesammelt von Eberh. von Oertzen, Arch. Natg., Berlin, **69**, Bd 1, 1903, (372-374).

Wohlberedt, Otto. Nachtrag zur Molluskenfauna von Montenegro und Nord-Albanien. Frankfurt a. M. NachrBl. D. malakozool. Ges., **35**, 1903, (83-86).

#### dm MEDITERRANEAN AND ISLANDS.

Kwietniewski, C. Alcune osservazione intorno agli Pteropodi Gimnosomi del Mare Mediterraneo. Padova, Atti Soc. ven. trent., (Ser. 2), 4, fasc. 20, (1900 1902), 1902, (39-58).

du BLACK SEA.

Andrusov, N. Studien über die Brackwassercardiden. Lieferung 1. St. Peterburg, Mém. Ac. Sc., (8 F.), 13, No. 3, 1903, (82, mit 2 fig. and 7 Taf.).

e Asia.

Andreae, A. Lund- und Süsswasserschnecken aus Zontral- und Ostasien. [In: K. Futterer, Durch Asien. Bd 3.] Berlin, 1903, (41–90, mit 1 Taf.). **Gude**, G. K. A classified list of the helicoid land shells of Asia. J. Malac., London, **10**, 1903, (5-16, 45-62, 83-98, 129-136, pl. III).

# ca ASIATIC RUSSIA.

Dybovskij, W. Beitrag zur Kenntniss der Molluskenfauna Kamtschatkas. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (40-55, mit 8 Fig.).

Zur Kenntniss der ostsibirischen Landschnecken. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (7-10).

Gariaev, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal-Sæs im Sommer 1900 u. 1901. (Russ.) St. Peterburg, Trd. Troick.-Kíacht. Otd. Russ. Geogr. Obsč., **V**. 2, 1902, [1903], (27–48, mit 1 Karte).

Rosen, Otto Baron von. Neue Arten aus dem Kaukasus und Zentralasien. Frankfurt a. M., NachrBl. D. malakozool. (ies., **85**, 1903, (178–182).

# cb CHINA.

**Crich**, G. C. Notes on some specimens of straight shelled Nautiloidea collected by the Rev. Samuel Couling, M.A., Ching Chowfu, Kiaochow, North China. Geol. Mag., London, [4], **10**, 1903, (481– 485, pl. XXII).

ec JAPANESE ISLANDS.

Illustration of some Japanese land shells. Nautilus, Philadelphia, Pa., 16, 1903, (136-137, with pl.); [Errata], *Ibid.*, 17, 1903, (12). [2231].

Dean, Bashford. Japanese oysterculture. Washington, D.C. Bull., U. S. Fish Com., 22, (1902), 1903, (13-37, with text fig. and pl.).

Gude, G. K. Classified list of the helicoid land shells of Sian. J. Malac., London, 10, 1903, (5-16).

Hirase, Y. Catalogue of land shells of Japan to be had of Y. Hirase. Shimochoja-Machi, Karasunaru, Kyota, Japan, 1903, ([1-21, with pl.). [with Nautilus, Philadelphia, Pa., **16**, 1903]. **Plishry**, Henry A[ugustine]. Additions to the Japanese land snail fauna. No. 8. [nn. spp. in *Clausilia*]. Philadelphia, Pa., Froc. Acad. Nat. Sci., 55, 1903, (315-319, with pl.).

maria. l.c. (496).

\_\_\_\_\_ New land shells of the Japanese Empire. Nautilus, Philadelphia, Pa., 16, 1902, (21-22).

in Japan. *l.c.* (119).

New Japanese marine mollusks. *l.c.* 17, 1903, (69-71).

shells of the Japanese empire. *l.c.* 16, 1903, (114-117).

Descriptions of new Japanese land shells. *l.c.* (134-136); **17**, 1903, (31-32).

Japanese land shells. *l.c.* (44-46).

land shells of the Japanese empire. *l.c.* (52-55).

snails of the Japanese empire. *l.c.* (78–79).

**Sowerby**, G. B. Descriptions of fourteen new species of marine Mollusca from Japan. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (496-501).

Uchiyama, R. . . . Molluscs of Japan. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (9-12, with pl.).

ed TONQUIN, ANNAM.

Bavay, A. et Dautsenberg, Ph. Description de coquilles nouvelles de l'Indo-Chine (3e suite). J. conchyliol., Paris, 51, 1903, (201-236, av. 8 pls.).

ee Sian.

Blanford, W. T. Notes on Mr. W. M. Daly's collections of land and freshwater Mollusca from Siam. London, Proc. Malac. Soc., 5, 1903, (274-284, pl. VIII).

ef BRITISH INDIA.

Blanford, W. T. Note on the supposed locality "Sulgrances" whence Dr.

J. E. Gray's type-specimens of Indian Jurassic Ammonites were said to have been obtained. London, Proc. Malac. Soc., 5, 1903, (345).

Cossmann, M. Faune pliccénique de Karikal (Inde française). J. conchyliol., Paris, 51, 1903, (105-173, av. 4 pls.).

**Crick**, G. C. Note on Dr. J. E. Gray's type specimens of Jurassic Ammonites from India. London, Proc. Malac. Soc., 5, 1903, (285-289).

(R. Strachey MS.) H. F. Blandford, from the Himalayas. *l.c.* (290-295, with fig.).

Diener, C. Palaeontologia Indica. Series XV. Himalayan Fossils. Vol. 11. Part I. The Cephalopoda of the Lower Trias. Calcutta (Geol. Survey Office). London (Kegan, Paul & Co.), (1-181, pls. i-xxiii). [Reviews], Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1902, (241-244).

Lomas, J. Report on the Sea bottoms and Calcretes collected by Prof. Herdman. In: Report Pearl Oyster Fisheries of the Gulf of Manaar. London, 1903, (147-162).

### eg MALAY PENINSULA AND ARCHI-PELAGO.

**Collinge**, W. E. Contributions to a knowledge of the Mollusca of Borneo. J. Malac., London, **10**, 1903, (79–82, pls. VII-VIII).

**Dautsenberg**, Ph. Contribution à la faune malacologique terrestre et d'eau douce des îles Obi et Iolo. J. conchylol., Paris, **51**, 1903; (5-20, av. 1 pl. et fig.).

Gude, G. K. Classified list of the helicoid land shells of the Malay Peninsula and the Malay Archipelago. J. Malac., London, **10**, 1903, (45-62, 83-98).

Martens, [Eduard] von. Land- und Süsswasser-Conchylien von Ost-Bornëo. Berlin, SitzBer. Ges. natf. Freunde, 1903, (416-428).

**Möllendorf**, O[tto] von. Neue Landschnecken von Niederländisch-Indien. Frankfurt a. M., NachrBl. D. Malakozool. Ges., **35**, 1905, (156). Newton, R. B. Notes on some Jurassic shells from Borneo, including a new species of *Trigonia*. London, Proc. Malac. Soc., 5, 1903, (403-409, pl. XVI).

**Bolle**, H. Einige neue Binnen-Mollusken von den Molukken. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (23-24).

Schepman, M[attheus] M[arinus]. . . Three new species of Oliva from the Siboga-expedition. Helder, Tijdschr. Ned. Dierk. Ver., (Ser. 2), 8, [1903], (67-69).

**smith**, E. A. A new species of *Modiola* from Malacca. J. Conch., Leeds, **19**, 1903, (368, with fig.).

Sykes, E. R. On the land operculate Mollusca collected during the "Skeat Expedition" to the Malay Peninsula in 1899-1900. London, Proc. Zool. Soc., 1903, I, (194-199, pl. XX).

**Tesch**, J. J. . . . The cosomata und Gymnosomata der Siboga-Expedition. Helder, Tijdschr. Ned. Dierk. Ver., (Ser. 2), 8, [1903], (111-117).

# ei Asiatic Turkey, Arabia.

Naegele, G. Einiges aus Vorderasien. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (168-177).

Sykes, E. R. Description of Cerastus dinshauti, n. sp. from Aden, with a note on Otopoma clausum Sby. and O. gemenicum Brgt. London, Proc. Malac. Soc., 5, 1903, (338-339, with figs.).

# ek CASPIAN.

Andrusov, N. Studien über die Brackwassercardiden. Lieferung 1. St. Peterburg, Mém. Ac. Sc., (8 F.), 13, No. 3, 1903, (82, mit 2 Fig. and 7 Taf.).

# el PERSIAN GULF.

Melvill, J. C. A revision of the Columbellidae of the Persian Gulf and North Arabian Sea, with description of C. calliope, n. sp. J. Malac., London, 10, 1903, (27-31, with fig.).

Melvill, J. C. and Standen, R. Descriptions of sixty-eight new Gastropoda from the Persian Gulf, Gulf of Oman, and North Arabian Sea, dredged by Mr. F. W. Townsend, of the Indo-European Telegraph Service, 1901-1903. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (289-324, pls XX-XXIII).

Scala (Klein) Humphrey, as represented in the Persian Gulf, Gulf of Oman, and North Arabian Sea, with descriptions of new species. J. Conch., Leeds, **10**, 1903, (340-351, pl. VII).

# f AFRICA.

Martens, [Eduard] von. Die Verbreitung der Meer-Conchylien an den Küsten von West- und Süd-Afrika. Berlin, SitzBer. Ges. natf. Freunde, 1903, (188-193).

# fd WEST AFRICA.

Dautzenberg, P. Description de trois mollusques nouveaux provenant de l'état indépendant du Congo. Bruxelles, Ann. Soc. roy. malac., 26, 1903, (3-7).

Martens, [Eduard] von. Süsswasser-Conchylien vom Südufer des Tsad-Sees. Be lin, SitzBer. Ges. natf. Freunde, 1901, (5-10).

# ff EAST AFBICA.

**Eliot**, Sir C. On some Nudibranchs from East Africa and Zanzibar. London, Proc. Zool. Soc., **1903**, 1, (250-257); *l.e.* 2, (354-385).

**Smith**, E. A. Descriptions of new species of land shells from Central Africa. J. Conch., Leeds, **10**, 1903, (315–319, pl. IV.).

Land and freshwater shells. In "Nat. Hist. Sokotra and Abd-el-Kuri," **1903**, (111-135, pls. XII-XIII).

# fg South Africa.

Melvill, J. C. and Ponsonby, J. H. Descriptions of thirty-one terrestrial and fluviatile mollusca from South Africa. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (595-609, pls. XXXI-XXXII).

**Smith**, E. A. A list of species of mollusca from South Africa, forming an appendix to G. B. Sowerby's "Marine

Shells of South Africa." London, Proc. Malac. Soc., 5, 1903, (354-402, pl. XV.).

Soverby, G. B. Mollusca of South Africa. Cape Town, Marin. Invest., 2, 1903, (213-232, pls. 11I-V).

g NORTH AMERICA.

**Button**, F. L. West American *Cypraeidae*. J. Conch., Leods, **10**, 1903, (254–258).

Dall, William Healey. Synopsis of the Carditacea and of the American species [with bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (696-716).

[**Orcutt**, C. R.] West American Mollusca. The West American Scientist, San Diego, Cal., **12**, 1901, (67–68, 78–80, [105]-108).

**smith**, J. P. The Carboniferous Ammonoids of America [with bibliography]. Washington, D.C., Dept. Int. U. S. Geol. Surv. Monogr., **42**, 1903, (211 + iii, with pl.). 30 cm.

gf UNITED STATES.

Gratacap, L. P. Catalogue of the Binney and Bland collection of the terrestrial air-breathing mollusks of the United States and territories in the American Museum of Natural History, with enumeration of types and figured specimens, and supplementary notes. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 14, 1901, (355-403, with 6 maps). 23.5 cm.

Sterki, V[ictor]. New North American Pisidia. Nautilus, Boston, Mass, 17, 1903, (42-43).

gg North Eastern United States.

Baker, Frank C[ollins]. Pleistocene molluske of White pond, New Jersey. Nautilus, Boston, Mass, 17, 1903, (38-39).

Billups, A. C. Fossil land shells of the Old Forest bed of the Ohio river. *le.* 16, 1902, (50-52).

in Hamilton Co., Uhio.] *l.e.* (119).

**Biatchley**, W[illis] S[tanley] and **Daniels**, L. E. On some Mollusca known to occur in Indiana. A supplementary paper to Call's catalogue. Indiana, Rep. Dept. Geol. Nat. Res. Indianapolis, **27**, 1902, [1903], (577-628, with pl.). **Cleland**, Herdman Fitzgerald. A study of the fauna of the Hamilton formation of the Cayuga Lake section in central New York [with bibliography]. Washington, D.C., U. S. Dept. Int. Bull. Geol. Surv., No. **206**, 1903, (112, with pl.).

Daniels, L. E. A check list of Indiana Mollusca, with localities. Indiana, Rep. Dept. (Ieol. Nat. Res., Indianapolis, 27, 1902, [1903], (629-652).

Evermann, Barton Warren aud Goldsborough, Edmund Lee. Notes on the fishes and mollusks of lake Chautauqua, New York. New York, Forest Fish, Game Com. Rep. Albany, 1900, 1901, (357-366, with col. pl., and text fig.).

Notes on the fishes and mollusks of lake Chautauqua. New York, Washington, D.C., Rep. U.S. Com. Fish, **1901**, 1902, (169–175).

Ortmann, A[rnold] E[dward]. Illex illecebrosus (Lesueur), the "Squid from Onondaga Lake, N.Y." Science, New York, N.Y., (N. Ser.), 17, 1903, (30-31).

Walker, Bryant. Notes on eastern American Ancyli. Nautilus, Boston, Mass., 17, 1903, (13-19, 25-31, with pl.).

Weeks, Wm. H., jun. Shell collecting on Cliff island, Casco Bay, Maine. *l.e.* (119-120).

gh South EASTERN UNITED STATES.

Aldrich, T[rumann] H[emingway]. Two new species of Eocene fossils from the lignitic of Alabama. Nautilus, Boston, Mass., 17, 1903, (19-20).

Dall, William Healey. Contributions to the Tertiary fauna of Florida, with especial reference to the silex beds of Tampa and the Pliocene beds of the Caloosahatchie river Part 6, concluding the work. [Pelecypoda (concluded) and Brachiopoda, with discussion of geology]. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, ((i-xiv) + (1219-1654) with pl.). Separate. 28.5 cm.

**Plisbry**, Henry A[ugustine]. A new Guppya [G. miamiensis n. sp.] from Florida. Nautilus, Boston, Mass., **17**, 1903, (77-78).

# gi Western United States.

Bartsch, Paul. A new landshell [Sonorclla craleottiana n. sp.] from California. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (103–104). Separate. 23.3 cm.

**Cockerell**, T[heodore] D[ru] A[lison]. Ashmunella thomsoniana cooperac [at Pecos, New Mexico.] Nautilus, Boston, Mass., **17**, 1903, (36).

**Dall**, William Healey. Diagnoses of new species of mollucks from the Santa Barbara channel, California. Washington, D.C., Proc., Biol. Soc., **16**, 1903, (171-176). Separate. 23.3 cm.

Elrod, Morton J[ohn]. Montana shells. — Pyramidula strigosa. Nautilus, Boston, Mass., 17, 1903, (1-6).

Montana shells. Nature study lesson. Missoula, Ball. Univ. Mont., No. 17, Biol. Ser. No. 5, 1903, (255-262, with pl.).

Lowe, Herbert N. Notes on the mollusk fauna of San Nicholas island. [Cal.] Nautilus, Boston, Mass., 17, 1903, (66-69).

**Oroutt**, C. R. Shells of western lake and stream. The West American Scientist, San Diego Cal., **12**, 1901, ([33]-40).

Plisbry, Henry Augustine. New land Mollusca from Idaho. [Pristiloma idahoense n. sp.] Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (593).

Mollusca of Western Arkansas and adjacent States, with a revision of *Pararitrea*. *l.c.* 55, 1903, (193-214, with pl.).

central Washington. Nautilus, Boston, Mass., 17, 1903, (84).

**Raymond**, William J. A new Californian Trivia [T. ritteri n. sp.] l.c. (85-86).

Shattuck, G. B. The mollusca of the Buda Limestone. [Texas]. [Dissertation (Ph.D.), Johns Hopkins university], with an appendix on the corals of the Buda limestone, by Thomas Wayland Vaughan. Washington, D.C., Bull. Dept. Int., U. S. Geol. Surv., No. 205, 1903, (9-40, with pl.). Separate, 22.8 cm.

**Stanton**, Timothy W. A new freshwater Molluscan faunule from the Cretaceous of Montana. Philadelphia, Pa., Proc. Amer. Phil. Soc., **42**, 1903, (188-199, with 1 pl.).

stearns, Robt. E. C. Mollusks occurring in Southern California. Nautilus, Philadelphia, Pa., 16, 1903, (133-134).

Whitfield, R[obert] P[arr]. Notice of six new species of Unios from the Laramie group. [Montana]. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (483-487, with 3 pls.). Separate. 24.5 cm.

#### h Central and South America.

Ancey, C. F. On some new land Mollusca from Middle America [nn. spp. in Streptostyla]. I.c. (56-57).

New land snails from South America [nn. spp. in Porphyrobaphe and Bulimulus.] l.e. (82-83, 89-90).

Button, F. L. West American Cypraeidae. J. Conch., Leeds, 10, 1903, (254-258).

**Dall**, William Healey. Synopsis of the Carditacea and of the American species [with bibliography.] Philadelphia, Pa., Proc. Acad. Nat. Sci., **54**, 1902, [1903], (696-716)

[Orcutt, C. R.] West American Mollusca. The West American Scientist, San Diego, Cal., **12**, 1901, (67-68, 78-80, [105]-108).

ha MEXICO.

Fischer, H. et Chatelet, G. Description d'une espèce nouvelle du genre *Glanlina*. J. conchyliol., Paris, **51**, 1903, (321-322, av. fig. et pl.).

#### hb CENTRAL AMERICA.

**Preston**, H. B. Supposed new species of *Helicina* and *Bulimulus* from Costa Rica. J. Malac., London, **10**, 1903, (4, with figs.).

he WEST INDIAN ISLANDS.

Baker, Frank Collins. A partial list of the marine mollusks of San Salvador, Bahamas. Nautilus, Boston, Mass., 17, 1903, (57).

Brown, L. B. Notes on the land and freshwater shells of Barbados. J. Conch., Leeds, 10, 1903, (266-273).

# Mollusca.

Pilsbury, Henry A[ugustine]. Land shells of Curacao. Nautilus, Boston, Mass., 17, 1903, (48).

A new Jamaican Colobosiylus. l.c. (65-66).

#### he COLUMBIA.

**Dall**, William Healey. Two new mollusks from the west coast of America. [*Nigaretus noyenii* n. sp. from Colombia and *Tonicia arnheimi* n. sp. from Galapagos Islands]. Nautilus, Boston, Mass., **17**, 1903, (37–38).

#### hh Brazil.

**Smith**, E. A. Note on some Mollusks of the family *Bulimulidae* from Matto Grosso. London, Proc. Zool. Soc., **1903**, 2, (70-71).

# hi Abgentina.

Bartech, Paul. A new Sciseurella [S. dalli n sp.] from Patagonia. Nautilus, Boston, Mass., 17, 1903 (90-91).

### i AUSTRALASIA.

Hedley, C. Studies on Australian Mollusca. Part VII. Sydney, N.S.W. Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903, (596-619, with 4 pls.).

### ia New Guinea and Islands from Wallaces Line.

**Dautzenberg**, P. Description de mollusques nouveaux provenant de l'île Obi (Moluques). Naturaliste, Paris (sér. 2), **24**, 1902, (247-248, av. fig.).

**smith**, E. A. Description of a new species of *Gomphina*. . . J. Mala2., London, **9**, 1902, [1903], (109-110, with fig.).

Sykes, E. R. Descriptions of new land shells from the Austro-Malayan Region. *l.e.* 10, 1903, (64-67).

Tesch, J. J. Thecosomata und Gymnosomata der Siboga-Expedition. Helder, Tijdschr. Ned. Dietk. Ver., (Ser 2), 8, [1903]. (111-117).

(x 2-0053)

ib BISMARCK ARCHIPELAGO.

Hedley, C. [Mollusca of the Gilbert Group.] Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (4, 5).

#### ic AUSTRALIA.

Hedley, C. Effect of the Bassian Isthmus upon the existing marine fauna : a study in ancient geography. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (876-883, with 1 map).

# ie NEW SOUTH WALES.

Hedley, Charles. Mollusca. Part II. Scaphopoda and Gastropoda. Scientific Results of the trawling expedition of H.M.C.S. "Thetis" off the coast of New South Wales in February and March, 1898. Sydney, N.S.W., Mem. Austr. Mus., 4, 1903, (327-402, with 3 pls. and 53 text-figs.).

if VICTORIA.

Barnard, F. G. A. Excursion to Launching Place [Victoria]. [Helix atramentaria.] Vict. Nat., Melbourne, 19, 1903, (147).

**Gatliff**, J. H. Additions to the list of Victorian marine Mollusca. [41 species.] *l.e.* 20, 1903, (89-91).

Pritchard, G. B. and Gatliff, J. H. Catalogue of the Marine Shells of Vic toria. Pts. VI, VII. Melbourne, Proc. R. Soc. Vict., 15, (N. Ser.), 1903, (176-223); 16, 1903, (90-139).

species of Victorian Mollusca. *l.e.* (92-95, with pl. XV.)

#### il New Hebrides.

**Dautzenberg**, Ph. Revision des Cypracidae de la Nouvelle-Calédonie. J. conchyliol., Paris, **50**, 1902, (291-384, av. 1 pl.).

**Fischer**, H. Description d'un Olira nouveau provenant des Nouvelles-Hébrides. *l.c.* (409-411, av. fig. et pl.).

Geret, P. Variété nouvelle de Cypraca provenant de la Nouvelle-Calédonie. *l.c.* 51, 1903, (28). Godwin-Austen, H. H. On the anatomy of two land molluscs (*Heli*carion (?) willeyana and II (?) woodworthinn.spp.) from New Britain and Lifu, Loyalty Islands, collected by Dr. Arthur Willey, F.R.S., in 1895-97. London, Proc. Malac. Soc., 5, 1903, (296-209, pl. IX).

**Pace**, S. Critical notes on Hervier's monograph of the *Columbellidae* of New Caledonia with *C. hervieri* nom. nov. J. conchyliol.. Paris, **50**, 1902, (412-422).

**Sykes**, E. R. On a small collection of marine shells from Surprise Island. J. Malac., London, **10**, 1903, (137–138).

h ARCTIC.

# kd Islands North of Europe and Asia.

**Enipovič** N. M. Zoologische Ergebnisse der russischen Expeditionen nach Spizbergen. Mollusca und Brachiopoda IV. Nachtrag. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (133–143).

# 2 ATLANTIC.

Martens, [Eduard] von. Die Verbreitung der Meer-Conchylien an den Küsten von West- und Süd-Africa. Berlin, SitzBer. Ges. natf. Freunde, 1903, (188-193).

le South Atlantic.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, 51, 1903, (39–47).

m INDIAN OCEAN.

### ma Indian Ocean and Islands North of the Equator.

**Etiot**, C. N. E. Nudibranchiats, with some remarks on the families and genera, and description of a new genus *Doridomorpha*. In Fauna and Geography of the Maldive and Laccadivo Archipelagoes, II, 1903, (540-573, pl. XXXII). Melvill, J. C. and Sykes, E. R. Description of *Marginella lateritia* n. sp., from the Andaman Islands. London, Proc. Malac. Soc., 5, 1903, (410, with fig.).

**smith**, E. A. Laud and fresh-water mollusca. Fauna of the Maldive and Laccadive Islands, 1, (141-145).

(589-630, pls. XXXV-XXXVI).

# mb Indian Ocean and Islands South of the Equator.

Martens, [Edward] von. Ueber einige Schnecken der Cocosinsel. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (59– 62).

Die Meeres-Conchylien der Cocos-Insel. *l.c.* (137-141, 253).

n Pacific.

nb SOUTH PACIFIC.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, 51, 1903, (39-47).

terrestre de l'ile des Cocos dans l'Océan Pacifique. 1.c. (97-104).

nd SANDWICH ISLANDS.

Ancey, C. F. Etude sur la faune malacologique des iles Sandwich (5e partie). J. conchyliol., Paris, 51, 1903, (295-307, av. 1 pl.).

**Baldwin**, D. D. Descriptions of new species of *Achatinellidae* from the Hawaiian islands. Nautilus, Boston, Mass., **17**, 1903, (34-36).

**Dall**, William Healey. A new genus of *Trochidae* [from Hawaii]. [Stylobates aeneus n. gen. and sp.] l.c. (61-62).

# ng GALAPAGOS ISLANDS.

**Dall**, William Healey. Two new mollusks from the west coast of America. [Sigaretus noyesii n. sp. from Colombia, and Tonicia arnheimin. sp. from Galapagos Islande]. Nautilus, Boston, Mass., **17**, 1903, (37-38).

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# 2231 TAXONOMY AND SYSTEMATIC.

# GENERAL.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, 51, 1903, (39-47).

Blanford, W. T. Notes on Mr. W. M. Daly's collections of land and freshwater Mollusca from Siam. London, Proc. Malac. Soc., 5, 1903, (283-284).

**Brady**, G. S. Report on dredging and other marine research off the N.E. coast of England in 1901. Newcastle, Trans. Nat. Hist. Soc., **14**, 1903, (87– 101).

Brown, L. B. Notes on the land and freshwater shells of Barbados. J. Conch., Leeds, 10, 1903, (266-273).

**Casey**, T. L. Notes on the Conrad collection of fossils, with descriptions of new species. Philadelphia, Pa., Proc. Acad., Nat. Sci., **55**, 1903, (261-283).

**Collinge**, W. E. Contributions to a knowledge of the Mollusca of Borneo. J. Malac., London, **10**, 1903, (79-82, pls. VII, VIII).

**Cossman**, M. Faune pliocénique de Karikal (Inde française). J. conchyliol., Paris, **51**, 1903, (105-173, av. 4 pl.).

**Dautsenberg**, Ph. Contribution à la faune malacologique terrestre et d'eau douce des îles Obi et Iolo. *l.c.* (5-20, av. 1 pl. et fig.).

Garlaev, V. P. Evertebratenfauna des Baikal-Sees. (Russ.) St. Peterburg, Trd. Troick.-Kfacht. Otd. Russ. Geogr. Obšč., V, 2, 1902, [1903], (27-48, mit I Karte).

Gatlin, J. H. Additions to the list of Victorian marine Mollusca. [41 species]. Vict. Nat., Melbourne, 20, 1903, (89-91).

Hedley, C. Studies on Australian Mollusca. Part VII. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903, (596-619, with 4 pls.).

Jacot, E. Etude sur les mollusques. Messager Suisse Rom., Fribourg, 16, 1903, (132-133, 140-141, 173-174, 188).

Kennard, A. S. and Woodward, B. B. The non-marine mollusca of the River Lea Alluvium at Walthamstow. Strat-(N 2-9053) ford, Essex Nat., **13**, 1903, (13-21, 115-116, with figs.).

Knipovic, N. M. Zoologische Ergeonisse der russischen Expeditionen nach Spitzbergen. St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (133-143).

Kormos, T. Paläontologische Mitteilungen. (Ungarisch u. Deutsch) Földt. Közl., Budapest, 33, 1903, (451-462, 496-500, mit Taf. XIII).

Lamplugh, G. W. and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., 59, 1903, (234-265, pls. XVI-XVIII, 2 text-figs.).

Lawezzari. Liste des coquilles recueillies au Val-André (Côtes-du-Nord)... J. conchyliol., Paris, 51, 1903, (29-34).

Letacq, A. L. Liste des mollusquesrecueillis dans les cantons de Freenay et de Saint-Paterne. Mans (le), Bul. soc. agricult., (sér. 2, 30), 38, 1901-1902, (136-143).

Lo Bianco, S. Le pesche abissali eseguite da F. A. Krupp col yacht Puritan nelle adiacenze di Capri ed in altre località del Mediterraneo. Mitt. Zool. Stat. Nenpel, Berlin, **16**, 1903, (109-279, mit 3 Taf.).

Locard, A. Description de mollusques nouveaux appartenant à la faune souterraine de France et d'Italie. Bul. Museum, Paris, **1902**, (608-611, av. fig.).

Loomis, F. B. The dwarf fauna of the pyrite layer at the horizon of the Tully limestone in western New York [nn. spp. of Brachiopoda, Mollusca and Crustacea]. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920, with 5 pls.).

Loriol, P. de et Girardot, A. Etude sur les mollusques et brachiopodes de l'Oxfordien supérieur et moyen du Jura lédonien. Première partie. Basel, Abh. Schweiz. Pal. Ges., 29, 1002, (76 pp., 5 pls., 2 figs.).

Martens, E. von. Neue Meer-Conchylien aus den Sammlungen der deutschen Tiefsee-Expedition. (Abdr. aus: Berlin, SitzBer. Ges. natf. Freunde, Jg 1902, N. 9.) Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (97-105),

R 2

Martens, E. von. Süsswasser-Conchylien vom Südufer des Tsad-Sees. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (5-10).

Martini und Chemnits. Systematisches u. vervollständigt v. H. C. Küster nach dessen Tode fortgesetzt von W. Kobelt. Lfg 464 = Bd 1, H. 166 (S. 989-1028,Ing 404 = 101, f. 100 (5. 555-1055), nit Taf.); Lfg 465 = Bd 6, H. 15 (8. 1-24, mit Taf.); Lfg 466 = Bd 1, H. 167 (S. 1029-1060, mit Taf.); Lfg 467. 468. = Bd 1, H. 168. 169 (8. 773-836, mit Taf.); Lfg 460 = Pd 1, H. 170 (8. mit Taf.); Lfg 469 = Bd 1, H. 170 (S. 401-448, mit Taf.); Lfg 470 = Bd 1, H. 171 (S. 837-884, mit Taf.); Lfg 471= Bd 6, H. 16 (S. 25-32, 81-104 + 2 Bl., 241-273, mit Taf.); Lfg 472 = Bd 1, H. 172 (S. 1-24, 885-900); Lfg 473 = Bd 1, H. 173 (S. 901-956, mit Taf.); Lfg 474 = Bd 6, H. 17 (S. 33-1a1.); Lfg 414 = Bd 0, H. 17 (5. 35-56, mit Taf.); Lfg 475 = Bd 1, H. 174, (2 Bl., 8. 957-1051); Lfg 476 = Bd 1, H. 175 (S. 25-56, mit Taf.); Lfg 477 = Bd 1, H. 176 (1061-1092, mit Taf.); Lfg 478 = Bd 6, H. 18 (S. 57-80, mit Taf.); Lfg 479 = Bd 1, H. 177 (S. 1-32, mit Taf.); Lfg 480 = Bd 6, H. 19 (S. 91 104 - mit Taf.) = Lfg 480(S. 81-104, mit Taf.); Lfg 481 = Bd 6, H. 20 (S. 1-32, mit Taf.); Lfg 482 = Bd 6, H. 21 (S. 33-64, mit Taf.); Lfg 483 = Bd 6, H. 178 (S. 57-88, mit Taf.); Lfg 484 = Bd 6, H. 22 (S. 65-96, mit Taf.); I.fg 485 = Bd 6, H. 179 (S. 89-120, mit Taf.). Nürnberg (Bauer & Raspe), 1901-1903. 30 cm. Die Lfg Auch in Sectionen zu 27 M. 9 M.

Molyneux, A. J. C. Fossils in: The sedementary deposits of Southern Rhodesia. London, Q. J. Geol. Soc., 59, 1903, (280-281).

Mewton, R. B. Notes on some Jurassic shells from Borneo, including a new species of *Trigonia*. London, Proc. Malac. Soc., 5, 1903, (403-409, pl. XVI).

Mordmann, V. A conglomeration of mollusk shells from the bottom of the sea at Læsö. (Danish) Kjöbenhavn, Medd. Geol., 9, 1903, (37-44).

Park, J. Marine Mollusca of Totaranui Bay, Nelson. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (299-304).

**Pilsbry**, H. A. Molluscs of western Arkansas and adjacent states. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (193-214, with pl.).

Pritchard, G. B. and Gatliff, J. H. Catalogue of the marine shells of Vic-

toria. Pt. VII. (97 species). Melbourne, Proc. R. Soc. Vict., 16, (N. Ser.), 1903, (93-139).

**Böhm**, J. Ueber cretaceische und eocäne Versteinerungen aus Fergana. [In: K. Futterer, Durch Asien. Bd 3.] Berlin, 1903, (93-112, mit 1 Taf.).

Shattuck, G. B. The mollusca of the Buda limestone. [Texas.] [Dissertation (Ph.D.), Johns Hopkins university], with an appendix on the corals of the Buda limestone by Thomas Wayland Vaughan. Washington, D.C., Bull. Dept. Int., U. S. Geol. Surv., No. 206, 1903, (9 - 36, with pl.). Separate. 22.8 cm.

**smith**, E. A. Land and fresh-water mollusca. Fauna of the Maldive and Laccadive Islands, 1, (141-145).

\_\_\_\_\_ Marine Mollasca. l.c. II, (589-630, pls. XXXV-XXXVI).

Land and fresh - water shells. In "Nat. Hist. Sokotra and Abd-el-Kuri," **1903**, (111-135, pls. XII-XIII). 8vo.

A list of species of Mollusca from South Africa, forming an appendix to G. B. Sowerby's "Marine Shells of South Africa." London, Proc. Malac. Soc., 5, 1903, (394–402, pl. XV).

**Sturm**, F. Der Sandstein von Kieslingswalde in der Grafschaft Glatz und seine Fauna. Berlin, Jahrb. geol. Landesanst., **21**, 1901. Abh. auss. st. Pers., (39-98, mit 10 Taf.).

Tomlin, J. R. le B. and Marquand, E. D. The land and freshwater shells of the Channel Islands. J. Conch., Leeds, 10, 1903, (285-294).

# PELECYPODA.

#### GENERAL.

**Bloomer**, H. H. On the origin and function of the fourth aperture in some Pelecypoda. J. Malac., London, **10**, 1903, (43-45).

Boutan, L. L'origine réelle des perles fines. Paris, C.-R. Acad. sci., 137, 1903, (1073-1075).

**Clarke**, J. M. Torsion of the Lamellibranch shell. An illustration of Noetling's law. Albany Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (1228-1933). **Dall.** W. H. Contributions to the Tertiary fauna of Florida with especial reference to the silex beds of Tampa and the Pliocene beds of the Caloosahatchie river, including in many cases a complete revision of the generic groups treated of and their American Tertiary species. Part 6, concluding the work. [Pelecypoda (concluded) and Brachiopoda, with discussion of geology.] Philadelphia, Pa., Traus. Wagner Free Inst. Sci., **3**, 1903, ((i-xiv) + (1219-1654) with pl.). Separate. 28.5 cm.

Dybovakij, W. Beitrag zur Kenntniss der Molluskenfauna Kamt-chatkas. . . St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (40-55, mit 8 Fig.).

Hind, W. A monograph of the British Carboniferous Lamellibranchiata. Vol. II. London, Monogr. Palaeont. Soc., 1903, (35-124, pls. VII-XXI).

**Bidewood**, W. G. On the structure of the gills of the Lamellibranchia. London, Phil. Trans. R. Soc., **194 B**, 1903, (147-284, with figs.).

**Ruedemann**, R. Noetling on the morphology of the Pelecypods. [Fritz Noetling: Beiträge zur Morphologie der Pelecypoden.] Amer. Geol., Minneapolis, Minn., **31**, 1903, (34-40, with pl.).

Woods, H. A monograph of the Cretaceous Lamellibranchia of England. Vol. I. London, Monogr. Palaeont. Soc., 1903, (197-232, pls. XXXIX-XLII).

# PKOTOBRANCHIATA.

Leda futtereri | n. sp. Fergans. Böhm, J. In: K. Futterer, Durch Asien, Bd 3, 1903, (93-112).

minuta, var. praecursor<sup>†</sup> n. var. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3**.] *in*: Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (97).

rostellata Conrad mut. pygmaea† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

Nucula lirata Conrad mut. pygmaca† n. mut., N. corbuliformis Hall mut. pygmaca† n. mut., N. varicosa Hall mut. pygmaca† n mut. Loomis, F. P. I.c. (892-920).

Nuculites triqueter Conrad mut. pygmacus† n. mut., Nuculites oblongatus Conrad mut. pygmacus† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

Palaeoneilo plana Hall mut. pygmaea† n. mut., P. constricta Conrad mut. pygmaea† n. mut. Loomis, F. B. l.c. (892-920).

Trigonia crenulata Lam var. perunut n. var., nn. spp. Kreide, Südamerika. **Panicke**, W. N. Jahrb. Min., Stuttgart, Beilagebd **17**, 1903, (252-312, mit 3 Taf.).

*glaciana*<sup>†</sup> n. sp. **Sturm**, F. Berlin, Jabrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (39–98).

*molengraafi* n. sp. Borneo. **Newton**, R. B. London, Proc. Malac. Soc., **5**, 1903, (403-403, pl. XVI, figs. 1-6).

#### FILIBRANCHIATA.

# GENERAL.

List, T. Die Mytiliden des Golfes von Neapel und der angrenzenden Meeres-Abschnitte. TI 1. (Fauna und Flora des Golfes von Neapel. 27. Monographie [Jg 20.)] Berlin, 1902, (X + 312, mit 22 Taf.). 33 cm. 120 M.

### SPECIAL.

Arca<sup>†</sup> nn. spp. **Casey**, T. L. Phila-delphia, Pa., Proc. Acad. Nat. Sci., **55**, 1993, (261–283).

justinae<sup>†</sup> n. sp. **Wollemann**, A. Berlin, Jahrb. geol. Landesanst., **21**, 1901, Abh. auss. st. Pers, (1-30).

pharaonis P. Fischer, identiqué avec A. ehrenbergi. Lamy, Ed. J. conchliol., Paris, 51, 1903, (323-325).

Cucullaca teichmulleri<sup>†</sup> n. sp. **Sturm.** F. Berlin, Jahrb. geol. Landesant., **21**, 1901, Abb. auss. st. Pers., (39-98).

Gastrochaena striatula<sup>†</sup> n. sp. Aldrich, T. H. Nautilus, Boston, Mass., 17, 1903, (19–20).

Modiola evansi n. sp. Malacca, smith, E. A. J. Conch., Loeds, 10, 1903, (368, with figs.).

G. B. and Gatliff, J. H. Melbourne, Proc. R. Soc. Vict., 16, (N. Ser.), 1903, (93-4, with pl. XV). Myrlina excentrica<sup>†</sup> n. sp. Deutschland oberdevonisch. Drevermann, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (99-207).

Mytilus gallo-provincialis, origine des perles. Dupois, R. Paris, C.-R. Acad. sci., 136, 1903, (178-179).

Nuculina liasina<sup>†</sup> n. form. Alps. **Bistram**, A. Freiburg i B., Ber. natf. Ges., **13**, 1903, (116-213).

Pectunculus mundus n. sp. Japan. Sowerby, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (501).

Sarignyarea Jousseaume, le prétendu genre. Lamy, E. Bul. Muséum, Paris, 1903, (140-142).

#### . PSEUDOLAMELLIBRANCHIATA.

#### GENERAL.

Dubois, R. Sur l'acclimatation et la culture des Pintadines ou huitres perlières vraies sur les côtes de France, et sur la production forcée des perles fines. Paris, C.-R. Acad. sci., 137, 1903, (611-613).

**Perrier**, E. Remarques à propos de la communication de M. Raphaël Dubois, du 19 octobre 1903, "Sur les hultres perlières vraies." *l.e.* (682).

#### SPECIAL.

Amusium concentricum<sup>†</sup> n. sp. **Hind**, W. Vol. II, London, Monogr. Palaeont. Soc., **1903**, (122).

E. A. Fauna Mald. Laccad. Arch., II, (623).

Avicula kieslingstraldensis † n. sp. Sturm, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (39-98).

W. A. Part I. Pearl Oyster Report. London, 1903, (146).

n. form. **Bistram**, A. Freiburg i. B., Ber, natf. Ges., **13**, 1903, (116-214).

Aviculopecten † nn. spp. Hind, W. Vol. 11, London, Monogr. Palaeont. Soc., 1903, (74-99). Conocardium eboraceum Hall, mut. pygmaeum † n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

Daonella † spp. des deutschen Muschelkalkes. Tornquist, A. N. Jahrb. Min., Stuttgart, 1903, 2, (83-92, mit 1 Taf.).

Dimyopsis emmerichi † n. nom. Alps. Bistram, A. Freiburg i. B., Ber. natf. Ges., 13, 1903, (160).

Exogyra clarki † n. sp. Buda Limestone, Texas. Shattuck, G. B. Washington, D.C., Bull. Dept. Int. U. S., Geol. Surv., No. 205, 1903, (9-36, with pl.).

reissi † n. sp. Kreide, Südamerika. Stein, M. (MSS.) in Pauleke, W. N. Jahrb. Min., Stuttgart, Beilagebd 17, 1903, (252-312, mit 3 Taf.).

Gryphaea romanoucskii † n. nom. =G. kaufmanni † Rom. Böhm, J. In: K. Futterer, Durch Asien, Bd 3, 1903, (93-112).

Inoceramus † nn. spp. **Pálty, M.** Földt. Közl., Budapest, **33**, 1903, (445– 451, 489–495, mit. Taf. XI-XII).

Janira gardineri n. sp. Smith, E. A. Fauna Mald. Laccad. Arch., Vol. II, (622).

Lima elliptica, note on the name. Sykes, E. R. J. Malac., London, 10, 1903, (104).

*shumardi*<sup>†</sup> n. sp. Buda Limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9-36, with pl.).

Limatulina scotica † n. sp. Hind, W. London, Monogr. Palaeont. Soc., 1903, (36).

Limea delanosiei † n. sp. Blättermergel von Theben. **Oppenheim**, P. München, SitzBer. Ak. Wiss., math.-phys. Cl., **32**, (1902), 1903, (435–456).

Mytilarca eduliformis † n. sp. Upper Silurian, New York. Clarke, J. M. and Buedemann, R. Albany, Univ. N.Y., Mem. St. Mus., No. 5, 1903, (195).

Obliquipecten n. gen., O. laevis n. sp. Hind, W. Vol. II, London, Monogr. Palaeont. Soc., **1903**, (114-115).

Ostrea. Studium der Austernwirthschaft. (Russ.) **Karpov**, V. Vést. rybopromyšl., St. Peterburg, **1903**, 18, (269-345). Ostrea spp. Japan. Desn, B. Washington, D.C. Bull. U.S. Fish Com., 22. (1902), 1903, (13-37, with text fig. and pl.).

cills. Molisch, H. Berlin, Ber. D. bot. Ges., 21, 1903, (23-26, mit 1 Taf.).

Kjöbenhavn, Medd. Geol., 9, 1903, (45-60).

Palaeolima<sup>†</sup> n. gen., P. laevis, P. obliquiradiata nn. spp. Hind, W. Vol. II, London, Monogr. Palaeont. Soc., **1903**, (38-40).

Pecten<sup>†</sup> nn. spp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3**] *in* Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (1-420).

Fauna Mald. Laccad. Arch., II, (621-622).

son, Mrs. M. B. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, ([50]-61, with pl.).

A. Berlin, Jahrb. geol. Landesanst., 21, 1901, Abh. auss. st. Pers., (1-30).

elegantissimus, note. un. spp. **Bavay**, A. J. conchyliol., Paris, **50**, 1902, (403-404, av. fig. et pl.).

Laquaetus Marenz, notes on the habits. Takeshita, T. Dobuts. Z., Tokyo, 15, 1903, (359-365).

*opercularis*, evolution; comparison of spp. from different localities of Great Britain. **Davenport**, C. B. Boston, Mass., Proc. Amer. Acad. Arts Sci., **39**, 1903, (121-159).

Pseudamusium<sup>†</sup> nn. spp. Hind, W. Vol. 11, London, Monogr. Palaeont. Soc., **1903**, (109-111).

Pseudomonotis bolgiensis† n. form. Bistram, A. Freiburg i. B., Ber. natf. Ges., 13, 1903, (116-214).

Spondylus nn. spp. Philippines and Moluccas. Sowerby, G. B. J. Malac., London, 10, 1903, (77, pl. V, fig. 6, 9).

Syncyclonema carboniferum<sup>†</sup> n. sp. **Hind**, W. Vol. II, London, Monogr. Palaeont. Soc., **1903**, (120).

# EULAMELLIBRANCHIATA.

# Submytilacea.

# GENERAL.

**Dall**, W. H. Synopsis of the Carditucea and of the American species [with bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., **54**, 1902, [1903], (696-716).

Astartidae, with a review of the family Astartidae, with a review of the American species. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (933-951, with 2 pls.). Separate 24.3 cm.

Review of the classification of the Cyrenacea. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (5-8). Separate 23.3 cm.

**Dybowski**, W. Fauna der Binnennollusken Littauen's. 1. Familia *Cycladidae* Clessin. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (76-83).

Frierson, L S. Observations on the byssus of Unionidae. Nautilus, Boston, Mass., 17, 1903, (76-77).

**Sterk**I, V. Notes on the Unionidae and their classification. Amer. Nat., Boston, Mass., **37**, 1903, (103-113).

Voinea, J. Ueber die Entwicklung der Kiemen der Najaden. Diss. Munchen (Druck v. M. Ernst), 1903, (45, mit 4 Taf.). 22 cm.

#### SPECIAL.

Aligena cerritensis<sup>†</sup> n. sp. **Arnold**, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci, **3**.] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (1-420).

Anodonta, Parasitismus der Larven. **Paussek**, V. St. Peterburg, Mém. Ac. Sc., (8 F.), **13**, No. 6, 1903, (132), mit dtschr Tafelerklärung, (133–141, mit 8 Taf.).

et Larus. Forel, F. A. Lausanne, Bul. Soc. Sci. Nat., 38, 1902, (XXI); Arch. Sci. Phys., Genève, (sér. 4), 13, 1902, (605).

Latter, O. H. Nature, London, 68, 1903, (623).

Astarte<sup>\*</sup><sup>†</sup> nn. spp. America. Dall, W. H. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (946-948).

Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

(Crassinella) branneri<sup>†</sup> n. sp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3**.] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (1-420).

Batissa schmidti n. sp. Ost.-Borneo. Martana, E. von. Berlin, SitzBer. Ges. Natf. Freunde, **1903**, (416–428).

Callocardia (Agriopoma)<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Cardita (Carditamera)† un. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

*abbreviata* n. sp. Japan. **Sowerby**, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (500-501).

*aldrichi*<sup>†</sup> n. sp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261–283).

*chaylai*<sup>†</sup> n. sp. Etampes. **Maunier**, S. Naturaliste, Paris, ser. 2), **25**, 1903, (55-56, av. fig.).

(Glans) sulcosa n. sp. America. Dall, W. H. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (696-716).

Codakia "Jagonia)† nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Corbiculina, n. sect. (Type Cerbicula augasi Prime). **Dall**, W. H. Washington D.C., Proc. Biol. Soc., **16**, 1903, (6).

Crassatellites (Crassinella, Scambula) nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Cyclocalyz<sup>\*†</sup> n. sect. (type Pisidium scholtzii Prime). **Dall**, W. H. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (7). Cymatocyclas n. subgen., (type Pisidium compressum Prime). Dall, W. H. I.e. (7).

Cyrena (Posudocyrena) dupliniana n. sp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Cyrenodonazt n. sect., (type C. fo:mosana Dall.) Dall, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, (6).

Diaurora n. nom. = Aurora Simpson not Rog. not Solla<sup>a</sup>. Cockerell, T. D. A. Nautilus, Boston, Mass., 16, 1903, (118).

Divaricella<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Erycinella (Carditopsis) bernardi † n. sp. Dall, W. H. Tertiary, Florida. l.c. (i-xiv + 1219-1654).

Felania minor n. sp. Janan. **Sowerby**, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (501).

Kellia natalensis n. sp. Durban. Smith, E. A. London, Proc. Malac. Söc., 5, 1903, (396, pl. XV, fig. 8).

Kobya n. gen., K. typica<sup>†</sup> n. sp. Oxfordien, Jura. Loriol, P. de und Girardot, A. Basel, Abh. Schweiz. Pal. Ges., **29**, 1902, (58).

Lirodiscus uailesii † n. sp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Lucina<sup>†</sup> un. spp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261-283).

**Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Miodontiscus n. nom. - Miodon Carpenter. Dall, W. H. Nautilus, Philadelphia, Pa., 16, 1903, (143).

Miodontopsist n. nom (= Miodont Sandberger not Carpenter). Dall, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, 5).

Myrtaeat nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Ps., Trans. Wagner Free Inst. Sci., 3, 1903, i-xiv + 1219-10540. Paracyclas lirata Conrad mut. pygmaca<sup>†</sup> n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

Phacoides † nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Pisidium nn. spp. Clessin, In: K. Futterer, Durch Asien, Bd 3, 1903, (41-90).

Simpson not Cossmann. = Dalliella Simpson not Cossmann. Cockerell, T. D. A. l.c. 16, 1903, (118).

Tellinocyclast n. sect., (type Cyrena tellinellat Deshayes). Dall, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, (6).

Tropidocyclast n. subgen., (type Pisidium henslowianum Sheppard.) Dall, W. H. l.c. (7).

Unio<sup>†</sup> nn. spp. Montana, Cretaceous. Stanton, T. W. Philadelphia, Pa., Proc. Amer. Phil. Soc., 42, 1903, (188-199).

the Laramie. Whitheld, R. P. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (483–487, with 3 pls.).

------ briarti n. sp. Congo. Dautsenberg, P. Bruxelles, Bull. Soc. roy. malac., 286, 1903, (3-7).

*declivis*, specific value. **Frierson**, L. S. Nantilus, Boston, Mass., **17**, 1903, (49-51, with pl.).

Venericardia<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654)

(Cyclocardia) nn. spp. America. **Dall**, W. H. Philadelphia, Pa., Proc. Acad. Nat. Sci., **54**, 1902, (1903], (696-716).

**Casey**, T. L. *l.c.* **55**, 1903, (261-283).

# Tellinacea.

Semele pulchra var. montcreyi<sup>†</sup> n. var. **Arnold**, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3**.] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (166).

Tellina consanguinea n. sp. Japan. Sowerby, P. B. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (500).

*pilsbryi*<sup>†</sup> n. sp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261–283).

Zenatia victoriae n. sp. Pritchard, G. B. and Gatliff, J. H. Melbourne, Proc. R. Soc. Vict., 16, (N. Ser.), 1903, (92-3, with pl. XV).

### Veneracea.

Anomalocardia<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci.. **3**, 1903, (i-xiv + 1219-1654).

Callista subdiaphana var. pedroana<sup>†</sup> n. var. **Arnold**, R. [Reprinted from Sau Francisco, Mem. Cal. Acad. Sci., **3**,] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (144).

Chione<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

peronii Lamarck, C. scalarina L., C. strigosa L. Pritchard, (I. B. and Gatliff, J. H. Melbourne, Proc. R. Soc. Vict., 16, (N. Ser.), 1903, (94-5, with pl. XV).

Cyclinella gatunensis<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Cytherea<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. l.c. (i-xiv + 1219-1654).

Dosinia (Dosinidia)<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Gafrarium (Gouldia)† nn. spp. Tertiary, Florida. Dall, W. H. l.c. (i-xiv + 1219-1654).

Gemma<sup>†</sup> nn. spp. Tertiary, Florida, Dall, W. H. *l.c.* (i-xiv + 1219– 1654).

Gomphina maorum n. sp., New Zealand. **Smith**, E. A. J. Malac., London, 9, 1902, [1903], (109-110, with fig.). Macrocallista acuminata<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Pitaria (Hyphantosoma, Lamellioncha)<sup>†</sup> nr. spp. Tertiary, Florida. **Dall**, W. H. l.c. (i-xis + 1219-1654).

Tivela jamaicensis† n. sp. Tertiary, Florida. **Dall.** W. H. *l.c.* (i-xiv + 1219-1654).

Transennella<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. *l.e.* (i-xiv + 1219-1654).

Venus mercenaria, habits. Kellogg, J. S. Albany Univ., N.Y., Bull. St. Mus., No. 71, 1903, (27, with pl.).

V. clathrata<sup>†</sup> Desh. Dollfus, G. F. J. conchyliol., Paris, 50, 1902, (423–428).

F. Berlin, Jahrb. geol., Landesant., 21, 1901. Abh. auss. st. Pers., (39-98).

# Cardiacea.

#### GENEBAL.

Andrusov, N. Studien über die Brackwassercardiden. Lieferung 1. St. Peterburg, Mém. Ac. Sc., (8 F.), 13, No. 3, 1903, (82, mit 2 Fig. und 7 Taf.).

### SPECIAL.

Cardium, numerical variation of ribs. Baker, F. C. Amer. Nat., Boston, Mass., 87, 1903, (481-488).

† nn. spp. Buda Limestone, Texns. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U. S., Geol. Surv., No. **205**, 1903, (9-36).

E. A. Fauna Mald. Laccad. Arch., II, (624).

Chama<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv+1219-1654).

Conocardium beushauseni<sup>†</sup> n. sp. Deutschland oberdevonisch. Drever**mann,** F. Berlin, Jahber. geol. Landesant., **21**, 1901, Abh. auss. st. Pers., (9.)-207).

Echinocluma antiquata<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Iust. Sci., **8**, 1903, (i-xiv+1219-1654).

Limnocardium subsquamulosum n. sp. Andrusov, A. A. St. Peterburg, Mém. Ac. Sc., (8 F.), **13**, No. 3, 1903, (82, mit 2 Fig. und 7 Taf.).

Radiolites ga'ensis<sup>†</sup> n. sp. Dacqué, E. Palaeontographica, Stuttgart, **30**, II, 1903, (337-339, 3 Taf.).

# Myacea.

Ceratisolen, anatomy of certain species. Bloomer, H. H. J. Malac., London, 10, 1903, (31-40, pl. II).

----- legumen, note on a malformed specimen. Bloomer, H. H. l.c. (104).

Corbula lagueata<sup>†</sup> n. sp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261-283).

gana. **Böhm**, J. In: K. Futterer, Durch Asien, Bd. 3, 1903, (93-112).

*rugifera* n. sp. Natal. smith, E. A. London, Proc. Malac. Soc., 5, 1903, (399, pl. XV, figs. 9-10).

Fistulana clava Lamk, perforating a shell of Mitra interlirata Reeve. Sowerby, G. B. and Fulton, H. C. l.c. (345, pl. XVI).

Mya arenaria, Einwanderung. Lorenzen, A. Prometheus, Berlin, 15, 1903, (61-62).

Fischerei in der Passamaquoddy - Bay. **Stafford-Toronto**, J. Berlin, Mitt. D. Seefischereiver., **18**, 1902, (457–461).

Neaera aegyptiaca<sup>†</sup> n. sp. Blättermergel von Theben. **Oppenheim**, P. München, SitzBer. Ak. Wiss., math.phys. Cl., **32**, (1902), 1903, (435-456).

Panopaea<sup>†</sup> nn. spp. **Sturm**, F. Berlin, Jahrber. geol. Landesant., **21**, 1901, Abh. Auss. st. Pers., (39–98).

Pharella orientalis Dunker, anatomy. Bloomer, H. H. J. Malac., London, 10, 1903, (114-121, pl. X).

# Mollusca.

Solecurtus, anatomy of certain species. **Bioomer**, H. H. J. Malac., London, **10**, 1903, (31-40, pl. II).

Solen (Linné), classification of British species. **Bloomer**, H. H. *l.c.* (41-43).

Solenomorpha n. gen., S. major n. sp. Lancashire. Hind, W. London, Q. J. Geol. Soc., 59, 1903, (334, with fig.).

Tagelus rufus Spengler, anatomy. Bloomer, H. H. J. Malac., London, 10, 1903, (114-121, pl. X).

# Pholadacea.

Teredo navalis L. Beitrag zur Kenntnis [des Baues] des Schiffsbohrwurmes. (Holländisch) Keer, P. M. Leiden (P.W.M. Trap), 1903, (58, mit 4 Taf.).

Xylophaga praestans n. sp. Northumberland. **Smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (328-330, with figs.).

# Anatinacea.

Anatina<sup>†</sup> nn. spp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int. U.S., Geol. Surv., No. **205**, 1903, (9-36, with pl.).

Buchiola retrostriata v. Buch mut. pygmaea† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

semiimpressa† n. sp. Deutschland oberdevonisch. Drevermann, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (99-207).

Cardiola pectinata<sup>†</sup> n. sp. Unterdevon, Marburg a. L. **Walther**, K. N. Jahrb. Min., Stuttgart, Beilagebd, **17**, 1903, (1-75).

Ceromya isocardioides<sup>†</sup> n. sp. **Sturm**, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (39-98).

Cyathodonta<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654). <sup>•</sup> Goniomya<sup>†</sup> nn. spp. **Sturm, F.** Berlin, Jahrb. geol. Landesant., **21**, 1901, Abh. auss. st. Pers., (39–98).

Grammysia constricta Hall mut. pygmaca<sup>†</sup> n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892–920).

Homomya<sup>†</sup> nn. spp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9-36, with pl.).

Lyonsia acuta<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Pandora (Kennerleyia)† nn. spp. Tertiary, Florida. Dall, W. H. l.c. (i-xiv + 1219-1654).

(Kennerlia) grandis<sup>†</sup>. Neocene. **Rivers**, J. J. Los Angeles, Bull., So. Cal. Acad. Sci., **1**, 1902, (69).

Pholadomya roemeri<sup>†</sup> n. sp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9-36).

Prothyris truncata<sup>†</sup> n. sp. Devonian, New York. **Cleiand**, H. F. Washington, D.C., U.S. Dept. Int. Bull. Geol. Surv., No. **206**, 1903, (112, with pl.).

#### SEPTIBRANCHIATA.

Cuepidaria<sup>†</sup> nn. spp. Tertiary, Fl.rida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Poromya jamaicensis<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.e.* (i-xiv + 1219-1654).

Spheniopsis americana<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Verticordia† nn. spp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

#### SCAPHOPODA.

Dentalium<sup>†</sup> nn. spp. **Casey**, T. L. Philadelphia, Pa. Proc. Acad. Nat. Sci., **55**, 1903, (261-283).

\_\_\_\_\_ nn. spp. Hedley, C. Port Kembla, Cape Three Points, N.S.W. Sydney, N.S.W., Mem. Austr. Mu3., 4, pt. 6, 1903, (327, 328, figs. 61-62). Dentalium<sup>†</sup> un. spp. S. Africa. Sowerby, G. B. Cape Town, Marin. Invest., 2, 1903, (224, 225, pl. V, figs. 10-12).

regulare n. sp. S. Africa. Smith, E. A. London, Proc. Malac. Soc., 5, 1903, (393, pl. XV, fig. 2).

# AMPHINEURA.

# POLYPLACOPHORA.

### GENERAL.

F[11sbry], H. A. Notes on Polyplacophora of the Conchylien cabinet [by S. Clessin]. Nautilus, Boston, Mass., 17, 1903, (58-59).

Synces, E. R. On the Polyplacophora, in Herdman, Heport. . . Pearl Oyster Fisheries of the Gulf of Manaar. Part I. Suppl. Rep. IV. London, 1903, (177-180, with I pl.). 4to.

#### SPECIAL.

Acanthopleura granulata, habits. Hamilton, S. H. Nautilus, Philadelphia, Pa., 16, 1903, (138).

Callochiton sublaevis n. sp. Sykes, E. R. In: Herdman, Report . . . Pearl Oyster Fisheries. Part 1. Suppl. Rep. IV. London, 1903, (177).

Chiton, subradular organ. Heath, H. Anat. Anz, Jena, 23, 1903, (92-95).

(Hanleya) sykesi n. sp. S. Africa. **Sowerby**, G. B. Cape Town, Marin. Invest., **2**, 1903, (225, pl. V, fig. 13).

Cryptoplax larvaeformis, Anatomie. Wettstein, E. Jenaische Zs. Natw., 38, 1903, (473-504, mit 3 Taf.).

Ischnochiton nn. spp. Smith, E. A. Fauna Mald. Laccad. Arch., II, (618-619).

In : Herdman, Report . . . Pearl Oyster Fisheries, Part I. Suppl. Rep. IV. London, 1903, (178).

biarcuatus n. sp. California. Dall, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, (176). Tonicia aruheimi n. sp. Galapagos Islanda. Dall, W. H. Nautilus, Boston, Mass., 17, 1903, (37-38).

<u>pectinoides n. sp.</u> **Sylves,** E. R. In: Herdman, Report . . . Pearl Oyster Fisheries. Part 1. Suppl. Rep. IV. London, 1903, (179-180).

### APLACOPHORA.

#### GENERAL.

**Mierstrass**, H. F. Das Herz der Solenogastren. Amsterdam, Verh. K. Akad. Wet., 2e Sect., **10**, No 2, [1903], (52, mit 3 Taf.).

**Simroth**, H. [Kritisches Referat über] Thiele, Joh. Die systemat. Stellung der Solenogastren u. die Phylogenie der Mollusken. Zool. Centralbl., Leipzig, **10**, 1903, (844–863).

# SPECIAL.

Chaetoderma nn. spp. Nierstrasz, H. F. Zool. Jahrb., Jena Abt. f. Anat., 18, 1903, (359-386).

Kruppomenia n. gen., K. minima n. sp. Mediterranean. Nierstrasz, in Lo Bianco, S. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (249).

Neomenia carinata (?) Tullberg. Brady, G. S. Newcastle, Trans. Nat. Hist. Soc., 14, 1903, (102).

Proneomenia amboinensis n. sp. Thiele, J. Jena, Denkschr. med. Ges., 8, 1903, (733-737, mit 1 Taf.).

Pruvotina n. nom. = Paramenia Pruvot not Bauer and Bergenstamn. Cockerell, T. D. A. Nautilus, Boston, Mass., 16, . 1903, (118).

Uncimenia n. gen., U. neapolitana n. sp. Nierstrass, H. F. Zool. Jahrb. Jena, Abt. f. Anat., 18, 1903, (376).

# GASTROPODA.

# GENERAL.

Illustrations of some Japanese land shells. Nautilus, Philadelphia, Pa., 16, 1903, (136-137, with pl.); [Errata] *lb.* 17, 1903, (12).

Blanford, W. T. Notes on Mr. W. M. Daly's collections of land and freshwater Mollusca from Siam. London, Proc. Malac. Soc., 5, 1903, (275-283, pl. VIII).

**Dall**, W. H. Diagnoses of new species of inollusks from the Santa Barbara Channel, California. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (171-176). Separate. 23.3 cm.

Germain, L. Etude sur les mollusques terrestres et fluviatiles vivants des environs d'Angers et du département de Maine-et-Loire. Nantes, Bul. soc. sci. nat., (sér. 2, 8), 13, 1903, (1-112).

Hedley, C. Mollusca. Part II. Scaphopoda and Gastropoda. Scientific Results of the trawling expedition of H.M.C.S. "Thetis" off the coast of New South Wales in February and March, 1893. Sydney, N.S.W., Mem. Austr. Mus., 4, 1903, (327-402, with 3 pls. and 53 text-figs.).

Hirase, Y. Catalogue of land shells of Japan to be had of Y. Hirase. Shimochoja-Machi, Karasumaru, Kyota, Japan, 1903, [1]-24, with pl.). [With Nautilus, Philadelphia Pa., **16**, 1003].

Madouló, A. Double observation sur le mode de distribution des mollusques terrestres, vivant soit en colonies, soit plus ou moins isolément. Elbeuf, Bul. soc. étud. sci. nat., **21**, (1902), 1903, (4C-49).

Martens, E. von. Griechische Mollusken, gesammelt von Eberh. von Oertzen. Arch. Natg., Berlin, **69**, Bd 1, 1903, (372-374).

Die Meeres-Conchylien der ('ocos-Insel. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (137-141, 253).

Land- und Süsswasser-Conchylien von Ost-Borneo. *l.e.* 1903, (416-428).

von und Thiele, J. Die beschalten Gastropoden der deutschen Tiefsee-Expedition 1898-1899. A. Systematisch-geographischer Teil von Martens. B. Anatomisch-systematische Untersuchungen einiger Gastropoden. von Joh. Thie'e. (Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7. Lfg 1. Jena, 1903. (1-146, mit 5 Taf.; 147-180, mit 4 Taf.).

Pilsbry, H. A. Land shells of Curacao. Nautilus, Boston, Mass., 17, 1903, (48).

Binnenconchylienfauna des Miöcans von

Oppeln in Schlesien. [Von Prof. Dr. A. Andreae]. l.e. (59-60).

Rossmässler, E. A. Iconographie der Land- und Süsswasser-Mollusken mit vorzüglicher Berücksichtigung der europäischen noch nicht abgebildeten Arten. Fortges. v. W[ilhelm] Kobelt. N.F. Bd 9. Lfg 3/4. 5/6 [Schluss des Bandes]. Color. u. schwarze Ausg. Wiesbaden (C. W. Kreidel), 1901, 1902, (25-86, mit 20 Taf.). Die Lfg. der color. Ausg. 8 M., der schwarz. Ausg. 4,60 M. Bd. 10, Lfg 1. 2. Ib., 1903, (1-32, mit 10 Taf.). Je 8 bezw. 4.60 M.

**Sardeson**, F. W. The phylogenic stage of the Cambrian Gastropoda. Chicago, Ill., J. Geol. Univ. Chic., **11**, 1903, (169-492, with 2 pls.).

Sykes, E. R. Notes on, with illustrations of, Austro-Malayan land shells. J. Malac., London, 10, 1903, (78, pl. VI.).

# PROSOB RANCHIATA.

**Sykes**, E. R. On the land operculate Mollusca collected during the "Skest Expedition" to the Malay Peninsula in 1849-1000. London, Proc. Zool. Soc., **1903**, 1, (194-199, pl. XX).

# DOCOGLOSSA.

# Patellidae.

*Patclla*, the common limpet. **Davis**, J. R. A. and **Fleure**, H. J. L. M. B. C. Memoirs on typical British marine plants and animals. London, 1903, (84, with 4 pls.).

hepatica n. nom. for Acinaea striata Pilsbry nec Quoy & Gaimard. **Pritchard** and **Gatliff**. Melbourne, Proz. R. Soc. Vict., **15**, (N. Ser.), 1903, (192-194).

kermaccdensi Pilsbry, systematic position. **Suter**, H. J. Malac., London, **9**, 1902, [1903], (111, with pl.).

### RHIPIDOGLOSSA.

### Fissarellidae.

Emarginula nn. spp. (Julf of Oman. Melvill, J. B. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (290-291, pl. XX). Puncturella (Cranopsie) nn. spp. Tiefsee-Expedition. **Martens**, E. von. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (237-244).

# Pleurotomariidae.

Eotomaria † nn. spp. Upper Silurian, New York. Clarke, J. M. and Buedemann, R. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (195).

Hormotoma ichitearesi † n. sp. Upper Silurian, New York. **Clarke**, J. M. and **Ruedemann**, R. *l.c.* (195).

Pleurotomaria beyrichi, Handelswerth und Grad der augenblicklichen Seltenheit. **Cort**, H. de. Uebers. aus Bull. soc. r. malacol. d. Belg. 2. III. 01 . . v. D. F. Heynemann. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (14–16).

*pygmaea* † n. mut. *P. itys* Hall mut. *pygmaea* † n. mut. *Loomis*, F. B. Albany Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892-920).

hirasei n. sp. Japan. **Pilsbry**, H. A. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (496); Nautilus, Boston, Mass, **17**, 1903, (36).

*lóczyi*<sup>†</sup> n. sp. Ostasien. **Schellwien**, E. In : K. Futterer, Durch Asien, Bd 3, 1903, (125-174).

stantoni<sup>†</sup> n. sp. Buda limestone, Texas. **Shattuch**, G. B. Washington, D.C., Bull. Dept. Int., U. S. Geol. Surv., No. **205**, 1903, (9–36, with pl.).

*thebensis* † n. sp. Blättermergel von Theben. **Oppenheim**, P. München, SitzBer. Ak. Wiss., math.phys. Cl., **32**, (1902), 1903, (435–456).

Sciesurella aetheria n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (300-301, pl. XXI).

*australis* n. sp. Port Kembla, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (329, fig. 63).

*dalli* n. sp. Patagonia. **Bartsch**, P. Nautilus, Boston, Mass., **17**, 1903, (90-91).

# Bellerophontidae.

Bellerophon (Bucania?) sphaericus † n. sp. Unterdevon, Marburg. Walther, K. N. Jahrb. Min., Stuttgart, Beilagebd. 17, 1903, (2-75).

shelbiensis<sup>†</sup> n. sp. Upper Silurian, New York. **Clarke**, J. M. and **Buedemann**, R. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (195).

# Cocculinidae.

Cocculina nn. spp. Thiele, J. in Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1, Jena, 1903, (128-129).

*meridionalis* n. sp. Port Kembla, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., **4**, pt. 6, 1903, (331, fig. 64).

# Stomatellidae.

Stomatella erquisita n. sp. Sowerby, G. B. J. Malac., London, 10, 1903, (76– 77, pl. V, fig. 4).

#### Cyclostrematidae.

Cyclostrema nn. spp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (291-293, pl. XX).

(Tubiola) semisculptum n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Exhibition. Bd 7, Lfg 1, Jena, 1903, (49).

#### Liotiidae.

Delphinoidea coronadoensis<sup>†</sup> n. sp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3.] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (1-420).

Liotia nn. spp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (293-294, pl. XX).

*bicarinata* n. sp. **Martens**, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1, Jena, 1903, (46). Liotia disjuncta n. sp. Cape Three Points, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (337, fig. 66).

squamicostata n. sp. **smith**, E. A. Fauna Mald. Laccad. Arch., **II**, (617).

# Trochidae.

Calliostoma nn. spp. S. Africa. Sowerby, G. B. Cape Town, Marin. Invest., 2, 1903, (222, 223, pl. V, figs. 3, 4, 7).

Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (296, pl. XX).

Clanculus gemmulifer var. pallidus n. var. Japan. Plisbry, H. A. Nautilus, Boston, Mass., 17, 1903, (69-71).

*miztus* n. sp. Cape Colony. **Smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (389, pl. XV, fig. 7).

Enida persica n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (294, pl. XX).

Ethalia floccata n. sp. Japan. Sowerby, G. B. l.c. (500).

Euchelus townsendianus n. sp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (295, pl. XX).

Gibbula nn. spp. et n. var. Japan. Pilsbry, H. A. Nautilus, Boston, Mass., 17, 1903, (69-71).

Margarita<sup>†</sup> nn. varr. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3.] in Stanford Univerversity, Cal., Leland Stauford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (332, 333).

Minolia arata n. sp. Botany Bay, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (333, fig. 65).

(Nachaeroplax) congener n. sp. S. Africa. Sowerby, G. B. Cape Town, Marin. Invest., 2, 1903, (223, pl. V, fig. 2); M. laeviesima Martens. Figured, ib., (231, pl. V, fig. 2). Minolia ornata n. sp. Japan. Sowerby, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (499-500).

Monilea (Ross teria) nucleolus n. sp. Japan. Plisbry, H. A. Nautilus, Boston, Mass., 17, 1903, (69-71).

Solariella nn. spp. Tiefsee-Expedition. Martens, E. von. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (237-244).

*persculpta* n. sp. S. Africa. **Sowerby**, G. B. Cape Town, Marin. Invest., **2**, 1903, (233, pl. V, fig. 8).

*zacalles* n. sp. Persian Gulf. **Melvill**, J. C. and **Standen**, R. Ann. Mag. Nat. Hist., London, (Ser. 7), **19**, 1903, (295-296, pl. XX).

Stylobates n. gen., S. aeneus n. sp. Hawaii. Dall, W. H. Nautilus, Boston, Mass., 17, 1903, (61-62).

Thalotia maldirensis n. sp. Smith, E. A. Fauna Mald. Laccad. Arch., II, (617).

# Turbinidae.

Astralium (Cyclocantha) gilchristi n. sp. S. Africa; A. andersoni Smith, figured. **Sowerby**, G. B. Cape Town, Marin. Invest., **2**, 1903, (221, 230, pl. IV, fig. 6, pl. V, fig. 5).

Collonia bicarinata n. sp. Tiefsee-Expedition. Martens, E. von. Berlin, SitzBer. Ges. natf. Freunde, 1902, (237-244).

Leptothyra rubens n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (296, pl. XX).

Phasianella tristis n. sp. Japan. Pilsbry, H. A. Nautilus, Boston, Mass., 17, 1903, (69).

Poleumita † n. nom. = Polytropis de Koninck not. Scandberger; P. scamnata † n. sp. Upper Silurian, New York. Clarke, J. M. and Ruedemann, R. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (195).

# Neritidae.

Nerita proxima n. sp. Japan. Sowerby, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (498–499). Neritina fluviatilis, systèmes nerveux, circulaire, respiratoire, et excréteur. Lenssen, J. Cellule, Louvain, **20**, 1903, (287-333).

grateloupiana † (hither:o misidentified as N. fluriatilis). Pleistocene gravels of the Thames at Swanscomb. **Kennard**, A. S. and **Woodward**, B. B. Loudon, Proc. Malac. Soc., **5**, 1903, (320-321).

subocellata (Marts.) Schepm. Schepman, M. M. Frankfurt a. M., NachrBl. D. malakozool. Ges., 35, 1903, (20-22).

Theodoxia fluviatilis, curieuse station. Glard. Feuille jeunes natural., Paris, (sér. 4). 33, 1903, (223).

# Helicinidae.

Ilclicina gemma n. sp. Costa Rica. **Preston**, H. B. J. Malac., London, **10**, 1903, (4, with fig.).

Islands. Sykes, E. R. *l.e.* (67)

# PTENOGLOSSA.

# Ianthinidae.

Janule na auriculata n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1. Jena, 1903, (142).

# Scalariidae.

Aclis bitaeniata n. sp. Japan. Bowerby, P. B. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (498).

Crossea carinata n. sp. Port Kembla, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (345, fig. 71).

Scala (Klein) Humphrey, representatives in the Porsian Gulf, Gulf of Oman, and North Arabian Sea, with descriptions of new species. **Melvill**, J. C. and **Standen**, R. J. Conch., Leeds, **10**, 1903. (340-351, pl. VII). Scala (Cirsotrema) texta n. sp. Smith, E. A. Fauna Mald. Laccad. Arch., II, (616).

(Constantia) intertexta n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (305-306, pl. XXII).

**Dall**, W. H. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (175).

*tenebrosa* n. sp. S. Africa. **Sowerby**, G. B. Cape Town, Marin. Invest., **2**, 1903, (220, pl. IV, fig. 6).

Scalaria cusculpata n. sp. Japan. Sowerby, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (497-498).

instricta n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1, Jena, 1903, (69).

*unilateralis* n. sp. Tiefsee-Expedition. **Martens**, E. von. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (237-244).

# TAENIOGLOSSA.

# Naticidae.

Lunatia draconis n. sp. California. Dall, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, (171–176).

Macromphalina californica n. sp. California. Dall, W. H. l.e. (175).

Natica nn. spp. **Martens**, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Exhibition. Bd 7, Lfg 1, Jena, 1903, (64, 113).

(Polinices) burnupi n. sp. Durban Bay. **Smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (385, pl. XV, fig. 11).

(Amauropeis) goleana n. sp. Dacq6, E. Palaeontographica, Stuttgart, 30, 11, 1903, (337–339, 3 Taf.).

F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. St. Pers., (39-98).

Sigaretus noyesii n. sp. Colombia. Dall, W. H. Nautilus, Boston, Mass., 17, 1903, (37-38).

# Lamellariidae.

Echinospira compressa n. sp. Mediterranean. Lo Bianco, S. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (109-279).

# Trichotropidae.

Trichotropis pulcherrima n. sp. Gulf of Oman. Metvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (296-297, pl. XX).

# Capulidae.

Crepidula, embryology. Conklin, E. G. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 2, 1901, (257-265, with textfig.); [reprint] Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, (257-265, with text fig.).

phenomena of fertilization. Conktin, E. G. Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, ([280]-287, with text fig.).

#### Solariidae.

Euomphalus fairchildi<sup>†</sup> n. sp. Upper Silurian, New York. Clarke, J. M. and Rusdemann, R. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (195).

*aricosus* n. sp. Deutschland, oberdevonisch. **Drevermann**, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. St. Pers., (96-207).

Fluxina dalliana n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., Loudon (Ser. 7), 12, 1903, (298, pl. XXI).

Homalazis nn. spp. Gulf of Oman. Melvill, J. C. and Standen, R. *l.c.* (298-300, pl. XXI).

Three Points, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (351, fig. 74).

Solarium nn. spp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (297, pl. XX, XXI).

(Torinia) admirandum n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. l.e. (322).

**Martens**, E. von. Wissenschaftliche (x 2-9053) Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, I.fg 1. Jena, 1903, (118).

# Littorinidae.

# GENERAL.

Kesteven, H. L. Notes on Prosobranchiata. No. ii.—Littorinacea. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903, (620–636, with 1 pl.).

#### SPECIAL.

Littorina litorea, general variation. Bigelow, R. P. and Bathbun, P. Amer. Nat., Boston, Mass., 37, 1903, (171-184).

# Fossaridae.

Fossarus (Couthouyia) unicarinalis n. sp. Arabian Sea. **Melvill**, J. C. and **Standen**, R. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (301, pl. XXI).

# Cyclophoridae.

Arinia japonica n. sp. Japan. Pilabry, H. A. and Hirase, Y. Nautilus, Philadelphia, Pa., 16, 1903, (136).

Cataulus, preliminary note on the anatomy of the genus. Digby, L. London, Proc. Malac. Soc., 5, 1903, (261).

var. robusta n. var. Ceylon. Fulton, H. l.c. (102, pl. IX, fig. 1, 4).

('hondrocyclus exsertus n. sp. Natal. Melvill and Ponsonby. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (608– 609).

Coptocheilus perakensis n. sp. Malay Peninsula. **Fulton**, H. J. Malac., London, **10**, 1903, (102, pl. IX, fig. 3).

Cyathopoma nn. spp. ('eylon and India. **Preston**, H. B. London, Proc. Malac. Soc., **5**, 1903, (340, with figs.).

Cyclotus nn. spp. Ost-Borneo. Martens, E. von. Berlin, SitzBer. Ges. natif. Freunde, **1903**, (416-428). Diplommatina nn. spp. Malay Peninsula. **Bykes**, E. R. London, Proc. Zool. Soc., **1903**, 1, (198–199, pl. XX, figs. 3, 16).

balansai nn. var. et nn. spp. Indo-Chine. Bavay et Dautsenberg. J. conchyliol., Paris, 51, 1903, (201-236).

Ditropis civernae n. sp. Malay Peninsula. **Sykes**, E. R. London, Proc. Zool. Soc., **1903**, 1, (195, pl. XX, figs. 17-19).

Helicomorpha scalaroides n. sp. Indo-Chine. Bavay et Dautsenberg, P. J. conchyliol., Paris, 51, 1903, (201-236).

Japonia sadoensis n. sp. Japan. Pilsbry, H. A. and Hirase, Y. Nautilus, Boston, Mass., 17, 1903, (31-32).

Lagochilus kobelti n. sp. Małay Peninsula. **Sykes**, E. R. London, Proc. Zool. Soc., **1903**, 1, (194–195, pl. XX, figs. 13–15).

Leptopoma nn. spp. Moluques. Dantsenberg, P. Naturaliste, Paris, (ser. 2), 24, 1902, (247-248).

\_\_\_\_\_ nn. spp. Dautsenberg, P. J. conchyliol., Paris, 51, 1903, (5-20, av. 1 pl. et fig.)

nn. spp. Sumba Island and Flores. Fulton, H. J. Malac., London, 10, 1903, (101, pl. IX, figs. 5 and 7).

E. R. *l.c.* (66).

Opisthostoma annandalei n. sp. Malay Peninsula. **Sykes**, E. R. London, Proc. Zool. Soc., **1903**, 1, (198, pl. XX, figs. 4 and 5).

Palaina ponsonbyi n. sp. Waigiou. **sykes**, E. R. J. Malac., London, **10**, 1903, (66-67).

Platyrhaphe ratheleti n. sp. Indo-Chine. Bavay, A. et Dautzenberg, P. J. conchyliol., Paris, 51, 1903, (201-236).

Pterocyclos subalatus n. sp. Malay Peninsula. **Symes**, E. R. London, Proc. Zool. Soc., **1903**, 1, (195-196, pl. XX, figs. 1, 2).

Pupina bruchysoma n. sp. Indo-Chine. Bavay, A. et Dautzenberg, P. J. conchyliol., Paris, 51, 1903, (201– 236).

Rhaphaulus ascendens n. sp., R. perapensis Smith var. jalorensis n. var. Malay Peninsula. **Sykes**, E. R. London, Proc. Zool. Soc., **1903**, 1, (196, pl. XX, figs. 9-12).

· Rhiostoma sp., R. jalorensis n. sp. Malay Peninsula. **Sykes**, E. R. *l.c.* (196, pl. XX, figs. 6-8).

# Cyclostomatidae.

Colobostylus nuttii n. sp. Jamaica. Pilsbry, H. A. Nautilus, Boston, Mass., 17, 1903, (65–66).

Omphalotropis waigiouensis n. sp. Waigiou. Sykes, E. R. J. Malac., London, 10, 1903, (67).

Otopoma clausum Sby., O. yemenicum Brgt. Sykes, E. R. London, Proc. Malac. Soc., 5, 1903, (339).

Tropidophora nn. spp. Madagascar and Cape Colony. **Fulton**, H. J. Malac., London, **10**, 1903, (102-103, pl. IX, figs. 8a, b, 11).

comburents n. sp. Zululand. Melvill, J. C. and Ponsonby, J. H. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (608).

# Rissoidae.

Epigrus n. gen., type Rissoa ischna Tate. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (355).

Risson paren Da Costa, note on a monstrosity. Sykes, E. R. London, Proc. Malac. Soc., 5, 1903, (260).

Rissoina nn. spp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (302-303, pl. XXI).

Scrobs pyramidatus n. sp. Wata Mooli, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., **4**, pt. 6, 1903, (354, fig. 77).

# Hydrobiidae.

Bythinella padiraci n. sp. Locard, A. Bul. Muséum, Paris, 1902, (608-611, av. fig.).

Lartetia umbilicata n. sp. Locard, A. Nimes, Bul. soc. étud. sc. nat., (n. sér.), **29**, 1901, [1902], (10–13).

*virei* n. sp. Locard, A. Bul. Muséum, Paris, **1902**, (608-611, av. fig.).

Pseudamnicola prasina n. sp. Rosen, (). Baron von. Fraukfurt a. M., Nachr. Bl. D. malakozool. Ges., **35**, 1903, (178-182).

# Assimineidae.

Assiminea pagodella n. sp. Australia. Hedley, C. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, 1903, (603, pl. XXIX, fig. 6).

# Adeorbidae.

Adeorbis axiotimus n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat Hist., London, (Ser. 7), 12, 1903, (301, pl. XXI).

# Viviparidae.

Campelonia harloutonensis † n. sp. Montana, Cretaceous. **Stanton**, T. W. Philadelphia, Pa., Proc. Amer. Phil. Soc., **42**, 1903, (188–199).

Paludestrina † nn. spp. Arnold, R. [Reprinted from San Francisco, Mem. ('al. Acad. Sci., **3**], Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (1-420).

Paludina, wurmförmige Samenfäden. und ihre Entwickelung. **Meves**, F. Anat. Anz., Jena, **19**, ErgH., 1901, (23-37).

*vicipara*, die sog. wurmförmigen Samenfäden und über ihre Entwicklung. **Meves**, F. Kiel, Mitt. Ver. schlesw.-holst. Aerzte, (N.F), **10**, 1901, (5-9, 36-39, 49-52).

**Drummond**, J. M. Q. J. Microsc. Sci., London, (Ser. 2), **46**, 1902, (97 143, with 3 pls.).

Viciparus montanaensis † n. sp. Montana, Cretaceous. **Stanton**, T. W. Philadelphia, Pa., Proc. Amer. Phil. Soc., **42**, 1903, (188–199).

### Ampullariidae.

Ampullaria dalyi n. sp. Siam. Blanford, W. T. London, Proc. Malac. Soc., 5, 1903, (281-282, pl. VIII, fig. 1).

*globosa* Swains., respiratory and locomotory habits. **Bamanan**, V. V. J. Malac., London, **10**, 1903, (107-113).

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# Valvatidae.

Valvata stelleri n. sp. Kamtschatka. Dybovakij, W. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (46).

# Cerithiidae.

Bittium quadricinctum n. sp. Durban. **Smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (381, pl. XV, fig. 12).

williamsoni<sup>®</sup><sup>†</sup> n. sp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3**] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (295).

Cerithium (?) texanum<sup>†</sup> n. sp. Buda Limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U. S. Geol. Surv., No. **205**, 1903, (9–36, with pl.).

rerecundum n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (300, pl. XXI).

*zebrum* var., nn. varr. **Vignal**, L. J. conchyliol., Paris, **51**, 1903, (21-27, av. fig. et pl.).

Triforis nn. spp. Smith, E. A. Fauna Mald. Laccad. Arch., II, (613-614).

*abnormalis* n. sp. Japan. **Sowerby**, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (498).

*Triphora* nn. spp. Australia. **Hedley**, C. Sydney, N.S.W., Proc. Linn. Soc., N. S. Wales, **27**, 1903, (608-618, pl. XXXII, figs. 21-27, pl. XXXIII, figs. 30-45).

#### Melaniidae.

Melania binodosa n. sp. Siam. Blanford, W. T. London, Proc. Malac. Soc., 5, 1903, (282-283, pl. VIII, fig. 2).

<u>liebrechtsi</u> n. sp. Congo. **Dautzenberg**, P. Bruxelles, Bull. soc. roy. malac., **26**, 1903, (3-7).

Melanopsis sikorai Brus. var carinata† n. var. Kormos, T. Földt. Közl., Budapest, 33, 1903, (451-462, 496-508, mit Taf. XIII).

Paludomus siamensis n. sp. Siam. Blanford, W. T. London, Proc. Malac, Soc., 5, 1903, (283, pl. VIII, fig. 3).

# Pleuroceridae.

Goniobasis. Billups, A. C. Nautilus, Boston, Mass., 17, 1903, (22-24).

Hinkley, A. A. *l.c.* (32–34).

? nn. spp. Montana, Cretaceous. **Stanton**, T. W. Philadelphia, Pa., Proc. Amer. Phil. Soc., **42**, 1903, (188-199).

# Turritellidae.

Mathilda carrystia n. sp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 13, 1903, (321-322).

decorata n. sp. Port Kembla, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., **4**, pt. 6, 1903, (352, fig. 75).

Omphalius comptus n. sp. Japan. Sowerby, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), 13, 1903, (499).

Turritella budaensis | n. sp. Buda Limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U. S. Geol. Surv., No. **205**, 1903, (9-36, with pl.).

# Coecidae,

Caccum lilianum n. sp. Australia. Hedley, C. Sydney, N.S.W., Proc. Linn; Soc., N.S.W., 27, (1902), 1903, (603, pl. XXIX, fig. 7).

# Vermetidae.

Vermetus waitei n. sp. Port Kembla, N.S.W. **Hedley**, C. Sydney, N.S.W., Mein. Austr. Mus., **4**, pt. 6, 1903, (346, fig. 72).

# Chenopodidae.

Aporrhais hirundo † n. sp. **Sturm**, F. Berlin, Jahrber. geol. Landesant., **21**, 1901, Abh. auss. St. Pers., (39–98).

# Cypraeidae.

# GENERAL.

Button, F. L. West American Cypraeidae. J. Conch., Leeds, 10, 1903, (254-258). **Dautzenberg**, P. Revision des *Cypraeidae* de la Nouvelle-Caledonie. J. conchyliol., Paris, **50**, 1902, (291-384, av. 1 pl.).

#### SPECIAL.

Cypraca nn. spp. et monstr. Nouvelle-Calédonie. **Dautsenberg**, P. J. Couchyliol., Paris, **50**, 1902, (291-384, av. 1 pl.).

*fultoni* n. sp. S. Africa. **Sowerby**, G. B. Cape Town, Marin. Invest., **2**, 1903, (218, pl. 1V, fig. 7).

Erato recondita n. sp., E. recondita var. haplochila n. var. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (302, pl. XXI).

Pedicularia stylasteris n. sp. Wollengong Coogee, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (342, figs. 69, 70).

Trivia ritteri n. sp. California. **Baymond**, W. J. Nautilus, Boston, Mass., **17**, 1903, (85-86).

# Cassididae.

Cassis microstoma n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1, Jena, 1903, (112).

#### Tritonidae.

# GENERAL.

Dall, W. H. Note on the family Septidae. Nautilus, Boston, Mass., 17, 1903, (55-56).

#### SPECIAL.

Epidromus crebriliratus n. sp. S. Africa. **Sowerby**, G. B. Cape Town, Marin. Invest., **2**, 1903, (220, pl. IV, fig. 4).

Lotorium pumilis n. sp. Manning River, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (339, fig. 68).

# GYMNOGLOSSA.

# Pyramidellidae.

Actacopyramis nn. spp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (305, pl. XXII).

Eulimella carmanica n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. I.c. (303-304, pl. XXI).

Macrochilina hehe Hall mut. pygmaea<sup>†</sup> n. mut. Loomis, F. B. Albany Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892– 920).

Mormula persarum n. sp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (304, pl. XXII).

Myza n. gen., M. ezesa n. sp. Cape Three Points, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (362, fig. 86).

Odontostomia nugatoria n. sp. Cape Three Points, N.S.W. **Hedley**, C. *l.e.* (363, fig. 87).

Odostomia n spp. Dall and Bartsch in Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (1-420).

(subgenus Irara) Dall and Bartsch (MSS.) in Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci, 3] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (285).

Promathildia terquemi<sup>†</sup> n. nom. Alps. Bistram, A. Freiburg i B., Ber. natf. Ges., 13, 1903, (116-214).

Pyramidella (Syrnola) nisoides n. sp. **Martens**, E. von. Wissenschaftliche Ergebnisse der deutschen, Tiefsee-Expedition. Bd 7, Lfg 1, Jena, 1903, (119).

Pyrgulina manorae n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (305, pl. XXII).

Syrnola macrocephala n. sp. Port Kembla, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (362, fig. 85).

of Oman. Melvill, J. C. and Standen,

R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (304, pl. XXII).

Turbonilla Risso, (type Turbonilla typica Dall and Bartsch n. nom = Turbonilla plicatula Risso, non Turbo (= Turbonilla plicalu'us Brocchi); nn. spp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3] in Stanford University, ('al., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (270-278).

similans n. sp. S. Africa. smith, E. A. London, Proc. Malac. Soc., 5, 1903, (386–387, pl. XV, fig. 13).

### Eulimidae.

Entosiphon n. gen., E. deimatis n. sp. Laccadive Is. **Ecchler**, R. and **Vaney**, C. Rev. Suisse Zool., Genève, **11**, 1903, (23, fig.).

*Eulima*, old and new species. **Sykes.** E. R. London, Proc. Malac. Soc., **5**, 1903, (348-353, pl. XIV).

decagyra n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (302, pl. XXI).

*munita* n. sp. Cape Three Points, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., **4**, pt. 6. 1903, (358, fig. 81).

*canneri* [ n. sp. Blättermergel von Theben. **Oppenheim**, P. Munchen, SitzBer. Ak. Wiss., mathphys. Cl., **32**, (1902), 1903, (435-456).

Leiostraca lodderae n. sp. Cape Three Points, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (360, fig. 82).

Pseudorissoina exigua n. sp. Cape Three Points. **Hedley,** C. *l.c.* (361, fig. 83).

#### RACHIGLOSSA.

# Muricidae.

Eupleura muriciformis, var. curta n. var. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3.] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (248). Latiaxis resuccus n. sp. Cape Colony. Smith, E. A. London, Proc. Malac. Soc., 5, 1903, (376, pl. XV, fig. 16).

.*Murez*, le venin de la glande à pourpre. **Dubois**, R. Paris, C.-R. soc. biol., **55**, 1903, (81).

damicornis n. sp. Coogee, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (378, fig. 92).

*gallinago* n. sp. Japan. **Sowerby**, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (496).

*marcoensis.* Baker, F. C. Nautilus, Boston, Mass., **17**, 1903, (88–89).

(Ocinebra) marjoriae n. sp. Persian (iulf, Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ner. 7), 12, 1903, (308, pl. XXII).

Dall, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, (174).

(Oc. nebra) submissus n sp. Smith, E. A. Fauna Mald. Laccad. Arch., II, (609).

Ocinebra keepi<sup>†</sup> n. sp., O. lurida var. cerritensis<sup>†</sup> n. var. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3.] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (1-420).

Olivella afluens† n. sp. Casey, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (261-283).

Pentadactylus nn. spp. Japan. **Sowerby**, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (496–497).

Purpura, la purpurase. Dubois, R. Paris, C.-R. soc. biol., 55, 1903, (82).

eudeli n. sp. West Africa. Sowerby, G. B. J. Malac., London, 10, 1903, (74, pl. V, fig. 3).

*lapillus*, formation de la pourpre. **Dubois**, R. Paris, C.-R. Acad. sci., **136**, 1903, (117–118).

\_\_\_\_\_ pseudamygdala n. sp. Australia. Hedley, C. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903 (599, pl. XXIX, figs. 4, 5).

*l'urpura sertata* n. sp. Port Kembla, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., **4**, pt. 6, 1903, (382, figs. 95, 96).

Sistrum squamiliratum n. sp. Natal. Smith, E. A. London, Proc. Malac. Soc., 5, 1903, (377, pl. XV, fig. 17).

Trophon<sup>†</sup> nn spp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3**.] *in* Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (1-420).

*simplex* n. sp. Port Kembla, N.S.W. Sydney, N.S.W., Mem. Austr. Mus., **4**, pt. 6, 1903, (380, fig. 93).

Typhis syringianus n. sp. Cape Three Points, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (381, fig. 94).

*transcurrens* n. sp. Tiefsee-Expedition. Martens, E. von. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (237– 244).

# Columbellidae.

# GENERAL.

Melvill, J. C. A revision of the Columbellidae of the Persian Gulf and North Arabian Sea. J. Malac., London, 10, 1903, (27-31, with fig.).

Pace, S. Critical notes on Hervier's monograph. *Columbellidae*, New Caledonia. J. conchyliol., Paris, 50, 1902, (412-422).

#### SPECIAL.

Amphissa centricosa † n. sp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3.] in Stanford University, Cal., Leland Standford Jr. Univ., Hopkins Sesside Lab., Cont. Biol., No. 31, 1903, (1-420).

Columbella † nn. spp. Arnold, R. l.e.

(Mitrella) calliope n. sp. Bombay. Melvill, J. C. J. Malac., London, 10, 1903, (29, with fig.).

*hervieri* n. nom. New Caledonia. **Pace**, S. J. conchyliol., Paris, **50**, 1902, (420).

 Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1, Jena, 1903, (105).

#### Nassidae.

Nassa nn. spp. Smith, E. A. Fauna Mald. Lacced. Arch., II, (606-607).

A. A. Vést. rybopromyšl., St. Peterburg, 1903, 18, (445-446).

cerritensis † n. sp., N. versicolor var. hooveri † n. var. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3.] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (1-420).

(Amyela) circumtexta n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1. Jena, 1903, (27).

(Alectryon) himeroessa n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (306, pl. XXII).

<u>natalensis</u> n. sp. Natal. **smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (373, pl. XV, fig. 6).

dbsoleta, N. trivittata from Cold Spring Harbour, variation. **Dimon**, A. C. Biometrika, Cambridge, 2, 1903, (24-43).

optima n. sp. N. W. Australia. Sowerby, G. B. J. Malac., London, 10, 1903, (73, pl. V, figs. 1, 2).

trifasciata. A. Adams. figured; and 2 nn. spp. S. Africa. **Bowerby**, G. B. Cape Town, Marin. Invest., 2, 1903, (219, 228, pl. IV, figs. 1-3).

Nassaria teres n. sp. Tiefsee-Expedition. Martens, E. von. Berlin, Sitz-Ber. Ges. natf. Freunde, 1903, (237-244).

#### Buccinidae.

Euthria pura n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1. Jens, 1903, (25).

Fascinus n. gen., F. typicus n. sp. Port Kembia, N.S.W. Hedley, C. Sydney, N.S.W.. Mem. Austr. Mus., 4, pl. 6, 1903, (376, fig. 91). Lachesis? australis n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1. Jena, 1903, (62).

Macron, note on the genus. Melvill, J. C. J. Conch., Leeds, **10**, 1903, (320-330).

E. A. *l.c.* (351).

Metula<sup>†</sup> nn. spp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261-283).

*daphnelloides* n. sp. Gulf of Oman. **Melvill**, J. C. and **Standen**, R. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (307–308, pl. XXII).

*Phos*<sup>†</sup> nn. spp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261–283).

Pseudamycla Pace, note on the genus, P. dermestoidea (Lam.), P. miltostoma (Ten.-Wds.). **Pace**, S. London, Proc. Malac. Soc., **5**, 1903, (267-269).

Pseudoliza, note on the genus. Melvill, J. C. J. Conch., Leeds, **10**, 1903, (320-330).

Sylvanocochlis n. gen. South Africa. Melvill, J. C. *l.c.* (325).

Tritonidea soucerbyana n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (306-307, pl. XXII).

# Turbinellidae.

Fulgur, phylogeny. Graban, A. W. Amer. Nat., Boston, Mass., 37, 1903, (515-539).

Johnson, C. W. Nautilus, Boston, Mass., 17, 1903, (73-75).

Metzgeria californica n. sp. **Dall,** W. H. l.c. (51–52).

Sycotypus, phylogeny. Grabau, Λ. W. Amer. Nat., Boston, Mass., 37, 1903, (515-539).

Tudicla beushauseni<sup>†</sup> n. sp. Wollemann, A. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (1-30).

# Fasciolaridae.

Cochlespirella<sup>†</sup> n. gen. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (279).

Fasciolaria rutila Watson figured. Sowerby, G. B. Cape Town, Marin. Invest., 2, 1903, (227, pl. III, fig. 2).

Fusus texanus<sup>†</sup> n. sp. Buda Limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Inst., U. S. Geol. Surv., No. **205**, 1903, (9–36, with pl.).

raitei n. sp. Cape Three Points, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (393, pl. XXXVII).

Lagena ? antarctica<sup>†</sup> n. sp. **Weller**, S. Chicago, Ill., J. Geol. Univ. Chic., **11**, 1903, (413-419).

Latirus singularis n. sp. Sowerby, (†. B. J. Malac., London, 10, 1903, (74, pl. V, fig. 10).

Neptuncopsis pyrrhostoma Wats. figured. Sowerby, (4. B. Cape Town, Marin. Invest., 2, 1903, (226, pl. III, fig. 1).

Peristernia corallina n. sp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (308, pl. XXII).

#### Mitridae.

Mitra nn. spp. California. **Dall**, W. H. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (173).

diaconalis n. sp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., I.ondon, (Ser. 7), 12, 1903, (308-309, pl. XXII).

(Phaeomitra) triplicata n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1. Jena, 1903, (106).

Mitromorpha intermedia † n. sp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 81, 1903, (223).

#### Volutidae.

Fusicoluta n. subgen. Tief-See. Martens, E. von. Berlin, SitzBer. Ges. natf. Freunde, 1903, (237-244).

Lyria nestor<sup>†</sup> n. subsp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261–283).

Melo diadema, neanic shell. Kesteven, H. L. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (443).

indicus Gmel, note on the nepionic shell. Woodward, B. B. London, Proc. Malac. Scc., 5, 1903, (260).

Voluta nn. spp. Sowerby, G. B. J. Malac., London, 10, 1903, (74-76, pl. V, fig. 7, 8).

*epigona* n. sp. **Martens**, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Exhibition. Bd 7, Lfg 1. Jena, 1903, (106).

*(Fusivoluta* n. subgen.) anomala n. sp. Tief-See. **Martens**, E. von. Berlin, SitzBer. Ges. nstf. Freunde, **1902**, (237-244).

### Marginellidae.

Marginella nn. spp. Port Kembla, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (365, 367, figs. 88-90).

(Glabella) alchymista n. sp. et nn. varr. Persian Gulf. Malvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., Iondon, (Ser. 7), **12**, 1903, (309-310, pl. XXII).

*fallax* n. sp. Cape Colony. **Smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (365, pl. XV, fig. 20).

fischeri n. sp. Bavay, A. J. conchyliol, Paris, 50, 1902, (407-408, av. fig. et pl.).

(Marginellona) gigas. n. sp. Martens, E. von. Wiesenschaftliche Ergebnisse des deutschen Tiefsee-Expedition. Bd 7, Lfg 1. Jena, 1903, (108).

(Glabella) lateritia n. sp. Andaman Islands. **Melvill**, J. C. and **Sykes**, E. R. London, Proc. Malac. Soc., 5, 1903, (410, with fig.). Ancilla contusa Reeve figured. Sowerby, G. B. Cape Town, Marin. Invest., 2, 1903, (228, pl. III, fig. 3).

Ancillaria hasta n. sp. Tiefsee-Expedition. Martens, E. von. Berlin, SitzBer. Ges. natif. Freunde, 1902, (237-244).

Oliza, means of determination of the species. Bridgman, F. G. London, Proc. Malac. Soc., 5, 1903, (346-347).

nn. spp. Siboga Expedition. **Schepman**, M. M. Helder, Tijdschr. Ned. Dierk. Ver., (Ser. 3), **8**, [1903], (67-69).

rubrolabiata n. sp. New Hebrides. Fischer, H. J. conchyliol., Paris, 50, 1902, (409-411, av. fig. et pl.).

# TOXOGLOSSA.

#### Terebridae.

Terebra helichrysum n. sp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (310, pl. XXII).

loisae n. sp., T. (Hastula) casta var. natalensis n. var. Natal. Smith, E. A. London, Proc. Malac. Soc., 5, 1903, (360, pl. XV, fig. 1).

#### Conidae.

Bathytoma biconica n. sp. Shoalhaven Bight, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (385, fig. 98).

Bela sanctae-monicae † n. sp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3.] in Stanford University, Cal., Leland Stanford Jr. Univ. Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (1-420).

Clathurella nn. spp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (314-315, pls. XXII-XXIII).

Loccei n. sp. California. Dall, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, (172). G. B. J. Malac., London, **10**, 1903, (76, pl. V, fig. 5).

*prometheus* Hwass = C. nicholii Wilson. Nautilus, Philadelphia, Pa., **16**, 1903, (143).

T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (261–283).

Cythara elegantissima n. sp. (iulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (319, pl. XXIII).

Daphnella nn. spp. Persian Gulf. Melvill, J. C. and Standen, R. l.c.. (315-318, pl. XX1II).

vestalis u. sp. Cape Three Points, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (390, fig. 105).

Drillia nn. spp. Port Kembla, N.S.W. **Hedley**, C. *l.c.* (387, figs. 100, 101).

mn. spp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (311-313, pl. XXII-XXIII).

*harmonica*<sup>†</sup> n. sp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261–283).

[Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3**.] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (1-420).

tena, E. von. Wissenschaftliche-Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1. Jena, 1903, (82).

Leucosyrinz recta n. sp. Cape Three-Points, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pl. 6, 1903, (386, fig. 99).

Mangilia<sup>†</sup> nn. spp. Arnold, R. [Reprinted from San Francisco, Men.. Cal. Acad. Sci., **8**] in Stanford University, Cal., Leland Stanford Jr., Univ.,. Hopkins Seaside Lab., Cont. Biol., No.. **81**, 1903, (1-420). Puncturella (Cranopsis) nn. spp. Tiefsee-Expedition. **Martens**, E. von. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (237-244).

# Pleurotomariidae.

Eotomaria † nn. spp. Upper Siluriau, New York. Clarke, J. M. and Ruedemann, R. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (195).

Hormotoma whitearesi † n. sp. Upper Silurian, New York. Clarke, J. M. and Ruedemann, R. *l.c.* (195).

Pleurotomaria beyrichi, Handelswerth und Grad der augenblicklichen Seltenheit. **Cort**, H. de. Uebers. aus Bull. soc. r. malacol. d. Belg. 2. III. 01 . . v. D. F. Heynemann. Frankfurt a. M., NachrBl, D. malakozool. Ges., **35**, 1903, (14–16).

eapillaria Conrad mut. pygmaea † n. mut., P. itys Hall mut. pygmaea † n. mut. Loomis, F. B. Albany Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892–920).

*hirasei* n. sp. Japan. **Pilsbry**, H. A. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (496); Nautilus, Boston, Mass, **17**, 1903, (36).

**Schellwien**, E. In : K. Futterer, Durch Asien, Bd 3, 1903, (125-174).

*stantoni*<sup>†</sup> n. sp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U. S. Geol. Surv., No. **205**, 1903, (9-36, with pl.).

*thebensis* † n. sp. Blättermergel von Theben. **Oppenheim**, P. München, SitzBer. Ak. Wiss., math.phys. Cl., **32**, (1902), 1903, (435–456).

Sciesurella aetheria n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (300-301, pl. XXI).

*australis* n. sp. Port Kembla, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (329, fig. 63).

*dalli* n. sp. Patagonia. **Bartech**, P. Nautilus, Boston, Mass., **17**, 1903, (90-91).

# Bellerophontidae.

Bellerophon (Bucania?) sphaericus † n. sp. Unterdevon, Marburg. Walther, K. N. Jahrb. Min., Stuttgart, Beilagebd. 17, 1903, (2-75).

shelbiensis<sup>†</sup> n. sp. Upper Silurian, New York. **Clarke**, J. M. and **Ruedemann**, R. Albany Univ., N.Y., Mem. St. Mus., No. **5**, 1903, (195).

# Cocculinidae.

Cocculina nn. spp. Thiele, J. in Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1, Jena, 1903, (128-129).

*meridionalis* n. sp. Port Kembla, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (331, fig. 64).

# Stomatellidae.

Stomatella erquisita n. sp. **Sowerby**, G. B. J. Malac., London, **10**, 1903, (76– 77, pl. V, fig. 4).

# Cyclostrematidae.

Cyclostrema nn. spp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (291-293, pl. XX).

(Tubiola) semisculptum n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Exhibition. Bd 7, Lfg 1, Jens, 1903, (49).

# Liotiidae.

Delphinoidea coronadoensis<sup>†</sup> n. sp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3.] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. 31, 1903, (1-420).

Liotia nn. spp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (293-294, pl. XX).

bicarinata n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1, Jena, 1903, (46). Liotia disjuncta n. sp. Cape Three Points, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (337, fig. 66).

squamicostata n. sp. Smith, E. A. Fauna Mald. Laccad. Arch., II, (617).

# Trochidae.

Calliostoma nn. spp. S. Africa. Sowerby, G. B. Capo Town, Marin. Invest., 2, 1903, (222, 223, pl. V, figs. 3, 4, 7).

dulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (296, pl. XX).

Clanculus gemmulifer var. pallidus n. var. Japan. Pilsbry, H. A. Nautilus, Boston, Mass., 17, 1903, (69-71).

*mixtus* n. sp. Cape Colony. **Smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (389, pl. XV, fig. 7).

Enida persica n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (294, pl. XX).

Ethalia floccata n. sp. Japan. Sowerby, G. B. *l.c.* (500).

------ rhodomphala n. sp. Smith, E. A. Fauna Mald. Laccad. Arch., II, (618).

Euchelus tournsendianus n. sp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (295, pl. XX).

Gibbula nn. spp. et n. var. Japan. Pilsbry, H. A. Nautilus, Boston, Mass., 17, 1903, (69-71).

Margarita<sup>†</sup> nn. varr. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3.**] in Stanford Univerversity, Cal., Leland Stauford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (332, 333).

Minolia arata n. sp. Botany Bay, N.S.W. **Hedley**, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (333, fig. 65).

(Nachaeroplax) congener n. sp. S. Africa. Sowerby, G. B. Cape Town, Marin. Invest., 2, 1903, (223, pl. V. fig. 2); M. laevissima Martens. Figured, ib., (231, pl. V, fig. 2). Minolia ornata n. sp. Japan. Sowerby, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (499-500).

Monilea (Ross teria) nucleolus n. sp. Japan. Pilsbry, H. A. Nautilus, Boston, Mass., 17, 1903, (69–71).

Solariella nn. spp. Tiefsee-Expedition. Martens, E. von. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (237-244).

*persculpta* n. sp. S. Africa. **Sowerby**, G. B. Cape Town, Marin. Invest., **2**, 1903, (233, pl. V, fig. 8).

*racalles* n. sp. Persian Gulf. **Meivill**, J. C. and **Standen**, R. Ann. Mag. Nat. Hist., London, (Ser. 7), **19**, 1903, (295-296, pl. XX).

Stylobates n. gen., S. aeneus n. sp. Hawaii. Dall, W. H. Nautilas, Boston, Mass., 17, 1903, (61-62).

Thalotia maldirensis n. sp. Smith, E. A. Fauna Mald. Laccad. Arch., II, (617).

# Turbinidae.

Astralium (Cyclocantha) gilchristi n. sp. S. Africa; A. andersoni Smith, figured. **Sowerby**, G. B. Cape Town, Marin. Invest., **2**, 1903, (221, 230, pl. IV, fig. 6, pl. V, fig. 5).

Collonia bicarinata n. sp. Tiefsee-Expedition. Martens, E. von. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (237– 244).

Leptothyra rubens n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (296, pl. XX).

Phasianella tristis n. sp. Japan. Pilsbry, H. A. Nautilus, Boston, Mass., 17, 1903, (69).

Poleumita † n. nom. = Polytropis de Koninck not. Scandberger; P. scamnata † n. sp. Upper Silurian, New York. Olarke, J. M. and Ruedemann, R. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (195).

# Neritidae.

Nerita proxima n. sp. Japan. Sowerby, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (498-499).

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- bern't n. sp Ustasien. Schellwien, E. in K. Futterer, Durch Asien, Bd 3, 1903, (125-174).

\_\_\_\_\_ stantoni † n. sp. Buda Innestone, Texas. Shattuck, G. B. Washington, D.C., Bull Dept. Int., U. S. Geol. Surv., No. 205, 1903, (9-36, with pl.V.

- thebenais † n. sp. Blättermergel von Theben. Oppenheim, P. Munchen, SitzBer. Ak. Wiss., math.phys. (1., 32, (1902), 1903, (435-456).

Scissurella aetheria n. sp. Gulf of Oman Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (300-301, pl. XXI).

australia n. sp. Fort Kembla, N.S.W. Hedley, C. Sydner, N.S.W. Men. Austr. Mus., 4, pr. 6. 1903 (329, 52, 63)

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## Bellermontidae.

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## Stomatellidae.

Sowerby, 11 8. J. Malao, Levidor, 10, 1903, 16-17 gl. V. 5.2 4

## Cyclostrematidae.

Ogelestrema nn. spp. Persian Gulf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (291-293, pl. XX).

(Tubiola) semisculptum ----n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tielser-Exhibition. Bd 7, Lfg 1, Jena, 1903. (49).

## Liotiidae.

Delphinoidea coronadcensist n. sp. Arnold, R. [Reprinted from San Francisco, Men. Cal. Acad. Sci., 3.) in Stanford University, Cal., Leland Stan-ford Jr. Univ., Hopkins, Seaside Iab., Cont. Biol., No. 31, 1903, (1-420).

Liotia nn. spp. Persian GnE Melwill, J. C. and Standen, R. Am. Mag. Nat. Hist, Lordon, (Ser. 7), 4, 1903, 285-294, pl XXV Martens,

medantiche Eirebnisse **B.**I Conularia fimbriata † n. sp. Unterdevon, Marburg. Walther, K. N. Jahrb. Min., Stuttgart, Beilagebd. 17, 1903, (1-75).

Cymbulia peronii, Reifung und Befruchtung des Eies. Nekrassoff, A. Anat. Anz., Jens, 24, 1903, (119-127).

*sibogae* n. sp. Siboga Expedition. **Tesch**, J. J. Helder, Tijdschr. Ned. Dierk. Ver., (Ser. 2), **8**, [1903], (113).

Cymbuliopsis intermedia n. sp. Siboga-Expedition. **Tesch**, J. J. *l.c.* (113).

Paraclione n. gen., P. pelseneeri n. sp. Siboga Expedition. Teach, J. J. l.c. (117).

Peraelis nn. spp. Siboga Expedition. Teach, J. J. l.c. (111, 112).

Pneumoderma nn. spp. Siboga Expedition. Tesch, J. J. l.e. (114, 115).

Schizobrachium n. gen. (~ Clione), S. polycotylum n. sp. Meisenheimer, J. Zool. Anz., Leipzig, **26**, 1903, (410–412).

Tiedemannia neapolitana, nidamento. Ghigi, A. Mon. 2001. ital., Firenze 13, 1902, (Supplemento), (24-27, con 2 fig.).

## PULMONATA.

#### GENERAL.

Ancey, F. Faune malacologique terrestre de l'île des Cocos dans l'Océan Pacifique. J. conchyliol., Paris, 51, 1903, (97-104).

Etude sor la faune malacologique des iles Sandwich (5° partie). *i.e.* (295-307, av. 1 pl.).

Andrese, A. Land- und Süsswasserschnecken aus Zentral- und Ostasien. [In: K. Futterer, Durch Asien. Bd 3.] Berlin, 1903, (41-90, mit 1 Taf.).

Bavay, A. et Dautsenberg, Ph. Description de coquilles nouvelles de l'Indo-Chine (3<sup>e</sup> suite). J. conchyliol., Paris, 51, 1903, (201-236, av 8 pl.).

Billups, A. C. Fossil land shells of the old Forest bed of the Ohio river. Nautilus, Philadelphia, Pa., 16, 1902, (50-52).

269

Notes on slugs and sluglike molluscs. *l.c.* (17-19).

Dautsenberg, P. Contribution à la faune malacologique terrestre et d'eau douce des iles Obi et Iolo. J. conchyliol., Paris, 51, 1903, (5-20, av. 1 pl. et fig.).

**Dybowski**, W. Zur Kenntniss der ostsibirischen Landschnecken. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (7-10).

Bemerkungen über die gegenwärtige Systematik der Süsswasserschnecken. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (130– 145).

Gratacap, L. P. Catalogue of the Binney and Bland collection of the terrestrial air-breathing mollusks of the United States and territories in the American Museum of Natural History, with enumeration of types and figured specimens, and supplementary notes. New York, N,Y., Bull. Amer. Mus. Nat. Hist., 14, 1901, (335-403, with 6 maps). Separate. 23.5 cm.

Gude, G. K. Classified list of the helicoid land shells of Asia. J. Malac., London, 10, 1903, (5-16, 45-62, 83-98). Corrections and bibliography (129-136, pl. III).

Yung, Emile. Siège du sens olfactif chez les (lastéropodes pulmonés terrestres. Verh. Schweiz. Natf. Ges., Aarau, **85**, 1902, (78); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (535–537).

## BASOMMATOPHORA.

## Auriculidae.

Carychium fischerei † n. sp. Tertiärkalk, Hochheim. Boettger, O. Frankfurt a. M., NachrBl. D. malakozool. Ges., 35, 1903, (182–184).

### Limnaeidae.

Ameria obiana n. sp. Molukken. **Bolle**, H. Frankfurt a. M., NachrBl. D. malakozool. (ies., **35**, 1903, (23-24). Neritina fluziatilis, systèmes nerveux, circulaire, respiratoire, ct excréteur. Lenssen, J. Cellule, Louvain, **20**, 1903, (287-333).

grateloupiana<sup>†</sup> (litherto misidentified as N. fluriatilis). Pleistocene gravels of the Thames at Swanscomb. **Kennard**, A. S. and **Woodward**, B. B. London, Proc. Malac. Soc., **5**, 1903, (320-321).

subocellata (Marts.) Schepman, M. M. Frankfurt a. M., NachrBl. D. malskozool. Ges., **35**, 1903, (20-22).

Theodoxia fluviatilis, curieuse s'ation. Glard. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (223).

### Helicinidae.

Ilclicina gemma n. sp. Costa Rica. Preston, H. B. J. Malac., London, 10, 1903, (4, with fig.).

Islands. Sykes, E. R. *l.e.* (67)

## PTENOGLOSSA.

## Ianthinidae.

Janhlina auriculata n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1. Jena, 1903, (142).

## Scalariidae.

Aclis bitaeniata n. sp. Japan. Bowerby, P. B. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (498).

Crossea carinata n. sp. Port Kembla, N.S.W. Hodley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (345, fig. 71).

Scala (Klein) Humphrey, representatives in the Persian Gulf, Gulf of Oman, and North Arabian Sea, with descriptions of new species. **Melvill**, J. C. and **Standen**, R. J. Conch, Leeds, **10**, 1903. (340–351, pl. VII). Scala (Cirsotrema) texta n. sp. Smith, E. A. Fauna Mald. Laccad. Arch., II, (616).

(Constantia) intertexta n. sp. Gulf of Oman. **Meivill,** J. C. and **Standen**, R. Ann. Mag. Nat. Hist., Jondon, (Ser. 7), **12**, 1903, (305-306, pl. XXII).

**Dall**, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, (175).

*tenebrosa* n. sp. S. Africa. **Sowerby**, G. B. Cape Town, Marin. Invest., **2**, 1903, (220, pl. IV, fig. 6).

Scalaria cusculpata n. sp. Japan. Sowerby, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (497-498).

instricta n. sp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1, Jena, 1903, (69).

unilateralis n. sp. Tiefsee-Expedition. Martens, E. von. Berlin, SitzBer. Ges. natf. Freunde, 1902, (237-244).

## TAENIOGLOSSA.

## Naticidae.

Lunatia draconis n. sp. California. Dall, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, (171–176).

Macromphalina californica n. sp. California. Dall, W. H. l.e. (175).

Natica nn. spp. Martens, E. von. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Exhibition. Bd 7, Lfg 1, Jena, 1903, (64, 113).

(Polinices) burnupi n. sp. Durban Bay. **Smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (385, pl. XV, fig. 11).

sp. Dacqé, E. Palseontographica, Stuttgart, 30, II, 1903, (337-339, 3 Taf.).

F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. St. Pers., (39-98).

Sigaretus noyesii n. sp. Colombia. Dall, W. H. Nautilus, Boston, Mass., 17, 1903, (37-38).

## Lamellariidae.

Echinospira compressa n. sp. Mediterranean. Lo Bianco, S. Mitt. zool. Stat. Nespel, Berlin, 16, 1903, (109-279).

## Trichotropidae.

Trichotropis pulcherrima n. sp. (Julf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (296-297, pl. XX).

#### Capulidae.

Crepidula, embryology. Conklin, E. G. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 2, 1901, (257-265, with textfig.); [reprint] Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, (257-265, with text fig.).

\_\_\_\_\_ phenomena of fertilization. **Conktin**, E. G. Philadelphia, **Cont.** Zool. Lab., Univ. Pa., **1901**, 1902, ([280]-287, with text fig.).

#### Solariidae.

Euomphalus fairchildi<sup>†</sup> n. sp. Upper Silurian, New York. Clarke, J. M. and **Ruedemann**, R. Albany Univ., N.Y., Mem. St. Mus., No. 5, 1903, (195).

varicosus† n. sp. Deutschland, oberdevonisch. Drevermann, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. St. Pers., (96-207).

Fluzina dalliana n. sp. (iulf of Oman. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., Loudon (Ser. 7), 12, 1903, (298, pl. XXI).

Homalaxis nn. spp. Gulf of Oman. Melvill, J. C. and Standen, R. l.e. (298-300, pl. XXI).

Three Points, N.S.W. Hedley, C. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (351, fig. 74).

Solarium nn. spp. Persian (Julf. Melvill, J. C. and Standen, R. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (297, pl. XX, XXI).

(Torinia) admirandum n. sp. Gulf of Oman. Melvill, J. C. and Standen, R. l.c. (322).

**Martens,** E. von. Wissenschaftliche (x 2-9053) Ergebnisse der deutschen Tiefsee-Expedition. Bd 7, Lfg 1. Jena, 1903, (118).

## Littorinidae.

#### GENERAL.

Kesteven, H. L. Notes on Prosobranchiata. No. ii.—Littorinacea. Sydney, N.S.W., Proc. Linn. Soc. N.S. Wales, 27, (1902), 1903, (620-636, with 1 pl.).

#### SPECIAL,

Littorina litorea, general variation. Bigelow, R. P. and Bathbun, P. Amer. Nat., Boston, Mass., 37, 1903, (171-184).

## Fossaridae.

Fossarus (Couthouyia) unicarinalis n. sp. Arabian Sea. **Melvill**, J. C. and **Standen**, R. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (301, pl. XXI).

## Cyclophoridae.

Arinia japonica n. sp. Japan. Plabry, H. A. and Hirase, Y. Nautilus, Philadelphia, Pa., 16, 1903, (136).

Cataulus, preliminary note on the anatomy of the genus. Digby, L. London, Proc. Malac. Soc., 5, 1903, (261).

E. R. J. Malac., London, **10**, 1903, (2-3).

var. robusta n. var. Ceylon. Falton, H. l.c. (102, pl. IX, fig. 1, 4).

Chondrocyclus exsertus n. sp. Natal. Melvill and Ponsonby. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (608– 609).

Coptocheilus perakensis n. sp. Malay Peninsula. **Fulton**, H. J. Malac., London, **10**, 1903, (102, pl. IX, fig. 3).

Cyathopoma nn. spp. ('eylon and India. **Preston**, H. B. London, Proc. Malac. Soc., **5**, 1903, (340, with figs.).

('yclotus nn. spp. Ost-Borneo. Martens, E. von. Berlin, SitzBer. Ges. natif. Freunde, **1903**, (416-428). 1.3 Married M. Salari Come (Inclusion) delligion) 1 D. in has be by \$ 10. French Dall, W. H. 16.10 ----Inter and it is presented Dall Dall W H Washing N Tree Report For Lot 10, 1 18. hrs - 20. Sec - Company Income in Denters a prace during Suppli-the back and black Cockerell, T. D. A. Farmer, Joseph Karn, 16, 1903, (115). Data H. Plandstphia, Pa-base Straight Soc. 3, 1903. from principal and the Series And the first state in Erran Custopes lorard(† n. 2017 – B. Terniny, Florids, 4. S. 1920-1054) 10 may 22 11-04 Sowerby. 3 im Mar Nat Hist, London, TAG SA and the second s -Total Control of an Durhan-mann, E. J. Landon, Proc. Maloc-Soc. X 1903, 356, pl. XV, 5g. 8). 5.4 M. 14 - Dr. 6. and a second second Errorbat, A. Basel, Abd. Schweiz, Pal. month 1. In the lat for and the last the Marine In Francisco - H .H. 2. Londons endering a sp. Terting, N 75 & 16 55 55 Firmin Dall, W. H. Philadelphia, and the particular Ph. Truns, Wagner Free Inst. Sci., 3, March Minister Into with ML (-17-111-1674). 1 × 53, 1 × Lucasi and Syn Casey, T. L. Philadeblan, Pa., Proc. Acad. Nat. Sc., 55, 1946, (251-283). See and 5 P A MIL NAME A. No. 1 at 10 St. R. 10 Dall, W. E. Philadelphia, Pa., Trans. 5 5 18 15 Fague Free Inst. Sci., 3 1903, 0-10 TE Manuta 55 Name in the state of 1 CK 36 Maria and Minder Co-Mar W. H. Mantilus, Phila-and B. 16, 1905, (145). - SA -Top Courses The R R Fait 24 No. 25 1917 E-internet a non ( = Mindust Surger and Corponer). Dall -E. Windows, D.C., Par. M. No. of Concession, Name Sand MLFE Euror Per 16 2002 S. Here - 25-354 ALT I T -1 mt Im Junion Turne Pres b AND A CL LAS and he have seen - 120-3030

Campylaea uiedermayeri n. sp., phalerata n. subsp. Süsswasserlconographie der Land- und Süsswasser-Mollusken. **Kobelt** in **Rosmässler**, E. A. Wiesbaden, 1903, (4).

Cathaica nn. spp. Zentral- und Ostaien. Andreae, A. In: K. Futterer, Durch Asien, Bd 3, 1903, (41-90).

Chloritis bracteatus n. sp. Japan. Pilsbry, H. A. Nautilus, Philadelphia, Pa., 16, 1902, (21-22).

Pilsbry, H. A. and Hirase, Y. l.c. (116).

*romaensis* n. sp. Niederländisch-Indien. **Möllendorff**, O. von Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (156).

(Trichochlorites) tabularis n. sp. Sumatra. Gude, G. K. J. Malac., London, 10, 1903, (48–49, pl. III).

tosanus n. sp. Japan. Pilsbry, H. A. and Hirase, Y. Nautilus, Philadelphia, Pa., 16, 1903, (134–136); 17, 1903, (31–32).

Cochlostyla delicata n. sp. Fulton, H. J. Malac., London, 10, 1903, (100, pl. 1X, fig. 10).

Eucathaica n. subgen. (Cathaica). Andreae, A. In: K. Futterer, Durch Asien, Bd 3, 1903, (41-90).

Eulota nn. spp. Japan. Pilsbry, H. A. and Hirase, Y. Nautilus, Boston, Mass., 17, 1903, (44-46).

Japan. Pilsbry, H. A. and Hirase, Y. *l.e.* (52-55).

(Coelorus) cavitectum n. sp. Japan. Pilsbry, H. A. and Hirase, Y. *l.e.* 16, 1903, (134–136).

luhuana var. yakushimana n. var. Japan. Pilsbry, H. A. and Hirase, Y. l.c. 17, 1903, (78-79).

*inainensis* var. oshimana n. var. Japan. Pilsbry, H. A. and Hirase, Y. *l.c.* 16, 1903, (115).

Ganesella moellendorffiana n. sp. Japen. Pilsbry, H. A. and Hirase, Y. *l.c.* 17, 1903, (78-79).

notoensis n. sp., G. cardiostoma var. kagaensis n. var. Japan. Pilsbry, H. A. and Hirase, Y. l.c. 16, 1903, (116).

(n 2-9053)

Ganesella procera, Tonkin. Gude, G. K. London, Proc. Malac. Soc., 5, 1903, (266, pl. VII, figs. 21-24).

273

*Helicella barbara*, notes on the socalled appendix. **Overton**, H. J. Malac., London, **10**, 1903, (126-128).

Ilelicigona arbustorum var. bifasciata n. var. Kew, H. W. Naturalist, London, 1903, (341-342, with figs.).

Helicostyla, use of name. P[11sbry], H. A. Nautilus, Boston, Mass., 17, 1903, (58).

Ileliz, revision des espèces françaises du genre. Granger, A. Bordeaux, Actes soc. linn., 58, 1903, (1-60).

**berg**, P. J. conchyliol., Paris, **51**, 1903, (5-20, av. 1 pl.).

nn. spp. Moluques. Dautsenberg, P. Naturaliste, Paris, (sér. 2), 24, 1902, (247-248).

(*Chloritis, Planispira*?) nn. spp. Ost-Borneo. **Martens**, E. von. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (422-423).

(*Iberus*) nn. spp. Süsswasser. Iconographie der Land- und Süsswasser-Mollusken. **Kobelt** in **Rossmassler**, E. A. Wiesbaden, 1903, (9, 13-15).

(Iberus Helicogena) nn. spp. **Kobelt**, W. Frankfurt a. M., NachrBl. D. Malakozool. Ges., **35**, 1903, (88-91, 145-151).

(Pomatia, Jacosta) nn. spp. Vorderasien. **Naegele**, G. Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (172–173).

Germain, L. Nantes, Bul. soc. sci. nat., (ser. 2, 3), 13, 1903, (1-112).

*aspersa* Muell. **Conte**, A. et **Bonnet**, A. Paris, C.-R. soc. biol., **55**, 1903, (198-199).

sall'accrescimento degli oociti. Mirabella, [R.]. Mon. zool. ital.. Firenze, 13, 1902, (Supplemento), (58-59).

Т

Astarte<sup>•</sup>† nn. spp. America. **Dall**, W. H. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (946-948).

Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

(Crassinella) branneri<sup>†</sup> n. sp. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., **3**] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (1-420).

Batisea schmidti n. sp. Ost.-Borneo. Martens, E. von. Berlin, SitzBer. Ges. Natf. Freunde, **1903**, (416-428).

Callocardia (Agriopoma)<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Cardita (Carditamera)<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

*abbreviatu* n. sp. Japan. **Sowerby**, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (500-501).

ddrichi<sup>†</sup> n. sp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261-283).

*chaylai*† n. sp. Etampes. **Mennier**, S. Naturalisto, Paris, (sér. 2), **25**, 1903, (55-56, av. fig.).

(Glans) sulcosa n. sp. America. **Dall**, W. H. Philadelphia Pa., Proc. Acad. Nat. Sci., **54**, 1902, [1903], (696-716).

Codakia (Jagonia)† nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, l'a., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Corbiculina, n. sect. (Type Corbicula augasi Prime). Dall, W. H. Washington D.C., Proc. Biol. Soc., 16, 1903, (6).

Crassatellites (Crassinella, Scambula)† nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Cyclocalyz<sup>\*†</sup> n. sect. (type Pisidium scholtzii Prime). **Dall**, W. H. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (7). Cymatocyclas n. subgen., (type Pisidium compressum Prime). Dall, W. H. l.c. (7).

,

Cyrena (Pseudocyrena) dupliniana n. sp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Cyrenodonaxt n. sect., (type C. fo:mosann Dall.) Dall, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, (6).

Diaurora n. nom. = Aurora Simpson not Rog. not Sollas. Cockerell, T. D. A. Nautilus, Boston, Mass., 16, 1903, (118).

Divaricella<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Erycinella (Carditopsis) bernardi † n. sp. Dall, W. H. Tertiary, Florida. l.e. (i-xiv + 1219-1654).

Felania minor n. sp. Japan. **Sowerby**, G. B. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (501).

Kellia natalensis n. sp. Durban. Smith, E. A. London, Proc. Malac. Söc., 5, 1903, (396, pl. XV, fig. 8).

Kobya n. gen., K. typica † n. sp. Oxfordien, Jura. Loriol, P. de und Girardot, A. Basel, Abh. Schweiz. Pal. Ges., 29, 1902, (58).

Lirodiscus uailesii† n. sp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Lucina<sup>†</sup> un. spp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261-283).

m. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Miodontiscus n. nom. - Miodon Carpenter. Dall, W. H. Nautilus, Philadelphia, Pa., 16, 1903, (143).

Miodontopsis<sup>†</sup> n. nom (= Miodon<sup>†</sup> Sandberger not Carpenter). **Dall**, W. H. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (5).

Myrtaea<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654). Paracyclas lirata Conrad mut. pygmaca† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1:003, (892-920).

Phaeoides | nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Pisidium nn. spp. Clessin, In: K. Futterer, Durch Asien, Bd 3, 1903, (41-90).

Simpson not Cossmann. Cockerell, T. D. A. l.e. 16, 1903, (118).

Tellinocyclast n. sect., (type Cyrena tellinella† Deshayes). Dall, W. H. Washington, D.C., Proc. Biol. Soc., 16, 1903, (6).

Tropidocyclas† n. subgen.. (type Pisidium henslowianum Sheppard.) Dall, W. H. l.c. (7).

Unio<sup>†</sup> nn. spp. Montana, Cretaceous. **Stanton**, T. W. Philadelphia, Pa., Proc. Amer. Phil. Soc., **42**, 1903, (188-199).

the Laramie. Whitaeld, R. P. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (483-487, with 3 pls.).

**Dautsenberg**, P. Bruxelles, Bull. Soc. roy. malac., **286**, 1903, (3-7).

declivis. specific value. **Frierson**, L. S. Nautilus, Boston, Mass., **17**, 1903, (49-51, with pl.).

Venericardia† nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

(Cyclocardia) nn. spp. America. Dall, W. H. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (696-716).

**Casey**, T. L. *l.e.* **55**, 1903, (261-283).

## Tellinacea.

Semele pulchra var. montcreyi† n. var. Arnold, R. [Reprinted from San Francisco, Mem. Cal. Acad. Sci., 3.] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **81**, 1903, (166).

Tellina consanguinea n. sp. Japan. Sowerby, P. B. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (500).

*pilsbryi*<sup>†</sup> n. sp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261-283).

Zenatia victoriae n. sp. Pritchard, G. B. and Gatliff, J. H. Melbourne, Proc. R. Soc. Vict., 16, (N. Ser.), 1903, (92-3, with pl. XV).

#### Veneracea.

Anomalocardia† nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci.. 3, 1903, (i-xiv + 1219-1654).

Callista subdiaphana var. pedroana<sup>†</sup> n. var. **Arnold**, R. [Reprinted from Sau Francisco, Mem. Cal. Acad. Sci., **3**,] in Stanford University, Cal., Leland Stanford Jr. Univ., Hopkins Seaside Lab., Cont. Biol., No. **31**, 1903, (144).

Chione<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiw + 1219-1654).

peronii Lamarck, C. scalarina L., C. strigosa L. Pritchard, G. B. and Gatliff, J. H. Melbourne, Proc. R. Soc. Vict., 16, (N. Ser.), 1903, (94-5, with pl. XV).

Cyclinella gatunensis<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Cytherea<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. l.c. (i-xiv + 1219-1654).

Dosinia (Dosinidia)<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Gafrarium (Gouldia)<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Gemma<sup>†</sup> nn. spp. 'Tertiary, Florida, Dall, W. H. *l.c.* (i-xiv + 1219– 1654).

Gomphina maorum n. sp., New Zealand. **Smith**, E. A. J. Malac., London, 9, 1902, [1903], (109-110, with fig.). Grateloupia (Cytheriopsis) alumensis† nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219– 1654).

Macrocallista acuminata† n. sp. Tertiary, Florida. Dall, W. H. *l.e.* (i-xiv + 1219-1654).

Pitaria (Hyphantosoma, Lamellioncha)<sup>†</sup> nr. spp. Tertiary, Florida. Dall, W. H. l.c. (i-xiv + 1219-1654).

Tivela jamaicensis† n. sp. Tertiary, Florida. Dall, W. H. *l* c. (i-xiv + 1219-1654).

Transennella<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219–1654).

Venus mercenaria, habits. Kellogg, J. S. Albany Univ., N.Y., Bull. St. Mus., No. 71, 1903, (27, with pl.).

V. clathrata<sup>†</sup> Desh. **Dollfus**, G. F. J. conchyliol., Paris, **50**, 1902, (423-428).

F. Berlin, Jahrb. geol., Landesant., 21, 1901. Abb. auss. st. Pers., (39-98).

## Cardiacea.

### GENERAL.

Andrusov, N. Studien über die Brackwassercardiden. Lieferung 1. St. Peterburg, Mém. Ac. Sc., (8 F.), 13, No. 3, 1903, (82, mit 2 Fig. und 7 Taf.).

#### SPECIAL.

Cardium, numerical variation of ribs. Baker, F. C. Amer. Nat., Boston, Mass., 87, 1903, (481-488).

† nn. spp. Buda Limestone, Texas. Shattuck, (J. B. Washington, D.C., Bull. Dept. Int., U. S., Geol. Surv., No. 205, 1903, (9-36).

E. A. Fauna Mald. Laccad. Arch., II, (624).

Chama<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv+ 1219-1654).

Conocardium beushauseni<sup>†</sup> n. sp. Deutschland oberdevonisch. Drever**mann, F.** Berlin, Jahber. geol. Landesant., **21**, 1901, Abh. auss. st. Pers., (9.)-207).

Echinochama antiquata<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv+1219-1654).

Limnocardium subsquamulosum n. sp. Andrusov, A. A. St. Peterburg, Mém. Ac. Sc., (8 F.), **13**, No. 3, 1903, (82, mit 2 Fig. und 7 Taf.).

Radiolites ga'ensis<sup>†</sup> n. sp. Dacqué, E. Palaeontographica, Stuttgart, **30**, II, 1903, (337–339, 3 Taf.).

## Myacea.

Ceratisolen, anatomy of certain species. Bloomer, H. H. J. Malac., London, 10, 1903, (31-40, pl. II).

formed specimen. Bloomer, H. H. l.e. (101).

Corbula lagueata<sup>†</sup> n. sp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261-283).

muschketowi<sup>†</sup> n. sp. Fergana. **Böhm**, J. In: K. Futterer, Durch Asien, Bd. 3, 1903, (93-112).

*rugifera* n. sp. Natal. **smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (399, pl. XV, figs. 9–10).

Fistulana clava Lamk, perforating a shell of Mitra interlirata Reeve. Sowerby, G. B. and Fulton, H. C. l.c. (345, pl. XVI).

Mya arenaria, Einwanderung. Lorenzen, A. Prometheus, Berlin, 15, 1903, (61-62).

Fischerei in der Passamaquoddy - Bay. Stafford-Toronto, J. Berlin, Mitt. D. Seefischereiver., 18, 1902, (457-461).

Neaera aegyptiaca<sup>†</sup> n. sp. Blättermergel von Theben. **Oppenheim**, P. München, SitzBer. Ak. Wiss., math.phys. Cl., **32**, (1902), 1903, (435-456).

Panopaea<sup>†</sup> nn. spp. **Sturm**, F. Berlin, Jahrber. geol. Landesant., **21**, 1901, Abh. Auss. st. Pers., (39-98).

Pharella orientalis Dunker, anatomy. Bloomer, H. H. J. Malac., London, 10, 1903, (114–121, pl. X).

Solecurtus, anatomy of certain species. Eleomer, H. H. J. Malac., London, 10, 1903, (31-40, pl. II).

Solen (Linné), classification of British species. Bloomer, H. H. l.c. (41-43).

Solenomorpha n. gen., S. major n. sp. Lancashire. Hind, W. London, Q. J. Geol. Soc., 59, 1903, (334, with fig.).

Tagelus rufus Spengler, anatomy. Bloomer, H. H. J. Malac., London, 10, 1903, (114-121, pl. X).

#### Pholadacea.

Teredo navalis L. Beitrag zur Kenntais [des Baues] des Schiffsbohrwurmes. (Holländisch) Keer, P. M. Leiden (P.W.M. Trap), 1903, (58, mit 4 Taf.).

Xylophaga pracetans n. sp. Northumberland. **Smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (328-330, with figs.).

## Anatinacea.

Anatina<sup>†</sup> nn. spp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int. U.S., Geol. Surv., No. **205**, 1903, (9-36, with pl.).

Buchiola retrostriata v. Buch mut. pygmaea† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

semiimpressa† n. sp. Deutschland oberdevonisch. Drevermann, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (99-207).

Cardiola pectinata<sup>†</sup> n. sp. Unterdevon, Marburg a. L. Walther, K. N. Jahrb. Min., Stuttgart, Beilagebd, 17, 1903, (1-75).

Ceromya isocardioides<sup>†</sup> n. sp. **Sturm**, F. Berlin, Jahrb. geol. Landesant., **21**, 1901, Abh. auss. st. Pers., (39-98).

Cyathodonta<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654). Goniomya† nn. spp. **Sturm, F.** Berlin, Jahrb. geol. Landesant., **21**, 1901, Abh. auss. st. Pers., (39–98).

Grammysia constricta Hall mut. pygmaea† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

Homomya<sup>†</sup> nn. spp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9-36, with pl.).

Lyonsia acuta<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Pandora (Kennerleyia)† nn. spp. Tertiary, Florida. Dall, W. H. l.c. (i-xiv + 1219-1654).

(Kennerlia) grandis<sup>†</sup>. Neocene. **Rivers**, J. J. Los Angeles, Bull., So. Cal. Acad. Sci., **1**, 1902, (69).

Pholadomya roemeri<sup>†</sup> n. sp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9-36).

Prothyris truncata<sup>†</sup> n. sp. Devonian, New York. **Cieland**, H. F. Washington, D.C., U.S. Dept. Int. Bull. Geol. Surv., No. **206**, 1903, (112, with pl.).

#### SEPTIBRANCHIATA.

Cuspidaria<sup>†</sup> nn. spp. Tertiary, Fl.rida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Poromya jamaicensis<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Spheniopsis americana<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.e.* (i-xiv + 1219-1654).

Verticordia<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. *l.e.* (i-xiv + 1219-1654).

#### SCAPHOPODA.

Dentalium<sup>†</sup> nn. spp. **Casey**, T. L. Philadelphia, Pa. Proc. Acad. Nat. Sci., **55**, 1903, (261-283).

nn. spp. **Hedley**, C. Port Keinbla, Cape Three Points, N.S.W. Sydney, N.S.W., Mem. Austr. Mu3., 4, pt. 6, 1903, (327, 328, figs. 61-62). Grateloupia (Cytheriopeis) alumensis† nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Macrocallista acuminata<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.e.* (i-xiv + 1219-1654).

Pitaria (Hyphantosoma, Lamellioncha)<sup>†</sup> nr. spp. Tertiary, Florida. Dall, W. H. l.c. (i-xiv + 1219-1654).

Tivela jamaicensis† n. sp. Tertiary, Florida. **Dall**, W. H. *l*.c. (i-xiv + 1219-1654).

Transennella<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. *l.e.* (i-xiv + 1219-1654).

Venus mercenaria, habits. Kellogg, J. S. Albany Univ., N.Y., Bull. St. Mus., No. 71, 1903, (27, with pl.).

*neoclathrata*<sup>†</sup> n. nom = V. clathrata<sup>†</sup> Desh. **Dollfus**, G. F. J. conchyliol., Paris, **50**, 1902, (423-428).

## Cardiacea.

#### GENERAL.

Andrusov, N. Studien über die Brackwassercardiden. Lieferung I. St. Peterburg, Mém. Ac. Sc., (8 F.), 13, No. 3, 1903, (82, mit 2 Fig. und 7 Taf.).

#### SPECIAL.

Cardium, numerical variation of ribs. Baker, F. C. Amer. Nat., Boston, Mass., 87, 1903, (481-488).

tington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. 205, 1903, (9-36).

E. A. Fauna Mald. Laccad. Arch., II, (624).

Chama<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv+ 1219-1654).

Conocardium beushauseni<sup>†</sup> n. sp. Deutschland oberdevonisch. Drevermann, F. Berlin, Jahber. geol. Landesant., **21**, 1901, Abh. auss. st. Pers., (9.J-207).

Echinochama antiquata<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv+1219-1654).

Limnocardium subsquamulosum n. sp. Andrusov, A. A. St. Peterburg, Mém. Ac. Sc., (8 F.), **13**, No. 3, 1903, (82, mit 2 Fig. und 7 Taf.).

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Solen (Linné), classification of British species. Bloomer, H. H. l.e. (41-43).

Solenomorpha n. gen., S. major n. sp. Lancashire. **Hind**, W. London, Q. J. Geol. Soc., **59**, 1903, (334, with fig.).

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Teredo navalis L. Beitrag zur Kenntnis [des Baues] des Schiffsbohrwurmes. (Holländisch) Keer, P. M. Leiden (P.W.M. Trap), 1903, (58, mit 4 Taf.).

Xylophaga praestans n. sp. Northumberland. **Smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (328-330, with figs.).

## Anatinacea.

Anatina<sup>†</sup> nn. spp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int. U.S., Geol. Surv., No. **205**, 1903, (9-36, with pl.).

Buchiola retrostriata v. Buch mut. pygmaea† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

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Pandora (Kennerleyia)† nn. spp. Tortiary, Florida. Dall, W. H. *l.c.* (i-xiv + 1219-1654).

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Pholadomya roemeri<sup>†</sup> n. sp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9-36).

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Echinochama antiquata<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv+1219-1654).

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Xylophaga praestans n. sp. Northumberland. **Smith**, E. A. London, Proc. Malac. Soc., 5, 1903, (328-330, with figs.).

## Anatinacea.

Anatina<sup>†</sup> nn. spp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int. U.S., Geol. Surv., No. **205**, 1903, (9-36, with pl.).

Buchiola retrostriata v. Buch mut. pygmaea<sup>†</sup> n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892–920).

semiimpressa† n. sp. Deutschland oberdevonisch. Drevermann, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (99-207).

Cardiola pectinata<sup>†</sup> n. sp. Unterdevon, Marburg a. L. **Walther**, K. N. Jahrb. Min., Stuttgart, Beilagebd, 17, 1903, (1-75).

Ceromya isocardioides† n. sp. Sturm, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (39-98).

Cyathodonta<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654). <sup>•</sup> Goniomya<sup>†</sup> nn. spp. **Sturm,** F. Berlin, Jahrb. geol. Landesant., **21**, 1901, Abh. auss. st. Pers., (39–98).

Grammysia constricta Hall mut. pygmaca<sup>†</sup> n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892–920).

Homomya<sup>†</sup> nn. spp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9-36, with pl.).

Lyonsia acuta<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Pandora (Kennerleyia)† nn. spp. Tertiary, Florida. Dall, W. H. l.c. (i-xiv + 1219-1654).

(Kennerlia) grandis<sup>†</sup>. Neocene. **Rivers**, J. J. Los Angeles, Bull., So. Cal. Acad. Sci., **1**, 1902, (69).

Pholadomya roemeri<sup>†</sup> n. sp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9–36).

Prothyris truncata<sup>†</sup> n. sp. Devonian, New York. **Cieland**, H. F. Washington, D.C., U.S. Dept. Int. Bull. Geol. Surv., No. **206**, 1903, (112, with pl.).

#### SEPTIBRANCHIATA.

Cuspidaria† nn. spp. Tertiary, Fl.rida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Poromya jamaicensis<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Spheniopsis americana<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Verticordia† nn. spp. Tertiary, Florida. Dall, W. H. I.c. (i-xiv + 1219-1654).

#### SCAPHOPODA.

Dentalium<sup>†</sup> nn. spp. **Casey**, T. L. Philadelphia, Pa. Proc. Acad. Nat. Sci., **55**, 1903, (261–283).

nn. spp. **Hedley**, C. Port Kembla, Cape Three Points, N.S.W. Sydney, N.S.W., Mem. Austr. Mus., 4, pt. 6, 1903, (327, 328, figs. 61-62). Grateloupia (Cytheriopsis) alumensis† nn. spp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219– 1654).

Macrocallista acuminata<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Pitaria (Hyphantosoma, Lamellioncha)<sup>†</sup> nr. spp. Tertiary, Florida. **Dall**, W. H. l.c. (i-xiv + 1219-1654).

Tivela jamaicensis† n. sp. Tertiary, Florida. **Dall**, W. H. *l*.c. (i-xiv + 1219-1654).

Transennella<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Venus mercenaria, habits. Kellogg, J. S. Albany Univ., N.Y., Bull. St. Mus., No. 71, 1903, (27, with pl.).

*neoclathrata* $\dagger$  n. nom = *V. clathrata* $\dagger$  Desh. **Dollfus**, G. F. J. conchyliol., Paris, **50**, 1902, (423-428).

F. Berlin, Jahrb. geol., Landesant., 21, 1901. Abh. auss. st. Pers., (39-98).

## Cardiacea.

#### GENERAL.

Andrusov, N. Studien über die Brackwassercardiden. Lieferung I. St. Peterburg, Mém. Ac. Sc., (8 F.), 13, No. 3, 1903, (82, mit 2 Fig. und 7 Taf.).

#### SPECIAL.

Cardium, numerical variation of ribs. Baker, F. C. Amer. Nat., Boston, Mass., 37, 1903, (481-488).

† nn. spp. Buda Limestone, Texas. Shattuck, G. B. Washington, D.C., Bull. Dept. Int., U. S., Geol. Surv., No. 205, 1903, (9-36).

E. A. Fauna Mald. Laccad. Arch., II, (624).

Chama<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv+ 1219-1654).

Conocardium beushauseni<sup>†</sup> n. sp. Deutschland oberdevonisch. Drever**mann**, F. Berlin, Jahber. geol. Landesant., **21**, 1901, Abh. auss. st. Pers., (9.)-207).

Echinochama antiquata<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv+1219-1654).

Limnocardium subsquamulosum n. sp. Andrusov, A. A. St. Peterburg, Mém. Ac. Sc., (8 F.), **13**, No. 3, 1903, (82, mit 2 Fig. und 7 Taf.).

Radiolites ga'ensis<sup>†</sup> n. sp. Dacqué, E. Palaeontographica, Stuttgart, **30**, II, 1903, (337-339, 3 Taf.).

## Myacea.

Ceratisolen, anatomy of certain species. Bloomer, H. H. J. Malac., London, 10, 1903, (31-40, pl. II).

------ legumen, note on a malformed specimen. Bloomer, H. H. l.c. (101).

Corbula laqueata<sup>†</sup> n. sp. **Casey**, T. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (261-283).

muschketowi<sup>†</sup> n. sp. Fergana. **Böhm**, J. In: K. Futterer, Durch Asien, Bd. 3, 1903, (93-112).

*rugifera* n. sp. Natal. **smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (399, pl. XV, figs. 9-10).

Fistulana clava Lamk, perforsting a shell of Mitra interlirata Reeve. Sowerby, G. B. and Fulton, H. C. l.c. (345, pl. XVI).

Mya arenaria, Einwanderung. Lorenzen, A. Prometheus, Berlin, 15, 1903, (61-62).

Fischerei in der Passamaquoddy - Bay. **Stafford-Toronto, J.** Berlin, Mitt. D. Seefischereiver., **18**, 1902, (457–461).

Neaera aegyptiaea<sup>†</sup> n. sp. Blättermergel von Theben. **Oppenheim**, P. München, SitzBer. Ak. Wiss., math.phys. Cl., **32**, (1902), 1903, (435–450).

Panopaea nn. spp. Sturm, F. Berlin, Jahrber, geol. Landesant., 21, 1901, Abh. Auss. st. Pers., (39-98).

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Grateloupia (Cytheriopsis) alumensis† nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219– 1654).

Macrocallista acuminata<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.e.* (i-xiv + 1219-1654).

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Venus mercenaria, habits. Kellogg, J. S. Albany Univ., N.Y., Bull. St. Mus., No. 71, 1903, (27, with pl.).

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F. Berlin, Jahrb. geol., Landesant., 21, 1901. Abh. auss. st. Pers., (39-98).

#### Cardiacea.

#### GENERAL.

Andrusov, N. Studien über die Brackwassercardiden. Lieferung 1. St. Peterburg, Mém. Ac. Sc., (8 F.), **13**, No. **3**, 1903, (82, mit 2 Fig. und 7 Taf.).

#### SPECIAL.

Cardium, numerical variation of ribs. Baker, F. C. Amer. Nat., Boston, Mass., 37, 1903, (481-488).

† nn. spp. Buda Limestone, Texns. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U. S., Geol. Surv., No. **205**, 1903, (9-36).

E. A. Fauna Mald. Laccad. Arch., II, (624).

Chama<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv+ 1219-1654).

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Echinochama antiquata<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Iust. Sci., **8**, 1903, (i-xiv+1219-1654).

Limnocardium subsquamulosum n. sp. Andrusov, A. A. St. Peterburg, Mém. Ac. Sc., (8 F.), **13**, No. 3; 1903, (82, mit 2 Fig. und 7 Taf.).

Radiolites ga'ensis<sup>†</sup> n. sp. Dacqué, E. Palaeontographica, Stuttgart, **30**, II, 1903, (337-339, 3 Taf.).

## Myacea.

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----- legumen, note on a malformed specimen. Bloomer, H. H. l.c. (104).

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muschketowi<sup>†</sup> n. sp. Fergana. **Böhm**, J. In: K. Futterer, Durch Asien, Bd. 3, 1903, (93-112).

*rugifera* n. sp. Natal. smith, E. A. London, Proc. Malac. Soc., 5, 1903, (399, pl. XV, figs. 9-10).

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Neaera aegyptiaca<sup>+</sup> n. sp. Blättermergel von Theben. **Oppenheim**, P. München, SitzBer. Ak. Wiss., math.phys. Cl., **32**, (1902), 1903, (435–456).

Panopaea<sup>†</sup> nn. spp. **Sturm**, F. Berlin, Jahrber. geol. Landesant., **21**, 1901, Abh. Auss. st. Pers., (39-98).

L

Pharella orientalis Dunke Bloomer, H. H. J. Malac., I 1903, (114–121, pl. X). Solecurtus, anatomy of certain species. Bloomer, H. H. J. Malac., London, 10, 1903, (31-40, pl. II).

Solen (Linné), classification of British species. Bloomer, H. H. *l.e.* (41-43).

Solenomorpha n. gen., S. major n. sp. Lancashire. Hind, W. London, Q. J. Geol. Soc., 59, 1903, (334, with fig.).

Tagelus rufus Spengler, anatomy. Bloomsr, H. H. J. Malac., London, 10, 1903, (114-121, pl. X).

## Pholadacea.

Teredo navalis L. Beitrag zur Kenntnis [des Baues] des Schiffsbohrwurmes. (Holländisch) Keer, P. M. Leiden (P.W.M. Trap), 1903, (58, mit 4 Taf.).

Xylophaga praestans n. sp. Northumberland. **Smith**, E. A. London, Proc. Malac. Soc., **5**, 1903, (328-330, with figs.).

## Anatinacea.

. .

Anatina<sup>†</sup> nn. spp. Buda limestone, Texas. Shattuck, G. B. Washington, D.C., Bull. Dept. Int. U.S., Geol. Surv., No. 205, 1903, (9-36, with pl.).

Buchiola retrostriata v. Buch mut. pygmaea† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

mann, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (99-207).

Cardiola pectinata<sup>†</sup> n. sp. Unterdevon, Marburg a. L. Walther, K. N. Jahrb. Min., Stuttgart, Beilagebd, **17**, **1903**, (1-75).

Ceromya isocardioides† n. sp. Starm, F. Berlin, Jahrb. geol. Lar 1901, Abh. auss. st. Pers.

Cyathodonta† nn Florida. Dall, W. Pa., Trans. Wagner 1903, (i-xiv + 1219-1 <sup>•</sup> Goniomya<sup>†</sup> nn. spp. **Sturm, F.** Berlin, Jahrb. geol. Landesant., **21**, 1901, Abh. auss. st. Pers., (39–98).

Grammysia constricta Hall mut. pygmaea<sup>†</sup> n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892-920).

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Lyonsia acuta<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Pandora (Kennerleyia)† nn. spp. Tertiary, Florida. Dall, W. H. l.c. (i-xiv + 1219-1654).

(Kennerlia) grandis<sup>†</sup>. Neocene. **Eivers**, J. J. Los Angeles, Bull., So. Cal. Acad. Sci., **1**, 1902, (69).

Pholadomya roemeri<sup>†</sup> n. sp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9-36).

Prothyris truncata<sup>†</sup> n. sp. Devonian, New York. **Cleland**, H. F. Washington, D.C., U.S. Dept. Int. Bull. Geol. Surv., No. **206**, 1903, (112, with pl.).

## SEPTIBRANCHIATA.

Cuspidaria<sup>†</sup> nn. spp. Tertiary, Fl.rida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Poromya jamaicensis<sup>†</sup> n. sp. Tertisry, Florida. **Dall**, W. H. *l.e.* (i-xiv + 1219-1654).

Spheniopsis americana<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

Verticordia† nn. spp. Tertiary, Florida Dall, W. H. I.e. (i-xiv + 1219-1654).

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Solecurtus, anatomy of certain species. Bioomer, H. H. J. Malac., London, 10, 1903, (31-40, pl. II).

Solen (Linné), classification of British species. **Bloomer**, H. H. *l.c.* (41-43).

Solenomorpha n. gen., S. major n. sp. Lancashire. Hind, W: London, Q. J. Geol. Soc., 59, 1903, (334, with fig.).

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Teredo navalis L. Beitrag zur Kenntnis [des Baues] des Schiffsbohrwurmes. (Holländisch) Keer, P. M. Leiden (P.W.M. Trap), 1903, (58, mit 4 Taf.).

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Buchiola retrostriata v. Buch mut. pygmaea† n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892–920).

Dentschland oberdevonisch. Drevermann, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. st. Pers., (99-207).

Cordiola patinata† n. sp. Untertherron, Machorg s. L. Walther, K. N. Jahrh. Min., Staticart Deilagehd, 17, 1903. (1-75)

211

<sup>•</sup> Coniomya<sup>†</sup> nn. spp. **Sturm, F.** Berlin, Jahrb. geol. Landesant., **21**, 1901, Abh. auss. st. Pers., (39–98).

Grammysia constricta Hall mut. pygmaca<sup>†</sup> n. mut. Loomis, F. B. Albany, Univ., N.Y., Bull. St. Mus., No. 69, 1903, (892-920).

Homomya<sup>†</sup> nn. spp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9-36, with pl.).

Lyonsia acuta<sup>†</sup> n. sp. Tertiary, Florida. **Dall**, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., **3**, 1903, (i-xiv + 1219-1654).

Pandora (Kennerleyia)<sup>†</sup> nn. spp. Tertiary, Florida. **Dall**, W. H. *l.c.* (i-xiv + 1219-1654).

(Kennerlia) grandis<sup>†</sup>. Neocene. **Rivers**, J. J. Los Angeles, Bull., So. Cal. Acad. Sci., **1**, 1902, (69).

Pholadomya roemerit n. sp. Buda limestone, Texas. **Shattuck**, G. B. Washington, D.C., Bull. Dept. Int., U.S., Geol. Surv., No. **205**, 1903, (9-36).

Prothyris truncata<sup>†</sup> n. sp. Devonian, New York. **Cleland**, H. F. Washington, D.C., U.S. Dept. Int. Bull. Geol. Surv., No. **206**, 1903, (112, with pl.).

## SEPTIBRANCHIATA.

Cuspidaria† nn. spp. Tertiary, Fl.rida. Dall, W. H. Philadelphia, Pa., Trans. Wagner Free Inst. Sci., 3, 1903, (i-xiv + 1219-1654).

Poromya jamaicensis† n. sp. Tertiary, Florida. Dall, W. H. *l.c.* (i-xiv + 1219-1654).

Spheniopais americana<sup>+</sup> n. sp. Tertiary, Flotida. Dall, W. H. Le. (i-xiv + 1219-1654).

Verticordia<sup>†</sup> nn. spp. Tertiary, Florida. Dall, W. H. *l.c.* (i-xiv + 1219-1654).

## SCAPHOPODA.

Dentalium<sup>†</sup> nn. spp. Casey, T. L. Dentalelphin, Pa. Proc. Acad. Nat. Sci., 55, 1960, 1201-283).

un, spp. Hedley, C. Port Three Points, N.S.W. Sem. Austr. Mus., 4, figs. 61-62). Godwin-Austen, H. H. On the anatomy of two land molluscs (*Heli*carion (?) willeyana and II (?) woodworthin. spp.) from New Britain and Lifu, Loyalty Islands, collected by Dr. Arthur Willey, F.R.S., in 1895-97. London, Proc. Malac. Soc., 5, 1903, (296-209, pl. IX).

**Pace**, S. Critical notes on Hervier's monograph of the *Columbellidae* of New Caledonia with *C. hervieri* nom. nov. J. conchyliol.. Paris, **50**, 1902, (412–422).

**Sykes**, E. R. On a small collection of marine shells from Surprise Island. J. Malac., London, **10**, 1903, (137-138).

k ARCTIC.

kd Islands North of Europe and Asia.

Enipovič N. M. Zoologische Ergebnisse der russischen Expeditionen nach Spizbergen. Mollusca und Brachiopoda IV. Nachtrag. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (133–143).

## l ATLANTIC.

Martens, [Eduard] von. Die Verbreitung der Meer-Conchylien an den Küsten von West- und Süd-Africa. Berlin, SitzBer. Ges. natf. Freunde, 1903, (188-193).

le South Atlantic.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, **51**, 1903, (39–47).

m INDIAN OCEAN.

#### ma INDIAN OCEAN AND ISLANDS NORTH OF THE EQUATOR.

**Etiot**, C. N. E. Nudibranchiata, with some remarks on the families and genera, and description of a new genus *Doridomorpha*. In Fauna and Geography of the Maldive and Laccadivo Archipelagoes, II, 1903, (540-573, pl. XXXII). Melvill, J. C. and Sykes, E. R. Description of *Marginella lateritia* n. sp., from the Andaman Islands. London, Proc. Malac. Soc., 5, 1903, (410, with fig.).

**smith**, E. A. Land and fresh-water mollusca. Fauna of the Maldive and Laccadive Islands, 1, (141-145).

(589-630, pls. XXXV-XXXVI).

## mb Indian Ocean and Islands South of the Equator.

Martens, [Edward] von. Ueber einige Schnecken der Cocosinsel. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (59– 62).

Die Meeres-Conchylien der Cocos-Insel. *l.e.* (137-141, 253).

n PACIFIC.

nb SOUTH PACIFIC.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, 51, 1903, (39-47).

Faune malacologique terrestre de l'ile des Cocos dans l'Océan Pacifique. *l.c.* (97-104).

nd SANDWICH ISLANDS.

Ancey, C. F. Etude sur la faune malacologique des îles Sandwich (5e partie). J. conchyliol., Paris, **51**, 1903, (295-307, av. 1 pl.).

**Baldwin**, D. D. Descriptions of new species of *Achatinellidas* from the Hawaiian islands. Nautilus, Boston, Mass., **17**, 1903, (34-36).

**Dall**, William Healey. A new genus of *Trochidae* [from Hawaii]. [Stylobates aeneus n. gen. and sp.] l.c. (61-62).

## ng GALAPAGOS ISLANDS.

**Dall**, William Healey. Two new mollusks from the west coast of America. [Sigaretus noyesii n. sp. from Colombia, and Tonicia arnheim n. sp. from Galapagos Islands]. Nautilus, Boston, Mass., **17**, 1903, (37-38).

## 2231 ·

## 2231 TAXONOMY AND SYSTEMATIC.

## GENERAL.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, 51, 1903, (39–47).

**Blanford**, W. T. Notes on Mr. W. M. Daly's collections of land and freshwater Mollusca from Siam. London, Proc. Malac. Soc., 5, 1903, (283-284).

Brady, G. S. Report on dredging and other marine research off the N.E. coast of England in 1901. Newcastle, Trans. Nat. Hist. Soc., 14, 1903, (87– 101).

Brown, L. B. Notes on the land and freshwater shells of Barbados. J. Conch., Leeds, 10, 1903, (266-273).

**Casey**, T. L. Notes on the Conrad collection of fossils, with descriptions of new species. Philadelphia, Pa., Proc. Acad., Nat. Sci., **55**, 1903, (261-283).

**Collinge**, W. E. Contributions to a knowledge of the Mollusca of Borneo. J. Malac., London, **10**, 1903, (79-82, pls. VII, VIII).

**Coesman**, M. Faune pliocénique de Karikal (Inde française). J. conchyliol., Paris, **51**, 1903, (105-173, av. 4 pl.).

**Dautsenberg**, Ph. Contribution à la faune malacologique terrestre et d'eau douce des îles Obi et Iolo. *l.c.* (5-20, av. 1 pl. et fig.).

Garlaev, V. P. Evertebratenfauna des Baikal-Sees. (Russ.) St. Peterburg, Trd. Troick.-Kíacht. Otd. Russ. Geogr. Obšč., V, 2, 1902, [1903], (27-48, mit 1 Karte).

**Gatlin**, J. H. Additions to the list of Victorian marine Mollusca. [41 species]. Vict. Nat., Melbourne, **20**, 1903, (89-91).

Hedley, C. Studies on Australian Mollusca. Part VII. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903, (596-619, with 4 pls.).

Jacot, E. Etude sur les mollusques. Messager Suisse Rom., Fribourg, 16, 1903, (132-133, 140-141, 173-174, 188).

Kennard, A. S. and Woodward, B. B. The non-marine mollusca of the River Lea Alluvium at Walthamstow. Strat-(N 2-9053) ford, Essex Nat., 13, 1903, (13-21, 115-116, with figs.).

**Enipovic**, N. M. Zoologische Ergebnisse der russischen Expeditionen nach Spitzbergen. St. Peterburg, Ann. Mus. Zool. Ac. Sc., **8**, 1903, (133-143).

Kormos, T. Paläontologische Mitteilungen. (Ungarisch u. Deutsch) Földt. Közl., Budapest, 33, 1903, (451-462, 496-500, mit Taf. XIII).

Lampingh, G. W. and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., 59, 1903, (234-265, pls. XVI-XVIII, 2 text-figs.).

Lawerrari. Liste des coquilles recueillies au Val-André (Côtes-du-Nord)... J. conchyliol., Paris, 51, 1903, (29-34).

Letaoq, A. L. Liste des mollusquesrecueillis dans les cantons de Freenay et de Saint-Paterne. Mans (le), Bul. soc. agricult., (sér. 2, 30), 38, 1901-1902, (136-143).

Lo Bianco, S. Le pesche abissali eseguite da F. A. Krupp col yacht Puritan nelle adiacenze di Capri ed in altre località del Mediterraneo. Mitt. Zool. Stat. Neapel, Berlin, **16**, 1903, (109-279, mit 3 Taf.).

Locard, A. Description de mollusques nouveaux appartenant à la faune souterraine de France et d'Italie. Bul. Museum, Paris, **1902**, (608-611, av. fig.).

Loomis, F. B. The dwarf fauna of the pyrite layer at the horizon of the Tully limestone in western New York [nn. spp. of Brachiopoda, Mollusca and Crustacea]. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892-920, with 5 pls.).

Loriol, P. de et Girardot, A. Etude sur les mollusques et brachiopodes de l'Oxfordien supérieur et moyen du Jura lédonien. Première partie. Basel, Abh. Schweiz. Pal. Ges., 29, 1902, (76 pp., 5 pls., 2 figs.).

Martens, E. von. Neue Meer-Conchylien aus den Sammlungen der deutschen Tiefsee-Expedition. (Abdr. aus: Berlin, SitzBer. Ges. natf. Freunde, Jg 1902, N. 9.) Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (97-105).

R 2

Godwin-Austen, H. H. On the anatomy of two land molluscs (*Heli*carion (?) willeyana and  $\Pi$  (?) woodworthin ... spp.) from New Britain and Lifu, Loyalty Islands, collected by Dr. Arthur Willey, F.R.S., in 1895–97. London, Proc. Malac. Soc., 5, 1903, (296-299, pl. IX).

**Pace**, S. Critical notes on Hervier's monograph of the *Columbellidae* of New Caledonia with *C. hervieri* nom. nov. J. conchyliol.. Paris, **50**, 1902, (412-422).

Sykes, E. R. On a small collection of marine shells from Surprise Island. J. Malac., London, 10, 1903, (137-138).

**k** ARCTIC.

kd Islands North of Europe and Asia.

**Enipovič** N. M. Zoologische Ergebnisse der russischen Expeditionen nach Spizbergen. Mollusca und Brachiopoda IV. Nachtrag. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (133-143).

## l ATLANTIC.

Martens, [Eduard] von. Die Verbreitung der Meer-Conchylien an den Küsten von West- und Süd-Africa. Berlin, SitzBer. Ges. natf. Freunde, 1903, (188-193).

le South Atlantic.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, **51**, 1903, (39–47).

m INDIAN OCEAN.

### ma Indian Ocean and Islands North of the Equator.

**Etiot**, C. N. E. Nudibranchiata, with some remarks on the families and genera, and description of a new genus *Doridomorpha*. In Fauna and Geography of the Maldive and Laccadivo Archipelagoes, II, 1903, (540-573, pl. XXXII). Melvill, J. C. and Sykes, E. R. Description of Marginella lateritian. sp., from the Andaman Islands. London, Proc. Malac. Soc., 5, 1903, (410, with fig.).

**smith**, E. A. Land and fresh-water mollusca. Fauna of the Maldive and Lacendive Islands, 1, (141-145).

(589-630, pls. XXXV-XXXVI).

mb Indian Ocean and Islands South of the Equator.

Martens, [Edward] von. Ueber einige Schnecken der Cocosinsel. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (59– 62).

Die Meeres-Conchylien der Cocos-Insel. *l.e.* (137-141, 253).

n PACIFIC.

nb SOUTH PACIFIC.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, 51, 1903, (39-47).

Faune malacologique terrestre de l'ile des Cocos dans l'Océan Pacifique. *l.c.* (97-104).

nd SANDWICH ISLANDS.

Ancey, C. F. Etude sur la faune malacologique des îles Sandwich (5e partie). J. conchyliol., Paris, 51, 1903, (295-307, av. 1 pl.).

**Baldwin**, D. D. Descriptions of new species of *Achatinellidae* from the Hawaiian islands. Nautilus, Boston. Mass., 17, 1903, (34-36).

**Dall**, William Healey. A new genus of *Trochidae* [from Hawaii]. [Stylobates aeneus n. gen. and sp.] l.c. (61-62).

## ng GALAPAGOS ISLANDS.

**Dall**, William Healey. Two new mollusks from the west coast of America. [Sigaretus noyesii n. sp. from Colombia, and Tonicia arnheimi n. sp. from Galapagos Islands]. Nautilus, Boston, Mass., **17**, 1903, (37-38).

# AND ford

## 2231 ·

## 2231 TAXONOMY AND SYSTEMATIC.

## GENERAL.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, 51, 1903, (39-47).

**Blanford**, W. T. Notes on Mr. W. M. Daly's collections of land and freshwater Mollusca from Siam. London, Proc. Malac. Soc., 5, 1903, (283-284).

Brady, G. S. Report on dredging and other marine research off the N.E. coast of England in 1901. Newcastle, Trans. Nat. Hist. Soc., 14, 1903, (87– 101).

Brown, L. B. Notes on the land and freshwater shells of Barbados. J. Conch., Leeds, 10, 1903, (266-273).

**Casey**, T. L. Notes on the Conrad collection of fossils, with descriptions of new species. Philadelphia, Pa., Proc. Acad., Nat. Sci., **55**, 1903, (261-283).

**Collinge**, W. E. Contributions to a knowledge of the Mollusca of Borneo. J. Malac., London, **10**, 1903, (79-82, pls. VII, VIII).

**Coesman**, M. Faune pliocénique de Karikal (Inde française). J. conchyliol., Paris, **51**, 1903, (105-173, av. 4 pl.).

**Dautsenberg**, Ph. Contribution à la faune malacologique terrestre et d'eau douce des îles Obi et Iolo. *l.c.* (5-20, av. 1 pl. et fig.).

Garlaev, V. P. Evertebratenfauna des Baikal-Sees. (Russ.) St. Peterburg, Trd. Troick.-Kiacht. Otd. Russ. Geogr. Obšč., V, 2, 1902, [1903], (27-48, mit 1 Karte).

Gatlin, J. H. Additions to the list of Victorian marine Mollusca. [41 species]. Vict. Nat., Melbourne, 20, 1903, (89-91).

Hedley, C. Studies on Australian Mollusca. Part VII. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903, (596-619, with 4 pls.).

Jacot, E. Etude sur les mollusques. Messager Suisse Rom., Fribourg, 16, 1903, (132-133, 140-141, 173-174, 188).

Kennard, A. S. and Woodward, B. B. The non-marine mollusca of the River Les Alluvium at Walthamstow. Strat-(N 2-9053) ford, Essex Nat., **13**, 1903, (13-21, 115-116, with figs.).

**Enipovic**, N. M. Zoologische Ergebnisse der russischen Expeditionen nach Spitzbergen. St. Peterburg, Ann. Mus. Zool. Ac. Sc., **8**, 1903, (133-143).

Kormos, T. Paläontologische Mitteilungen. (Ungarisch u. Deutsch) Földt. Közl., Budapest, **33**, 1903, (451 - • 462, 496-500, mit Taf. XIII).

Lamplugh, G. W. and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., 59, 1903, (234-265, pls. XVI-XVIII, 2 text-figs.).

Lawezzari. Liste des coquilles recueillies au Val-André (Côtes-du-Nord)... J. conchyliol., Paris, 51, 1903, (29-34).

Letacq, A. L. Liste des mollusquesrecueillis dans les cantons de Freenay et de Saint-Paterne. Mans (le), Bul. soc. agricult., (sér. 2, 30), 38, 1901-1902, (136-143).

Lo Bianco, S. Le pesche abissali eseguite da F. A. Krupp col yacht Puritan nelle adiacenze di Capri ed in altre località del Mediterraneo. Mitt. Zool. Stat. Nenpel, Berlin, **16**, 1903, (109-279, mit 3 Taf.).

Locard, A. Description de mollusques nouveaux appartenant à la faune souterraine de France et d'Italie. Bul. Museum, Paris, **1902**, (608-611, av. fig.).

Loomis, F. B. The dwarf fauna of the pyrite layer at the horizon of the Tully limestone in western New York [nn. spp. of Brachiopoda, Mollusca and Crustacea]. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892-920, with 5 pls.).

Loriol, P. de et Girardot, A. Etude sur les mollusques et brachiopodes de l'Oxfordien supérieur et moyen du Jura lédonien. Première partie. Basel, Abb. Schweiz. Pal. Ges., 29, 1902, (76 pp., 5 pls., 2 figs.).

Martens, E. von. Neue Meer-Conchylien aus den Sammlungen der deutschen Tiefsee-Expedition. (Abdr. aus: Berlin, SitzBer. Ges. natf. Freunde, Jg 1902, N. 9.) Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (97-105),

R 2

Godwin-Ansten, H. H. On the anatomy of two land molluscs (*Heli*carion (?) willeyana and H (?) woodworthinn.spp.) from New Britain and Lifu, Loyalty Islands, collected by Dr. Arthur Willey, F.R.S., in 1895-97. London, Proc. Malac. Soc., 5, 1903, (296-299, pl. IX).

**Pace**, S. Critical notes on Hervier's monograph of the *Columbellidae* of New Caledonia with *(?. hervieri* nom. nov. J. conchyliol.. Paris, **50**, 1902, (412-422).

Sykes, E. R. On a small collection of marine shells from Surprise Island. J. Malac., London, 10, 1903, (137-138).

h ARCTIC.

kd Islands North of Europe and Asia.

**Enipovič** N. M. Zoologische Ergebnisse der russischen Expeditionen nach Spizbergen. Mollusca und Brachiopoda IV. Nachtrag. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (133-143).

## l ATLANTIC.

Martens, [Eduard] von. Die Verbreitung der Meer-Conchylien an den Küsten von West- und Süd-Africa. Berlin, SitzBer. Ges. natf. Freunde, 1903, (188-193).

le South Atlantic.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, **51**, 1903, (39–47).

## m INDIAN OCEAN.

#### ma Indian Ocean and Islands North of the Equator.

**Etiot**, C. N. E. Nudibranchiata, with some remarks on the families and genera, and description of a new genus *Doridomorpha*. In Fauna and Geography of the Maldive and Laccadivo Archipelagoes, II, 1903, (540-573, pl. XXXII). Melvill, J. C. and Sykes, E. R. Description of *Marginella lateritia* n. sp., from the Andaman Islands. London, Proc. Malac. Soc., 5, 1903, (410, with fig.).

**Smith**, E. A. Land and fresh-water mollusca. Fauna of the Maldive and Lacendive Islands, 1, (141-145).

(589-630, pls. XXXV-XXXVI).

## mb Indian Ocean and Islands South of the Equator.

Martens, [Edward] von. Ueber einige Schnecken der Cocosinsel. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (59– 62).

Die Meeres-Conchylien der Cocos-Insel. *l.c.* (137-141, 253).

n PACIFIC.

nb SOUTH PACIFIC.

**Ancey**, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, **51**, 1903, (39–47).

terrestre de l'ile des Cocos dans l'Océan Pacifique. 1.c. (97-104).

nd SANDWICH ISLANDS.

Ancey, C. F. Etude sur la faune malacologique des îles Sandwich (5e partie). J. conchyliol., Paris, 51, 1903, (295-307, av. 1 pl.).

**Baldwin**, D. D. Descriptions of new species of *Achatinellidae* from the Hawaiian islands. Nautilus, Boston, Mass., **17**, 1903, (34-36).

**Dall**, William Healey. A new genus of *Trochidae* [from Hawaii]. [Stylobates aeneus n. gen. and sp.] l.c. (61-62).

#### ng GALAPAGOS ISLANDS.

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## 2231 TAXONOMY AND SYSTEMATIC.

## GENERAL.

Ancey, C. F. Nouvelles remarques sur les faunes australes du globe. J. conchyliol., Paris, 51, 1903, (39–47).

**Elanford**, W. T. Notes on Mr. W. M. Daly's collections of land and freshwater Mollusca from Siam. London, Proc. Malac. Soc., **5**, 1903, (283–284).

Brady, G. S. Report on dredging and other marine research off the N.E. coast of England in 1901. Newcastle, Trans. Nat. Hist. Soc., 14, 1903, (87– 101).

Brown, L. B. Notes on the land and freshwater shells of Barbados. J. Conch., Leeds, 10, 1903, (266-273).

**Casey**, T. L. Notes on the Conrad collection of fossils, with descriptions of new species. Philadelphia, Pa., Proc. Acad., Nat. Sci., **55**, 1903, (261-283).

**Collinge**, W. E. Contributions to a knowledge of the Mollusca of Borneo. J. Malac., London, **10**, 1903, (79-82, pls. VII, VIII).

**Coesman**, M. Faune pliocénique de Karikal (Inde française). J. conchyliol., Paris, **51**, 1903, (105-173, av. 4 pl.).

**Dautsenberg**, Ph. Contribution à la faune malacologique terrestre et d'eau douce des îles Obi et Iolo. *l.c.* (5-20, av. 1 pl. et fig.).

Gariaev, V. P. Evertebratenfauna des Baikal-Sees. (Russ.) St. Peterburg, Trd. Troick.-Kiacht. Otd. Russ. Geogr. Obšč., V, 2, 1902, [1903], (27– 48, mit 1 Karte).

Gatliff, J. H. Additions to the list of Victorian marine Mollusca. [41 species]. Vict. Nat., Melbourne, 20, 1903, (89-91).

Hedley, C. Studies on Australian Mollusca. Part VII. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 27, (1902), 1903, (596-619, with 4 pls.).

Jacot, E. Etude sur les mollusques. Messager Suisse Rom., Fribourg, 16, 1903, (132-133, 140-141, 173-174, 188).

Kennard, A. S. and Woodward, B. B. The non-marine mollusca of the River Lea Alluvium at Walthamstow. Strat-(N 2-9053) ford, Essex Nat., 18, 1903, (13-21, 115-116, with figs.).

Knipovic, N. M. Zoologische Ergeonisse der russischen Expeditionen nach Spitzbergen. St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (133-143).

Kormos, T. Paläontologieche Mitteilungen. (Ungarisch u. Deutsch) Földt. Közl., Budapest, **33**, 1903, (451-462, 496-500, mit Taf. XIII).

Lamplugh, G. W. and Walker, J. F. On a fossiliferous band at the top of the Lower Greensand near Leighton Buzzard (Bedfordshire). London, Q. J. Geol. Soc., 59, 1903, (234-265, pls. XVI-XVIII, 2 text-figs.).

Lawerrari. Liste des coquilles recueillies au Val-André (Côtes-du-Nord)... J. conchyliol., Paris, 51, 1903, (29-34).

Letacq, A. L. Liste des mollusquesrecueillis dans les cantons de Fresnay et de Saint-Paterne. Mans (le), Bul. soc. agricult., (sér. 2, 30), 38, 1901-1902, (136-143).

Lo Bianco, S. Le pesche abissali eseguite da F. A. Krupp col yacht Puritan nelle adiacenze di Capri ed in altre località del Mediterraneo. Mitt. Zool. Stat. Neapel, Berlin, **16**, 1903, (109-279, mit 3 Taf.).

Locard, A. Description de mollusques nouveaux appartenant à la faune souterraine de France et d'Italie. Bul. Museum, Paris, **1902**, (608-611, av. fig.).

Loomis, F. B. The dwarf fauna of the pyrite layer at the horizon of the Tully limestone in western New York [nn. spp. of Brachiopoda, Mollusca and Crustacea]. Albany, Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892-920, with 5 pls.).

Loriol, P. de et Girardot, A. Etude aur les mollusques et brachiopodes de l'Oxfordien supérieur et moyen du Jura lédonien. Première partie. Basel, Abh. Schweiz. Pal. Ges., 29, 1902, (76 pp., 5 pls., 2 figs.).

Martens, E. von. Neue Meer-Conchylien aus den Sammlungen der deutschen Tiefsee-Expedition. (Abdr. aus: Berlin, SitzBer. Ges. natf. Freunde, Jg 1902, N. 9.) Frankfurt a. M., NachrBl. D. malakozool. Ges., **35**, 1903, (97-105),

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## TITLES.

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Andreae, Eugen. Inwiefern werden Insekten durch Farbe und Duft der Blumen angezogen? Bot. Centralbl., Jena, Beihefte, 15, 1903, (427-470). [2419]. 1

Bachmetjew, P. Bevorstehende Untersuchungen für Entomologen. Ent. Jahrb., Leipzig, 12, 1903, (103–107). [2423]. 2

Ein Versuch die Frage über die Parthenogenesse der Drohnen mittels der analytisch-statistischen Methode zu lösen. Allg. Zs. Ent., Neudamm, 8, 1903, (37–44). [4611 4631 2423].

Banks, Nathan. Principal insects liable to be distributed on nursery stock. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 34, 1902, (46). 23 cm. [0060 2403]. 4

An index to bulletins Nos. 1-30 (New Series) (1896-1901) of the division of entomology. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.) No. **36**, 1902, (64). 25 cm. [0030 2403]. 5

Barrett. Habits and mimicry. Ent. Mag., London, **39**, 1903, (170). [2419].

Bauer, Victor. Zur inneren Metamorphose des Centralnervensystems der Insecten. (Vorläuf. Mitt.) Zool. Anz., Leipzig, 26, 1903, (655-656). [2415]. 7

Bergroth, E. v. Semenov, A. P.

**Blaisdell**, F. E. The three Californias. [Three faunal areas of California.] Philadelphia, Pa., Ent. 'News Acad. Nat. Sci., **13**, 1902; (173-175). [0227 gi 2427 gi]. 8

Börner, Carl. Kritische Bemerkungen über einige vergleichend-morphologische Untersuchungen K. W. Verhoeff's. Zool. Anz., Leipzig, 29, 1903, (290-315). [2407]. 9

Ueber die Gliederung der Laufbeine der Atelocerata Heymons. Berlin, SitzBer. Ges. natf. Freunde, 1902, (205-229, mit 2 Taf.). [2407]. 10

Die Mundgliedmassen der Opisthogoneata. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (58-74, mit Taf.). [2407]. 11

\_\_\_\_\_ Die Beingliederung der Arthropoden. (3. Mitt. Die Cheliceraten, Pantopoden und Crustaceen betr.). Berlin, SitzBer. Ges. natf. Freunde, **1903**, (292-341, mit 7 Taf.). [2407]. 12

Bradley, J. Chester. Vernacular names again. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (26). [0070 2403]. 13

Britton, W. E. First report of the state entomologist. Agric. Exp. Sta., Connecticut, New Haven, Rep., 1901, Pt. 3, 1901, (227-278, with 11 pls., 2 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1902, (63). [2403]. 14

Brues, Charles Thomas v. Melander, Axel Leonard.

Burkill, I. H. v. Willis, J. E.

**C[alvert]**, P. P. Five years' observations and experiments on the bionomics of South African insects by Guy A. Marshall. [Review] Philadelphia, Pa., Ent. News. Acad. Nat. Sci., **14**, 1903, (91-96). [2419 2427 fg]. 15

Carpenter, G. H. On the relationships between the classes of Arthropoda. 
 Dublin, Proc. R. Irish Acad., 24, 1903,

 (320-360);
 [abstract], London, J. R.

 Microsc. Soc., 1904, (178).
 [0231 0207

 2431 3007 2807 2831].
 16

**Caudell**, A. N. Notes on Colorado insects. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (35-38). [0060 2427 gi]. 17

**Chapman**. [Imago produced by a parasitised lava.] London, Proc. Ent. Soc., **1903**, (31). [2419]. 18

**Chittenden**, F[rank] H[urlbut]. Some insects injurious to the violet, rose and other ornamental plants: A collection of articles dealing with insects of this class. [Rev. Ed.] Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **27**, 1901, (114, with pl.). [0060 2419]. 19

Insects and the weather during the season of 1000. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (63-75). [2411]. 20

Some insects injurious to vegetable crops. A series of articles dealing with insects of this class. Washington, D.C., Bull. U. S. Dept. Agric. Div. Eut., (N. Ser.), No. 33, 1902, (117). [0060 2403]. 21

Chobaut, A. Les insectes du biscuit de troupe. Moyen de préservation. Paris, C.-R. cong. soc. sav. en 1902, 1903, (102-107). [2419 0060]. 22

Čičerin, T. v. Semenov, A. P.

**Claybrooke**, J. de. Note sur quelques insectes du Tonkin provenant des environs d'Hanoï. Bul. Muséum, Paris, **1903**, (132–133). [2431 2427 ed]. 23

**Comstock**, G. F. A list of Lepidoptera found in the Adirondack Mts. [with list of other insects]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (197-200). [2427 4427 gg]. 24

**Cook**, Melville Thurston. Galls and insects producing them. Parts 3, 4 and 5. Ohio Nat., Columbus, 3, 1903, (419-436); [reprint], Columbus, Ohio, Univ. Bull., (Ser. 7), No. 20. 23.2 cm. [2419]. 25

Coquillett, D. W. Some insects of the Hudsonian zone in New Mexico. Diptera. Psyche, Cambridge, Mass., 9, 1901, (149-150). [4227 gi 4231 2427 gi]. 26 **Grevecceur**, F. F. Some entomological notes [for collectors]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (47-50). [2403]. 27

Darwin, F. A Naturalist's Calendar kept at Swaffham Bulbeck, Cambridgeshire, by Leonard Blomefield (formerly Jenyns). Cambridge, 1903, (xviii+84). [Review], Nature, London, **68**, 1903, (389). [2403 0030]. 28

Davis, K. C. v. Needham, J. G.

Deegener, P[aul]. Zur postembryonalen Entwicklung des Insectendarms. Zool. Anz., Leipzig, 26, 1903, (547-550). [2415]. 29

Deventer, W. van. Insekteneier, welche oft auf Zuckerrohr angetroffen werden. (Holländisch) Arch. Java Suiker., Soersbaia, 11, 1903 (437-446, 2 Taf.). [2419 243] 3019 3031], 30

Diederichs, K. Die Photographie lebender Insekten. Apollo, Dresden, 9, 1903, (74-77); Eutgegnung darauf v. Arth. Glaser, *l.c.* (127-128). [2403]

Distant, W. L. Animal sense perceptions. Zoologist, London, (Ser. 4), 6, 1902, (161–178). [2419 6019 5819 4419]. 32

Dominikiewics, Mieczysław. Les chenilles des insectes comme parasites accidentels de l'homme. D'après le Dr Erich Peiper. (Polonais) Zdrowie, Warszawa, 19, 1903, (1070–1092). [2419]. 33

Doncaster. Varieties confined to one sex. Ent. Rec., London, 15, 1903, (237). [2423]. 34

Duboscq, O. v. Léger, L.

Enderlein, Günther. Die Landarthropoden der von der Tiefsee-Expedition besuchten antarktischen Inseln. I. Die Insekten und Arachnoideen der Kerguelen. II. Die Landarthropoden der antarktischen Inseln St. Paul und Neu-Amsterdam. (Wissenshaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 3, Lfg 7.) Jena, 1903, (197-270, mit 10 Taf.). 35 cm. [2427 oc mb 2431 3631 4231 4431]. 35

**Face**, H[enri]. Sur quelques insectes nuisibles au printemps. Insectes nuisibles aux arbres fruitiers. Chron. Agric., Lausanne, **15**, 1902, (189–195, 297–305, 449–459, 521–532, av. 18 figs.). [2419]. **36**  **Pett.** E[phraim] P[orter]. Observations on forest and shade tree insects in New York State. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (63-68). [2403]. 39

Aquatic insects of the Saranac region. New York, Forest Fish. Game Com. Rep. Albany, **1900**, 1901, (499-531, with col. pl.). [2427 gg]. 40

Fernald, H[enry] 'I[orsey]. How shall we arrange our collections? Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (108-110). [2403]. 41

- v. Fernald, C. H.

Fernald, C. H. and Fernald, H[enry] T[orsey]. [Insects prevalent in Massachusetts in 1901]. Agric. Exp. Sta., Massachusetts, Amherst, Rep., 1901, (86-88). [2427 gg]. 42

**Pletcher**, James. Injurious insects of the year in Canada. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (78–83). [2403]. **43** 

**Priese**, H. Neue Zeiss - Lupen. Allg. Zs. Ent., Neudamm, **8**, 1903, (267– 268). [2403]. 44

**Pröhlich.** Ueber das Vorkommen von Pachytylus cinerascens Fieb. und anderer Insekten bei Kahl am Main. Berliner ent. Za., **48**, 1003, (146-148). [2427 de 3831]. 45

Froggatt, Walter W. Insects that damage wheat and other foodstuffs. Agric. Gaz., Sydney, N.S.W., 14, 1903, (481-492, 1 pl.). [2419]. 46

Insectarium notes, and insects found about the Hawkesbury College. Agric. Gaz., Sydney, N.S.W., 14, 1903, (1019-1027, with 2 pls. and 1 text fig.): [2419]. 47

**Pry.** Sir E. [Letter] on natural selection. Nature, London, **67**, 1903, (414). Cf. Galton, *ib.*, (343). [0223 2423]. 48

Garman, H[arrison]. Enemies of cucumbers and related plants. Agric. Exp. Sta., Kentucky, Lexington, Bull. No. 91, 1901, (3-48, with 3 pls., 10 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1901, (368-369). [2403]. 49

Gerstaecker, A. Arthropoda. Fortges. v. C[arl] Verhoeff. (H. G. Bronn's Klassen u. Ordnungen des Thier-Reichs, Bd 5, Abt. 2, Lfg 63-68). Leipzig (C. F. Winter), 1902-1903, (1-76, mit Taf.). 26 cm. 9 M. [2403]. 50

**Giard**, Alfred. Les idées de Lamarck sur la métamorphose. Paris, C.-R. soc. biol., **55**, 1903, (8-9). [0010 0215 2415]. 51

Pourquoi les insectes de nuit sont-ils, de préférence, attirés par la lumière artificielle ?--Réponse à la question de M. Guilhard. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (202-203). [2419]. 52

**Gibson**, William Hamilton. Blossom hosts and insect guests: how the heath family, the bluets, the figworts, the orchids and similar wild flowers welcome the bee, the fly, the wasp, the moth and other faithful insects; edited by Eleanor E. Davie; illustrated by the Author. New York (Newson & Co.), [1901], (XIX + 197, with front., illustr.). 20 cm. [2419]. 53

**Gillette**, C. P. Notes on some Colorado insects. Washington, D.C., Bull. U. S. Dept., Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (51-55). [0060 2427 gi]. 54

Gossard, H. A. Report of the entomologist. Agric. Exp. Sta. Florida, Lake City, Rep., 1901, (58-75); [review], Washington, D.C., U. S. Dept. Agric. Off., Exp. Sta. Rec., 13, 1902, (1062). [2403]. 55

Gross, J. Untersuchungen über die Histologie des Insectenovariums. Zool. Jahrb., Jena, Abt. f. Anat., 18, 1903, (71-186, mit 9 Taf.). [2407 2415]. 56

Grünberg, K. Die Homologie des Trochanters bei Chilopoden und Insekten, sowie über die Bedeutung secundärer Einschnürungen am Trochanter verschiedener Insekten. Berlin, Sitz-Ber. Ges. natf. Freunde, **1903**, (74-82, mit 1 Taf.). [2407]. 57

Haensch, Rich[ard]. Kurzer Bericht über die entomolog. Ergebnisse meiner Ecuador-Reise. Berliner ent. Zs., 48, 1903, (149-156). [2427 he]. 58 Hebard, Morgan. A few captures made at Miami, Florida. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (253). [2427 gh]. 59

Notes on the collecting around Thomasville, Georgia. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (260-261). [2427 gh]. CO

Hesse, Edmond. Sur la présence de Microsporidies du genre *Theloania* chez les insectes. Paris, C.-R. Acad. sci., **137**, 1903, (418–419). [2419]. 61

Heycke, E. Wie die Insekten sehen. Allg. Zs. Ent., Neudamm, 8, 1903, (206– 208). [2411]. 62

Hofer, J. Beobachtungen und Versuche über Bekämpfung tierischer Feinde der Obstbäume, Weinreben und einiger Gartenpflanzen. Wädensweil, Jahresber. Versuchstation, **1902**, (108-121). [2419]. 65

**Holmgren**, Nils. Ueber vivipare Insecten. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (431-468). [2407 2419]. 67

Holtz, Martin. Reiseerinnerungen aus dem Peloponnes. Insektenbörse, Leipzig, 20, 1903, (4-5, 12, 28, 35-36, 43, 50-51, 67-68, 75-76, 83-85, 92-93). [2427 dl]. 68

Hopkins, A. D. Insect enemies of the pine in the Black Hills forest reserve. An account of results of special investigations, with recommendations for preventing losses [new Dendroctonus and Tomicus]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 32, 1902, (24, with pl.). 23 cm. [2403 2419 4831]. 69

Horváth, Geza. Die Insectenfauna der kochsalz- und sodahaltigen Gebiete Ungarns. (Hung.) Állatt Közlem., Budapist, 2, 1903, (206-211). [2427 dk]. 70

**Houghton**, C. O. v. MacGillivray, Alex[ander] D[yer].

Hutton and Poulton. Pseudomimicry. Nature, London, 67, 1903, (439). [2419]. 71 Imhof, O. Une étude comparative sur les antennes et les ailes des insectes. Aarau, Verh. Schweiz. Natf. Ges., 85, 1902, (81); Arch. Sci. Phys., Genève, (Ser. 4), 14, 1902, (556-558). [2407]. 72

Jakovlev, V. v. Semenov, A. P.

Johannsen, O. A. v. Needham, J. G.

Kellogg, Vernon L[yman]. Some insect reflexes. Science, New York, N.Y., (N. Ser.), 18, 1903, (693-696). [2419]. 73

**Kirkland**, A. H. Notes on four imported pests. [Porthetria dispar, Euproctis chrysorrhaea, Galerucella lutcola, and Cryptorhynchus lapathi in New England]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (93-97). [2403]. 74

Kokujev, N. v. Semenov, A. P.

Kolbe, H. J. Ueber vorschnelle Entwickelung (Prothetelie) von Puppenund Imago-Organen bei Lepidopterenund Coleopteren-Larven, nebst Beschreibung einer abnormen Raupe des Kiefernspinners, Dendrolimus pini L. Allg. Zs. Ent., Neudamm, 8, 1903, (1-9, 25-30). [2415 4431]. 75

Koningeberger, J[acob] C[hristiaan]. Insectenkrunkheiten der Reis, Jalack, Thee und anderer Kulturpflanzen. (Holländisch) Buitenzorg, Meded. Plant., 64, 1903, (11–109, 5 Taf.). [2403]. 76

Kośsvnikov, G. A. Ueber den Fangapparat Photeklektor. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (CLXI-CLXVIII). [2403]. 77

**Kraatz**, G. [Paul Weise<sup>†</sup>]. D. ent. Zs., Berlin, **1903**, (174). [0010 2403]. 78

Krassiliščik, I. M. Zur Frage über die Einwirkung der Gifte auf die Insecten. (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, IV, No. 3, 1903, (25). [2411 2423]. 79

Krüger, O. Die schädlichsten Forstinsekten auf der Kiefer und Schutzmassregeln gegen diese Insekten. Auf Grund vierzigjähriger Tätigkeit in Kiefernrevieren vom rein praktischen Standpunkte aus betrachtet. 2. verb. Aufl. Dessau (C. Dünnhaupt), 1903, (44). 23 cm. 1 M. [2419]. 80

Krulikovskij, L. v. Semenov, A. P.

1

Kulagin, Nikolaj. Berichte über die russische zoologische Litteratur. Lief. V. Bericht über Insecten für d. J. 1897. (Russ.) Moskva, 1902, (1-50). 34 cm. [2403]. 81

Kusnecov, N. I. Nouvelle méthode de combattre les insectes nuisibles (Russ.) Rev. Russ. Ent., Jaroslavlí, 3, 1903, (281-283). [2403]. 82

--- r. Semenov, A. P.

Lange, C. Fünfter Beitrag zur Insektenfauna des oberen Erzgebirges. Annaberg, Ber. Ver. Natk., 11, (1898– 1903), 1903, (23–33). [2427 dc]. 83

Lankester, E. Ray. Catalogue of the books, manuscripts, maps and drawings in the British Museum Natural History. [With an introduction by B. B. Woodward, who is responsible for the preparation of the work. To be completed in about 4 volumes]. Vol. i. A-D. London, 1903, (viii + 500). 4to. [0060 2403]. 84

Lóger, L. et Duboscq, O. Les grégarines et l'épithélium intestinal chez les Trachéates. Arch. parasit., Paris, 6, 1902, (377-473, av. fig. et 5 pl.). [0419 0431 2419 3419]. 85

Lendenfeld, R[obert] von. Demonstration von Photographien fliegender Insekten. Verh. Ges. D. Natf., Leipzig, 74, (1902), II, 1, 1903, (157-159). [2411]. 86

Lowis, E. J. [The oak galls and gall insects of Epping Forest. Pts. I and 11.] Stratford, Essex Nat., 12, 1902, (267-268); 13, 1903, (138-160). [2419]. 87

Loeb, Leo. On the coagulation of the blood of some Arthropods and on the influence of pressure and traction on the protoplasm of the blood cells of Arthropods. Wocd's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (301-318). [2411]. 88

Ueber die Bedeutung der Blutkörperchen für die Blutgerinnung und die Entzündung einiger Arthropoden und über mechanische Einwirkungen auf das Protoplasma dieser Zellen. Arch. path. anat., Berlin, **173**, 1903, (35-112). [2411].

Longin Navas. Espèces cosmopolites et localisées [à propos d'une question de M. G. de Rocquigny Adanson, Feuille jeunes natural., p. 85]. Feuille jeunes (s 2-0053) natural., Paris, (sér. 4), **33**, 1903, (108). [2427]. 90

Lowe, E. Insects and flowers. Nature, London, 67, 1903, (369). [2419]. 91

Lowe, V. H. Miscellaneous notes on injurious insects, 2. Agric. Exp. Sta., New York, (State station), Geneva, Bull. No. 212, 1902, (25, with 9 pls.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (62– 63). [2403]. 92

Lucas, Robert. [Bericht über die wissenschaftl. Leistungen im Gebiete der Hymenoptera, Lepidoptera, Trichoptera, Panorpatae, Neuroptera, Rhynchota, Mallophaga, Thysanoptera, Corrodentia, Orthoptera, Plecoptera, Odonata, Agnatha, Dermatoptera, Apterygogenea, Myriopoda, Arachnida, Prototracheata, [während d. J. 1899]. Arch. Natg., Berlin, 66, Bd 2, H. 2, 1900, [1903]; D. ent. Zs., Berlin, 1900, H. 3, 1900, [1903], (369-820, 881-1244). [2403]. 93

Ludwig, F. Vorschläge zur Herstellung biologischer Insektensammlungen. Insektenbörse, Leipzig, 20, 1903, (308). [2403]. 94

McCook, Henry Christopher. Insects and civilization. Harper's Monthly Magazine, New York and London, 105, 1902, (79-82). [2403]. 96

McElfrenh, F. M. A method of collecting [on snow fields]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (316-319). [2403]. 97

**MacGillivray**, A'ex[ander] D[yer] and **Houghton**, C.O. A list of insects taken in the Adirondack mount..ins, New York. Philadelphia, Pa., Ent. News. Acad. Nat. Sci., **13**, 1902, (247-253); **14**, 1903, (12-13, 262-265). [4231 2427 gg 4227 gg 4827 gg] 98

- v. Needham, J. G.

Marlatt, C[harles] L[ester]. Applied entomology in Japan. Washington, D.C., Bull. U. S. Dept. Agric. Div. Fat., No. 40, 1903, (56-63, with pl.). [2427 cc 2403]. 99

Masarakij, V. V. Frühlingsexcursionen in der Umgebung St. Peterburg 1901. Der Frühling 1901 im Gouv. St. Peterburg. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., 3d, 1903, (XXXV-XLIV). [2423]. 100 . Melander, Axel Leonard. Some additions to the carboniferous terrestrial Arthropod fauna of Illinois. Chicago, Ill., J. Geol. Univ. Chic., **11**, 1903, (178-198, with pl.). [2427 gg 3031 3831]. 101

and Brues, Charles Thomas. Guests and parasites of the burnowing bee *Halictus* [un. spp. of Diptera and Hymenoptera]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **5**, 1903, (1-27, with text fig.). [2419 4231 4619 4631]. 102

Melichar, L. Eine entomologische Exkursion nach Bosnien und Herzegowina. Ent. Jahrb., Leipzig, **12**, 1903, (91-102). [2427 dk]. 103

Mercer, W. A few insects and plant diseases of special interest to farmers. Columbus, Ohio, Univ. Bull. St. Univ., (N. Ser.), **3**, 1901, (126-138). [2419]. 104

Mercier, L. Moyens de défense de quelques insectes. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (107-108). [2419]. 105

Mokrzeckij, S. A. Verzeichnis der Insecten und anderer wirbelloser Thiere, welche im europäischen Russland und im Kaukasus an Weinreben gefunden wurden. (Russ.) Ausg d. Minist. d. Landen. (Russ.) Ausg d. Minist. d. Landwirthschaft u. d. Staatsdomänen. St. Peterburg, 1903, (39). 23 cm. [1419 2419 2427]. 106

Morley, Claude. Entomology [leing Chap. XV, pp. 233-242, The Norfolk Broads]. London, 1903. 8vo. [2403]. 107

Murtfeldt, Mary E. Drought, heat, and insect life [in the Mississippi Valley]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (97-90). [2411 2427 gf]. 108

Needham, James G., MacGillivray, Alex. D., Johannsen, O. A. and Davis, K. C. Aquatic insects in New York state. A study conducted at the entomologic field station, Ithaca, N.Y., under the direction of Ephraim Porter Felt. Albany, Univ. N. Y., Bull. St. Mus., No. 68, (Entomology 18 and University Bulletin 295), 1903, ([197]-517, with pl.). [2427 gg]. 109

Newell, Wilmon v. Webster, F. M.

**Oestland**, O. W. I.arva vice nymph. Philadelphin, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (253-255). [2415]. 110 **Osborn**, Herbert. Insects of the senson in Ohio. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (45-47). [2427 gg]. 111

Octen Sacken, [Karl] R[obert Romanovich] Baron v[on]. Record of my life work in entomology. Cambridge, Mass., 1903, (V111 + 204, with 2 portr. facsim.). 24.5 cm. [2403]. 112

Packard, Alpheus S. Hints on the classification of the Arthropoda: the group a polyphyletic one. Philadelphia, Pa., Proc. Amer. Phil. Soc., 42, 1903, (142-161). [2431]. 113

Color-preference in insects. New York, N.Y., J. Ent. Soc., 11, 1903, (132-137). [2419]. 114

Patten, W[illiam]. On the structure of the Pteraspidae and Cephalaspidae. [With bibliography.] Amer. Nat., Boston, Mass., **37**, 1903, (837-805, pl.). [2407 2423 5207 5223]. 115

Pórez, Charles. Contribution à l'étude des métamorphoses. Bul. sci. France-Belgique, Paris, **37**, 1902, (195– 433, av. pl.); Thèse Fac. sci. Lille, 1902, (240, av. **3** pls.). 25 cm. [2415–2431]. 116

**Péringuey**, I. Some phases of insect life in South Africa. Phonation in insects. Cape Town, Trans. S. Afric. Phil. Soc., **14**, 1903, (l-VIII). [2419 2427 fg]. 117

Pettit, R. H. Some insects of the year 1901. Agric. Exp. Sta., Michigan, Agricultural College, Bull. No. 200. 1902, (179-212, with 21 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1002, (267-268). [2403 2427 gg]. 118

Peyerimhoff, P. de. Sur l'état de la systematique en entomologie, principalemente chez les coléopteres. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903. (37-42). [2431 4831]. 119

Sur la méthode dans les recherches de phylogénie entomologique. Feuille jeunes natural., l'aris, (sér. 4), **33**, (89-95). [2423 2431 4823 4831]. 120 La larve des insectes métabola et les idées de Fr. Brauer. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (21-26). [2431 2415]. 121

Pomerancev, D. r. Semenov, A. P.

**Ports**, A. La funzione epatica negli insetti. Nota preventiva. Anat. Anz., Jena, **22**, 1903, (447-448). [2407 2411]. 122

epatica negli insetti. Anat. Anz., Jena, **24**, 1903, (97-111). [2411]. 123

Poulton, E. B. What is a species? President's Address. London, Proc. Ent. Soc., 1903, (lxxvii-cxvi). [0223 2403]. 124

Value of transparent spaces. London, Proc. Ent. Soc., 1903, (26-28). [2419]. 124A

A brief discussion of A. H. Thayer's suggestions as to the meaning of colour and pattern in insect bionomics. London, Trans. Ent. Soc., **1903**, (570-575). [2419]. 125

### v. Hutton.

Pritchett, Annie H. Some experiments in feeding lizards with protectively coloured insects. [With bibliography]. [Contribution from the zoological laboratory of the university of Texas. No. 52.] Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (271-287). [0219 2419 5619 5631]. 126

Quaintance, A. L. Entomological notes from Maryland. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (47-50). [2427 gh]. 127

**Bainbow**, W. J. The Arthropoda. Notes on the Zoology of Paanopa or Ocean Island and Nauru or Pleasant Island. Sydney, N.S.W., Rec. Austr. Mus., **5**, 1903, (5-7). [2427 *ib*]. 128

Bedeke, H[einrich] C[arl]. Plankton-Untersuchungen im "Zwanenwater" bei ('allantscog. (Holländisch) Haarlem, Nat. Verb. Holl. Maatsch. Wet., (Verz. 3), 5, 1903, (1-42, mit 5 Tuf.). [2419 2431]. 129

**Behberg**, A. Schädliche Insekten Westpreussens und deren Bekämpfung. Danzig, Schr. natf. Ges., (N. F.), **10**, H. **4**, 1902, (64-81). [2427 de 2419].

130

**Benter**, Enzio. Beiträge zu einer statistischen Untersuchung über die Ursachen der Weissährigkeit an den Wiesengräsern in Finland. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 Juillet 1902, **1903**, VI Section, (20-26). [2419]. 131 (n.2.052)

(N 2-9053)

Russkij, M. r. Semenov, A. P.

307

**Sainte-Claire Deville**, J. Exploration entomologique des grottes des Alpes-Maritimes. Ann. soc. ent., Paris, **71**, 1902, [1903]. (695-70), av. fig.). [2431 2631 2427 df 4831 3031 3431 3831 3631]. 133

Sambon, L. W. Principles determining the geographical distribution of disease. J. trop. Med., London, 5, 1903. (101-106). [0060 0227 2419]. 134

**Sanderson,** E[zra] D[wight]. Report of the entomologist. [Including notes ou Aphie and Euzophera semifuneralis. Agric. Exp. Sta., Delaware, Newark, Rep., **1901**, (127-199, with 6 pls., 16figs.]; [review]. Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1002, (268-269). [2103 2427 gh. 4031 4431]. 135

Schenkling, C. Die Spinnkunst der Insekten. Insektenbörse, Leipzig, 20, 1903, (332-333). [2419]. 136

Schiller-Tietz. Ameisen, Blattläuseund Honigtau an Kulturpflanzen. Schweiz.-Bauer, Bern, 56, 1902, No. 70, (5). [2419]. 137

Schindler, Anton K. Die Metamorphoso der Insekten. Zs. Natw., Stuttgart, 75, (1902), 1903, (341-356). [2415]. 138

Schnitzler, Franz. Ueber lebende Fremdkörper im Ohre. Diss. München (Druck v. C. Wolf & S.), 1901, (31). 21 cm. [2419]. 139

Schwarz, E. A. A letter from Cuba [containing entomological notes]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (286-289). [2427 hi]. 140

**Seidlitz**, G[eorg]. Bericht über die wissenschaftlichen Leistungen im Gebiete der Entomologie während des Jahres 1901. Allgemeines. Arch. Natg., Berlin, **69**, Bd 2, If. 2, 1902 [1903], (1-44) = D. ent. Zs., Berlin, **1902**, H. 3, [1903], (1-44). [2403]. 141

Sellards, E. H. Discovery of fossil insects in the Permian of Kansas. Amer. J. Sci., New Haven, Conn., (Ser. 4), 16, 1903, (323-324). [2427 gi]. 142

x 2

Semenov, A. P., Adelung, N., Bergroth, E., Gičerin, T., Jakovlev, V., Kokujev, N., Krulikovskij, L., Kusnecov, N., Pomerancev, D., Russkij, M. and Skorikov, A. Revue de la bibliographie, concernant la faune russe. (Russ.) Rev. Russ. Ent., Jaroslavil, 3, 1903, (46-67 + 117-152 + 233-280 + 314-343 + 405-448). [2403]. 143

**Sharp**, D. Insecta. Zool. Rec. London, **39**, 1902, No. xiii, (313). [2403]. 145

**Sherman**, Franklin, *jun*, Injurious insects. Raleigh N.C., Bull. St. Brd. Agric., 24, 1903, (3-29). [2419 2427 gh]. 146

Skinner, Henry. A list of the insects of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (35–117). [2403 2427 gi]. 147

Skorikov, A. v. Semenov, A. P.

**Slosson**, Annie Trumbull. Additional list of insecta taken in Alpine region of Mt. Washington [nn. spp. in Parasitica]. Philadelphia, Pa., Ent. News. Acad. Nat. Sci., **13**, 1902, (319–321). 2427 gg **4631** 4831]. 148

**Smith**, G. The temperature of insects. Zoologist, London, (Ser. 4), 6, 1902, (287-293). [2411]. 149

**Smith**, J. B. Report of the entomologist. Agric. Exp. Sta., New Jersey, New Brunswick, Rep., **1901**, (463–587, with .36 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., **14**, 1903, (586–587). [2403]. 150

**Spaulding**, Perley. The relation of insects to fungi. Plant World, Washington, D.C., **6**, 1903, (182–184). [2419]. 151

**Standfuss, M.** Zur Frage der Unterscheidung der Arten bei den Insekten. Ent. Zs., Guben, **16**, (1902–1903), 1902, (1–2). [2431]. 152

**Stebbing**, E P. Insect pests of the sugar cane in India. Calcutta, Ind. Mus. Notes, **5**, 1903, (64-91). [2419].

152

Departmental notes on insects that affect forestry. No. 2. Calcutta, 1903, (V-VII + 151-334, with 13 pls.). 25 cm. [2419]. 1528

. Sutherland, Harvey. The book of bugs. New York and London (Street &

Smith), [1902], (233, with illustr.). [2403]. 153

Tarnani, I. K. Insecten welche dem Obstbau und der Gemüsegärtnerei in den Gouvernments des Zarenthums Polen schädlich werden und die Mittel zur Bekämpfung dieser Insecten. (Russ.) Varsäva, 1903, (138, mit 135 Fig.). 25 cm. [2419 2427 db]. 154

Thayer, A. H. Protective coloration in its relation to mimicry, common warning colours, and sexual selection. London, Trans. ent. Soc., **1903**, (553– 569). [2419]. **154**A

Theobald, F. V. British Museum (Natural History). First report on Economic Zoology. London, 1903, (xxiv + 192). 8vo. Includes "a classification of animals from the point of view of Economic Zoology," by E. Ray Lankester, (xi-xxiv). [0060 2403]. 155

Thibault, J. Mes chasses entomologiques en 1902. Elbeuf, Bul. soc. étud. sci. nat., 21, (1902), 1903, (37-42). [2427 df 2431]. 156

Tower, William Lawrence. The development of colours and colour patterns of Coleoptera, with observations upon the development of colour in other orders of insects [with bibliography] Chicago, Ill., Dec., Pub. Univ. Chic., (Ser. 1), 10, 1903, [[31]-40, with pl.) [2407 4807]. 157

Ulrich, Carl Jost. A contribution to the subterranean fauna of Texas [Arthropoda with nn. spp. in Crustacea, Arachnida and Aptera]. Contributions from the Zoological Laboratory of the Indian University, No. **34**, in Lincoln, Nebr., Trans. Amer. Microsc. Soc., **23**, 1901, [1902], (83-100, with pl.). [0219 2427 gi 2631 3031 3631]. 158

Van Hauwaert, P. De insectenwereld met illustraties. [Die Insektenwelt.] Gent (I. Vanderpoorten), 1903, (64, av. figs.). 8vo. fr. 0.75. [2403]. 159

Van Kerchove, Em. De la nécessité de vulgariser l'entomologie en Belgique. Ing. agric., Gembloux, 1901, (480-483). [2403]. 160

Vasiljev, I. V. Ueber Insecten, welche 1900 im Gouv. Charkov den Kiefern schadeten (Vorläufige Mitteilung). Russ. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (VII-X). [2419]. 161 Verhoeff, Karl W. Ueber Tracheaten-Beine. 2. Aufsatz : Trochanter und Praefemur. Zool. Anz., Leipzig, 28, 1903, (205-214). [2407]. 162

Tracheaten - Beine. Aufsatz 3: Progoneata. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (82–103, mit Taf.). [2407]. 163

Ueber Tracheaten-Beine. Aufsatz 4 u. 5: Chilopoda und Hexapoda. Halle, Nova Acta Leop., **81**, 1903, (209-250, mit 4 Taf.). [2407]. 165

Beiträge zur vergleichenden Morphologie des Thorax der Insekten mit Berücksichtigung der Chilopoden. Halle, Nova Acta Leop., **81**, 1902, (63-110, mit 7 Taf.). [2407]. 164

Ueber die Endsegmente des Körpers der Chilopoden, Dermapteren und Japygiden und zur Systematik von Japyz. Halle, Nova Acta Leop., 81, 1903, (257-258, mit 2 Taf.). [2407 3631]. 166

Ueber die Interkalarsegmente der Chilopoden, mit Berücksichtigung der Zwischensegmente der Insekten. Arch. Natg., Berlin, **69**, Bd 1, 1903, (427-441, mit 1 Taf.). [3407 2407]. 167

Viehmeyer, H. Kleinere Beiträge zur Biologie einiger Ameisengäste. Allg. Zs. Ent., Neudamm, 8, 1903, (15-17). [2419 4619 4631]. 168

Webster, F. M. Some insect notes of the year. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (93-96). [2403 2427 gg]. 169

Some insects attacking the stems of growing wheat, rye, barley and oats, with methods of prevention and suppression. [Life histories and descriptions of species of *Isosoma*, *Micromyza* and *Oscinis*.] Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 42, 1903, (62). 23 cm. [2419 4619]. 169A

and Newell, Wilmon. Insects of the year in Ohio. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (84–90). [2403 2427 gg]. 170

Weed, C[larence] M[oores]. Insect record for 1900. Agric. Exp. Sta., New Hampshire, Durham, Bull. No. 81, 1901, (9-22, with 11 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1902, (667). [2403 2427 gg]. 171

Weed, C[larence] M[oores]. Insect record for 1901. Agric. Exp. Sta., New Hampshire, Durham, Bull. No. 90, 1902, (29-44, with 12 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1902, (268). [2403 2427 gg]. 172.

Notes from New Hampshire. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (50-52). [2403 2427 gg]. 173

Wickham, H[enry] F[rederick]. San Francisco; a reminiscence [collections of insects]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (123-125). [2403]. 174

Willis, J. C. and Burkill, I. H. Flowers and insects in Great Britain. Part II. Observations on the Natural Orders Dipsaceae, Plumbaginacae, Compositae, Umbelliferae, and Cornaceae made in the Clova mountains. Ann. Bot., Oxford, 17, 1903, (313-340). Part III. Observations of the most specialized flowers of the Clova mountains, ib., (539-570). [2419]. 175

Notes on the anthophilous insect fauna of the Clova mountains. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (29-37, 99-102). [2419 4419 4427 de 4627 de 4631]. 175a

Wytaman, P. [et al.] Genera insectorum, publiés. Fascicules I-XII. Bruxelles (P. Wytsman), 1902. 4to. [2403]. 176

# 2403 COMPREHENSIVE AND GENERAL WORKS.

#### GENERAL.

Bericht über die wissenschaftlichen Leistungen im Gebiete der Entomologie während des Jahres 1899. Zweite Hälfte: Insecta (Schluss), Myriopoda, Arachnida, Protracheata v. Robert Lucas u. Benno Wandolleck. Arch. Natg., Berlin, **66**, Bd 2, H. 2, 1900, [1903], (369–1244); D. ent. Zs., Berlin, **1900**, H. 3, 1900, [1903], (369–1244); separat: Berlin (Nicolai), 1903.

Bericht über die wissenschaftlichen Leistungen im Gebiete der Entomologie während des Jahres 1901. Erste Berliner entomologische Zeitschrift. Inhaltsübersicht über die einzelnen Jahrgänge, 1881-1890. Zusammengestellt v. W. Roepke. Berliner ent. Zs., 48, 1903, Beilage, (1-26).

Entomologisches Jahrbuch. Jg 12. Kalender für alle Insekten-Sammler auf das Jahr 1903. Hrsg. v. Oskar Krancher. Leipzig (Frankenstein u. Wagner), 1903, (VIII + 256). 16 cm. Geb. 1,60 M.

Nachtrag I zum Bücher-Verzeichnis der Bibliothek des entomologischen Vereins zu Berlin . . Zusammengestellt v. H. Stichel. Berlin (Druck v. C. Fromholz), 1902, (VIII + 48, nebet 2 Bl.). 21 cm. Auch als Beilage zu: Berliner ent. Zs., 47, 1902, [1903].

**Bradley**, J. Chester. Vernacular names again. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (26).

Darwin, F. A Naturalist's Calendar kept at Swaffham Bulbeck, Cambridgeshire, by Leonard Blomefield (formerly Jenyns). Cambridge, 1903, (XVIII + 84). [Review], Nature, London, **68**, 1903, (389).

**Diederichs**, K. Die Photographie lebender Insekten. Apollo, Dresden, **9**, 1903, (74-77); Entgegnung darauf v. Arth. Glaser, *l.e.* (127-128).

Lucas, Robert. [Bericht über die wissenschaft]. Leistungen im Gebiete der] Hymenoptera, Lepidoptera, Trichoptera, Panorpatae, Neuroptera, Rhynchota, Mallophaga, Thysanoptera, Corrodentia, Orthoptera, Plecoptera, Odonata, Agnatha. Dermatoptera, Apterygogenea, Myriopoda, Arachnida, Prototracheata [während d. J. 1899]. Arch. Natg., Berlin, **66**, Bd 2, H. 2, 1900 [1903]; D. ent. Zs., Berlin, **1900**, H. 3, 1900, [1903], (369-820, 881-1244).

Morley, Claude. Entomology (being Chap. XV, pp. 233-242, The Norfolk Broads). London, 1903, 8vo.

**Poulton**, E. B. What is a species? President's Address. London, Proc. Ent. Soc., **1903**, (lxxvii-cxvi). Seidlitz, G[corg]. Bericht über die wissenschaftlichen Leistungen im Gebiete der Entomologie während des Jahres 1901. Allgemeines. Arch. Natg., Berlin, **69**, Bd 2, H. 2, 1902 [1903], (1-44) = D. ent. Zs., Berlin, **1902**, H. 3, [1903], (1-44).

**Skinner**, Henry. A list of the insects of Boulah, New Mexico. Phitadelphin, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1902–1903, (35–117). [Includes papers by Skinner, Viereck, Calvert, Rehn, Van Duzee, Cockerell, and Johnson].

**Sutherland**, Harvey. The book of bugs. New York and London (Street and Smith), [1902], (233, with illustr.). 19.5 cm.

Van Kerchove, Em. De la nécessité de vulgariser l'entomologie en Belgique. Ing. agric., Giembloux, **1901**, (480-483).

#### TREATISES.

Gerstaecker, A. Arthropoda. Fortges. v. C[arl] Verhoeff. (H. G. Bronn's Klassen u. Ordnungen des Thier-Reichs, Bd 5, Abt. 2, Lfg 63-68). Leipzig (C. F. Winter), 1902-1903, (1-76, mit Taf.). 26 cm. 9 M.

Van Hauwaert, P. Die Insektenwelt. (Holländisch) Gent (I Vanderpoorten), 1903, (64, av. figs.). 8vo. fr. 0,75.

Wytsman, P. [et al.]. Genera insectorum, publiés. Fascicules I-XII. Bruxelles (P. Wytsman), 1902. 4to.

#### ECONOMICS.

Banks, Nathan. Principal insects liable to be distributed on nursery stock. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 34, 1902, (46). 23 cm.

An index to bulletins Nos. 1-30 (New series) (1896–1901) of the Division of entomology. *l.c.* No. **36**, 1902, (64). 23 cm.

Britton, W. E. First report of the state entomologist. Agric. Exp. Sta., Connecticut, New Haven, Rep., **1901**, Pt. 3, 1901; (227-278, with 11 pls., 2 fig.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1902, (63). Chittenden, F[rank] H[urlbut]. Some insects injurious to vegetable crops. A series of articles dealing with insects of this class. Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., (N. Ser.), No. 33, 1902, (117). 23 cm.

**Fass**, Henri. L'acide prussique gazeuse dans la lutte contre les insectes. Lausanne, Bull. Soc. Sci. Nat., (sér. 4), **39**, 1903, (65-82); Arch. Sci. Phys., Gienève, (sér. 4), **15**, 1903, (678-679).

Felt, E[phraim] P[orter]. Observations on forest and shide tree insects in New York state. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (63-68).

Fletcher, James. Injurious insects of the year in Canada. *l.c.* No. 40, 1903, (78-83).

Garman, H. Enemies of cucumbers and related plants. Agric. Exp. Sta., Kentucky, Lexington, Bull. No. 91, 1901, (3-48, with 3 pls., 10 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 13, 1901, (368-369).

Gossard, H. A. Report of the entomologist. Agric. Exp. Sta. Florida, Lake City, Rep., **1901**, (53-75); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1902, (1032).

Hopkins, A. D. Insect enemies of the pine in the Black Hills forest reserve. An account of results of special investigations, with recommendations for preventing losses [New *Dendroctonus* and *Tomicus*]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **32**, 1902, (24, with pl.). 23 cm.

**Kirkland**, A. H. Notes on four imported pests [Porthetria dispar, Euproctis chrysorrhaea, Galerucella lutcola, and Cryptorhynchus lapathi in New England]. l.c. No. **31**, 1902, (93-97).

Koningsberger, J[acob] C[hristiaan]. Insektenkrankheiten [javanischer Kulturpflanzen]. (Holländisch) Buitenzorg, Meded. Plant., **64**, 1903, (II + 109, 5 Taf.).

Kuznecov, N. I. Nouvelle méthode de comhattre les insectes nuisibles. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (281-283).

Lowe, V. H. Miscellaneous notes on injurious in ects. 2. Agric. Exp. Sta., New York, (State station), Geneva, Bull. No. 212, 1993, (25, with 9 pls.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1902, (62-63).

McJook, Henry Christopher. Insects and civilization. Harper's Monthly Magazine, New York and London, 105, 1902, ([79]-82).

Maristi, C[harles] I.[ester]. Applied eutomology in Japan. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (56-63, with pl.).

Pettit, R. H. Some insects of the year 1901. Agric. Exp. Sta., Michigan, Agricultural College, Bull. No. 220, 19.02, (179-212, with 21 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (267-268).

**Sanderson**, E[zra] D[wight]. Report of the entomologist [including notes on Aphis and Euzophera semifureralis. Agric. Exp. Sta., Delaware, Newark, Rep., **1901**, (137-199, with 6 pls., 16 figs.); [review], Washington, D.C., U. S. Dept, Agric. Off. Exp. Sta. Rec., **14**, 1902, (268-269).

**Smith**, J. B. Report of the entomologist. Agric. Exp. Sta., New Jersey, New Brunswick, Rep., **1901**, (463-457, with 36 figs.); [review]. Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1903, (586-587).

**Theobald,** F. V. British Museum (Natural History). First report on economic Zoology. London, 1903, (xxxiv + 192), 8vo. Includes "a classification of animals from the point of view of Economic Zoology," by E. Ray Lankester, (xi-xxxiv).

Webster, F. M. Some insect notes of the year. Washington, D.C., Bull. U. S. Dept. Agric. Div. Eut., 40, 1903, (93-96).

and Newell, Wilmon. Insects of the year in Ohio. *l.c.* No. 31, 1902, (84-90).

Wead, C[larence] M[oores]. Insect record for 1900. Agric. Exp. Sta., New Hampshire, Durham, Bull. No. 81, 1901, (9-22, with 11 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 13, 1902, (667).

Insect record for 1901-Agric. Exp. Sta., New Hampshire, Durham, Bull. No. 90, 1902, (29-44, with 12 figs); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (268). weed, C[larence] M[oores]. Notes, from New Hampshire. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (50-52).

Collections and Technique.

**Creveccur**, F. F. Some entomological notes [for collectors]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (47-50).

Fernald, H[enry] T[orsey]. How shall we arrange our collections? *l.c.* (108-110).

Friese, H. Neue Zeiss-Lupen [für Entomologen]. Allg. Zs. Ent., Neudamm, 8, 1903, (267-268).

Koževníkov, G. A. Ueber den Fangapparat Photeklektor. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (CLXI-CLXVIII).

Ludwig, F. Vorschläge zur Herstellung biologischer Insektensammlungen. Insektenbörse, Leipzig, **20**, 1903, (308).

McElfresh, F. M. A method of collecting [on snow fields]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (316-319).

**Wickham**, H[enry] F[rederick]. San Francisco; a reminiscence. [Collections of insects]. *l.c.* (123-125).

# HISTORY, BIBLIOGRAPHY.

**Eraats**, G. [Paul Weise<sup>†</sup>.] D. ent. Zs., Berlin, **1903**, (174).

Kulagin, N. Berichte über die russische zoologische Litteratur. Lief. V. Bericht über Insocten für d. J. 1897. (Russ.) Moskva, 1902, (1-50). 34 cm.

Lankester, E. Ray. Catalogue of the books, manuscripts, maps and drawings in the British Museum Natural History. [With an introduction by B. B. Woodward, who is responsible for the preparation of the work. To be completed in about 4 volumes.] Vol. I. A-D. London, 1903, (viii-500). 4to.

**Osten Sacken**, [Karl] R[obert Romanovich] *baron* v[on]. Record of my life work in entomology. Cambridge, Mass., 1903, (viii + 204, with 2 ports., facsim.). 24,5 cm. **Semenov**, A. P. Revue de la bibliographie, concernant la faune russe. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (46-67, 117-152, 233-280, 314-343, 405-418).

Sharp, D. Insecta. Zool. Rec., London, 39, 1902, No. xiii, (313).

# 2407 STRUCTURE.

#### COMPARATIVE ANATOMY.

Börner, Carl. Kritische Bemerkungen über einige vergleichend-morphologische Untersuchungen K. W. Verhoeff's. Zool. Anz., Leipzig, **26**, 1903, (290-315).

Ueber die Gliederung der Laufbeine der Atelocerata Heymons. Berlin, SitzBer. Ges. natf. Freunde, 1902, (205-229, mit 2 Taf.).

Die Mundgliedmaassen der Opisthogoneata. *l.c.* **1903**, (58-74, mit Taf.).

\_\_\_\_\_ Die Beingliederung der Arthropoden. (3. Mitt. Die Cheliceraten, Pantopoden und Crustaceen betr.). *l.c.* (292-341, mit 7 Taf.).

Grünberg, K. Die Homologie des Trochanters bei Chilopoden und Insekten, sowie über die Bedeutung secundärer Einschnürungen am Trochanter verschiedener Insekten. *l.e.*, (74-82, mit 1 Taf.).

Imhof, O. Une étude comparative sur les antennes et les ailes des insectes. Aarau, Verh. Schweiz. Natf. Ges., **85**, 1902, (81); Arch. Sci. Phys., Genève, (4), **14**, 1902, (556-558).

Patten, W[illiam]. On the structure of the *Pteraspidae* and *Cephalaspidae*. [With bibliography.] Amer. Nat., Boston, Mass., **37**, 1903, (827-865, with pl.).

Verhoeff, Karl W. Ueber Tracheaten-Beine, 2. Aufsatz : Trochanter und Praefemur. Zool. Anz., Leipzig, 26, 1903, (205-214).

Tracheaten - Beine. Aufsatz 3: Progoneats. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (82–103, mit Taf.).

Ueber Tracheaten-Beine. Aufsatz 4 u. 5: Chilopoda und Hexapoda. Halle, Nova Acta Leop., 81, 1903, (209-250, mit 4 Taf.). Verhoeff, Karl W. Beiträge zur vergleichenden Morphologie des Thorax der Insekten mit Berücksichtigung der Chilopoden. *l.c.* 1902, (63-110, mit 7 Taf.).

Ueber die Endsegmente des Körpers der Chilopoden, Dermapteren und Japygiden und zur Systematik von Japyz. *l.e.* (257-298, mit 2 Taf.).

<u>Ueber</u> die Interkalarsegmente der Chilopoden, mit Berücksichtigung der Zwischensegmente der Insekten. Arch. Natg., Berlin, **69**, Bd 1, 1903, (427-441, mit 1 Taf.).

# ALIMENTARY SYSTEM.

Porta, A. La funzione epatica negli insetti. Nota preventiva. Anat. Anz., Jena, 22, 1903, (447-448).

# REPRODUCTIVE ORGANS.

Gross, J. Untersuchungen über die Histologie des Insectenovariums. Zool. Jahrb., Jena, Abt. f. Anat., 18, 1903, (71-186, mit 9 Taf.).

Holmgren, Nils. Ueber vivipare Insecten. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (431-468).

#### COLOUR.

Tower, William Lawrence. The development of colors and color patterns of Coleoptera, with observations upon the development of color in other orders of insects [with bibliography]. Chicago, Ill., Dec., Pub. Univ. Chic., (Ser. 1), 10, 1903, [[31]-40, with pl.).

# 2411 PHYSIOLOGY.

### GENERAL.

Loeb, Leo. Ueber die Bedeutung der Blutkörperchen für die Blutgerinnung und die Entzündung einiger Arthropoden auf über mechanische Einwirkungen auf das Protoplasma dieser Zellen. Arch. path. Anat., Berlin, **173**, 1903, (35-112).

----- On the congulation of the blood of some Arthropods and on the influence of pressure and traction on the Smith, G. The temperature of insects. Zoologist. London, (Ser. 4), 6, 1902, (287-293).

### FUNCTION OF SPECIAL STRUCTURES.

Sur la stridulation chez les insectes. Par. X. Fouille jeunes natural., Paris, (sér. 4), 33, 1902, (13), d'après Morley, Cl. Field Notes on stridulation. Ent. Mag., London, 1902, (249-250).

Heycke, E. Wie die Insekten sehen. Allg. Zs. Ent., Neudamm, 8, 1903, (206– 208).

Lendenfeld, R[obert] von. Demonstration von Photographien fliegender Insekten. Verh. Ges. D. Natf., Leipzig, 74, (1902), II, 1, 1903, (157-159).

Porta, A. La funzione epatica negli insetti. Nota preventiva. Anat. Anz., Jena, 22, 1903, (447-448).

La funzione pancreo-epatica negli Insetti. *l.c.* 24, 1903, (97-111).

# ENVIRONMENTAL EFFECTS.

Chittenden, F[rank] H[urlbut]. Insects and the weather during the season of 1900. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (63-75).

**Krassilikčik**, I. M. Zur Frage über die Einwirkung der Gifte auf die Insecten. (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, **IV**, No. 3, 1903, (25).

Murtfeldt, Mary E. Drought, heat, and insect life [in the Mississippi Valley]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (97-99).

# 2415 DEVELOPMENT.

#### GENERAL.

Les insectes des livres. Par L. R. Nature, Paris, **30**, (2° semest.), 190', (249-250).

# OVUM.

Gross, J. Untersuchungen über die Histologie des Insectenovariums. Zool. Jahrb., Jena, Abt. f. Anat., **18**, 1903, 71-186, mit 9 Taf.).

#### POSTEMBRYONIC ONTOGENY.

Deegener, P[aul]. Zur postembryovalen Entwicklung des Insectendarms. Zool. Anz., Leipzig, 26, 1903, (547-550).

METAMORPHOSIS AND LARVAL FORMS.

Bauer, Victor. Zur inneren Metamorphose des Centralnervensystems der Insecten. (Vorläuf. Mitt.) Zool. Anz., Leipzig, 26, 1903, (655-656).

Giard, Alfred. Les idées de Lamarck sur la métamorphose. Paris, C.-R. soc. biol., 55, 1903, (8-9).

**Kolbe**, H. J. Ueber vorschnelle Entwickelung (Prothetelie) von Puppen-und Imago-Organen bei Lepidopteren- und Coleopteren-Larveu, nebst Beschreibung einer abnormen Raupe des Kiefernspinners, *Dendrolimus pini* L. Allg. Zs. Ent., Neudamn, **8**, 1903, (1-0, 25-30).

**Oestlund**, O. W. Larva vice nymph. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (253-255).

Pérez, Charles. Contribution à l'étude des métamorphoses. Bul. sci. France-Belgique, Paris, **37**, 1902, (195-433, av. pl.); Thèse Fac. sci., Lille, 1902, (240, av. 3 pls.). 25 cm.

**Peyerimhoff**, P. de. La larve des insectes métabola et les idées de Fr. Brauer. Feuille jeunes natural., Paris, sér. 4), **34**, 1903, (21-26).

Schindler, Anton K. Die Metamorphose der Insekten. Zs. Natw., Stuttgart, 75, (1902), 1903, (341-356).

# 2419 ETHOLOGY.

# GENERAL.

**Cook**, Melville Thurston. Galls and insects producing them. Parts 3, 4 and 5. Ohio Nat., Columbus, 3, 1903, (419-536); [reprint], Columbus, Ohio, Univ. Bull. (Ser. 7), No. 20. 23.2 cm. **Proggatt**, Walter W. Insectarium notes and insects found about the Hawkesbury College. Agric. Gaz., Sydney, N.S.W., **14**, 1903, (1019-1027, with 2 pls. and 1 text-fig.).

Lowis, E. J. [The oak galls and gall insects of Epping Forest. Pts. 1 and 11]. Stratford, Essex Nat., 12, 1902, (267-236); 13, 1903, (138-160).

Lowe, E. Insects and flowers. Nature, London, 67, 1903, (368, 369).

**Péringuey**, L. Some phases of insect life in South Africa. Cape Town, Trans. S. Afric. Phil. Soc., **14**, 1903, (i-viii).

Tarnani, I. K. Insecten welche dem Obstbau u. d. Gemüsegärtnerei in den Gouvernements des Zarenthums Polen schädlich werden u. d. Mittel zur Bekämpfung dieser Insecten. (Russ.) Varsáva, 1903, (138, mit 135 Fig.). 25 cm.

Willis, J. C. and Burkill, I. H. Flowers and insects in Great Britain. Part II. Observations on the Natural Orders Dipsaceae, Plumbaginaccae, Compositae, Umbelliferae, and Cornaceae made in the Clova mountains. Ann. Bot., Oxford, 17, (313-349). Part. III. Observations on the most specialized flowers of the Clova mountains, ib. (539-570).

#### HABITS.

Barrett. Habits and mimicry. Ent. Mag., London, 39, 1903, (170).

C[alvert], P. P. Five years' observations and experiments on the biononics of South African insects . . . by Guy A. Marshall . . . [Review]. Philadelphia, P.a., Ent. News Acad. Nat. Sci., 14, 1903, (91-96).

**Chittenden**, F[rank] H[urlbut]. Some insects injurious to the violet, rose and other ornamental plants: A collection of articles dealing with insects of this class. [Rev. Ed.] Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 27, 1901, (114, with pl). 23 cm. Deventer, W. van. Insecteneier . . . auf Zuckerrohr. (Holländisch) Arch. Java Suiker., Soerabaia, 11, 1903, (437– 446, 2 Taf).

**Gibson**, William Hamilon. Blossom hosts and insect guests: how the heath family, the bluets, the figworts, the orchids and similar wild flowers welcome the bee, the fly, the wasp, the moth and other faithful insects; edited by Eleanor E. Davie; illustrated by the author. New York (Newson & Co.), f1901, (xix + 197, with front., illustr.). 20 cm.

Packard, A[lpheus] S[pring]. Colorpreference in insects. New York, N.Y., J. Ent. Soc., 11, 1903, (132-137).

**Schenkling**, C. Die Spinnkunst der Insekten. Insektenbörse, Leipzig, **20**, 1903, (332–333).

Schiller-Tietz. Ameisen, Blattläuse und Honigtau an Kulturpflanzen. Schweiz. Bauer, Bern, 56, 1902, No. 70, (5).

**Spaulding**, Perley. The relations of insects to fungi. Plant World, Washington, D.C., **6**, 1903, (182–184).

# OVIPOSITION.

Deventer, W. van. Insectencier . . . auf Zuckerrohr. (Holländisch) Arch. Java Suiker., Soerabaia, **11**, 1903, (437– 446, 2 Taf.).

Holmgren, Nils. Ueber vivipare Insecten. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (431-468).

#### Sound Production.

Sur la stridulation chez les insectes. Par. X. Feuille jeunes natural., Paris, (sér. 4), 33, 1902, (13), d'après Morley, Cl. Field. Notes on stridulation. Eut. Mag., London, 1902, (249-250).

# HABITAT.

**Bedeke**, II[einrich] C[arl]. Plankton-Untersuchungen im "Zwanenwater" bei Callantsoog. (Holländisch) Haarlem, Nat. Verh. Holl. Maatsch. Wet., (Verz. 3), 5, 1903, (1-42, mit 5 Taf.).

# INSTINCT AND PSYCHOLOGY.

Andreas, Eugen. Iuwiefern werden Insekten durch Farbe und Duft der Blumen angezogen? Bot. Centralbl., Jena, Beihefte, 15, 1903, (427-470).

Distant, W. L. Animal sense perceptions. Zoologist, London, (Ser. 4), 6, 1902, (161-178).

Giard, A. Pourquoi les insectes de nuit sont-ils, de préférence, attirés par la lumière artificielle?—Réponse à la question de M. Guilhard. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (202-203).

Kellogg, Vernon L[yman]. Some insect reflexes. Science, New York, N.Y., (N. Ser), 18, 1903, (693-696).

#### SYMBIOSIS.

**Beuter**, O[do] M[orannal]. [Sonderbare Speisegenossen]. (Finnisch) Luonnon Ystävä, Helsingfors, **1903**, 10, (236– 238).

Viehmeyer, H. Kleinere Beiträge zur Biologie einiger Ameisengäste. Allg. Zs. Ent., Neudamm, 8, 1903, (15-17).

#### PARASITISM.

**Chapman.** [Imago produced by a parasitised larva.] London, Proc. Ent. Soc., **1903**, (31).

Dominikiewich, Mieczysław. Les chenilles des insectes comme parasites accidentels de l'homme. (Polonais) Zdrowie, Warszawa, **19**, 1903, (1070– 1092).

Hesse, Edmond. Sur la présence de Microsporidies du genre *Theloania* chez les insectes. Paris, C.-R. Acad. sci., **137**, 1903, (418–419).

Léger, L. et Duboscq, O. Les grégarines et l'épithélium intestinal chez les Trachéates. Arch. parasit. Paris, 6, 1902, (377-473, av. fig. et 5 pl.).

Melander, Axel Leonard, and Brues, Charles Thomas. Guests and parasites of the burrowing bee *Halictus* [nn. spp. of Diptera and Hymenoptera] Wood's Holl, Mass., Mar. Biol. Bult., **5**, 1903, (1-27, with text-fig.). Schnitzler, Franz. Ueber lebende Fremdkörper im Ohre. Diss. München (Druck v. C. Wolf & S.), 1901, (31). 21 cm.

#### DEFENSIVE PROCESSES.

Hutton and Poulton. Pseudomimicry. Nature, London, 67, 1903, (439).

Mercier, L. Moyens de défense de quelques insectes. Feuilles jeunes natural., Paris, (sér. 4), **33**, 1903, (107-108)

**Poulton**. Value of transparent spaces. London, Proc. Ent. Soc., **1903**, (26-28).

Fritchett, Annie II. Some experiments in feeding lizards with protectively colored insects [with bibliography]. [Contribution from the zoological laboratory of the University of Texas, No. 52.] Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (271-287).

Thayer, A. H. Protective coloration in its relation to mimicry, common warning colours, and sexual selection. London, Trans. ent. Soc., **1903**, (553– 569).

#### COLOUR AND ORNAMENT.

**Poulton**, E. B. A brief discussion of A. H. Thayer's suggestion as to the meaning of colour and pattern in insect bionomics. London, Trans. Ent. Soc., **1903**, (570–575).

# UTILITY AND HARMFULNESS.

Obstbaumschädlinge aus der Klasse der Insekten (Bohrer). Schweiz.-Bauer, Bern, **57**, 1903, No. 27, (5). [2431].

Les insectes des livres. Par L. R. Nature, Paris, **30**, (2<sup>e</sup> semest.), 1902, (249-250).

**Chobant**, A. Les insectes du biscuit de troupe. Moyen de préservation. Paris, C.-R. cong. soc. sav. en 1902, **1903**, (102-107).

Faes, H[enri]. Sur quelques insectes nuisibles au printemps. Insectes nuisibles aux arbres fruitiers. Chron. Agric., Lausanne, **15**, 1902, (189–195. 297-305, 449-459, 521-532, av. 18 figs.).

**Proggatt**, Walter W. Insects that damage wheat and other foodstuffs. Agric. Gaz., Sydney, N.S.W., **14**, 1903, (481-492, 1 pl.).

Höfer, J. Beobachtungen und Versuche über Bekämpfung tierischer Feinde der Obstbäume, Weinreben und einiger Gartenpflanzen. Wädensweil, Jahresber. Versuchstation, **1902**, (108-121).

Hopkins, A. D. Insect enemies of the pine in the Black Hills forest reserve. An account of results of special investigations, with recommendations for preventing losses [New Dendroctonue and Tomicus]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 32, 1902, (24, with pl.). 23 cm.

Ertiger, O. Die schädlichsten Forstinsekten auf der Kiefer und Schutzmassregeln gegen diese Insekten. Auf Grund vierzigjähriger Tätigkeit in Kiefernrevieren vom rein praktischen Standpunkte aus betrachtet. 2. verb. Aufl. Dessau (C. Dünnhaupt), 1903, (44). 23 cm. 1 M.

Mercer, W. F. A few insects and plant diseases of special interest to farmers. Columbus, Ohio, Univ. Bull, St. Univ., (N. Ser.), **3**, 1901, (126-138).

Mokrisckij, S. A. Verzeichnis der Insecten und anderer wirbelloser Thiere, welche im europäischen Russland und im Kaukasus an Weinreben gefunden wurden. (Russ.) Ausg. d. Minist. d. Landwirthsch. u. d. Staatsdom. St. Peterburg, 1903, (39). 23 cm.

**Behberg**, A. Schädliche Insekten Westpreussens und deren Bekämpfung. Dantzig, Schr. natf. Ges., (N.F.), **10**, H. 4, 1902, (64-81).

**Beuter**, Enzio. Beiträge zu einer statistischen Untersuchung über die Ursachen der Weissährigkeit an den Wiesengräsern in Finland. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, VI Section, (20-26).

[Bericht über das Auftreten schädlicher Insekten in Finland im Jahre 1901.] (Schwedisch-Landtbr.-Styr. Medd., Helsingfors, **39**, 7, 1902, (1-74). **Sambon**, L. W. Principles determining the geographical distribution of disease. J. trop. Med., London, 5, 1903, (101-106).

Sherman, Franklin, jun. Injurious insects. Raleigh, N. C., Bull. St. Brd. Agric., 24, 1903, (3-29).

**Stebbing**, E. P. Insect pests of the sugar cane in India. Calcutta, Ind. Mus. Notes, **5**, 1903, (64–91).

Departmental notes on insects that affect forestry. No. 2. Calcutta, 1903, (V-VII + 151-334, with 13 pls.).

Vasiljev, I. V. Ueber Insecten, welche 1900 in Gouv. Charikov den Kiefern schadeten (Vorläufige Mitteilung). (Russ.) St. Peterburg, Hor. Soc., Ent. Ross., 36, 1903. (VIII-X).

Webster, F. M. Some insects attacking the stems of growing wheat, rye, barley and oats, with methods of prevention and suppression. [Life histories and descriptions of species of *Isosoma*, *Micromyza*, and *Oscinis*.] Washington, D.C., U. S. Dept. Agric. Div. Ent., No. 42, 1903, (62). 23 cm.

# 2423 VARIATION AND ÆTIOLOGY.

#### GENERAL.

Bachmetjew, P. Analytisch-statistische Methode [Variation]. Allg. Zs. Ent., Neudamm, 8, 1903, (37-44).

Bevorstehende Untersuchungen für Entomologen. Ent. Jahrb., Leipzig, **12**, 1903, (103-107).

**Doncaster**. Varieties confined to one sex. Ent. Rec., London, **15**, 1903, (237).

**Peyerimhoff**, P. de. Sur la méthode dans les recherches de phylogénie entomologique. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (89-95).

# BIONOMIC VARIATION.

**Krassiliščik**, I. M. Zur Frage über die Einwirkung der Gifte auf die Insecten. (Russ). Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, **IV**, No. 3, 1903, (25). 2427

Mararakij, V. V. Frühlingsexcursionen in der Umgebung St. Peterburg, 1901. Der Frühling 1901, im Gouv. St. Peterburg. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (XXXV-XLIV).

#### Evolution.

**Fry**, Sir E. [Letter] on natural selection. Nature, London, **67**, 1903, (414). Cf. Galton, *ib.*, (343)

Patten, William. On the structure of the *Pteraspidae* and *Cephalaspidae*. [With bibliography.] Amer. Nat., Boston, Mass., **37**, 1903, (827-865, with pl.).

# 2427 GEOGRAPHICAL DISTRIBUTION.

Longin Navas. Espèces cosmopolites et localiséos [à propos d'une question de M. G. de Rocquigny Adanson, Feuille jeunes natural., p. 85]. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (108).

### d EUROPE.

#### db RUSSIA IN EUROPE.

Mokrieckij, S. A. Verzeichnis der Insecten und anderer wirbelloser Thiere, welche im europäischen Russland und im Kaukasus an Weinreben gefunden wurden. (Russ.) Ausg. d. Minist. d. Landwirthsch. u. d. Staatsdom., St. Peterburg, 1903, (39). 23 cm.

Tarnani, I. K. Insecten, welche dem Obstbau und der Gemüsegärtnerei in den Gouvernements des Zarenthums Polen schädlich werden u. d. Mittel zur Bekämpfung dieser Insecten. (Russ.) Varšava, 1903, (138, mit 135 Fig.). 25 cm.

### de German Empire.

Fröhlich. Ueber das Vorkommen von Pachytylus cinerascens Fieb. und anderer Insekten bei Kahl am Main. Berliner ent. Zs., 48, 1903, (146-148).

Lange, C. Fünfter Beitrag zur Insektenfauna des oberen Erzgebirges. Annaberg, Ber. Ver. Natk., **11**, (1898– 1903); 1903, (23–33). **Behberg**, A. Schädliche Insekten Westpreussens und deren Bekämpfung. Danzig, Schr. natf. Ges., (N.F.), **10**, H. 4, 1902, (64-81).

### df FRANCE.

Sainte-Claire Deville, J. Exploration entomologique des grottes des Alpes-Maritimes. Ann. soc. ent., Paris, 71, 1902, [1903], (695-709, av. fig.).

Thibault, J. Mes chasses entomologiques en 1902. Elbeuf, Bul. soc. étud. sci. nat, 21, (1902), 1903, (37-42).

dk AUSTRIA-HUNGARY.

Horváth, Geza. Die Insectenfauna der kochsalz- und sodahaltigen Gebiete Ungarns. Allatt. Közlem., Budapest, 2, 1903, (206-211).

Melichar, L. Eine entomologische Exkursion nach Bosnien und Herzegowina. Ent. Jahrb., Leipzig, **12**, 1903, (91-102).

dl BALKAN PENINSULA.

Holtz, Martin. Reiseerinnerungen aus dem Peloponnes. Insektenbörse, Leipzig, 20, 1903, (4-5, 12, 28, 35-36, 43, 50-51, 67-68, 75-76, 83-85, 92-93).

- e ABIA.
- cc JAPANESE ISLAND3.

Marlatt, C[harles] L[ester]. Applied entomology in Japan. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (56-63, with pl.).

#### ed Cochin China: Tonquin.

**Claybrooks**, J. de. Note sur quelques insectes du Tonkin provenant des environs d'Hanol. Bul. Muséum, Paris, **1903**, (132-133).

f AFRICA.

fg South Africa.

Calvert], P. P. Five years' observations and experiments on the bionomics of South African insects . . . by Guy A. Marshall . . [Review]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (91-96).

Páringuey, L. Some phases of insect life in South Africa. Phonation in insects. Cape Town, Trans. S. Afric. Phil. Soc., 14, 1903, (i-viii).

# g North America.

gf UNITED STATES.

U. S. DEPARTMENT OF AURICULIURE, DIVISION OF ENTOMOLOGY. [Leland Ossian Howard, Entomologist.] Some miscellaneous results of the work of the division of entomology. 5. Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., (N. Ser.), No. 30, 1901, (98, with pl.). 23 cm.; 6. *l.e.* No. 38, 1902, (110, with pl.). 23 cm.

Murtfeldt, Mary E. Drought, heat. and insect life in the Mississippi Valley. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902. (97-99).

**Slosson**, Annie Trumbull. Additional list of insects taken in Alpine region of Mt. Washington. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (4-8).

Webster, F. M. Some insect notes of the year. Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., No. 40, 1903, (93-96).

# gg NORTH EASTERN UNITED STATES.

**Comstock**, G. F. A list of Lepidoptera found in the Adirondack Mts. [with list of other insects]. Philadelphia. Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (197-200).

Folt, E[phraim] P[orter]. Aquatic insects of the Saranac region. New York, Forest Fish. Game Com. Rep. Albany, 1900, 1901, (499-531, with col. pl.).

Fernald, C. H. and Fernald, H[enry] T[orsey]. [Insects prevalent in Massachusetts in 1901.] Agric. Exp. Sts., Massachusetts, Amherst, Rep., **1901**, (86-88).

**MacGillivray**, Alex. and **Houghton**, C. O. A list of insects taken in the Adirondack Mountains, New York. 1. [Coleoptera.] Philadelphia, Pa., Ent. News Acad. Nat. Sci. **13**, 1902, (247– 253); 2. [Diptera.] *l.c.* **14**, 1903, (12– 13); 3. *l.c.*, (262–265).

Melander, Axel Leonard. Some additions to the Carboniferous terrestrial Arthropod fauna of Illinois. Chicago, Ill., J. Geol. Univ. Chic., 11, 1903, (178-198, with pl.).

Needham, James G., MacGillivray, Alex. D., Johannsen, O. A. and Davis, K. C. Aquatic insects in New York State. A study conducted at the entomologic field station, Ithaca, N.Y., under the direction of Ephraim Porter Felt. Albany Univ., N.Y., Bull. St. Mus., No. 68, (Entomology 18 and University Bulletin 205), 1903, ([197]-517, with pl.). Separate. 22.8 cm.

**Outorn**, Herbert. Insects of the season in Ohio. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (45–47).

Pettit, R. H. Some insects of the year 1901. Agric. Exp. Sta., Michigan, Agricultural College, Bull. No. 200, 1902, (179-212, with 21 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (267-268).

**Slosson**, Annie Trumbull. Additional list of insects taken in Alpine region of **Mt**. Washington [nn. spp. in Parasitica]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (319-321).

Webster, F. M. and Newell, Wilmon. Insects of the year in Ohio. Washington, D.C., Bull. U. S Dept. Agric. Div. Ent., (N. Ser.), No. 31, 1002, (84-90).

Weed, C[larence] M[oores]. Insect record for 1900. Agric. Exp. Sta., New Hampshire, Durham, Bull. No. 81, 1901, (9-22, with 11 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (667).

Insect record for 1901. Agric. Exp. Sta., New Hampshire, Durham, Bull. No. **90**, 1902, (29-44, with 12 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1902, (268).

Notes from New Hampshire. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (50-52). gh South Eastern United States.

Hebard, Morgan. A few captures made at Miami, Florida. Philadelphia. Pa., Ent. News Acad. Nat. Sci., 14, 1903, (253).

around Thomasville, Georgia. *l.c.* (260-261).

Quaintance, A. L. Entomological notes from Maryland. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (47-50).

**Sanderson,** E[zra] D[wight]. Report of the entomologist. [Including notes on Aphies and Euzophera semifuneralis. Agric. Exp. Sta., Delaware, Newark, Rep., **1901**, (127-179, with 6 pls., 10 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1902, (268-269).

**Sherman**, Franklin, *jun.* Injurious insects. Raleigh N.C., Bull. St. Brd. Agric., **24**, 1903, (3-29).

gi WESTERN UNITED STATES.

Blaisdell, F. E. The three Californias [Three faunal areas of California]. Philadelphia, Pa, Ent. News Acad. Nat. Sci., 13, 1902, (173-175).

**Gaudell**, A. N. Notes on Colorado insects. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (35-38).

Coquillett, D. W. Some insects of the Hudsonian zone in New Mexico. Diptera. Psyche, Cumbridge, Mass., 9, 1901, (149-150).

Gillette, C. P. Notes on some Colorado insects. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (51-55).

**Hoag**, M. C. [The Moreno valley and Ute creek districts as collecting regions.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (59).

Sellards, E. H. Discovery of fossil insects in the Permian of Kansas. Amer. J. Sci., New Haven, Conn., (Ser. 4), 16, 1903, (323-324).

Skinner, Henry. A list of the insects of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (35–117). [Includes papers by Skinner, Viereck, Calvert, Rehn, Van Duzee, Cockerell, aud Johnson.] Ulrich, Carl Jost. A contribution to the subterranean fauna of Texas [Arthropoda, with nn. spp. in Crustacea, Arachnida and Aptera]. Contributions from the Zoological Laboratory of the Indian University, No. 34, in Lincoln, Nebr. Trans. Amer. Microsc. Soc., 23, 1901, [1902], (83-100, with pl.).

# h CENTRAL AND SOUTH AMERICA.

ha MEXICO.

Hoag, M. E. Collecting in Mexico. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (319-322).

he WEST INDIAN ISLANDS.

Schwarz, E. A. A letter from Cuba. [Containing entomological notes.] Washington, D.C., Proc. Ent. Soc., 5, 1903, (286-289).

he ECUADOR.

Haensch, Rich[ard]. Kurzer Bericht über die entomolog. Ergebnisse meiner Ecuador-Reise. Berliner ent. Zs., 49, 1903, (149–156).

i AUSTBALASIA.

ib BISMARCK ARCHIPELAGO.

**Bainbow**, W. J. [Arthropoda (Arachnida and Insecta) of the Gilbert Group]. Sydney, N.S.W., Rec. Austr. Mus., **5**, 1903, (5-7).

# O ANTARCTIC.

Enderlein, Günther. Die Landarthropoden der von der Tiefsee-Expedidition besuchten antarktischen Inseln. 1. Die Insekten und Arachnoideen der Kerguelen. II. Die Landarthropoden der antarktischen Inseln St. Paul und Neu-Amsterdam. (Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 3, Lfg 7.) Jens, 1903, (197-270, mit 10 Taf.). 35 cm.

# 2431 TAXONOMY.

**Carrenter**, S. H. On the relationships between the classes of Arthropoda. Dublia, Proc. R. Irish Acad., **24**, 1903, **320**-260). **Claybrooke**, J. de. Note sur quelques insectes du Tonkin provenant des environs d'Hanoï. Bul. Muséum, Paris, **1903**, (132-133).

Deventer, W. van. Insecten- (auch Spinnen-) eier . . . auf Zuckerrohr. (Holländisch) Arch. Java Suiker., Soerabaia, 11, 1903, (437–446, 2 Taf.).

Enderlein, G. Die Landarthropoden der von der Tiefsee-Expedition besuchten antarktischen Inseln. I. Die Insektenund Arachnoideen der Kerguelen. II. Die Landarthropoden der antarktischen Inseln St. Paul und Neu-Amsterdam. (Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition. Bd 3, Lfg 7.) Jena, 1903, (197-270, mit 10 Taf.) 35 cm.

Packard, A. S. Hints on the classification of the Arthropoda; the group a polyphyletic one. Philadelphia, Pa., Proc. Amer. Phil. Soc., 42, 1903, (142-161).

Pérez, C. Contribution à l'étude des métamorphoses. Bul. sci. France-Belgique, Paris, 37, 1902, (195-433, av. pl.); Thèse Fac. sci., Lille, 1902, (240, av. 3 pls.). 25 cm.

**Peyerimhoff**, P. de. Sur l'état de la systématique en entomologie, principalement chez les coléoptères. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (37-42).

Sur la méthode dans les recherches de phylogénie entomolgique. *l.e.* (89-95).

La larve des insectes métabola et les idées de Fr. Brauer. *l.c.* **34**, 1903, (21-26).

**Bedeke**, H. C. Plankton – Untersuchungen im "Zwanenwater" bei Callantsoog. (Holländisch) Haarlem, Nat. Verh. Holl. Maatsch. Wet., (Verz. 3), **5**, 1903, (1-42, mit 5 Taf.).

Sainte-Glaire Deville, J. Exploration entomologique des grottes des Alpes-Maritimes. Ann. soc. ent., Paris, 71, 1902, [1903], (695-709, av. fig.).

Standfuss, M. Zur Frage der Unterscheidung der Arten bei den Insekten. Ent. Zs., Guben, 16 (1902-03), 1902, (1-2).

Thibault, J. Mes chasses entomologiques en 1902. Elbeuf, Bul. soc. étud. sci. nat., 21, (1902), 1903, (37-42).

# 2603-2631 CRUSTACEA.

# TITLES.

Appender, A[nders]. Researches on the development of the lobster, 1902. (Norw.) Bergen, Norsk Fisket., 22, 1903, (114-132). [2615]. 1

Augener, H. Beiträge zur Kenntnis der Gephyreen nach Untersuchung der im Göttinger Zoologischen Museum befindlichen Sipunculiden und Echiuriden. Arch. Natg., Berlin, 69, Bd. 1, 1903, (297-371, mit 5 taf.). [1831 1807 1431 2631 2619]. 1a

**Barnard**, F. G. A. Excursion to Launching Place [Victoria]. [14 species.] Vict. Nat., Melbourne, **19**, 1903, (147-148). [2227 if 2231 2627 if 2631 4827 if 4831]. 2

Bassett Smith, P. W. On new parasitic Copepoda from Zanzibar and East Africa collected by Cyril Crossland, B.A., B.Sc. London, Proc. Zool. Soc., **1903**, 1, (104– 109, with 2 text-fige). [2619 2631]. 3

**Benedict**, James E[verard]. Revision of the Crustaces of the genus *Lepidopa*. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (889-895). [2631]. 4

Benham, W. Blaxland. On some remains of a gigantic fossil Cirripede from the Tertiary Rocks of New Zealand. Geol. Mag., London, [4], **10**, 1903, (110-119, pls. IX, X). [2607 2631]. 5

Berndt, Wilhelm. Zur Biologie und Anatomie von Alcippe lampas Hancock. Zs. wiss. Zool., Leipzig, 74, 1903, (396-457, mit 4 Taf.). [2607 2631]. 6

Die Anatomie von Cryptophialus striatus n. sp. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (436-444). [2631 2607]. 7

Biétrix, E. v. Fabre Domergue, (N 2-9053) Bohn, Georges. Des mécanismes respiratoires chez les Crustacés décapodes : essai de physiologie évolutive, éthologique et phylogénique. Bul. sci. France-Belgique, Paris, **36**, 1902, (178-551, av. fig.). [2611 2623 2619 2631]. 8

Bonnier, Jules. Sur deux types nouveaux d'Epicarides, parasites d'un Cumacé et d'un Schizopode. Paris, C.-R. Acad. sci., **136**, 1903, (102–103). [2619 2631]. 9

Borradaile, L. A. On the genera of the *Dromiidae*. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (297-303). [2631]. 10

On the classification of the Thalassinidea. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (534–551); Addendum, *ib.*, (638). [2631]. 11

Marine Crustaceans. IV. Some remarks on the classification of the crabs. V. The crabs of the Cato-VI. The sand crabs metope families. VII. The Barnacles (Oxystomata). (Cirripedia). In : Gardiner, The Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, pt. 4, (424-443, pl. XXII, and text-figs. 110-119); IX. The sponge-crabs (Dro-miaces). *Ib.*, **2**, pt. 1, (574-578, pl. XXXIII); X. The spider-crabs (Oxyrhyncha). XI. On the classification and genealogy of the reptant Decapods. *Ib.*, pt. 2, (681-698, pls. XLVII-XLVIII, text-figs. 122-126). [2603 2631]. 12

Brady, George Stewardson. List of the Ostracoda collected by Mr. George Murray, F.R.S., during the cruise of the "Oceana" in 1898. Ann. Mag. Nat. Hist., I.ondon, (Ser. 7), **12**, 1903, (337-339). [2631]. 13 Brady, George Stewardson. Report on dredging and other marine research off the north-east coast of England in 1901. Newcastle, Trans. Nat. Hist. Soc., 14, 1903, (87-101). [2227 de 2231 2627 de 2631]. 14

Brian, Alessandro. Sostituzione di nome al nuovo genere di Crostaceo Lerneide: Silvestria mihi (= Leptotrachelus mihi). Zool. Anz., Leipzig, 26, 1903, (547). [2631]. 15

Brues, C. T. A Dexid parasite [Melanophora roralis] of the sow-bug [Porcellio]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (291). [2631 4219 4231]. 16

**Calman**, W. T. On Macrurous Crustacea obtained by Mr. George Murray during the cruise of the "Oceana" in 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (416-420). [2631]. 17

**Chevreux**, Ed. Amphipodes recueillis par M. P. Labbé dans les parages du lac Baikal (1902-1903). Bul. Muséum, Paris, **1903**, (222-224). [2631 2627 ea]. 18

**Clapp**, Geo. H. Protective coloration in *Cambarus virilis* Hagen. Pittsburg, Pa., Ann. Carnegie Mus., **1**, 1901, (253). [2619 2631]. 19

**Coker**, Robert E. Notes on a species of barnacle (*Dichelaspis*) parasitic on the gills of edible crabs. [With bibliography.] Washington, D.C., Bull. U. S. Fish Com., **21**, (1901), 1902, (399-412, with text fig.). [2619 2631]. 20

**Cuénot**, L. L'organe phagocytaire des crustacés décapodes. Paris, C.-R. Acad. sci., **137**, 1903, (619-621). [2611 2631]. 21

**Cunningham**, J. T. Report on the experiments in oyster and lobster culture in 1902, with summary of the work from 1897. Falmouth, Rep. R. Cornwall Polyt. Soc., **70**, 1903, (27-39). [0060 2603 2615]. 22

Gunnington, William A. Studien an einer Daphnide Simocephalus sima. Beiträge zur Kenntnis des Centralnervensystems und der feineren Anatonie der Daphniden. Jenaische Zs. Natw., **37**, 1903, (447-520, mit 3 Taf.). [2607 2631]. 23 Daday, E[ugen] von. Eine neue Cladoceren-Gattang aus der Familie der Bosminiden. (Vorläuf. Mitt.). Zool. Anz., Leipzig, **26**, 1903, (594-597). [2631]. 24

Mikroskopische Süsswasserthiere der Umgebung des Balaton. Zool. Jahrb., Jena, Abt. f. Syst, **19**, 1903, (37–98, mit 2 Taf.). [0227 dk 2631]. 25

Mikroskopische Süsswasserthiere aus Turkestan. (Ungarisch) Math. Termt. Ért., Budapest, **21**, 1903, (324-357). [0227 ei 1431 2631 3031]. 26

Doflein, F[ranz]. Die Augen der Tiefseekrabben. Hab.-Schr. München. Leipzig (G. Thieme), 1903, (24). 23 cm. [2607 2619]. 27

**Dollitus**, A. Sur la diminution progressive de la pigmentation oculaire chez *Cirolana neglecta*. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (65). [2615 2631]. 28

Douwe, Carl van. Zur Kenntnis der freilebenden Süsswasser-Copepoden Deutschlands : Cyclops crassicaudis Sars. Zool. Anz., Leipzig, 26, 1903, (463-465). [2631]. 29

Beitrag zur Kenntnis der Copepodenfauna Bulgariens. Zool. Anz., Leipzig, **26**, 1903, (550–553). [2627 dl 2631]. 30

Zur Kenntniss der Süsswasser - Harpacticiden Deutschlands. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (383-400, mit 1 Taf.). [2627 de 2631]. 31

Duncker, Georg. Ueber Asymmetrie bei Gelasinus pugilator Latr. Biometrika, Cambridge, 3, 1903, (307-320). [2623 2631]. 32

Ehrenbaum, [E.]. Neuere Untersuchungen über den Hummer. Berlin, Mitt. D. Seefischereiver., **19**, 1903, (146– 159). [2631]. 33

Fabre-Domergue et Biétrix, E. Le mécanisme de l'émission des larves chez la femelle du homard européen. Paris, C.-R. Acad. sci., **136**, 1903, (1408-1409); [abstract], London, J. R. Microsc. Soc., **1903**, (723). [2619 2631]. **34** 

**Parran**, G. P. Record of the Copepoda taken on the mackerel fishing grounds off Cleggan, Co. Galway, in 1901. Report on the Sea and Inland Fisheries of Ireland for the year 1901 1903]. Part II, Appendix. No. VII, (105-120). [0020 2603 2631]. 35

323

Fowle, Elizabeth W. A study in the heliotropism of *Cypridopsis*. [With bibliography.] [Reprint from Amer. J. Physiol., Boston, Mass., **3**, 1900, (345-365).] Bryn Mawr, Pa., Bryn Mawr Coll. Monogr., (Repr. Ser.), **1**, 1901, (345-365). [0219 2619 2631]. 36

Fowler, G. Herbert. Contributions to our knowledge of the Plankton of the Faerce Channel. No. viii. [Notes on Copepoda by R. Norris Wolfenden.] London, Proc. Zool. Soc., **1903**, 1, (117-133, 5 text-figs.). [2615 2619 2631 0819 0827 da 0831]. 37

Fritel, P. H. Crustacés fossiles. Naturaliste, Paris, (sér. 2), 24, 1902, (269–271, av. fig.). [2631]. 38

Crustacés fossiles. Les Thoracostracés. Naturaliste, Paris, (sér. 2), **25**, 1903, (29-32). [2631]. 39

Gariaev, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal-Sees im Sommer 1900-1901. (Russ.) St. Peterburg, Trd. Troick-Klacht. Otd. Russ. Geogr. Obšč., V, 2, 1902, [1903], (27-48, mit 1 Karte). [0627 0227 1827 2027 2227 2627 0631 1231 1831 2031 2231 2631]. 40

Giesbrecht, W. Zoologie. Copepoden. In: Expedition antartique belge. Résultats du voyage du S.Y. "Belgica" en 1897-99. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1902, (49, av. XIII pls. hors texte). 25 fr. [2627 o 2631]. 41

**G111.** Theo[dore] [Nicholas]. The hosts of argulids and their nomenclature [Criticism of C. B. Wilson's North American parasitic copepods of the family *Argulidae*]. Science, New York, N.Y, (N. Ser.), **17**, 1903, (33). [2619 **5419 5431**]. 42

Godon, J. Orchestia carimana Heller. Feuille jeunes natural., Paris, (sér. 4), 38, 1903, (50). [2631]. 43

Graeter, Alb. Die Copepoden der Umgebung Basels. Rev. Suisse Zool., Genève, 11, 1903, (419-541, mit 2 Taf.). [2627 di 2631]. 44

(n 2-9053)

Revision des Cirrhipèdes appartenant à la collection du Muséum d'Histoire naturelle. Nouv. Arch. Muséum, Paris, (sér. 4), 4, 1902, (215-312, av. fig. et pl.); 5, 1903, (95-170, av. pl.). [2627 2631]. 46

Description of a new species of *Balanus* from the collection of the British Museum. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (297). [2631].

Gurney, Robert. The metamorphosis of the Decapod Crustaceans Aegeon (Crangon) fasciatus Risso, and Aegeon (Crangon) trispinosus (Hailstone). London, Proc. Zool. Soc., 1903, 2, (24-30, pls. V-VI). [2615 2631]. 49

Notes on Scapholeberis aurita (S. Fischer), a Cladoceran new to Britain. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (630-633, with 2 textfigs.). [2619 2627 de 2631]. 50

The larvae of certain British Crangonidae. Plymouth, J. Mar. Biol. Ass., (N. Ser.), **6**, 1903, (595-597). [2615]. **51** 

<u>Monstrilla</u> helgolandica Claus, at Plymouth. Plymouth, J. Mar. Biol. Ass., (N. Ser.), **6**, 1903, (627). [2627 de 2631]. 52

Haase, J. F. Records of some Victorian Entomostraca. Vict. Nat., Melbourne, 19, 1903, (148–150, with 1 pl.). [2619 2627 if 2631]. 53

Hansen, H. J. On the Crustaceans of the genera *Petalidium* and *Sergestes* from the "Challenger," with an account of luminous organs in *Sergestes challengeri* n. sp. London, Proc. Zool. Soc., **1903**, 1, (52-79, pls. XI, XII). [2607 2627 n 2631]. 54

The deep-sea Isopod Anuropus branchiatus Bedd. and some remarks on Bathynomus giganteus A. M. Edw. London, J. Linn. Soc. Zool., 29, 1903, (12-25, pl. IV); [abstract], London, J. R. Microsc. Soc., 1903, (611, 612). [2607 2631]. 55

The Ingolfiellidae fam. n., a new type of Amphipoda. London, J. Linn. Soc. Zool., 29, 1903, (117-133, pls. XIV, XV). [2607 2631]. 56 Hanson, H. J. On a new species of Sergestes obtained by Mr. George Murray during the cruise of the "Oceana" in 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (479–481, with 7 figs. in text). [2627 l 2631]. 57

Harris, J. Arthur. The habits of Cambarus. Amer. Nat., Boston, Mass., **37**, 1903, (601–608); [abstract], London, J. R. Microsc. Soc., **1903**, (723). [2619 2631]. 58

Hartog, Marcus. Notes on the method of feeding of Phyllopods and Cladocera. The American Monthly Microscopical Journal, Washington, D.C., 23, 1902, (131-132). [2619 2631]. 59

Hay, William Perry. On a small collection of crustaceans from the island of Cuba. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (429-435). [2627 he 2631]. 60

**Herdman**, W. A. The new biological station at Port Erin, being the 16th annual report of the Liverpool Marine Biology Committee. Liverpool, Trans. Biol. Soc., **17**, 1903, (15–67). [0827 de 5427 de 2227 de 2627 de 1227 de 1803]. 61

Herrick, Francis H[obart]. The reproductive period in the lobster. Washington, D.C., Bull. U. S. Fish Com., 21, (1901), 1902, (161-166, with text fig.). [2619 2615 2631]. 62

Hey, W. C. Shore-collecting at Scarborough and Filey. Naturalist, London, 1903, (344-348). [1027 de 2227 de 2627 de]. 63

Hoffmann, Wilh. Das Gleichgewichts-Sinnesorgan (Statocyste) bei den Krebsen. Naturfreund, Witten, 2, 1903, (11-13). [2611]. 64

Holmes, S. J. Death-feigning in terrestrial amphipods. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (191-196); [abstract], London, J. R. Microsc. Soc., 1903, (723). [2619 2631]. 65

Holmes, S. G. Sex recognition among Amphipods. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (288-292). [2619 2631]. 65A

Synopses of North American Invertebrates. 18. The Amphipoda [of the Atlantic Coast]. Amer. Nat., Boston, Mass., **37**, 1903, (267-292). [2627 g 2631]. 66 Jones, T. Rupert. On some Isochilinae from Canada and elsewhere in North America. Geol. Mag., London, [4], 10, 1903, (300-304, with 3 text figs.). [2627 g 2631]. 67

Kališevskij, M. Th. Zur Frage ueber die frühen Entwicklungstadien der Crevette Palaemon (Leander) rectirostris Zadd. (Russ.) Odessa, Ann. Soc. Nat., 25, Liefg 2, 1903, (134-138). [2615 2631]. 68

Kane, W. F. de Vismes. A contribution to the knowledge of Irish freshwater Entomostraca. Cladocera. Irish Nat., Dublin, **12**, 1903, (210-218, and note on 273). [2627 de 2631]. 69

A rare blind Amphipod from Lough Mask. [With note by A. M. Norman.] Irish Nat., Dublin, **12**, 1903, (273-274). [2619 2627 de 2631]. 70

Keeble, F. and Gamble, F. W. The colour physiology of the higher crustaceans. London, Phil. Trans. R. Soc., **196** B, 1903, (295-388). [0211 2611]. 71

Kirkaldy, G. W. Note on the phototropism of Daphnia. J. Quek. Microsc. Cl., London, (Ser. 2), 8, 1903, (465-466); [abstract], London, J. R. Microsc. Soc., 1908, (497). [2619 2631]. 72

**[Xishinouye, Kamakichi.]** The sand balls made by crabs. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (372-373). [2619]. 73

**Elocke**, Eduard. Bosminopeis in Japan. (German) Annot. Zool. Jap., Tokyo, 4, 1903, (123–135, with pl.). [2607 2627 ec 2631]. 74

Koltzoff, Nicolas. Sur la réorganisation des corpuscules centraux. Paris, C.-R. soc. biol., 55, 1903, (135-137). [2615]. 75

Untersuchungen über Spermien und Spermiogenese bei Decapoden. Vorläufige Mitteilung. Anat. Anz., Jena, 24, 1903, (83–95). [2615 2631]. 76

Korotnev, A. Bericht an des Minist. der Landwirthschaft u. d. Staatsdomäuen über die Thätigkeit der zoologischen Expedition auf dem Baikalsee im Sommer des Jahres 1902. (Russ.) Moskva, 1902, (27, mit 9 Fig. u. 1 Karte). 26 cm. [0227 2619 5431]. 77 Kotte, Erich. Beiträge zur Kenntniss der Hautsinnesorgane und des peripheren Nervensystems der Tiefsee-Decapoden. Zool. Jahrb., Jena, Abt. f. Anat., 17, 1903, (619–658, mit 5 Taf.). [2607 2619 2631]. 78

Labbé, Alphonse. Sur la spermatogenèse des crustacés décapodes. Paris, C.-R. Acad. sci., 137, 1903, (272-274). [2615]. 79

Lampert, Kurt. Ein seltener Kruster Deutschlands. [Apus cancriformis.] Natur. u. Schule, Leipzig, 1, 1902, (128-134). [2631]. 80

Lamplugh, G. W. Ostracoda in the Geology of the Iale of Man. Mem. Geol. Surv. U. K., London, 1903, (257); Cirripedia, *ib.*, (473). [2627 *de* 2631]. 81

Lanchester, W. F. On the Crustacea collected during the "Skeat Expedition" to the Malay Peninsula. London, Proc. Zool. Soc., 1902, 2, [1903], (363-381, pls. XXXIV-XXXV). [Terrestrial Isopoda descr. by Gustav Budde-Lund.] [2627 eg 2631]. 82

Marine Crustaceans. VIII. Stomatopoda, with an account of the varieties of Gonodactylus chiragra. In Gardiner, The Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, pt. 4, (444-458, pl. XXIII). [2623 2627 ma 2631]. 83

Lankester, E. Ray. On the modificaof the eye peduncles in crabs of the genus Cymonomus. London, Q. J. Miscrosc. Sci., (N. Ser.), 47, 1903, (439-463, pls. XXXIII, XXXIV, 12 text figs). [Notes by A. M. Norman and W. T. Calman]. [2623 2631]. 84

Launoy, L. Les phénomènes de pyrénolyse dans les cellules de la glande hépato-pancréstique de l'*Eupagurus* bernardus. Paris, C.-R. Acad. sci., **136**, 1903, (109-112). [2611 2031]. 85

Lepri, G. Nota preliminare sopra una forma cieca di *Asellus*. Mon. Zool. Ital., Firenze, **13**, 1902, (Supplemento), (37-38). [2623 2631]. 86

Linko, A. Die Cladoceren des Ilmen-Sees und benachbarter Gegenden. (Russ.) Nickolak Fischzucht., St. Peterburg, **1903**, No. 7, (50-61, deutsches Res., 61-66). [2619 2627 db 2631]. 87

Bees und einiger angrenzender Seen.

(Russ.) Nikolsk Fischzucht., St. Peterburg, **1903**, No. 7, (66-78, deutsches Rés. 78). [2627 2631]. 88

Lo Bianco, Salvatore. Le pesche abissali eseguite da F. A. Krupp col yacht Puritan nelle adiacenze di Capri ed in altre località del Mediterraneo. Mitt. Zool. Stat. Neapel, Berlin, **16**, 1903, (109-279, mit Taf.). [0219 0227 dm 0231 0431 2231 1631 2631].

# - v. Monticelli, F. S.

Lönnberg, Einar. Ueber eine Zwischenform zwischen Mysis oculata Fabr. und Mysis relicta (Lovén). Zool. Anz., Leipzig, 26, 1903, (577-581); [abstract], London, J. R. Microsc. Soc., 1908, (611). [2631]. 90

Lörenthey, E. "Audorina" und "Daránzia" Huld, neue Brachyuren-Gattungen aus Ungarn. Math.-natw. Ber. Ungarn, Leipzig, 17, (1899), 1901, (328-336, mit 1 Taf.). [2631]. 91

Neuere Beiträge zur tertiären Decapodenfauna Ungarns. Math.-natw. Ber. Ungarn, Leipzig, **18**, (1900), 1903, (98–120, mit 2 'Iaf.). [2631]. 92

Loomis, F. B. The dwarf fauna of the pyrite layer at the horizon of the Tully limestone in Western New York. Albany Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892-920, with 5 pls.). [0227 gg 2031 2231 2631]. 93

Loško, Jaroslav. Die Morphologie der Exkretionsorgane der Krustazeen. (Böhmisch) Prag, SitzBer. Ges. Wiss., 1903, No. 26, (29, 1 Taf.) [2607]. 94

Man, J. G. de. On Potamon (Potamonautes) latidactylum, a new freshwater crab from Upper Guinea. London, Proc. Zool. Soc., **1903**, 1, (41– 47, pl. IX). [2627 fd 2631]. 95

Marchand, Ernest. Description de deux arthropodes nouveaux provenant du Soudan français. Nantes, Bul. soc. sci. nat., (sér. 2), 2, (2<sup>e</sup> semest.), 1902, (331-343, av. 1 pl.). [2627 fc 2631 4827 fc 4831]. 96

Marshall, W. S. Entocythere cambaria (n. gen. et. n. sp.), a parasitic Ostracod [with bibliography]. Madison, Trans. Wis. Acad. Sci., 14, (1902), 1903, (117-144, with pl.). [2631]. 96A

Mayer, P[aul]. Die Caprellidae. Résultats des explorations zool., botan., océanogr., géol., entreprises aux Ind. Néerl. or. 1899-1900, à bord du Siboga, sous le commandement de G. F. Tydeman, publiés par Max Weber. Livr. 12, Monogr. 34, Leide (E. J. Brill), (160, mit 10 l'af.). 33 cm. [2627 c 2631]. 97

Maxi rski, Stanislas. Sur les rapports des mu cles et de la cuticule chez les Crustacés. (Polonais) Kraków, Bull. Intern. Acad., **1903**, (520-531, av. 1 pl.). [2607]. 98

Meek, Alexander. The migrations of crabs [Cancer pagurus]. Rep. Northumb. Sea Fish. Comm., 1903, (33-35). [2619 2631]. 99

Pit fish. A strange habitat for Gammarus duebeni. Rep. Northumb. Sea. Fish. Comm., **1903**, (51–53). [2619 2631]. 100

Monticelli, F. S. e Lo Bianco, S. Sullo sviluppo dei Peneidi del Gelfo di Napoli. Napoli, Boll. Soc. Nat., 15, (1901), 1902, (159). [2615 2631] 101

Sulla probabile larva di Aristeus antennatus. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (30-31). [2615 2631]. 102

Müller, G. W[ilhelm]. Ostracoden. (Hamburgische Elb - Untersuchung.) Hamburg, Jahrb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (163–167). [2627 dc 2631]. 103

Norman, A. M. Notes on the natural history of East Finmark. Including "Notes on some Copepoda from the Arctic Seas collected in 1890 by the Rev. Canon A. M. Norman, F.R.S. By Thomas Scott." Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (1-32, pls. 1-IV). [2627 db 2631]. 104

New generic names for some Entomostraca and Cirripedia. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (367-369). [0070 2631]. 105

British Land Isopoda-Supplement. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (369-372). [2627 de 2631]. 106

Copepoda Calanoida, chieffy abyssal, from the Farce Channel and other parts of the North Atlantic. London, J. Linn. Soc. Zool., 29, 1903, (133-141). [2627 la 2631]. 107 Nusbaum, Józef. [Nouvelles recherches sur l'embryologie des Isopodes (*Cymothoa*)]. (l'olonais) Kosmos, Lwów, **28**, 1903, (154-177, av. pl.). [2615 2631]. 108

Ohlin, Axel. Ueber eine neue bathypelagisch lebende Phyllocaride. (Vorläuf. Mitt.). Zool. Anz., Leipzig, 27, 1903, (59-61). [2631 2619]. 109

Osborn, Henry Leslie. Bunodera cornuta sp. nov.: a new parasite from the crayfish and certain fishes of Lake Chautauqua, N.Y. [with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (63-73, with fig. in text). [1219 1227 gg 1231 2631 5431].

110 **Parker**, G[eorge] H[oward]. The reaction of copepods to various stimuli and the bearing of this on daily depthmigrations. [With bibliography.] Washington, D.C., Bull. U. S. Fish. Com., **21**, (1901), 1902, (103-123). [2619 2631]. 111

**Paulmisr**, F[rederick] C. The edible crab. [Callinectes hastatus]. A preliminary study of its life history and economic relationships. Albany Univ., N.Y., Rep. St. Mus., **55**, (1901), 1903, (r. 129-r. 136). [2619 2603 2631]. 112

Pearcey, F. G. Notes on the marine deposits of the Firth of Forth, and their relation to its animal life. Glasgow, Trans. Nat. Hist. Soc., 6, 1903, (217-251, with map). [0427 de 0827 de 2227 de 2627 de 5427 de 1827 de]. 113

Petch, T. The marine fauna of the Humber District and the Holderness Coast. Hull, Trans. Sci. F. Nat. Cl., 3, 1903, (27-41). [1027 de 2227 de 2627 de 0827 de 1827 de]. 114

Piovanelli, S. Two new Bdelloida commensal in the branchial cavities of *Telphusa fluviatilis* Link. London, J. Quek. Miscrosc. Cl., 8, 1903, (521-522). [1619 1631 2619]. 115

Pocock, R. I., Walker, A. O. and Scott, Andrew. Crustaces, Malacostraca. In "The Natural History of Sokotra and Abd-el-Kuri . .," edited by Henry O. Forbes. Liverpool, Special Bull. Mus., 1903. I. The Decapoda of Sokotra, by R. I. Pocock, *ib.*, (212-213, 4 figs. in text). II. Decapod and sessileeyed Crustaceans from Abd-el-Kuri, [Brachyura by] R. I. Pocock, [Macrura and Edriophthalma by] A. O. Walker, and Andrew Scott, ib., (216-232, pla, XIVa and XIVb). [With notes by H. O. Forbes.] [Quoted hereafter as Nat. Hist. Sokotra.] [2627 ff 2631]. 116

**Bichardson**, Harriet. Isopods collected at the Hawaiian Islands by U. S. Fish Commission steamer Albatross. Washington, D.C., Bull. U. S. Fish Com., **1903**, (47-53). [2627 nd 2631]. 117

Richters, Ferd. Lernaeonema encrasicoli Baird, ein Parasit der Sprotte. Prometheus, Berlin, 14, 1903, (267–268). [2631]. 118

**Bidewood, W. G. On** Obesiella lyonsiellae, a new genus of Copepod Crustacean. London, J. Linn. Soc. Zool., 28, 1903, (463-465); [abstract], London, J. R. Miscrosc. Soc., 1903, (497). [2619 2631]. 119

 
 Sainte-Claire Deville, J. Exploration

 entomologique des grottes des Alpes-Maritimes. Ann. Soc. ent., Paris, 71, 1902, [1903], (695-709, av. fig.). [2431

 2427 df
 2631
 3031
 3431
 3631

 3831
 4831].
 120

**Sars**, G[eorg] O[ssian]. Fresh-water entomostraca from China and Sumatra. Arch. Math. Naturv., Kristiania, **25**, 1903, (44, with 4 pls.). [2627 eb eg 2631]. 121

An account of the Crustacea of Norway, with short descriptions and figures of all the species. Vol. 5, Parts 1 and 2. Bergen, 1903, (1-28, 16 pls.). 4to. [2631 2627 da]. 122

On the Crustacean Fauna of Central Asia. Part II, Cladocera. St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (157-194, pls. I-VIII); Part III . . Copepoda and Ostracoda. Ib., (195-232, pls. IX-XVI); Appendix. Local Faunae of Central Asia. Ib., (233-264). [2627 ea eb 2631]. 123

**Sayce**, O. A. The Phyllopoda of Australia, including descriptions of some new genera and species. Melbourne, Proc. R. Soc. Vict., (N. Ser.), **15**, 1903, (224-261, with pls.). [2619 2627 ic 2631]. 124

schnee. Landbewohnende Krebse der Südsee. Natur u. Haus, Dresden, 11, 1903, (212-216). [2619]. 125

Schuster, E. H. J. Variation in Eupagurus prideauxi (Heller). Biometrika, Cambridge, 2, 1903, (191-210, with 1 fig.). [2623 0223 2631]. 126

**Scott**, Andrew. On the spawning of the common lobster. Liverpool, Proc. biol. Soc., **17**, 1903, (106–113). [2619]. 127

### ---- v. Thompson, I. C.

# - v. Walker, A. O.

Scott, Thomas. Notes on some Copepoda from the Faroe Channel. London, J. Linn. Soc. Zool., 29, 1903, (1-11, pls. I-III); [abstract], London, J. R. Microsc. Soc., 1903, (612). [2627 la 2631]. 128

British freshwater harpactids. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (185–196). [2627 de 2631]. 129

Some observations on the distribution of the smaller Crustacea. Edinburgh, Trans. Nat. Soc., 5, 1903, (23-26). [2619]. 130

On some new and rare Crustacea collected at various times in connection with the investigations of the Fishery Board for Scotland. Glasgow, Rep. Fish. Board, **21**, pt. 3, 1903, (109– 135, pls. II-IV). [2627 de 2631]. 131

Some further observations on the food of fishes, with a note on the food observed in the stomach of a common porpoise. Glasgow, Rep. Fish. Board, **21**, pt. 3, 1903, (218-227, 2 textfigs.). [0060 2603]. 132

Scourfield, D. J. Synopsis of the known species of British freshwater Entomostraca. Part I. Cladocera. London, J. Quek. Microsc. Cl., 8, 1903, (431-454, pl. XXIV); [abstract], London, J. R. Microsc. Soc., 1903, (497); 1904, (63). Part II. Copepoda. *Ib.*, (531-544). [2627 de 2631]. 133

Seurat, L. G. Extrait d'une lettre addressée à M. E. L. Bouvier [Mœurs des Crustacés]. Bul. Muséum, Paris, 1903, (222-223). [2619 2627 nh]. 134

**Sharpe**, Richard W. Report on the freshwater Ostracoda of the United States National Museum, including a revision of the sub-families and genera of the family *Cyprididae*, [with bibliography]. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (969-1001, with 5 pls.). [2627 gf 2631]. 135

**Smallwood**, Mabel E. The beach flea: *Talorchestia longicornis*. Brooklyn, N.Y., Inst. Arts Sci. Cold Spring Harbour Monog., No. 1, 1903, (27, with 3 pls.). 25 cm. [2607 2619 2631]. 136

**Spencer**, W. K. The hypostomic eyes of Trilobites. Geol. Mag., London, [4], **10**, 1903, (489–492, 3 text figs.). [2607 2831 2807]. 137

**Sprague**, B. Cyclops rubellus. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (139–140). [2627 de 2631]. 138

On the occurrence of Simocephalus serrulatus in Scotland. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (250). [2627 de]. 139

**Stebbing**, Thomas R. R. Amphipoda from Costa Rica [Talorchestia fritzi n. sp., and Hyalella fazoni n. sp.] Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (925-931, with 2 pls.). [2627 hb 2631]. 140

Stecka, Stanisława. Contributions à l'anatomie du cœur chez l'écrevisse. (Polonais) Kosmos, Lwów, 28, 1903, (21-43, 1 pl.). [2607 2631]. 141

**Steele**, Mary. The cray fish [*Cambarus*] of Missouri [with bibliography]. Cincinnati, Ohio, Univ. Cincin. Bull., No. **10**, 1902, (54, with pl.). 23.5 cm. [2627 gi 2631]. 142

**Stempell**, W[alter]. Beiträge zur Kenntnis der Gattung *Polycaryum*. Arch. Protistenkunde, Jena, **2**, 1903, (349–363, mit 1 Taf.). [0431 2631].

143 **Stener**, Adolf. Mytilicola intestinalis n. gen. n. sp. Wien, Arb. Zool. Inst. Univ., **15**, 1903, (1-46, mit 5 Taf.). [2603 2631]. 144

**Szilády**, Zoltán von. Die Crustaceen des Retyezát. Math.-natw. Ber. Ungarn, Leipzig, **18**, (1900), 1903, (71-97). [2627 de]. 145

**Terasalti**, Tomekichi. Descriptions of Japanese crabs. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (12–17, 44–47, 177–186, 234–241, 356–359, 431–440, with figs.). [2627 ec 2631]. 146

**Thienemann**, A. Statocysten bei Anthura gracilis Leach. Zool. Anz., Leipzig, **26**, 1903, (406–410); [abstract], London, J. R. Microsc. Soc., **1903**, (610). [2607 2631]. 147 Thompson, I. C. Report on the Copepoda obtained by Mr. George Murray, F.R.S., during the cruise of the "Oceana" in 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (1-36, pls. I-VII). [2627 l 2631]. 148

On the plankton of the Indian Ocean. London, Rep. Brit. Ass., 1903, 1903, (663-664). [2619 0419]. [49]

and Scott, Andrew. Report on the Copepoda collected by Prof. Herdman at Ceylon in 1902, in "Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar by W. A. Herdman, D.Sc., F.R.S. With supplementary reports upon the Marine Biology of Ceylon by other naturalists." Part I. London (Royal Society), 1903, (227-307, 20 pls., 1 text-fig.). Quoted hereafter as "Rep. Ceylon Pearl Fisheries." [2619 2631]. 150

Thompson, Millett T. A rare Thalassinid [*Naushonia crangonoides*] and its larva [with bibliography]. Boston, Mass., Proc. Soc. Nat. Hist., **34**, 1903, (1-21, with 3 pls.). [2615 2631]. 151

The metamorphoses of the hermit crab [Eupagurus, with bibliography]. Boston, Mass., Proc. Soc. Nat. Hist., **81**, 1903, (147-209, with 7 pls.). [2615 2631]. 152

A new Isopod [Stegophryzus hyptius n. gen. et. sp.] parasitic on the hermit crab [Pagurus longicarpus]. Washington, D.C., Bull. U. S. Fish Com., **21**, (1901), (53-56, with pl.). [2619 2631]. 153

Thomson, G. M. On the New Zealaud Phyllobranchiate Crustaces - Macrura. London, Trans. Linn. Soc. Zool., **8**, 1903, (433–453, pls. XXVII-XXIX). [2627 *ik* 2631]. 154

Tièche, M. Ein Petrefakten-Fund vom Belpberg [Schweiz.]. [Lepadiden]. Bern, Mitt. Natf. Ges., **1903**, (XII). [2627 di 2631]. 155

**Todd**, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., **6**, 1903, (541-561). [5003 5027 de 2219 2227 de 2603 1827 de 1027 de 1019 0827 de 0819 0227 de 0060]. 156 Ulrich, Carl Jost. A contribution to the subterranean fauna of Texas. [1 n. gen. described by Eigenmann and Ulrich.] [Arthropoda, with nn. spp. in Crustaces, Arachnida and Aptera.] Contributions from the Zoological Laboratory of the Indiana University No. 34 in Lincoln, Nebr. Trans. Amer. Microsc. Soc., 23, 1901, [1902]; (83-100, with pl.). [0219 2427 gi 2631 3031 3631].

Vallentin, R. Observations on the plankton of Loce Pool. Truro, J. R. Inst. Cornwall, 15, 1903, (328-344). [2619 1619 0219]. 158

Walker, A. O. Amphipoda of the Southern Cross Antarctic expedition. London, J. Linn. Soc. Zool., 29, 1903, (38-62). [2631]. 159

- v. Pocock, R. I.

Warren, Ernest. On the anatomy and development of *Distomum cirrigerum* v. Baer. [Parasitic in *Astacus.*] Q. J. Microsc. Sci., London, (N. Ser.), 47, 1903, (273-301, pls. XXIV-XXVI). [2619 2631]. 160

A preliminary attempt to ascertain the relationship between the size of the cell and the size of body in Daphnia magna Straus. Biometrika, Cambridge, 2, 1903, (255-259, with 1 fg.). [2607 0207 2631]. 161

Weller, Stuart. The Stokes collection of Antarctic fossils, Mollusca and Crustacea. Chicago, Ill., J. Geol. Univ. Chic., 11, 1903, (413-419, with pl.). [2203 2603]. 162

Whitelegge, T. Crustacea. Notes on the Zoology of Paanopa or Ocean Island and Nauru or Pleasant Island. Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (8-12). [2627 *ib*]. 163

Williamson, H. C. On the larval and early young stages and rate of growth of the shore crab *Carcinus maenas*. Glasgow, Rep. Fish. Board, 21, pt. 3, 1903, (136-179, pls. VII-XIII). [2615 2631]. 164

Wilson, Edmund B. Notes on the reversal of asymmetry in the regeneration of the chelae in *Alpheus heterochelis*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (197-210). [0211 2611 2631]. 165 Wolf, Eugen. Dauereier und Ruhezustände bei Kopepoden. Zool. Anz., Leipzig, 27, 1903, (98–108). [2615 2619 2631]. 167

Wolfenden, R. Norris. On the Copepod sub-family Ætidiinae, with a proposed revision of the classification. London, Rep. Brit. Ass., **1902**, 1903, (263-267). [2631]. 168

Woltereck, [Richard]. Bemerkungen zu den Amphipoda Hyperiides der deutschen Tiefsee-Expedition. I. Thaumatopeidae. Zool. Anz., Leipzig, **26**, 1903, (447-459, 504, mit 1 Taf.). [2631 2607]. 169

Woodward, Henry. On some fossil prawns from the Osborne Beds of the Isle of Wight. Geol. Mag., London, [4], 10, 1903, (97-99, pl. V.). [2631 2627 de]. 170

Wüst, Ewald. Ein pleistocäner Valvaten - Mergel mit Brackwasser-Ostrakoden bei Memleben an der Unstrut. Centralbl. Min., Stuttgart, **1903**, (586-590). [2627 de 2631]. 171

Yorkes, Robert M. and Huggins, Gurry E. Habit formation in the crawfish *Cambarus affinis*. Harvard Psychological studies, **1**, Psych. Rev. Mongr. Suppl., New York, N.Y., **4**, 1903, (565– 577). [2619 2631]. 172

Zacharias, Otto. Ueber die jahreszeitliche Variation von Hyalodaphnia kahlbergeneis Schoedl. Plön, Forsch-Ber. biol. Stat., **10**, 1903, (293-295). [2631 2623]. 173

**Zernov,** S. A. Ueber das Zooplankton des Aral-Sees, auf Grund der von L. S. Berg im Jahre 1900 gesammelten Materialien. (Russ.) Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., **3**, Liefg III, 1903, (1-38). [0227 0427 1627 *ea* 1631 2627 2631]. 174

**Zimmer**, Carl. Die Cumaceen des Museums für Naturkunde in Berlin. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (665-694). [2631]. 175

#### 2603 COMPREHENSIVE AND GENERAL WORKS.

#### GENERAL.

Borradaile, L. A. Marine Crustaceans. IV. Some remarks on the classification of the crabs. V. The crabs of the Catometope families. VI. The sand crabs (Oxystomata). VII. The barnacles (Cirripedia). IX. The sponge-crabs (Dromiacea). X. The spider-crabs (Oxyrhynca). XI. On the classification and genealogy of the reptant Decapods. In: Gardiner, the Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, pt. 4, (424-443, pl. XXII, and text-figs. 110-119); *Ib.*, 2, pt. 1, 574-578, pl. XXXIII); *Ib.*, pt. 2, (681-698, pls. XLVII-XLVIII, text-figs. 122-126).

Farren, G. P. Record of the Copepoda taken on the mackerel fishing grounds off Cleggan, Co. Galway, in 1901. Report on the Sea and Inland Fisheries of Ireland for the year 1901 [1903]. Part II, Appendix, No. VII, (105-120).

**Scott**, Thomas. Some further observations on the food of fishes, with a note on the food observed in the stomach of a common porpoise. Glasgow, Rep. Fish. Board, **21**, pt. 3, 1903, (218-227, 2 textfigs.).

Stener, Adolf. Mytilicola intestinalis n. gen. n. sp. Wien, Arb. Zool. Inst. Univ., 25, 1903, (1-46, mit 5 Taf.).

**Todd**, R. A. Notes on the invertebrate fauna and fish-food of the bays between the Start and Exmouth. Plymouth, J. Mar. Biol. Ass., 6, 1903, (541– 561).

Weller, S. The Stokes collection of Antarctic fossils. Chicago, Ill. J. Geol. Univ. Chic., 11, 1903, (413-419, with pl.).

#### ECONOMICS.

**Cunningham**, J. T. Report . . . on the experiments in oyster and lobster culture in 1902, with summary of the work from 1897. Falmouth, Rep. Cornwall Polyt. Soc., **70**, 1903, (27-39).

**Paulmier**, F[rederick] C. The edible crab. [Callinectes hastatus.] A preliminary study of its life history and economic relationships. Albany Univ., N.Y., Rep. St. Mus., 55, (1901), 1903, (r. 129-r. 136).

## 2607 STRUCTURE.

# GENERAL,

Benham, W. B. On some remains of a gigantic fossil Cirripede from the Tertiary Rocks of New Zealand. Geol. Mag., London, [4], 10, 1903, (110-119, pls. IX-X).

Berndt, W. Die Anatomie von Cryptophialus striatus n. sp. Berlin, SitzBer. Ges. natf. Freunde, 1903, (436– 444).

Zur Biologie und Anatomie von Alcippe lampas Hancock. Zs. wiss. Zool., Leipzig, 74, 1903, (396–457, mit 4 Taf.).

Hansen, H. J. The deep-sea Isopod Anuropus branchiatus Bedd. and some remarks on *Bathynomus giganteus* A. M. Edw. London, J. Linn. Soc. Zool., **29**, 1903, (12-25, pl. IV); [abstract], London, J. R. Microsc. Soc., **1903**, (611-612).

**Elocke**, Eduard. Bosminopsis (B. ishikawai n. sp. and B. deitersi Rich.) in Japan. (German) Annot. Zool. Jap., Tokyo, **4**, 1903, (123–135, with pl.).

**Smallwood**, Mabel E. The beach flea: *Talorehestia longicornis*. Brooklyn, N.Y., Inst. Arts Sci. Cold Spring Harbor Monog., No. **1**, 1903, (27, with 3 pls.). 25 cm.

Warren, Ernest. A preliminary attempt to ascertain the relationship between the size of the cell and the size of body in *Daphnia magna* Straus. Biometrika, Cambridge, **2**, 1903, (255– 259, with 1 fig.).

Woltereck, [Richard]. Bemerkungen zu den Amphipoda Hyperiidea der deutschen Tiefsee - Expedition. I. *Thaumatopsidae*. Zool. Anz., Leipzig, 26, 1903, (447-459, 504, mit 1 Tat.).

NERVOUS SYSTEM AND ORGANS OF SENSE.

**Cunnington**, William A. Studien an einer Daphnide, Simocephalus sima. Beiträge zur Kenntnis des Centralnervensystems und der feineren Anatomie der Daphniden. Jenaische Zs. Natw., **37**, 1903, (447-520, mit 3 Taf.).

Dofiein, F[ranz]. Die Augen der Tiefseekrabben. Hab.-Schr. München. Leipzig (G. Thieme), 1903, (24). 23 cm.

Kotte, Erich. Beiträge zur Kenntniss der Hautsinnesorgane und des peripheren Nervensystems der Tiefsee-Decapoden. Zoul. Jahrb., Jena, Abt. f. Anat., 17, 1903, (619-658, mit 5 Taf.).

**Spencer**, W. K. The hypostomic eyes of Trilobites. [*Branch pus.*] Geol. Mag., London, [4], **10**, 1903, (489–492, **3 text figs.**).

Thienemann, A. Statocysten bei Anthura gracilis Leach. Zool. Anz., Leipzig, 26, 1903, (406-410); [abstract], London, J. R. Microsc. Soc., 1903, (610).

#### MYOLOGY.

Masiarski, Stanislas. Sur les rapports des muscles et de la cuticule chez les Crustacés. (Polonais) Kraków, Bull. Intern. Acad., **1903**, (520-531, av. 1 pl).

# GIBCULATORY AND RESPIRATORY OBGANS.

**Stecka**, Stanisława. Contributions à l'anatomie du-coeur chez l'écrevisse. Kosmos, Lwów, **28**, 1903, (21-43, av. 1 pl.).

#### EXCRETORY ORGANS.

Loiko, J. Die Morphologie der Exkretionsorgane der Krustazeen. Prag, SitzBer. Ges. Wiss., 1903, Nr. 26, (29, 1 Taf.).

# SPECIAL EXTERNAL CHARACTERS.

Hansen, H. J. On the Crustaceans of the genera *Petalidium* and *Sergestes* from the "Challenger," with an account of luminous organs in *Sergestes challengeri* n. sp. London, Proc. Zool. Soc., **1903**, 1, (52-79, pls. XI, XII).

# 2611 PHYSIOLOGY.

FUNCTIONS OF SPECIAL STRUCTURES.

**Cuénot**, L. L'organe phagocytaire des crustacés décapodes. Paris, C.-R. Acad. sci., **137**, 1903, (619-621).

Hoftmann, Wilh. Das Gleichgewichts-Sinnesorgan (Statocyste) bei den Krebsen. Naturfreund, Witten, 2, 1903, (11-13). Launoy, L. Les phénomènes de pyrénolyse dans les cellules de la glande hépato - pancréatique de l'*Eupagurus* bernardus. Paris, C.-R. Acad. sci., **135**, 1903, (109-112).

#### RESPIRATION.

Bohn, Georges. Des mécanismes respiratoires chez les crustacés décapodes: essai de physiologie évolutive, éthologique et phylogénique. Bul. sci. France, Belgique, Paris, **36**, 1902, (178– 551, av. fig.).

#### ENVIRONMENTAL EFFECTS.

Keeble, F. and Gamble, F. W. The colour physiology of the higher Crustaceans. London, Phil. Trans. R. Soc., **196**8, 1903, (295-388).

### REGENERATION.

Wilson, Edmund B. Notes on the reversal of asymmetry in the regeneration of the chelae in *Alpheus heterochelis*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (197-210).

#### 2615 DEVELOPMENT.

#### GENERAL.

**Cunningham**, J. T. Report . . . on the experiments in oyster and lobster culture in 1902, with summary of the work from 1897. Falmouth, Rep. R. Cornwall Polyt. Soc., **70**, 1903, (27-39).

Monticelli, F. S. e Lo Bianco, S. Sullo sviluppo dei Peneidi del Golfo di Napoli. Napoli, Boll. Soc. Nat., **15**, (1901), 1902, (159).

#### Ovum.

**Herrick**, Francis H[obart]. The reproductive period in the lobster. Washington, D.C., Bull. U. S. Fish. Com., **21**, (1901), 1902, (161-166, with text fig.).

Wolf, Eugen. Dauereier und Ruhezustände bei Kopepoden. Zool. Anz., Leipzig, 27, 1903, (98–108).

#### SPERMATOGENES18.

Koltzoff, Nicolas. Untersuchungen über Spermien und Spermiogenese bei Decapoden. Vorläufige Mitteilung. Anat. Anz., Jena, 24, 1903, (83–95).

Labbé, Alphonse. Sur la spermatogenèse des crustacés décapodes. Paris, C.-R. Acad. sci., 137, 1903, (272-274).

EMBRYOLOGY, ORGANOGENY, HISTOGENY.

Kališevakij, M. Th. Zur Frage über die frühen Entwicklungsstadien der Crevette Palaemon (Leander) rectirostris Zadd. (Russ.) Odessa, Ann. Soc. Nat., 25, Liefg 2, (134–138).

Nusbaum, Jósef. Nouvelles recherches sur l'embryogénie des Isopodes (Cymothoa). (Polonais) Kosmos, Lwów, 28, 1903, (157–177, av. 2 pls.).

#### METAMORPHOSIS AND LARVAL FORMS.

Fowler, G. Herbert. Contributions to our knowledge of the Plankton of the Faeroe Channel.—No. VIII [Notes on Copepoda by R. Norris Wolfenden]. London, Proc. Zool. Soc., **1903**, 1, (117– 133, 5 text-figs.).

**Gurney**, Robert. The metamorphosis of the Decapod Crustaceans Aegeon (Crangon) fasciatus Risso, and Aegeon (Crangon) trispinosus (Hailstone). l.e. 2, (24-30, pls. V-VI).

The larvae of certain British Crangonidae. Plymouth, J. Mar. Biol. Ass., (N. Ser.), 6, 1903, (595– 597).

Monticelli, F. S. e Lo Bianco, S. Sulla probabile larva di Aristeus antennatus. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (20–31).

Thompson, Millett T. The metamorphoses of the hermit crab. [*Eupagurus*, with bibliography.] Boston, Mass., Proc. Soc. Nat. Hist., **31**, 1903, (147-209, with 7 pls.). Separate 24.3 cm.

Williamson, Henry Charles. On the larval and early young stages and rate of growth of the shore crab Carcinus maenas. Glasgow, Rep. Fish. Board, 21, pt. 3, 1903, (136-179, pls. VII-XVI),

Appelløf, A[nders]. Researches on the development of the lobster, 1902. (Norw.) Bergen, Norsk Fisket., 22, 1903, (114–132).

Thompson, Millett T. A rare Thalassinid [Naushonia crangonoides] and its larva [with bibliography]. Boston, Mass., Proc. Soc. Nat. Hist., **31**, 1903, (1-21, with 3 pls.).

### CHANGES DURING LIFE.

**Dollfus**, A. Sur la diminution progressive de la pigmentation oculaire chez *Circolana neglecta*. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (65).

witten, E. P. On the structural changes accompanying the ecdysis of the crab *Cancer pagurus*. Rep. Northumb. See Fish, Comm., **1903**, (42– 48, 1 pl., 1 text-fig.).

# 2619 ETHOLOGY.

#### GENERAL.

Bohn, Georges. Des mécaniames respiratoires chez les crustacés décapodes : essai de physiologie évolutive, éthologique et phylogénique. Bul. sci. France-Belgique, Paris, **36**, 1902, (178– 551, av. fig.).

Fowler, G. Herbert. Contributions to our knowledge of the Plankton of the Faeroe Channel. No. VIII. [Notes on Copepoda by R. Norris Wolfenden.] London, Proc. Zool. Soc., **1903**, 1, (117-133, 5 text figs.).

Gurnsy, R. Notes on Scapholeberis aurita (S. Fischer), a Cladoceran new to Britsin. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (630-633, with 2 textfigs.).

Hasse, J. P. Records of some Victorian Entomostraca. Vict. Nat., Melbourne, **19**, 1903, (148–149).

Kirkaldy, G. W. Note on the phototropism of *Daphnia*. J. Quek. Microsc. Cl., London, (Ser. 2), 8, 1903, (465-466); [abstract], London, J. R. Microsc. Soc., **1903**, (497). Linko, A. Die Cladoceren des Ilmen-Sees und benachbarter Gegenden. (Russ.) Nikolsk Fischzucht., St. Peterburg, **1903**, No. 7, (50-61, deutsches Res., 61-66).

**Paulmier**, F[rederick] C. The edible crab. [Callinectes hastatus]. A preliminary study of its life history and economic relationships. Albany Univ., N.Y., Rep. St. Mus., 55, 1903, (r. 129r. 136).

**Bidewood**, W. G. On Obesiella lyonsiellae, a new genus of Copepod Crustacean. London, J. Linn. Soc. Zool., **28**, 1903, (463-465); [abstract], Loudon, J. R. Microsc., **1903**, (497).

**Sayce**, O. A. The Phyllopoda of Australia, including descriptions of some new genera and species. Melbourne, Proc. R. Soc. Vict., **15**, (N. Ser.), 1903, (224-59, with pls. XXVII-XXXVI).

**smallwood**, Mabel E. The beach flea: *Talorchestia longicornis*. Brooklyn, N.Y., Inst. Arts. Sci. Cold Spring Harbor Monog., No. **1**. 1903, (27, with 3 pls.). **25 cm**.

Thompson, I. C. and Scott, Andrew. Report on the Copepoda collected by Prof. Herdman at Ceylon in 1902, in Rep. Ceylon Pearl Fisheries. Part I. London (Royal Society), 1903, (227-307, 20 pls., 1 text-fig.).

#### HABITS.

**Pabre-Domergue** et **Biétrix**, E. Le mécanisme de l'émission des larves chez la femelle du homard européen. Paris, C.-R. Acad. sci., **136**, 1903, (1408–1409); [abstract], London, J. R. Microsc. Soc., **1903**, (723).

**Harris**, J. Arthur. The habits of *Cambarus*. Amer. Nat., Boston, Mass., **37**, 1903, (601–608); [abstract], London, J. R. Microsc. Soc., **1903**, (723).

Hartog, Marcus. Notes on the method of feeding of Phyllopods and Cladocera. The American monthly microscopical Journal, Washington, D.C., 23, 1902, (131-132).

Kane, W. F. de V. A rare blind Amphipod from Lough Mask. [With note by A. M. Norman.] Irish Nat., Dublin, **12**, 1903, (273-274). [**Kishinouye**, Kamakichi.] . . . Sand balls made by crabs. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (372-373).

Schnee. Landbewohnende Krebse der Südsee. Natur u. Haus, Dresden, 11, 1903, (212-216).

Sourat, L. G. Extrait d'une lettre adressée à M. E. L. Bouvier [Mœurs des crustacés]. Bul. Muséum, Paris, 1903, (222-223).

#### MIGRATION.

Meek, Alexander. The migrations of crabs. [Cancer pagurus.] Rep. Northumb. Sea Fish. Comm., 1903, (33-35).

**Parker**, G[eorge] H[oward]. The reactions of Copepods to various stimuli and the bearing of this on daily depth-migrations, [With bibliography.] Washington, D.C., Bull. U. S. Fish. Com., **21**, (1901), 1902, (103-123).

#### HIBERNATION.

Wolf, Eugen. Dauereier und Ruhezustände bei Kopepoden. Zool. Anz., Leipzig, 27, 1903, (98-108).

#### REPRODUCTION.

**Scott**, Andrew. On the spawning of the common lobster. Liverpool, Proc. biol. Soc., **17**, 1903, (106-113).

Herrick, Francis H[obart]. The reproductive period in the lobster. Washington, D.C., Bull. U. S. Fish Com., 21, (1901), 1902, (161-166, with textfig.).

**Eolmes**, S. J. Sex recognition among Amphipods. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **5**, 1903, (288-292).

#### HABITAT.

Dofietn, F[ranz]. Die Angen der Tiefseekrabben. Hab.-Schr. München. Leipzig (G. Thieme), 1903, (24). 23 cm.

Korotnev, A. Bericht an das Ministerium der Landwirthschaft u. d. Staatsdomänen üb. die Thätigkeit der zoologischen Expedition auf dem Baikalsee im Sommer d. J. 1902. (Russ.) Moskva, 1902, (27, mit 9 Fig. u. 1 Karte). 26 cm. Kotte, Erich. Beiträge zur Kenntniss des Hautsinnesorgane und peripheren Nervensystems der Tiefsee-Decapoden. Zool. Jahrb, Jena, Abt. f. Anat., 17, 1903, (619-658, mit 5 Taf.).

Linko, A. Die Cladoceren des Ilmen Sees und benachbarter Gegenden. (Russ.) Nikolsk Fischzucht., St. Peterburg, 1903, No. 7, (50-61, deutsches Res., 61-66).

**Meer.** A. Pit fish. A strange habitat for *Gammarus duebeni*. Rep. Northumb. Sea Fish Comm., **1903**, (51-53).

**Ohim**, Axel. Ueber eine neue bathypelagisch lebende Phyllocaride. (Vorläuf. Mitt.) Zool. Anz., Leipzig, **27**, 1903, (59-61).

Thompson, Isaac C. On the plankton of the Indian Ocean. London, Rep. Brit. Ass., **1903**, 1903, (643-644).

**Vallentin**, Rupert. Observations on the plankton of Loce Pool. Truro, T. R. Inst. Cornwall, **15**, 1903, (325-344).

### INSTINCT and PSYCHOLOGY.

**Holmes**, S. J. Death feigning in terrestrial amphipods. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (191-196); [abstract], London, J. R. Microsc. Soc., 1903, (723).

Yerkes, Robert M. and Huggins, Gurry E. Habit formation in the craw fish *Cambarus affinis*. Harvard Psychological studies 1, Psych. Rev. Monogr. Suppl., New York, N.Y., 4, 1903, (565– 577).

#### PARASITISM.

Augener, Hermann. Beiträge zur Kenntniss der Gephyreen nach Untersuchung der im Göttinger zoologischen Museum befindlichen Sipunculiden und Echiuriden. Arch. Natg., Berlin, 69, Bd. 1, 1903, (297-371, mit 5 Taf.).

**Bassett-Smith**, P. W. On new parasitic Copepoda from Zanzibar and East Africa collected by Cyril Crossland, B.A., B.Sc. London, Proc. Zool. Soc., **1903**, 1, (104–109, with 2 text figs.).

Bonnier, Jules. Sur deux types nouveaux d'Epicarides, parasites d'un Cumacé et d'un Schizopode. Paris, C.-R. Acad. sci., **136**, 1903, (102-103). **Coher**, Robert E. Notes on a species of barnacle (*Dichelaspis*) parasitic on the gills of edible crabs. [With bibliography.] Washington, D.C., Bull. U. S. Fish Com., **21**, (1901), 1902, (399-412, with text-fig.).

Gill, Theo[dore] [Nicholas]. The hosts of argulids and their nomenclature. [Criticism of C. B. Wilson's "North American parasitic copepods of the family Argulidae"]. Science, New York, N.Y., (N. Ser.), **17**, 1903, (33).

Piovanelli, S. Two new Bdelloida commensal in the branchial cavities of *Telphusa fluviatilis* Lmk. London, J. Quek. Microsc. Cl., 8, 1903, (521-522).

**Scott**, T. Some observations on the distribution of the smaller Crustacea. Edinburgh, Trans. Nat. Sci., 5, 1903, (23-26).

Thompson, Millett T. A new Isopod [Stegophryxus hyptius n. gen. et sp.] parasitic on the hermit crab [Pagurus longicarpus]. Washington, D.C., Bull. U. S. Fish Com., 21, 1901, (53-56, with pl.).

Warren, Ernest. On the anatomy and development of *Distomum cirri*gerum. V. Baer. [Parasitic in Astacus] Q. J. Miscrosc. Sci., London, (N. Ser.), 47, 1903, (273-301, pls. XXIV-XXVI).

#### DEFENSIVE PROCESSES.

**Clapp**, Geo. H. Protective coloration in *Cambarus virilis* Hagen. Pittsburgh, Pa., Ann. Carnegie Mus., **1**, 1901, (253).

# 2623 VARIATION AND AETIO-LOGY.

#### General.

Byrnes, Esther F. Heterogeny and variation in some of the Copepoda of Long Island. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (152-168, with text-fig.). [Separate. 25.7 cm.]

Lanchester, W. F. Marine Crustaceans. VIII. Stomatopoda, with an account of the varieties of *Gonodactylus chiragra*. In: Gardiner, the Fauna and Geography of the Maldive and Laccadive Archipelagoes, **1**, pt. **4**, (444– 458, pl. XXIII). Schuster, E. H. J. Variation in Eupagurus prideauxi (Heller). Biometrika, Cambridge, 2, 1903, (191-210, with 1 fig.).

# SUBSTANTIVE VABIATION.

Lankester, E. Ray. On the modification of the eye peduncles in crabs of the genus *Cymonomus*. London, Q. J. Microsc. Sci. (N. Ser.), **47**, 1903, (439-463, pls. XXXIII-XXXIV, 12 text-figs.). [Notes by A. M. Norman and W. T. Calman].

Lepri, G. Nota preliminare sopra una forma cieca di *Asellus*. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (37-38).

Zacharias, Otto. Ueber die jahreszeitliche Variation von Hyalodaphnia kahlbergensis Schoedl. Plön, Forsch-Ber. biol. Stat., 10, 1903, (293-295).

#### MERISTIC VARIATION.

Duncker, Georg. Ueber Asymmetrie bei Gelasimus pugilator Latr. Biometrika, Cambridge, **3**, 1903, (307-320).

#### EVOLUTION.

Bohn, Georges. Des mécanismes respiratoires chez les crustacés décapodes : essai de physiologie évolutive, éthologique et phylogénique. Bul. sci. France, Belgique, Paris, **36**, 1902, (178– 551, av. fig.).

# 2627 GEOGRAPHICAL DISTRI-BUTION.

Gruvel, A. Revision des Cirrhipèdes appartenant à la collection du Muséum d'Histoire naturelle (suite). Nouv. Arch. Muséum, Paris, (sér. 4), 5, 1903, (95-170, av. pl.).

c THE OCEAN AS A WHOLE.

Mayer, P. Die Caprellidae der Siboga-Expedition [Systematik und Faunistik der Caprelliden der ganzen Welt]. Résultats des explorations zool., botan., océanogr., géol . . . à bord du Siboga . . . publiés par Max Weber. Livr. 12, Monogr. 34. Leide (E. J. Brill), 1903, (160, mit 10 Taf.). 33 cm.

d EUROPE.

da SCANDINAVIA.

**Sars**, G[eorg] O[ssian] . . . the Crustaces of Norway, with short descriptions and figures of all the species. Vol. 5, Parts 1 and 2. Bergen, 1903, (1-28, with 16 pl.). 4to.

db RUSSIA IN EUROPE.

Linko, A. Die Cladoceren des Ilmen-Sees und benachbarter Gegenden. (Russ.) Nikolsk Fischzucht., St. Peterburg, 1903, No. 7, (50-61, deutsches Res., 61-66).

Die Cladoceren des Weissen Sees und einiger angrenzender Seen. (Russ.) *l.c.* (66-78, deutsches Res. 78).

Norman, A. M. Notes on the natural history of East Finmark. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (1-32).

#### de GERMAN EMPIRE.

Douwe, C. van. Zur Kenntniss der Süsswasser-Harpacticiden Deutschlands. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (383-400, mit 1 Taf.).

Müller, G. W[ilhelm]. Ostracoden. (Hamburgische Elb - Untersuchung.) Hamburg, Jahrb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (163–167).

#### de BRITISH ISLANDS.

Brady, G. S. Report on dredging and other marine research off the north-east coast of England in 1902. Newcastle, Trans. Nat. Hist. Soc., 14, 1903, (87– 101).

Gurney, R. Notes on *Scapholeberis* aurita (S. Fischer), a Cladoceran new to Britain. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (630–633, with 2 textfigs.).

<u>— Monstrilla helgolandica</u> Claus at Plymouth. Plymouth, J. Mar. Biol. Ass., (N. Ser.), **6**, 1903, (621). Hey, W. C. Shore-collecting near Scarborough and Filey. Naturalist, London, **1903**, (344–348).

**Eane**, W. F. de Vismes. A contribution to the knowledge of Irish freshwater entomostraca. Cladocera. Irish Nat., Dublin, **12**, 1903, (210-218, and note on 273).

A rare blind Amphipod from Lough Mask. [With note by A. M. Norman.] *l.e.* (273-274).

Lamplugh, G. W. Ostracoda in The Geology of the Isle of Man. Mem. Geol. Surv. U. K., London, **1903**, (257); Cirripedia, *ib.*, (473).

Norman, A. M. British Land Isopoda. Supplement. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (369–372).

**Pearcey**, F. G. Notes on the marine deposits of the Firth of Forth and their relations to its animal life. Glasgow, Trans. Nat. Hist. Soc., **6**, 1903, (217-251, with map).

Petch, T. The Marine Fauna of the Humber District and the Holderness Coast. Hull, Trans. Sci. F. Nat. Cl., 8, 1903, (27-41).

Marine zoology at Filey. Naturalist, Loudon, **1903**, (351).

Scott, Thomas. Some observations on British freshwater Harpactids. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (185–196).

On some new and rare crustacea collected at various times in connection with the investigations of the Fishery Board for Scotland. Glasgow, Rep. Fish. Board, 21, pt. 3, 1903, (109– 135, pls. II-VI).

**Scourfield**, D. J. Synopsis of the known species of British freshwater entomostraca. Part II. Copepoda. London, J. Quek. Microsc. Cl., **8**, 1903, (531-544).

**Sprague**, B. *Cyclops rubellus*. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (139-140).

Simocephalus serrulatus in Scotland.

Ann. Scot. Nat. Hist., Edinburgh, 1903, (250).

Woodward, Henry. On some fossil prawns from the Osborne Beds of the Isle of Wight. Geol. Mag., London, [4], 10, 1903, (97-99, pl. V).

Wüst, Ewald. Ein pleistocäner Valvaten-Mergel mit Brackwasser-Ostrakoden bei Memleben an der Unstrut. Centralbl. Min., Stuttgart, **1903**, (586-590).

# dk AUSTRIA-HUNGARY.

Szilády, Zoltán von. Die Crustaceen des Retyezát. Math.-natw. Ber. Ungarn, Leipzig, 18, (1900), 1903, (71-97).

di Switzerland.

Graeter, Alb. Copepoden der Umgebung Basels. Rev. Suisse Zool., Genève, 11, 1903, (419-541, 2 pls.).

Tièche, M. Ein Petrefakten-Fund vom Belpberg (Schweiz) (Lepadiden). Bern, Mitt. Natf. Ges., **1903**, (XII).

dl BALKAN PENINSULA.

Douwe, Carl van. Beitrag zur Kenntnis der Copepodenfauna Bulgariens. Zool. Anz., Leipzig, **26**, 1903, (550-553).

- e Asia.
- ea ASIA RUSSIA.

**Chevreux**, Ed. Amphipodes recueillis par M. P. Labbé dans les parages du lac Baïkal (1902–1903). Bul. Muséum, Paris, **1903**, (223–224).

Gariaev, V. P. Bericht über eine Reise zur Untersuchung der Evertebratenfauna des Baikal-Sees im Sommer 1900 u. 1901. (Russ.) St. Peterburg, Trd. Troick.-Kiacht. Otd. Russ. Geogr. Obsč., V, 2, 1902, [1903], (27–48, mit 1 Karte).

Sars, G. O. On the Crustacean Fauna of Central Asia. Part II. Cladocera. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (157–194, pls. 1–VIII); Part III. Copepoda and Ostracoda. *l.c.* (195–232, pls. IX–XVI); Appendix. Local Fauna of Central Asia. *l.e.* (233– 264). Zernov, S. A. Ueber das Zooplankton des Aral-Sees, auf Grund der von L. S. Berg im Jahre 1900, gesammelten Materialien. (Russ.) Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., 3, Liefg III, 1903, (1-38).

eb CHINA AND DEPENDENCIES.

Sars, G. O. On the Crustacean Fauna of Central Asia. Part II. Cladocera.
St. Peterburg, Ann. Mus. zool. Ac. Sc.,
8, 1903, (157-194, pls. I-VIII); Part III. Copepoda and Ostracoda. *l.c.* (195-232, pls. IX-XVI). Appendix. Local Fauna of Central Asia. *l.c.* (233-264).

Fresh-water entomostraca from China and Sumatra. Arch. Math. Naturv., Kristiania, 25, 1903, (44, with 4 pls.).

ec JAPANESE ISLANDS.

**Elocke**, Eduard. Bosminopsis (B. ishikawai and B. deitersi Rich.) in Japan. (German) Annot. Zool. Jap., Tokyo, 4, 1903, (123-135, with pl.).

**Terasaki**, Tomekichi. [Brachyurous decapoda of Japan]. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (12–17, 44–47, 177–186, 234–241, 356–359, 431–440, with figs.).

eg MALAY PENINSULA AND ARCHIPELAGO.

Lanchester, W. F. On the Crustaces collected during the "Skeat Expedition" to the Malay Peninsula. London, Proc. Zool. Soc., **1902**, 2, [1903], (363-381, pls. XXXIV-XXXV). [Terrestial Isopoda descr. by Gustav Budde-Lund].

**Sars**, G[eorge] O[ssian]. Fresh-water entomostraca from China and Sumatra. Arch. Math. Naturv., Kristiania, **25**, 1903, (44, with 4 pls.).

f AFRICA.

fc SAHARA AND THE FRENCH SUDAN.

Marchand, Ernest. Description de deux Arthropodes nouveaux provenant du Soudan français. Nantes, Bul. soc. sci. nat., (sér. 2), 2, (2° semest.), 1902, (331-343, av. 1 pl.).

(n 2-9053)

fd WEST AFRICA.

Man, J. G. de On Potamon (Potamonautes) latidacytylum, a new freshwater crab from Upper Guinea. London, Proc. Zool. Soc., 1903, 1, (41-47, pl. 1X).

f EAST AFRICA.

Pocock, R. I., Walker, A. O. and Soot, Andrew. Crustaces; Malacostraca. In "Nat. Hist. Sokotra." . . . 1903, I. The Decapoda of Sokotra, by R. I. Pocock, *ib.*, (212-213, 4 figs. in text). II. Decapod and sessile-eyed Crustaceans from Abd-el-Kuri, [Brachyura by] R. I. Pocock, [Macrura and Edriophthalma by] A. O. Walker and Andrew Scott, (21C-232, pls. XIVa and XIVb). [With notes by H. O. Forbes.]

g NORTH AMERICA.

**Holmes**, S. J. Synopses of the North American Invertebrates. 18. The Amphipoda [of the Atlantic Coast]. Amer. Nat., Boston, Mass., **37**, 1903, (267-292).

Jones, T. Rupert. On some Isochilinae from Canada and elsewhere in North America. Geol. Mag., London, [4], 10, 1903, (300-304, with 3 text-figs.).

gf UNITED STATES.

**Sharpe**, Richard W. Report on the fresh-water Ostracoda of the United States National Museum including a revision of the subfamilies and genera of the family *Cyprididae*, [with bibliography]. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (969-1001, with 5 pls.). Separate 24.3 cm.

gi WESTERN UNITED STATES.

**Steels**, Mary. The crayfish [*Cambarus*] of Missouri [with bibliography]. Cincinnati, Ohio, Univ. Cincin. Bull., No. **10**, 1902, (54, with pl.). 23.5 cm.

# h CENTBAL AND SOUTH AMERICA.

hb CENTRAL AMERICA.

**Stebbing**, Thomas R. R. Amphipoda from Costa Rica. [Talorchestia fritzi n. sp. and Hyalella fazoni n. sp.]. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (925-931, with 2 µls.). Separate. 24.2 cm.

# he WEST INDIAN ISLANDS.

Hay, William Perry. On a small collection of crustaceans from the island of Cuba. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (429-435). Separate. 24.3 cm.

# i AUSTRALASIA.

## ib BISMARCK ARCHIPELAGO.

Whitelegge, T. [Crustacea of Gilbert Group]. Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (8-12).

# ic AUSTRALIA.

**Sayce**, O. A. The Phyllopoda of Australia, including descriptions of some new genera and species. Melbourne, Proc. R. Soc. Vict., **15**, (N. Ser.), 1903, (224-259, with pls.)

# if VICTORIA.

Barnard, E. G. A. Excursion to Launching Place [Victoria]. [Talitrus sylvaticus.] Vict. Nat., Melbourne, 19, 1903, (147).

**Haase**, J. F. Records of some Victorian Entomostraca. *l.c.* (148-150, with 1 pl.).

# ik New Zealand.

Thomson, George M. On the New Zealand Phyllobranchiate Crustacea-Macrura. London, Trans. Linn. Soc. Zool., 8, 1903, (433-453, pls. XXVII-XXIX).

# k ARCTIC.

#### ka Arotic Ocean.

Norman, A. M. "Notes on some Copepoda collected in the Arctic Seas in 1890 by the Rev. Canon A. M. Norman, F.R.S., by Thomas Scott, F.L.S.," in Notes on the Natural History of East Finmark. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (4-32, pls. VIII-IX). l ATLANTIC.

Hansen, H. J. On a new species of Sergestes obtained by Mr. George Murray during the cruise of the "Oceana" in 1898 Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (479-481, with 7 figs. in text).

Thompson, Isaac C. Report on the Copepoda obtained by Mr. George Murray, F.R.S., during the cruise of the "Oceana" in 1898. *l.e.* 12, 1903, (1-36, pls. I-VII).

# la North Atlantic Ocean.

Norman, A. M. Copepoda Calanoida, chiefly abyssal, from the Farce Channel and other parts of the North Atlantic. London, J. Linn. Soc. Zool., **29**, 1903, (133-141).

**Scott**, Thomas. Notes on some Copepoda from the Farce Channel. London, J. Linn. Soc. Zool., **29**, 1903, (1-11, pls. I-111); [abstract], London, J. R. Microsc. Soc., **1903**, (612).

#### m INDIAN OCEAN.

# ma OCEAN AND ISLANDS N. OF EQUATOR.

Lanchester, W. F. Marine Crustaceans. VIII. Stomatopods, with an account of the varieties of *Gonodactylus chiragra*. In: Gardiner, the Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, Pt. 4, (444– 458, pl. XXIII).

### n PACIFIC.

Hansen, H. J. On the Crustaceans of the genera *Petalidium* and *Sergestes* from the "Challenger," with an account of luminous organs in *Sergestes challengeri* n. sp. London, Proc. Zool. Soc., **1903**, 1, (52-79, pls. XI, XII).

# nd Islands N. of Equator and E. of 180<sup>o</sup>.

**Bichardson**, Harriet. Isopods collected at the Hawaiian Islands by the U. S. Fish Commission steamer "Albatross." Washington, D.C., Bull. U. S. Fish Com., **1903**, (47-54). Separate. 27.6 cm.

nh SOCIETY ISLANDS.

Sourat, L.-G. Extrait d'une lettre adressée à M. E. L. Bouvier [Mœurs des crustacés]. Bul. Muséum, Paris, 1903, (222-223).

# o ANTARCTIC.

Giesbrecht, W. Zoologie. Copepoden. In Expédition antarctique belge. Résultats du voyage du S.Y. "Belgica" en 1897-99. Rapports scientifiques. Anvers (Imprimerie J. E. Buschmann), 1902, (49, av. XIII pls. hors texte). 25 fr.

# 2631 TAXONOMY AND SYSTEMATIC,

# GENERAL.

Brady, G. S. Report of dredging and other marine research off the northeast coast of England, in 1901. Newcastle, Trans, Nat. Hist. Soc., 14, 1903, (87-101).

Pritel, P. H. Crustacés fossiles. Naturaliste, Paris, (sér. 2), 24, 1902, (269-271, av. fig.).

Hay, W. P. On a small collection of crustaceans from the island of Cuba. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (429-435). Separate. 24.3 cm.

Lanchester, W. F. On the crustacea collected during the "Skeat Expedition" to the Malay Peninsula. London, Proc. Zool. Soc., 1902, 2, [1903], (363–381, pls. XXXIV-XXXV.) [Terrestrial Isopoda descr. by Gustav. Budde-Lund.]

Loomis, F. B. The dwarf fauna of the pyrite layer at the horizon of the Tully limestone in western New York. [nn. spp. of Brachiopoda, Mollusca and Crustacea]. Albany, Univ. N.Y., Bull. 8t. Mus., No. 69, 1903, (892-920, with 5 pls.).

Norman, A. M. Notes on the natural history of East Finmark. [Crustacea]. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (1-4, pls. I. IV.).

some Entomostraca and Cirripedia. *l.c.* (367-369).

(N 2-9053)

2631

Sars, G. O. On the Crustacean Fauna of Central Asia, pt. III. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (195-232, pls. IX-XVI).

339

. . Crustacea of Norway . . Vol. 5, Parts I and 2. Bergen 1903, (1-28, w. 16 pl.). 4to.

**Scott**, T. On some new and rare Crustacea collected at various times in connection with the investigations of the Fishery Board for Scotland. Glasgow, Rep. Fish. Board, **21**, pt. 3, 1903, (109-135, pls. II-VI).

# ENTOMOSTRACA.

# GENERAL.

Haase, J. F. Records of some Victorian Entomostraca. Vict. Nat., Melbourne, 19, 1903, (148-150, with 1 pl.).

**Hartog**, M. Notes on the method of feeding of Phyllopods and Cladocera. The American monthly microscopical Journal, Washington, D.C., **23**, 1902, (131-132).

Kane, W. F. de V. A contribution to the knowledge of Irish fresh-water Entomostraca. Cladocera. Irish Nat., Dublin, **12**, 1903, (210-218, and Note on 273).

**Sars**, G. O. Fresh-water entomostraca from China and Sumatrs. Arch. Math. Naturv., Kristiania, **25**, 1903, (44, with 4 pls.).

**Scourfield**, D. T. Synopsis of the known species of British fresh-water Entomostraca. Part I. Cladocera. London, J. Quek. Microsc. Cl., **8**, 1903, (431-454, pl. XXIV.). Part II. Copepoda. *Ib.*, (531-544); [ubstract]. London, J. R. Microsc. Soc., **1903**, (497).

**Zernov**, S. A. Ueber das Zooplankton des Aral-Sees . . . (Russ.) Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., **3**, Liefg. 111, 1903, (1-38).

### CIRRIPEDIA.

#### GENEBAL.

Borradaile, L. A. Marine Crustaceans. VII. The Barnacles (Cirripedia). In Gardiner, Fauna Maldive and Laccad. Arch., 1, pt. 4, 1903, (440-443). Gruvel, A. Cirrhipèdes operculés nouveaux ou peu connus de la collection du Muséum. Bul. Muséum, Paris, 1903, (23-25).

Revision des Cirrhipèdes appartenant à la collection du Muséum d'Histoire naturelle. Nouv. Arch. Muséum, Paris, (sér. 4), 4, 1902, (215– 312, av. fig. et pl.); 5, 1903, (95–170, av. pl.).

Tièche, M. Ein Petrefakten-Fund vom Belpberg (Schweiz). (Lepadiden). Bern, Mitt. Natf. Ges., **1903**, (XII).

### SPROLAL.

Alcippe lampas, Biologie und Anatomie. Berndt, W. Zs. wiss. Zool. Leipzig, 74, 1903, (396–457, mit 4 Taf.).

Balanus nn. spp. Gruvel, A. Bull. Muséum, Paris, **1903**, (23–25); Arch. Mus., Paris, (sér. 4), **5**, 1903, (133–143).

*aeneas* n. sp., *B. amaryl*lis: dissimilis n. subsp. Malay Peninsula. Lanchester, W. F. London, Proc. Zool. Soc., **1902**, 2, [1903], (369– 370, pl. XXXIV).

daile, L. A. Fauna Mald. and Laccad. Arch., 1, (442).

Chelonobia manati n. sp. Gruvel, A. Bul. Muséum, Paris, **1903**, (24); Nouv. Arch. Mus., Paris, (sér. 4), **5**, 1903, (116, pl. 11, figs. 14, 17, 18, pl. 1V, figs. 15, 16).

Cryptophialus striatus n. sp. Berndt, W. Eerlin, SitzBer. Ges. natf. Freunde, 1903, (436–444).

Dichelaspis nn. spp. Gruvel, A. Nouv. Arch. Muséum, l'aris, (sér. 4), 4, 1902, (215-312, av. fig. et pl.).

nn. spp. Malay Peninsula. Lanchester, W. F. London, Proc. Zool. Soc., 1902, 2, [1903], (373-375, pl. XXXV).

*mülleri* n. sp. North Corolina. **Coker**, R. E. Washington, D.C., Bull. U. S. Fish Com., **21**, (1901), 1902, (399–412, with text-fig.).

Lepos hilli n. sp. var. californiensis n. var. Gruvel, A. Nouv. Arch. Muséum, Paris, (sér. 4), 4, 1902, (266, pl. XIII, figs. 1, 22).

Platylepas ophiophilus n. sp. Malay Peninsula. Lanchester, W. F. London, Proc. Zool. Soc., **1902**, 2, [1903], (371).

Pyrgoma madreporas n. sp. Borradaile, L. A. Fauna Mald. Laccad. Arch., 1, (443).

Scalpellum nn. spp. Gruvel, A. Nouv. Arch. Muséum, Paris, (sér. 4), 4, 1902, (229).

*aucklandicum*<sup>†</sup>, Tertiaries of New Zealand. **Benham**, W. B. Geol. Mag., London, [4], **10**, 1903, (110– 119, pls. IX-X).

Trypetesa n. nom = Alcippe, type T. lampas (A. Hancock). Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (369).

### OSTRACODA.

### GENERAL.

Brady, G. S. List of the Ostracoda collected by Mr. George Murray, F.R.S., during the Cruise of the "Oceana" in 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (337-339).

Müller, G. W. Ostracoden. (Hamburgische Elb- Untersuchung.) Hamburg, Jahrb. wiss. Anst., 19, (1901), Beih. 2, 1902, (163-167).

**Sharpe**, R. W. Report on the fresh water Ostracoda of the United States National Museum, including a revision of the sub-families and genera of the family *Cyprididae*. [With bibliography.] Washington, D.C., Smithsonian Inst. Nation. Mus. Proc., **26**, 1903, (969–1001, with 5 pls.). Separate 24.3 cm.

Wüst, E. Ein pleistocäner Valvaten-Mergel mit Brackwasser-Ostrakoden bei Memleben an der Unstrut. Centrabl. Min., Stuttgart, **1903**, (586– 590).

### SPECIAL.

Chlamydotheca mexicana n. sp. Sharpe, R. W. Washington, D.C., Smithsonian Inst., Nat. Mus. Proc., 26, 1903, (976).

Cypridopsella nn. spp. Siberia. Sars, G. O. St. Peterburg, Ann. Mus. zool. Ac. Sc., 9, 1903, (225). Cypridopsis nn. spp. Sars, G. O. Arch. Math. Naturv., Kristiania, 25, 1903, (44).

*Cypris* nn. sp. **Sara**, G. O. *l.c.* (22, 23, 32, pl. II, figs. 3–4b, pl. IV, figs. 2, 2a-b).

nn. spp. Siberia et Mongolia. **Sars**, G. O: St. Peterburg, Ann. Mus. zcol. Ac. Sc., **8**, 1903, (222, 223, pl. XVI, figs. 2-3b).

Dolerocypris sinensis n. sp. Sars, G. O. Arch. Math. Naturv., Kristiania, 25, 1903, (37, pl. IV, figs. 7-7b).

Entocythere n. gen, E. cambaria n. sp., parasitism. Marshall, Wm. S. Madison, Trans. Wis. Acad. Sci., 14, (1902), 1903, (117-144, with pl.).

Entomis prosephina<sup>†</sup> n sp. Loomis, F. B. Albany Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (892-920).

Eucandona stummeri n. sp. Daday, T. Math. Termt. Ért., Budapest, 21, 1903, (351-354).

Hemicypris n. gen., H. megalops, H. ovata nn. spp. Sars, G. O. Arch. Math. Naturv., Kristiania, 25, 1903, (25, pl. III, figs. 1-1 f).

Ilyocypris nn. spp. Sars, G. O. I.c. (38, 39, pl. IV, figs. 8-9a).

Isochilina spp. from Canada and elsewhere in North America. Jones, T. R. Geol. Mag., London, [4], 10, 1903, (300-304).

*gregaria* (Whitfield) var. utrichiana† n. var. Canada. Jones, T. R. *l.e.* (300-302, with 3 text-figs.).

Leptocypris n. gen., L. papyracea n. sp. Sarn, G. O. Arch. Math. Naturv., Kristiania, 25, 1903, (29, pl. 111, figs. 4-4 c).

Notodromas oculata n. sp. Sars, G. O. *l.c.* (30, pl. IV, figs. 1-1 c).

Physocypria kraepelinin. sp. Müller, T. W. Hamburg, Jahrb. wiss. Anst., 19, (1901), Beitr. 2, 1903, (163-167).

Potamocypris almísyi n. sp. Daday, T. Math. Termt. Ért., Budapest, 21, 1903, (354-355).

Spirocypris n. gen., S. passaica n. sp. Sharpe, R. W. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (982, pl. LXVI, figs. 1-3).

### COPEPODA.

# GENERAL.

**Bassett-Smith**, P. W. [Addenda to systematic enumeration of species of parasitic Copepoda found on fish.] London, Proc. Zool. Soc., **1903**, 1, (104– 109).

Byrnes, E. F. Heterogeny and variation in some of the Copepoda of Long Island. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (152–168, with textfig.). [Separate]. 2.57 cm.

Douwe, C. van. Beitrag zur Kenntnis der Copepodenfauua Bulgariens. Zool. Anz., Leipzig, 26, 1903, (550-553).

Farren, G. P. Record of the Copepoda taken on the mackerel fishing grounds off Cleggan, Co. Galway, in 1901. Report on the Sea and Inland Fisheries of Ireland for the year 1901 [1903]. Part II, Appendix, No. VII, (105-120).

Fowler, G. Herbert. Contributions to our knowledge of the Plankton of the Faeroe Channel. No. VIII. [Notes on Copepoda by R. Norris Wolfenden]. London, Proc. Zool. Soc., **1903**, 1, (1:7-183, 3 text-figs.).

Graster, A. Copepoden der Umgebung Basels. Rev. Suisse Zool., Genève, 11, 1903, (419-541, 2 pls.).

Norman, A. M. Copepoda Calanoida, chiefly abyssal, from the Farce Channel and other parts of the North Atlantic. London, J. Linn. Soc. Zool., 29, 1903, (133-141).

Notes on some copepoda from the Arctic Seas collected in 1900 by the Rev. Canon A. M. Norman, F.R.S. by Thomas Scott, F.L.S. In: Notes on the Natural History of East Finmark. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (4-32, pls. I-IV).

**Parker**, G. H. The reactions of copepods to various stimuli and the bearing of this on daily depth-migrations. [With bibliography.] Washington, D.C., Bull. U. S. Fish. Com., **21**, (1901), 1902, (103-123).

Scott, T. Some observations on British freshwater Harpactide. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (185-196). Soott, T. [Harpactidae, old and new species.] London, J. Linn. Soc. Zool., **29**, 1903, (1-11).

Thompson, I. C. Report on the Copepoda obtained by Mr. George Murray, F.R.S., during the cruise of the "Oceana" in 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (1-36, pls. I-VII).

and **Scott**, A. Report on the Copepoda collected by Prof. Herdman, at Ceylon in 1902, in "Rep. Ceylon Pearl Fisheries." Part I. London (Royal Society), 1903, (227-307, 20 pls., 1 text-fig.).

Wolf, E. Dauereier und Ruhezustände bei Kopepoden. Zool. Anz., Leipzig, 27, 1903, (98-108).

Wolfenden, R. N. On the Copepod sub-family *Aetidiinae*, with a proposed revision of the classification. London, Rep. Brit. Ass., **1903**, 1903, (262-267).

### SPECIAL.

Aetideus tenuirostris n. sp. Wolfenden, R. N. London, Rep. Brit. Ass., 1902, (266).

Ameira nn. spp. **Scott**, T. Glasgow, Rep. Fish. Board, **21**, 3, 1903, (114–115).

nn. spp. Thompson, I. C. and Scott, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (264).

Ancorabolus n. gen., A. mirabilis n. sp. Norman, A. M. Varanger Fiord and Clyde. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (2-4).

Asterocheres nn. spp. Thompson, I. C. and Scott, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (287-288).

Asteropontius n. gen., A. typicus, A. attenuatus nn. spp. Thompson, I. C. and Scott, A. l.c. (288-299).

Attheyella arctica (Lilljeborg) from E. Finmark, description. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (14–16).

Boeckella orientalis n. sp. Mongolia orient. Sars, G. O. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (196).

Centropages nn. spp. Thompson, I. C. and Soott, A. In: Herdman's Rep. Ceylon Pearl Fisheries. Part I. London, (Royal Society), 1903, (247). Ceylonia n. gen., C. aculeata n. sp. Thompson, I. C. and Scott, A. l.e. (265).

Chondracanthus cynoglottidis n. sp. Thompson, I. C. and Scott, A. l.c. (294).

Chondrocarpus n. gen., C. reticulosus n. sp. Zanzibar. Bassett-Smith, P. W. London, Proc. Zool. Soc., 1903, 1, (104-105, with text-fig.).

Clausidium Kossmann = Hersilia Philippi. Normau, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (368).

Cletodes armata n. sp. **Scott**, T. London, J. Linn. Soc. Zool., **29**, 1903, (6-8).

*neglecta* n. sp. **Scott**, T. Glasgow, Rep. Fish. Board, **21**, 3, 1903, (120–121).

var. E. Finmark. Scott, T. in Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (18-20).

Cletopontius n. gen., C. serratus n. sp. **Thompson**, I. C. and **Scott**, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (292).

Collocheres giesbrechti n. sp. Thompson, I. C. and Scott, A. l.c. (289).

Congericola van Beneden, type C. pallida. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (369).

Cyclopina belgicae n. sp. Antarctic Seas. Giesbrecht, W. Résultats du voyage du S.Y. "Belgica" en 1897-99. Anvers (Imprimerie J. E. Buschmann), 1902, (20, pl. 7, figs. 1-15).

*schneider* in. sp. East Finmark. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (6-7, pl. 1, figs. 1-16).

Cyclops nn. spp. **Ulrich**, C. J. Lincoln, Nebr., Trans. Amer. Microsc. Soc., **23**, 1901, [1902], (83-100, with pl.).

crassicaudis Sars. Douwe, C. van. Zool. Anz., Leipzig, 26, 1903, (463-465).

*rubellus*, in Britain. Sprague, B. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (139–140). Dactylophusia nn. spp. Thompson, I. C. and Scott, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (268-272).

Dactylopus, old and new species. Scott, T. Glasgow, Rep. Fish. Board, 21, 3, 1903, (124-129).

finmarchieus n. var. E. Finmark. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (21-22).

var. faroënsis n. var. **Scott**, T. London, J. Linn. Soc. Zool., **29**, 1903, (8-10).

Dactylopusia n. nom. = Dactylopus, type D. stroemi (Baird). Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (368).

Delavalia minutissima n. sp. **Scott**, T. Glasgow, Rep. Fish. Board, **21**, 3, 1903, (116).

var. East Finmark. **Socti**, T. in **Norman**, A. M. Ann. Mag. Nat. Hist., Londou, (Ser. 7), **11**, 1903, (13, pl. 1, figs. 14-18).

Diaptomus nn. spp. Siberia et Altai. Sars, G. O. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (200-214).

Doropontius n. gen., D. deuticornis n. sp. **Thompson**, I. C. and **Scott**, A. In : Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (291).

Ectinosoma antarcticum n. sp. Antarctic Seas. Gissprecht, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (31, pl. XII, figs. 7-17).

finmarchicum n. sp. East Finmark. Scott in Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (9-10, pl. I, figs. 7-13).

Enhydrosoma nn. spp. Scott, T. Glasgow, Rep. Fish. Board, 21, 3, 1903, (122-123).

Euchaeta nn. spp. Antarctic Seas. Giesbrecht, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (21-22 pl. III, figs. 1-16). Euchaeta oceana n. sp. **Thompson**, I. C. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (19, pl. 2, figs. 1-9).

Euterpina n. nom = Euterps, type E. gracilis. Norman, A. M. l.c. 11, 1903, (368).

Gaëtanus kruppii n. sp. Mediterranean. Giesbrecht in Lo Bianco, S. Mitt. Zool. Stat. Neapel, Berlin, 16, 1903, (109-279).

*major* n. sp. Faeroe Channel. **Wolfenden** in **Fowler**, G. H. London, Proc. Zool. Soc., **1903**, 1, (125).

G. P. Report on the Sea and Inland Fisheries of Ireland for the year 1901 [1903]. Part II, Appendix, No. VII, (120).

Gaidius boreale n. sp. Wolfenden, R. N. London, Rep. Brit. Ass., 1902, (266).

Halicyclops n. nom. = Hemicyclops Claus, type Cyclops acquoreus Fischer. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (368).

*llarpacticus furcifer* n. sp. Antarctic Seas. **Giesbrecht**, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (37, pl. 1X, figs. 15-19).

Ilemidiaptomus n. gen., H. ignatovi n. sp. Siberia occ., Altai et Mongolia orient. **Sars**, G. O. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (197).

Ilermanella nn. sp. Thompson, I. C. and Scott, A. In: Herdman's Rep. Ceylon Pearl Fisheries. Part I. London, (Royal Society), 1903, (282-283).

finmarchia n. sp. East Finmark. **Scott**, T. in **Norman**, A. M. Ann. Mag. Nat. Hist., London, Ser. 7, **11**, 1903, (28–29, pl. IV, figs. 14–19).

Hersiliodes nn. spp. Thompson, I. C. and Scott, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (284).

Heterorhabdus austrinus n. sp. Antarctic Seas. Giesbrecht, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (28, pl. VI, figs. 1-9).

Idya nn. spp. Antarctic Seas. Giesbrecht, W. *l.c.* (38, pl. XI, figs. 8-13, 1-7). Isochaeta longisetosus n. sp. Thompson, I. C. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (26-27, pl. VII, figs. 1-9).

Labidocera nn. spp. Thompson, I. C. and Scott, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (251-252).

Laophonte spp., L. gracilis n. sp. Scott, T. Glasgow, Rep. Fish. Board, 21, 3, 1903, (118-120).

*faroënsis* n. sp. **Scott**, T. London, J. Linn. Soc. Zool., **29**, 1903, (4-6).

hirsuta n. sp. Thompson, I. C. and Scott, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (266).

Laophontella n. gen., L. typica n. sp. Thompson, I. C. and Scott, A. l.c. (266-267).

Lepeopsyllus n. gen., L. typicus, L. ovalis nn. spp. Thompson, I. C. and Scott, A. l.c. (290-291).

Lernaconema encrasicoli Baird, ein Parasit der Sprotte. **Bichters**, F. Prometheus, Berlin, **14**, 1903, (267-268).

Lichomolgus nn. spp. Thompson, I. C. and Scott, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (279-281).

Liphonobius n. gen., L. gephyreicola n. sp. Augener, H. Arch. Natg., Berlin, 69, Bd 1, 1903, (297-371, mit 5 Taf.).

Luciculia magna n. sp. Faeroe Channel. Wolfenden in Fowler, G. H. London, Proc. Zool. Soc., 1903, 1, (124).

Maraenobiotus affinis n. sp. Daday, J. Math. Termt. Ért., Budapest, 21, 1903, (337-342).

Medenophthalmus n. gen., M. minutus n. sp. Mediterranean. Lo Bianco, S. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (109-279).

Metridia gerlachei n. sp. Antarctic Seas. Giesbrecht, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (27, pl. V, figs. 6-14).

Monstrilla conjunctiva n. sp. Antarctic Seas. **Giesbrecht**, W. l.c. (27, pl. V, figs. 6-14). Monstrilla helgolandica Claus, at Plymouth. Gurney, R. Plymouth, J. Mar. Biol. Ass., (N. Ser.), 6, 1903, (627).

Moraria schmeilii n. sp. Süsswasser, Deutschland, Douwe, C. van. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (383-400, mit 1 Taf.).

Mytilicola n. gen., M. intestinalis n. sp. **Stener**, A. Wien. Arb. Zool. Inst. Univ., **15**, 1903, (1-46, mit 5 Taf.).

Nitoera gracillimana n. sp. Antarctic Seas. **Giesbrecht**, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (32, pl. XI, figs. 14-21).

*paradoza* n. sp. **Daday**, J. Math. Termt. Ért., Budapest, **21**, 1903, (342-346).

Obesiella n. gen., O. lyonsiellae n. sp. Bidewood, W. G. London, J. Linn. Soc. Zool., 28, 1903, (463).

Oithona frigida n. sp. Antarctic Seas. **Giebbrecht**, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (29, pl. VI, figs. 10-16).

Oncaea curvata n. sp. Antarctic Seas. Giesbrecht, W. *l.c.* (42, pl. XIII, figs. 12-17).

Paralichomolgus n. gen., P. curticaudatus, P. longicaudatus nn. spp. **Thompson**, I. C. and **Scott**, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (281-282).

Paranthessius n. gen., P. dubius n. sp. **Scott.** T. Glasgow, Rep. Fish. Board, **21**, 3, 1903, (130–131).

Parastenhelia n. gen., P. hornelli, P. similis nn. spp. **Thompson**, I. C. and **Scott**, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (263-264).

Peltidium nn. spp. Thompson, I. C. and Scott, A. l.c. (273-274).

<sup>'</sup>Phyllothyreus n. nom. = Phyllophora Milne-Edwards, type Phyllothureus cornutus. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (368-369).

Pontella danae var. csylonica n. var. Thompson, I. C. and Scott, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (252). Pontellopsis herdmani n. sp. Thompson, I. C. and Scott, A. l.c. (253).

Porcellidium nn. spp. Thompson, I. C. and Scott, A. l.c. (275).

Pseudaetideus n. gen., P. multiserrata n. sp. Wolfenden, R. N. London, Rep. Brit. Ass., **1902**, (265-266).

Pseudanthessius nn. spp. Thompson, I. C. and Scott, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (276-278).

Pseudocalanus pygmaeus. Antarctic Seas. Giestrecht, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (20, pl. II, figs. 1-5).

Pseudotachidius similis n. sp. Scott, T. London, J. Linn. Soc. Zool., 29, 1903, (3-4, pls. I-III).

Racovitzanus n. gen. (Calanidae), R. antarcticus n. sp. Antarctic Seas. **Giesbrecht**, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (26, pls. IV, figs. 8-13, 1-5).

Rhincalanus grandis n. sp. Antarctic Seas. Giesbrecht, W. *l.c.* (18, pl. I, figs. 15–18).

Ridgewayia n. gen., R. typica n. sp. **Thompson**, I. C. and **Scott**, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London (Royal Society), 1903, (245).

Scolecithrix chelifer n. sp. Thompson, I. C. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (21-22, pl. V, figs. 1-9).

*\_\_\_\_\_ glacialis* n. sp. Antarctic Seas. **Glesbrecht**, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (25, pl. IV, figs. 1-7).

Scottocheres stylifer n. sp. Antarctic Seas. Giesbrecht, W. l.c. (39, pl. VII, figs. 16-23).

Silvestria n. nom. for Leptatrachelus mihi. Brian, A. Zool. Anz., Leipzig, 26, 1903, (547).

Stenhelia nn. spp. Thompson, I. C. and Scott, A. In Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (260-263).

Finmark. Scott, T. In: Norman, A. M.

Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (11-12, pl. II, figs. 9-13).

Stephopontius n. gen., S. typicus n. sp. **Thompson**, I. C. and **Scott**, A. In: Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (293).

Stephus longipes n. sp. Antarctic Seas. Giesbrecht, W. Résultats du voyage du S.Y. "Belgica." Anvers (Imprimerie J. E. Buschmann), 1902, (20, pl. II, figs. 6-14).

Sunaristes nn. spp. Thompson, I. C. and Scott, A. In : Herdman's Rep. Ceylon Fisheries, London, (Royal Society), 1903, (256).

Tegastes n. nom.=Amymone Claus., type A. satyrus Claus. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (368).

nn. spp. Thompson, I. C. and Scott, A. In : Herdman's Rep. Ceylon Pearl Fisheries, Part I, London, (Royal Society), 1903, (258-259).

Tetragoniceps nn. spp. Thompson, I. C. and Scott, A. *l.c.* (267-268).

Thalestris clausii, T. longimana Claus, descriptions. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (24-27).

*normani* n. sp. East Finnark. **Scott**, T. in **Norman**, A. M. *l.c.* (25–26, pl. III, figs. 12–18).

Ventriculina n. gen., V. crosslandi n. sp. Zanzibar. Bassett-Smith, W. A. London, Proc. Zool. Soc., 1903, 1, (106– 107, with text-fig.).

Xanthocalanus giesbrechti n. sp. Thompson, I. C. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (22-23, pl. V, figs. 1-9).

# PHYLLOPODA.

#### GENERAL.

Linko, A. Cladoceren des Thuen-Sees. (Russ.) Nikolsk Fischzucht., St. Peterburg, **1903**, No. 7, (50-61, deutsches Res., 61-66).

Cladoceren des Weissen Sees. . . (Russ.) *l.c.* (66-78, deutsches Res. 78). Sars, G. O. On the Crustacean Fauna of Central Asia. Pt. II. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (157– 194, pls. 1–VIII).

### SPECIAL.

Alona acuticostata n. sp. Sars, G. O. Arch. Math. Naturv., Kristiania, 25, 1903, (44).

Apus australiensis Spencer and Hall. Sayce, O. A. Melbourne, Proc. R. Soc. Vict., 15, (N. Ser.), 1903, (241-242).

cancriformis. Lampert, K. Natur u. Schule, Leipzig, 1, 1902, (128– 134).

Artemia proxima King, and 2 nn. spp. Australia. **Sayce**, O. A. Melbourne, Proc. R. Soc. Vict., **15**, (N. Ser.), 1903, (229-31, with pls. XXVII-XXVIII).

Bosminella n. gen., B. anieitsi n. sp. Daday, E. von. Zool. Anz., Leipzig, 26, 1903, (594-597).

Bosminopeis ishikawai n. sp. and B. deitersi Rich. in Japan. (German) Klocke, E. Annot. Zool. Jap., Tokyo, 4, 1903, (123-135, with pl.).

Branchinella n. gen., B. australiensis Richters, B. eyrensis n. sp. Australia. **Sayce**, O. A. Melbourne, Proc. R. Soc. Vict., **15**, (N. Sec.), 1903, (235-240, pls. XXX-XXXI).

Chirocephalus, sp. Australia. **Sayce**, O. A. *l.c.* (240-241).

Cyclestheria hislopi Baird. Australia. Sayce, A. O. *l.c.* (256-257, pl. XXXVI).

Daphnia, note on phototropism. Kirkaldy, G. W. London, J. Quek. Microsc. Cl., (Ser. 2), 8, 1903, (465-466); [abstract], London, J. R. Microsc. Soc., 1903, (497).

carinata. Hasse, J. F. Vict. Nat., Melbourne, 19, 1903, (146).

longispina, Parasit [Polycaryum laeve] in. **Stempell**, W. Arch. Protistenkunde, Jena, **2**, 1903, (349-363, mit 1 Taf.).

*magna* Straus, relationship between size of cell and size of body. **Warren**, E. Biometrika, Cambridge, 2, 1903, (255-259, with 1 fig.).

*triquetra* n. sp. Siberia occ. **Sars**, G. O. St. Peterburg, Ann. Mus. Zool. Ac. Sc., **8**, 1903, (157–194). Daphniopsis n. gen., D. tibetana n. sp. Sars, G. O. l.c. (157–194).

Darányia n. gen., D. granulata<sup>†</sup> n. sp. Ungarn. Lörenthey, E. Mathnatw. Ber. Ungarn, Leipzig, **17**, (1899), 1901, (328-336).

Dunhevidia neglecta n. sp. Austria. Daday, E. von. Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (37–98).

Estheria dictyon Spencer and Hall, E. elliptica G. O. Sars, E. lutraria Brady, E. packardi Brady, E. sarsi n. sp. Australia. **Sayce**, O. A. Melbourne, Proc. R. Soc. Vic., **15**, (N. Ser.), 1903, (250-256, pls. XXXIV-XXXVI).

Eulimnadia dahli G. O. Sars, E. ricolensis Brady, E. sordida King, E. victoriensis n. sp. Australia. **Bayce**, O. A. Le. (244-48, pls. XXXII-XXXIV).

Hyalodaphnia kahlbergensis Schoedl, jahreszeitliche Variation. **Zacharias**, O. Plön, ForschBer. biol. Stat., **10**, 1903, (293-295).

Lepidurus viridis Baird. Anstralia. **Sayce**, O. A. Melbourne, Proc. R. Soc. Vict., **15**, (N. Ser.), 1903, (242-243).

Leydigia propinqua n. sp. Sars, G. O. Arch. Math. Naturv., Kristiania, 25, 1903, (44).

Limnadopsis birchii Baird, L. brunneus Spencer and Hall, L. tatei S. and H. **Sayce**, O. A. Melbourne, Proc. Roy. Soc. Vict., **15**, (N. Ser.), 1903, (249-250).

Lynceus cremia Spencer and Hall, L. macleayana King, L. tatei Brady. Sayoe, A. O. l.c. (257-259, pl. XXXVI).

Macrothriz cornuta n. sp. Daday, J. Math. Termt. Ért., Budapest, 21, 1903, (346-351).

Moina brevicornis n. sp. **Sars**, G. O. Arch. Math. Naturv., Kristiania, **25**, 1903, (44).

microphthalma n. sp. Siberia occ. **Sars**, G. O. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (157– 194).

Paralimnadia stanleyana, King. Sayoe, O. A. Melbourne, Proc. R. Soc. Vict., 15, (N. Ser.), 1903, (248-249, with pl. XXXIV).

Parartemia n. gen., P. sietziana n. sp. Australia. **Sayce**, O. A. *l.c.* (231-33, pls. XXVIII-XXIX). Rhynchotalona n. nom. = Harporhynchus Sars. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (367).

Scapholeberis aurita (S. Fischer), a Cladoceran new to Britain, Notes. Gurney, R. *l.e.* 12, 1903, (630-633, with 2 text-figs.).

*echinulata* n. sp. Siberia occ. **Sars**, G. O. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (157–194).

*erinaceus* n. sp. Austria. **Daday**, E. von. Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (27-36).

*kingi* n. sp. **Sars**, G. O. Arch. Nath. Naturv., Kristiania, 25, 1903, (8, pl. I, figs. 2a-c).

Simocephalus nn. spp. Mongolia orient. et Siberia occ. Sars, G. O. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (173-174).

Kenntnis des Centralnervensystems und der feineren Anatomie. **Ountington**, W. A. Jenaische Zs. Natw., **37**, 1903, (447-520, mit 3 Taf.).

Simosa n. nom = Simocephalus, Schoedler. Norman, A. M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (367).

Streptocephalus (?) archeri G. O. Sars. Sayce, O. A. Melbourne, Proc. R. Soc. Vict., 15, (N. Ser.), 1903, (240).

Wlassicsia n. gen. (~ Ophryoxus Grimaldina) W. pannonica n. sp. Austria. Daday, E. von. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (37-98).

## LEPTOSTRACA.

Nebalia sp., eine neue bathypelagisch lebende Phyllocaride. Ohlin, A. Zool. Anz. Leipzig, **37**, 1903, (59-61).

### ARTHROSTRACA.

### AMPHIPODA.

## GENERAL.

**Chevreux**, E. Amphipodes recueillis par M. P. Labbé dans les parages du lac Baikal (1902-1903). Bul. Muséum, Paris, **1903**, (223-224). Hansen, H. J. The Ingolfiellidas fam. n., a new type of Amphipoda. London, J. Linn. Soc. Zool., 29, 1903, (117-138, pls. XIV-XV).

Holmes, S. J. Synopses of North American Invertebrates, 18. The Amphipoda [of the Atlantic Coast]. Amer. Nat., Boston, Mass., **37**, 1903, (267-292).

------ Death-feigning in terrestrial amphipods. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (191-196).

Amphipods. *l.c.* 5, 1903, (288-292).

Kane, W. F. de V. A rare blind Amphipod from Lough Mask [with note by A. M. Norman]. Irish Nat., Dublin, 12, 1903, (273-274).

Mayer, P. Die Caprellidae der Siboga-Expedition [Revision der Caprelliden der ganzen Welt], Résultats des explorations zool., botan., océanogr., géol. . . à bord du Siboga, . . . publiés par Max Weber. Livr. 12, Monogr. 34. Leide (E. J. Brill), 1903, (160, mit 10 Taf.).

#### SPECIAL.

Acanthogammarus labbei n. sp. lac Bäikal. Ohevreux, E. Bul. Muséum, Paris, **1903**, (223-224).

Aciconula (caprellidae) n. gen., A. miranda n. sp. Mayer, P. Siboga Expedition. Leide, 1903, Livr. 12, Monogr. 34, (43, pls. VI, IX, X).

Atylopsis latipalpus n. sp. Walker, A. O. and Scott, A. Nat. Hist. Sokotra, 1903, (222).

Atylus antarcticus n. sp. **Walker**, A. O. London, J. Linn. Soc. Zool., 29, 1903, (58-59).

Caprella nn. spp. **Mayer**, B. Siboga Expedition. Leide, 1903, Livr. 12. Monogr. 34, (92-128).

Cheirimedon nn. spp. Walker, A. O. London, J. Linn. Soc. Zool., 29, 1903, (41).

Crangonyz bowersii n. sp. Ulrich, C. J. Lincoln, Nebr., Trans. Amer. Microsc. Soc., 23, 1901, [1902], (83-100, with pl.).

Dodecas hexacentrum n. sp. Mayer, P. Siboga Expedition. Leide, 1903, Livr. 12, Monogr. 34, (29, pls. I, VI).

Elasmopus sokotrae n. sp. Walker, A. O. and Scott, A. Nat. Hist. Sokotra, 1903, (223).

*Epimeria inermis* n. sp. **Walker**, A. O. London, J. Linn. Soc. Zool., **29**, 1903, (54-55).

Eusirus laeris n. sp. Walker, A. O. l.e. (55).

Gammarus duebeni, a strange habitat. Meek, A. Rep. Northumb. Sea Fish. Comm., 1903, (51-53).

Hoplonyx stebbingi n. sp. Walker, A. O. London, J. Linn. Soc. Zool., 29, 1903, (52).

Hyalella fazoni n. sp. Co-ta Rica. Stebbing, T. R. R. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (928).

Ingolfiella n. gen., (Ingolfiellidae n. fam.), I. abyesi, I. littoralis nn. spp. Hansen, H. J. London, J. Linn. Soc. Zool., 29, 1903, (118-130).

Jassa goniamera n. sp. **Walker,** A. O. l.c. (61).

marmorata n. sp. N. E. America. Holmes, S. J. Amer. Nat., Boston, Mass., **37**, 1903, (289).

Kuria n. gen., K. longimanus n. sp. Pocock, R. I., Walker, A. O. and Scott, A. Nat. Hist. Sokotra, 1903, (228– 229).

Luconacia n. gen., L. incerta n. sp. Gulf of Mexico. Mayer, P. Siboga Expedition. Leide, 1903, Livr. 12, Monogr. 34, (49, pls. II, VI, IX).

Lysianax urodus n. sp. Pocock, R. I., Walker, A. O. and Scott, A. Nat. Hist. Sokotra, 1903, (220).

Lysianopsis (? n. gen.), L. alba n. sp. Holmes, S. J. Amer. Nat., Boston, Mass., 37, 1903, (276).

Metaprotella africana n. sp. Mayer, P. Siboga Expedition. Leide, 1903, Livr. 12, Monogr. 34, (42, pl. I).

Metaproto n. gen. (near Proto) for M. novaehollandiae Haswell. Mayer, P. l.c. (26). Melita parvimana n. sp. N. E. America. Holmes, S. J. Amer. Nat., Boston, Mass., **37**, 1903. (279).

Monoculodes eduard\*i n. sp. N. E. America. Holmes, S. J. l.c. (275).

Monoliropus n. gen., M. agilis n. sp. Gulf of Siam. **Mayer**, P. Siboga Expedition. Leide, 1903, Livr. 12, Monogr. 34, (53-54, pl. II, VII, IX).

Noculacia n. gen., N. bullata, N. bogisa nn. spp. E. Indies. Mayer, P. l.c. (50-52, pls. II, VII, 1X).

Oediceros neunesin.sp. **Walker**, A. O. London, J. Linn. Soc. Zool, **29**, 1903, (53-54).

Oradarea n. gen., O. longimana n. sp. Walker, A. O. *l.c.* (56-57).

Orchestia carimana Heller. Godon, J. Fouille jounes natural., Paris, (sér. 4), 33, 1903, (50).

Orchomenella nn. spp. Walker, A. O. London, J. Linn. Soc. Zool., 29, 1903, (46-48).

Orchomenopsis nn. spp. Walker, A. O. l.c. (44-46).

Orthoprotella n. gen. for O. australis Haswell. **Mayer**, P. Siboga Expedition. Leide, 1903, Livr. 12, Monogr. 34, (35).

Paedaridium n. gen., P. miserum. n. sp. Moluccas. Mayer, P. Lc. (18, pls. I, VI, IX).

l'aracaprella nn. spp. **Mayer**, P. l.e. (66–68, pls. II, VII, IX).

Paradeutella nn. spp. **Mayer**, P. l.c. (45-47, pls. II, VI, IX).

Parambasia n. gen., P. forbesii n. sp. Pocock, R. I., Walker, A. O. and Scott, A. Nat. Hist. Sokotra, 1903, (221).

Paraphozus spinosus n. sp. N. E. America. Holmes, S. J. Amer. Nat., Boston, Mass., **37**, (276).

Paraprotella n. gen., P. prima, P. secunda nn. spp. **Mayer**, P. Siboga expedition. Leide, 1903, Livr. 12, Monogr. 34, (38, 71, pls. I, VI, IX).

Paraproto n. gen. (near Proto) for P. spinosa Haswell. Mayer, P. l.c. (24).

Piperella n. gen., P. grata n. sp. S. Georgia. **Mayer**, P. *l.c.* (58-59, pls. II, VII, IX).

Prellicana n. gen., P. minima n. sp. Gulf of Siam. Mayer, P. l.c. (31, pls. I, VI, IX). 349

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Proliropus n. gen., P. dubius n. sp. Singapore. Mayer, P. l.c. (55, pls. II, VII, IX).

Propodalirius n. gen., P. insolitus n. sp. Gulf of Siam. Mayer, P. l.c. (62, pls. II, VII, 1X).

Protella similis n. sp. Dutch E. Indies. Mayer, P. l.c. (34, pls. I, VI).

Proto antillensis n. sp. St. Thomas. Mayer, P. *l.c.* (21, pls. I, VI).

Protogeton n. gen., P. inflatus, P. incertus nn. spp. Mayer, P. l.c. (28-29, pls. I, VI, IX).

Protomima n. gen., P. imitatrix, P. denticulata nn. spp. Mayer, P. l.c. (22, pl. I, VI, IX).

Protoplesius n. gen., P. enigma, P. falx nn. spp. Mayer, P. l.c. (23-24, pls. I, VI, X),

Pseudoproto n. gen., P. fallax n. sp. Mayer, P. l.c. (27, pls. VI, IX).

Stenothoe nn. spp. N. E. America. Holmes, S. J. Amer. Nat., Boston, Mass., 37, 1903, (278).

Talitrus sylvaticus from Launching Place, Victoria. Barnard, F. G. A. Vict. Nat., Melbourne, 19, 1903, (147).

Talorchestia fritzin. sp. Costa Rica. Stebbing, T. R. R. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (925–931),

----- longicornis, general anatomy, general ethology. **Smallwood**, M. E. Brooklyn, N.Y., Inst. Arts. Sci. Cold Spring Harbor Monog., No. 1, 1903, (27, with 3 pls.).

Thaumatope nn. spp. der deutschen Tiefsee-Expedition. Woltereck, R. Zool. Anz., Leipzig, 26, 1903, (447-459, 504, mit 1 Taf.).

Triantella n. gen., T. solitaria n. sp. Mayer, P. Siboga Expedition. Leide, 1903, Livr. 12, Monogr. 34, (32, pls. I, VI, IX).

Triliropus n. gen., T. uncinatus n. sp. Gulf of Siam. **Mayer**, P. *l.c.* (54-55, pls. II, VII, IX).

Triperopus n. gen., T. mirus n. sp. Mayer, P. l.c. (55-56, pls. II, VII, IX).

Tritella nn. spp. Alaska and California. **Mayer**, P. *l.c.* (48, pls. II. VI, IX). Tryphosa nn. spp. **Walker**, A. O. London, J. Linn. Soc. Zool., **29**, 1903, (49-51).

# ISOPODA.

### General.

Bonnier, J. Sur deux types nouveaux d'Epicarides, parasites d'un Cumacé et d'un Schizopode. Paris, C.-R. Acad. sci., 136, 1903, (102–103).

Norman, A. M. British Land Isopoda. Supplement. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (369-372).

**Richardson**, H. Isopods collected at the Hawaiian Islands by the U. S. Fish Commission steamer Albatross. Washington, D.C., Bull. U. S. Fish Com., **1903**, (47-54).

Sainte-Claire Deville, J. Exploration entomologique des grottes des Alpes-Maritimes. Ann. soc. ent., Paris, 71, 1902, [1903], (695-709, av. fig.).

### SPECIAL.

Aega quadratasinus n. sp. Hawaiian Is. Richardson, H. Washington, D.C., Bull. U. S. Fish. Com., **1903**, (47-54).

Anthura gracilis Leach, Statocysten. Thienemann, A. Zool. Anz., Leipzig, 26, 1903, (406-410).

Anuropus branchiatus Bedd., s deep sea Isopod. Hansen, H. J. London, J. Linn. Soc. Zool., 29, 1903, (12-25, pl. IV).

Armadillo nn. spp. Malay Peninsula. Budde-Lund, G. in Lanchester, W. F. London, Proc. Zool. Soc., **1902**, 2, [1903], (380).

Asellus, nota preliminare sopra una forma cieca. Lepri, G. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (37-38).

Bathynomus giganteus A. M. Edw. Hansen, H. J. London, J. Linn. Soc. Zool., 29, 1903, (12-25, pl. IV).

Brackenridgia n. gen., B. carernarum n' sp. Eigenmann and Ulrich. Lincoln, Nebr. Trans. Amer. Microsc. Soc., 23, 1901, [1902], (83–100).

Caecidotea smithii n. sp. Ulrich, C. J. Lincoln, Nebr., Trans. Amer. Microsc. Soc., 23, (1901), 1902, (83-100, with pl.). Cirolana cubensis n. sp. Cuba. Hay, W. P. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (429-435).

*neglecta*, diminution progressive de la pigmentation oculaire. **Dollfus**, A. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (65).

Cumoniscus n. gen., C. kruppii n. sp. Mediterranean. Bonnier, J. in Lo Bianco, S. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (109-279).

sp. parasite sur un cumacé. Bonnier, J. Paris, C.-R. Acad. sci., 136, 1903, (102–103).

Cymothoa. Nusbaum, J. Kosmos, Lwów, 28, 1903, (154–177, av. 2 pls.).

pulchrum n. sp. Malay Peninsula. Lanchester, W. F. London, Proc. Zool. Soc., 1902, 2, [1903], (377, pl. XXXV).

Eutophilus n. gen., E. omnitectus n. sp. Hawaii. **Bichardson**, H. Washington, D.C., Bull. U. S. Fish. Com., **1903**, (52, 53).

Philoscia nn. spp. Malay Peninsula. Budde-Lund, G. in Lanchester, W. F. London, Proc. Zool. Soc., **1902**, 2, [1903], (379).

Porcellio, parasite of. Brues, C. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (291).

Prodajus n. gen., P. lo biancoi n. sp. Mediterranean. Bonnier in Lo Bianco, S. Mitt. Zool. Stat. Neapel, Berlin, 16, 1903, (260).

lo biancoi n. sp. ? parasite sur Gastrocaccus normani. Bonnier, J. Paris, C.-R. Acad. sci., **136**, 1903, (103).

Rocinela havaiiensis n. sp. Hawaii. Richardson, H. Washington, D.C., Bull. U. S. Fish. Com., **1903**, (47-54).

mundana n. sp. Malay Peninsula. Lanchester, W. F. London, Proc. Zool. Soc., 1902, 2, [1903], (378, pl. XXXV).

Sphaeroma felix n. sp. Malay Peninsula. Lanchester, W. F. *l.c.* (379, pl. XXXV).

A. O. and **Scott**, A. Nat. Hist. Sokotra, **1903**, (218).

Spherillo griescens n. sp. Malay Peninsula. Budde-Lund, (}. in Lanchester, W. F. London, Proc. Zool. Soc., 1902, 2, [1903], (380).

Stegophryzus n. gen., S. hyptius n. sp. New England. Thompson, M. T. Washington, D.C., Bull. U. S. Fish Com., 21, 1901, (53-56, with pl.).

Toradjia conglubator n. sp. Malay Peninsula. Budde-Lund, G. in Lanchester, W. F. London, Proc. Zool. Soc., 1902, 2, [1903], (380).

Trichoniscus antennatus n. sp. Malay Peninsula. Budde-Lund, G. in Lanchester, W. F. l.c. (379).

Zonophryzus n. gen., Z. retrodens n. sp. Hawaii. Richardson, H. Washington, D.C., Bull. U. S. Fish. Com., **1903**, (47-54).

### THORACOSTRACA.

**Cuénot**, L. L'organe phagocytaire des crustacés décapodes. Paris, C.-R. Acad. sci., **137**, 1903, (619-621).

### DECAPODA.

### GENERAL.

Bohn, G. Des mécanismes respiratoires chez les crustacés décapodes : essai de physiologie évolutive, éthologique et phylogénique. Bul. sci. France Belgique, Paris, **36**, 1902, (178– 551 av. fig.).

Borradaile, L. A. On the genera of the Dromiidae. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (297-303).

On the classification of the Thalassinidea. *l.e.* **12**, 1903, (534-551); Addendium, *Ib.*, (638).

Marine crustacenns. IV. Some remarks on the classification of the crabs. V. The crabs of the Catometope families. VI. The sand crabs (Oxystomata). VII. The barnacles (Cirrepedia). In: Gardiner, the Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, pt. 4, (424-443, pl. XXII, and text figs. 10-119); IX. The sponge crabs (Dromiacea); *ib.*, 2, pt. 1, 1903, (574-578, pl. XXXIII); X. The spider crabs (Oxyrhyncha); XI. On the classification and genealogy of the reptant Decapods; *ib.*, pt. 2, (681-698, pls. XLVII-XLVIII). **Calman**, W. T. On Macrurous Crustaces obtained by Mr. George Murray during the cruise of the "Oceana" in 1898. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (416-420).

Pritel, P. H. Crustacés fossiles. Les Thoracostracés. Naturaliste, Paris, (sér. 2), 25, 1903, (29-32).

Koltzoff, Nicolas. Untersuchungen über Spermien und Spermiogenese bei Decapoden. Vorläufige Mitteilung. Anat. Anz., Jena, 24, 1903, (83–95).

Lörenthey. Neuere Beiträge zur tertiären Decapodenfauna Ungarns. Math.-natw. Ber. Ungarn., Leipzig, 18, (1900), 1903, (98–120, mit 2 Taf.).

Monticelli, F. S. e Lo Bianco, S. . . . Peneidi del Golfo di Napoli: sul [loro] sviluppo. Napoli, Boll. Soc. Nat., 15, (1901), 1902, (159).

Pocock, R. I., Walker, A. G. and Scott, A. Crustacea: Malacostraca. In "The Natural History of Sokotra and Abd-el-Kuri. . . ," Edited by Henry O. Forbes. Liverpool, Special Bull. Mus., 1908. I. The Decapoda of Sokotra, by R. I. Pocock, *ib.*, (212-213, 2 figs. in text). II. Decapod and sessileeyed Crustaceans from Abd-el-Kuri, [Brachyura by] R. I. Pocock, [Macrua and Edriophthalma by] A. O. Walker and A. Scott., *ib.*, (216-232, pls. XIVA and XIVB) [with notes by H. O. Forbes].

**Terasaki**, T. . . [Brachyurous decapoda of Japan]. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (12–17, 44–47, 177–186, 234–241, 356–359, 431–440, with figs.).

Thomson, G. M. On the New Zealand Phyllobranchiate Crustacea-Macrura. London, Trans. Linn. Soc. Zool., 8, 1903, (433-453, pls. XXVII-XXIX.).

Woodward, H. On some fossil prawns from the Osborne Beds of the Isle of Wight. Geol. Mag., London, [4], 10, 1903, (97-99, pl. V).

### SPECIAL.

Alpheus heterochelis, regeneration. Wilson, E. B. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (197-210).

Amalopenaeus elegans S. I. Smith. Galman, W. T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (416-418). Anchistia kornii n. sp. Mediterranean. Lo Bianco, S. Mitt. zool. Stat. Neapel, Berlin, 16, 1903, (109-279).

Andorina n. gen., A. elegans<sup>†</sup> n. sp. Lörenthey, E. Ungarn. Math.-natw. Ber. Ungarn, Leipzig, **17**, (1899), 1901, (328–336, mit 1 Taf.).

Aristeus antennatus, sulla [sua] probabile larva. **Monticelli**, [F. S.] e Lo Bianco, [S.]. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (30-31).

Axiopeis n. gen., definition, type A. affinis. Borradaile, L. A. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (538-539).

Callinectes hastatus, life history. **Paulmier**, F. C. Albany Univ., N.Y., Rep. St. Mus., **55**, (1901), 1903, (r. 129-r. 136).

sapidus, parasite. Coker, R. E. Washington, D.C., Bull. U. S. Fish Com., 21, (1901), 1902, (339-412, with text fig.).

Cambarus, habits. Harris, J. A. Amer. Nat., Boston, Mass., 37, 1903, (601-608).

a new parasite from. Osborn, H. L. N.Y. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (63-73, with fig. in text).

M. Cincinnati, Ohio, Univ. Cincin. Bull., No. 10, 1902, (54, with pl.).

*affinis*, psychology. Yerkes, R. M. and Huggins, G. E. Harvard Psychological studies, 1, Psych. Rev. Monogr. Suppl., New York, N.Y., 4, 1903, (565-577).

virilis, protective resemblance. Clapp, G. H. Pittsburg, Pa., Ann. Carnegie Mus., 1, 1901, (253).

Cancer pagurus, migrations. **Meek**, A. Rep. Northumb. Sea Fish. Comm., **1903**, (33-35).

changes accompanying the ecdysis. **Witten**, E. P. *l.c.* (42-48, 1 pl., 1 textfig.).

Carcinus maenas, larval and early young stages and rate of growth. Williamson, H. C. Glasgow, Rep. Fish. Board, 21, 3, 1903, (136-179, pls. VII-XIII). Clibanarius longitarsis var. trivittata n. var. Malay Peninsula. Lanchester, W. F. London, Proc. Zool. Soc., 1903, 2, [1903], (363-381, pl. XXXIV).

Crangon fasciatus Risso, C. trispinosus (Hailstone). Gurney, R. l.e. 1903, 2, (24–30, pls. V, VI).

Cryptodromia hireuta n. sp. Maldive Islands. Borradaile, L. A. Fauna of the Maldive and Laccadive Islands, 2, (577, pl. XXXIII).

Cryptodromiopsis n. gen. for C. tridens n. sp. Borradaile, L. A. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (299).

------ tridens n. sp. Borradalle, L. A. Fauna Mald. Laccad. Arch., 2, (578, pl. XXXIII).

Cymonomus, modification of the eye peduacles in crabs of this genus, and 2 nn. spp. Lankester, E. R. Q. J. Microsc. Sci., London, (N. Ser.), 47, 1903, (439-463, pls. XXXIII, XXXIV, 12 text-figs.).

Diogenes nn. spp. Malay Peninsula. Lanchester, W. F. London, Proc. Zool. Soc., 1902, 2, [1903], (366-368).

Dromides n. gen. Borradalle, L. A. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (299).

Dromidiopsis tridentatus n. sp., D. australiensis var. bidens n. var. Borradalle, L. A. Fauna Mald. Laccad. Arch., 2, (576, pl. XXXIII).

Ebalia maldivensis n. sp. Borradaile, L. A. *l.c.* 1, (437).

Eryonicus puritanii n. sp. Mediterranean. Lo Bianco, S. Mitt. Zool. Stat. Neapel, Berlin, 16, 1903, (109-279).

Eupagurus, metamorphosis. Thompson, M. T. Boston, Mass., Proc. Soc. Nat. Hist., **31**, 1903, (147-209, with 7 pls.).

bernadus. Launoy, L. Paris, C.-R. Acad. sci., **136**, 1903, (109– 112).

**bridge**, **2**, 1903, (191-210, with 1 fig.).

Gelasimus pugilator Latr. Duncker, G. l.c. 3, 1903, (307-320).

Glyphaea stokesi<sup>†</sup> n. sp. Weller, S. Chicago, Ill., J. Geol. Univ. Chic., **11**, 1903, (413-419, with pl.).

*llomarus americanus.* **Herrick**, F. H. Washington, D.C., Bull. U. S. Fish. Com., **21**, (1901), 1902, (161–166, with text-fig.).

*vulgaris*, neuere Untersuchungen. Ehrenbaum, [E.]. Berlin, Mitt. D. Seefischereiver., **19**, 1903, (146– 159).

de l'émission des larves. **Fabre-Domergue** et **Blétrix**. Paris, C.-R. Acad. sci., **136**, 1903, (1408-1409).

Lepidopa, revision of the genus, nn. spp. Benedict, J. E. Washington, D.C., Smithsonian Inst., Nation. Mus., Proc., 26, 1903, (889-895).

Leucosilia maldicensis n. sp. Borradaile, L. A. Fauna Mald. Laccad. Arch., 1, (437).

Macrophthalmus latipes n. sp. Borradaile, L. A. l.e. (433).

Myra intermedia n. sp. Borradaile, L. A. l.c. (438).

Naushonia crangonoides, postembryonic ontogeny. **Thompson**, M. T. Boston, Mass., Proc. Soc. Nat. Hist., **31**, 1903, (1-21, with 3 pls.).

Neaxius n. subgen., type Axius acanthus A. M. Edw. Borradaile, L. A. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (537).

Pagurus longicarpus, parasite. Thompson, M. T. Washington, D.C., Bull. U. S. Fish. Com., 21, 1901, (53– 56, with pl.).

Palaemon (Leander) rectirostris Zadd. Kališevsky, M. T. Odessa, Ann. Soc. Nat., 25, livr. 2, 1903, (134–138).

Palaemonetes nn. spp. Cuba. **Hay**, W. P. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (429-435).

Palaeomunida n. gen., P. defecta<sup>†</sup> n. sp. Tertiär, Ungarn. Lörenthey, E. Math.-natw. Ber. Ungarn, Leipzig, **18**, (1900), 1903, (98–120).

Petalidium species from "Challenger" collection. Hansen, H. J. London, Proc. Zool. Soc., 1903, 1, (54-56, pl. XI, figs. 1a-1g).

Phlyctenodes steinmanni<sup>†</sup> n. sp. Tertiär, Ungarn. Lörenthey, E. Math.natw. Ber. Ungarn, Leipzig, **18**, (1900), 1903, (98-120). Pinnotheres tenuipes n. sp. Borradaile, L. A. Fauna Mald. Laccad. Arch., 1. (431).

Plesionika capreensis n. sp. Mediterranean. Lo Bianco, S. Mitt. Zool. Stat. Neapel, Berlin, 16, 1903, (109-279).

**Example 1** cottei n. sp. **Pfeffer** in **Kotte**, E. Zool. Jahrb., Jena, Abt. f. Anat., **17**, 1903, (619–658, mit 5 Taf.).

Potamobius. Stecka, S. Kosmos, Lwdw, 28, 1903, (21-43, 1 tab.).

Potamon (Potamonautes) ecoresei n. sp. Soudan français. Marchand, E. Nantes, Bul. soc. sci. nat., (sér. 2), 2, (2<sup>e</sup> semest.), 1902, (331-343, av. 1 pl.).

London, Proc. Zool. Soc., 1903, 1, (41-47, pl. IX).

Ranina bittneri<sup>†</sup> n. sp. Tertiär, Ungarn, Lörenthey, E. Math.-natw. Ber. Ungarn, Leipzig, **18**, (1900), 1903, (98-120).

Richardina fredericii r. sp. Mediterranean. Lo Bianco, S. Mitt. Zool. Stat. Neapel, Berlin, 16, 1903, (109-279).

Selwynia n. gen., S. laevis n. sp. Borradaile, L. A. Fauna Mald. Laccad. Arch., 1, (430-431).

Surgestes species from "Challenger" collection, S. challengerin. sp. luminous organs, S. similis n. sp. Hansen, H. J. London, Proc. Zool. Soc., 1903, 1, (56-70, pls. XI-XII).

Telphusograpsus n. gen., T. laevis<sup>†</sup> n. sp. Tertiär, Ungarn. Lörenthey, E. Math.-natw. Ber. Ungarn, Leipzig, **18**, (1900), 1903, (98–120).

The latus n. sp. Borrodaile, L. A. Fauna Mald. Laccad. Arch., 1, (437).

### SCHIZOPODA.

Mysis, eine Zwischenform zwischen M. oeulata Fabr. und M. relicta (Lovén). Könnberg, E. Zool. Anz., Leipzig, 28, 1903, (577-581).

(n 2-9053)

### STOMATOPODA.

### GENERAL.

Lanchester, W. F. Marine Crustaceans. VIII. Stomatopoda, with an account of the varieties of *Gonodactylus chirajua*. In : Gardiner, The Fauna and Geography of the Maldive and Laccadive Archipelagoes, 1, pt. 4, (444–458, pl. XXIII).

### SPECIAL.

FAlimerichthus nn. spp. Lanchester, W. F. Fauna Mald. Laccad. Arch., 1, pt. 4, (444-458, pl. XXIII).

## CUMACEA.

### GENEBAL.

**Zimmer**, C. Die Cumaceen des Museums für Naturkunde in Berlin. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (665–694).

### SPECIAL.

Cuma pulez n. sp. **Zimmer**, C. Zool. Jahrb., Jens, Abt. f. Syst., **18**, 1903, (665-694).

Leptostylis nn. spp. Zimmer, C. l.c. (665-694).

Pseudoleucon n. gen., P. sorex n. sp Zimmer, C. l.c. (665–694).

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  - ----- miranda. Mayer. 97.
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quadratasinus. Richardson. 117.

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- ----- unidens. Lanchester. 83. 2 ▲

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Ancorabolus n. gen. [Copepoda]. Norman. 104. mirabilis. Norman. 104.
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ABMADILLO Isopoda]. ————————————————————————————————————
ARTENIA [Phyllopoda]. ————————————————————————————————————
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minor. Thompson and Scott. 150. Asteropontius n. gen. [Copepoda].
Thompson and Scott. 150. <i>attenuatus.</i> Thompson and Scott. 150. <i>typicus.</i> Thompson and Scott. 150.
ATTLOFSIS [Amphipoda]. ————————————————————————————————————
ATYLUS [Amphipoda]. ————————————————————————————————————
Axiopsis n. gen. [Decapoda]. Borra- daile. 11.
BALANUS [Cirripedia].         aeneas.       Lanchester.       82.         amaryllis:       dissimilis       n.         subsp.       Lanchester.       82.         dyboicskii.       Gruvel.       45,47.         maldivensis.       Borradaile.         12.
violaceus. Gruvel. 45, 47, 48.

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Scott. 150. Ceylonia n. gen. [Copepoda]. Thompson and Scott. 150.

Scott. 150.

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HETEROBHABDUS [Copepoda]. - austrinus. Giesbrecht. 41. HOPLONYX [Amphipoda]. ----- stebbingi. Walker. 159. HYALELLA [Amphipoda]. - faxoni. Stebbing. 140. IDYA [Copepoda]. - racovitzai. Giesbrecht. 41. tenuimana. Giesbrecht. 41. ILTOCYPRIS [Ostracoda]. angulata. Sars. 121. —— dentifera. Sars. 121. Ingolfiella n. gen. [Amphipoda]. Hansen. 56. abyssi. Hansen. 56. littoralis. Hansen. 56. ISOCHAETA [Copepoda]. Thompson. longisetosus. Ĩ**48**. ISOCHILINA [Ostracoda]. gregaria var. ulrichiana n. var.t. Jones. 67. JASSA [Amphipoda]. goniamera. Walker, 159. marmorata, Holmes, 66. Kuria n. gen. [Amphipoda]. Pocock, Walker and Scott. 116. longimanus. Pocock, Walker and Scott. 116. LABIDOCERA [Copepoda]. kroyeri var. stylifera n. var. Thompson and Scott. 150. ---- var. gallensis n. var. Thompson and Scott. 150. pectinata. Thompson and Scott. 150. LAOPHONTE [Copepoda]. faroënsis. Scott. 128. gracilis. Scott. 131. hirsuta. Thompson and Scott. 150. Laophontella [Copepoda]. n. gen. Thompson and Scott. 150. typica. Thompson and Scott. 150. - var. californiene io

n. var. Gruvel. 46.

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agilis. Mayer. 97. MONSTRILLA [Copepoda]. conjunctiva. Giesbrecht. 41. MORABIA [Copepoda]. schmeilii. Douwe, van. 31. MYRA [Decapoda]. intermedia. Borradaile. 12. § Mytilicola n. gen. [Copepoda]. Steuer. 144. intestinalis. Steuer. 144. Neaxius n. subgen. [Decapoda.] Borradaile. 11. NITOCRA [Copepoda]. gracillimana. Giesbrecht. 41. paradoxa. Daday. 26. Noculacia n. gen. [Amphipoda]. Mayer. 97. bogisa. Mayer. 97. bullata. Mayer. 97. NOTODROMAS [Ostracoda]. - oculata. Sars. 121.

Obesiella n. gen. [Copepoda]. Ridewood. 119. lyonsiellae. Ridewood. 119. **OEDICEROS** [Amphipoda] newnesi. Walker. 159. OITHONA [Copepoda].

- frigida. Giesbrecht. 41. ONCAEA [Copepoda].
- Giesbrecht. 41. - curvata.

Oradarea n. gen. [Amphipoda]. Walker. 159. longimana. Walker. 159. OBCHOMENELLA [Amphipoda]. franklini. Walker. 159. pinguides. Walker. 159. OBCHOMENOPSIS [Amphipoda]. nodimanus. Walker. 159. rossi. Walker. 159. Orthoprotella n. gen. [Amphipoda]. Mayer. 97. m n. gen. [Amphipoda]. Mayer. 97. *miserum.* Mayer. 97. Paedaridium PALAEMONETES [Decapoda]. 60. ----cubensis. Hay. eigenmanni. Hay. 60. gen. [Decapoda]. Palacomunida n. Lörenthey. 92. defecta. † Lörenthey. 92. PARACAPRELLA [Amphipoda]. alata. Mayer. 97. crassa. Mayer. 97. simplex. Mayer. 97. tenuis. Mayer. 97. PARADEUTELLA [Amphipoda]. armata. Mayer. 97. laevis. Mayer. 97. serrata. Mayer. 97. spinosa. Mayer. 97. Paralichomolgus n. gen. [Copepoda]. Thompson and Scott. 150. curticaudatus. and Scott. 150. Thompson Thompson longicandatus. and Scott. 150. Parambasia n. gen. [Amphipoda]. Po-cock, Walker and Scott. 116. Pocock, Walker forbesii. and Scott. 116. Paranthessius n. gen. [Copepoda]. Scott. 131 dubius. Scott. 131. PARAPHOXUS [Amphipoda]. spinosus. Holmes. 66. Paraprotella n. gen. [Amphipoda]. Mayer. 97. prima. Mayer. 97. secunda. Mayer. 97.

Paraproto n. gen. [Amphipoda]. Mayer. 97.

§ Also described in N. 2, i, No. 12066.

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2803-2831.

# TRILOBITA. XIPHOSURA. EURYPTERIDA.

### TITLES.

Baldwin, Walter. Bellinurus bellulus, from Sparth, Rochdale. Manchester, Trans. Geol. Soc., 28, 1903, (198–202). [2827 de 2831]. 1

Botenat, Eugen. Ueber Tardigraden [Milnesium alpigenum u. M. tardigradum]. Verh. Ges. D. Natf., Leipzig, 74, (1902), II, 1, 1903, (166). [2831]. 2

**Carpenter**, G. H. On the relationships between the classes of the Arthropoda. Dublin, Proc. R. Irish Acad. 24, Sect. B, pt. 4, 1903, (320-360, pl. VI, 5 figs. in text); [abstract], London, J. R. Microsc. Soc., 1904, (178). [0231 0207 2431 3007 2807 2831]. 3

Drevermann, F. Die Fauna der oberdevonischen Tuffbreccie von Langenaubach bei Haiger. Berlin, Jahrb. geol. Landesanst., 21, 1901, Abh. auss. St. Pers., (99-207, mit 5 Taf.). [0231 2031 2231 2831]. 4

Fearnaides, W. G. On some new fossils from Penmorfa, and their bearing on the Cambro-Ordovician Succession near Tremadoc. London, Rep. Brit. Ass., 1902, (614-615). [1027 de 2827 de]. 5

Fritel, P. H. Crustacés fossiles. Les Mérostomes. Naturaliste, Paris, (sér. 2), 24, 1902, (221-224, av. fig.). [2831]. 6

Gashell, Walter H. On the origin of Vertebrates deduced from the study of Ammocoetes. Part XI. London, J. Anat. Physiol., 17, 1903, (168-219, 6 figs. in text). [0223 0207 3223 2807 5223 5431]. 7

# PANTOPODA. TARDIGRADA. LINGUATULIDA.

Gill, Leonard. Trilobita in: Note on the occurrence of Keisley Limestone pebbles in the Red Sandstone Rocks of Peel (Isle of Man). London, Q. J. Geol. Soc., 59, 1903, (308). [2027 de 1027 de 2227 de 2827 de 0827 de]. 8

Hitchcock, C[harles] H[enry]. Notice of a species of Acidaspis [A. uhitfieldi, n. sp.] from a boulder of Marcellus shale, found in drift, at West Bloomfield, New Jersey. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (97-98, with 1 pl.). [2827 gg 2831]. 9

Katzer, Friedrich. Grundzüge der Geologie des unteren Amazonasgebietes (des Staates Pará in Brasilien). Leipzig (M. Weg), 1903, (III + 298, mit 4 Portr., 1 Karte). 26 cm. 14 M. [1031 0227 hh 2031 2831]. 10

Lamplugh, G. W. Trilobita in : The Geology of the Isle of Man. Mem. geol. Surv. U. K., London, **1903**, (95, 258, with 5 pls. and figs. in text). 11

Loob, Leo. On the blood, lymph cells, and inflammatory processes of *Limulus*. [With Bibliography]. J. Med. Res., Boston, Mass., **7**, 1902, (145–158). [2807 2831]. 12

Norman, A. M. Notes on the natural history of East Finmark. Podosomata. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (166). [2827 db 2831]. 13

Reed, F. R. Cooper. Woodwardian Museum Notes; On some Wenlock species of *Lichas*. Geol. Mag., London, [4], 10, 1903, (2-12, pl. 1). [2831]. 14 **Beed**, F. R. Cooper. Woodwardian Museum Notes; Brachymetopus strzeleckii McCoy, 1847. Geol. Mag., London, [4], **10**, 1903, (193-196, with 2 figs. in text.). [2831]. 15

Trilobites of the Girvan District, Ayrshire. Part I. London, Monogr. Palaeont. Soc., **57**, 1903, (1-48, pls. I-VI). [2831]. 16

**Eichters**, F. Nordische Tardigraden. Zool. Anz., Leipzig, **27**, 1903, (168–172). [2831 2827 kd]. 17

Pseudo-Parasiten an Bärthierchen. Prometheus, Berlin, **15**, 1903, (44-45). [2819 2831]. 18

Tardigarden. Verh. D. zool. Ges., Leipzig, **13**, 1903, (53). [2815 2831].

Searle, Clifton J. A new Eurypterid fauna from the base of the Salina of Western New York [with bibliography]. Thesis . . M.S. . University of Rochester. Albany Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (1080–1108, with 21 pls.). [2827 gg 2831]. 20

**Spencer**, W. K. The hypostomic eyes of Trilobites. Geol., Mag., London, [4], **10**, 1903, (489-492, 3 figs. in text). [2807 2607 2831]. 21

**Stebbing**, T. R. R. The Nobodiesa sea-faring family [Popular account of Pycnogonida, introducing some modifications of nomenclature] Knowledge, London, **25**, 1902, (37-40, 73-76, 137-140, 185-189); **26**, 1903, (14-17, 145-148, many figs. in text). [2803 2831].

Woodward, Henry. On two Trilobites from the Devonian Slates of Cornwall, obtained by Walter Barrett, Esq. Geol. Mag., London, [4], 10, 1903, (28-31, 1 fg. in text). [2831]. 23

Note on some fragmentary remains of fossils from the upper part of Mount Noyes (Canadian Rockies). Geol. Mag., London, [4], **10**, 1903, (297-298, 3 figs. in text). [2831]. 24

# 2803 COMPREHENSIVE AND GENERAL WORKS.

**Stebbing,** T. R. R. The Nobodies—a sea-faring family [Popular account of Pycnogonida, introducing some modifica-

tions of nomenclature]. Knowledge, London, 25, 1902, (37-40, 73-76, 137-140, 185-189); 26, 1903, (14-17, 145-148, many figs. in text).

# 2807 STRUCTURE.

# COMPARATIVE ANATOMY.

**Carpenter**, G. H. On the relationships between the classes of the Arthropoda. Dublin, Proc. R. Irish Acad., **24**, Sect. B, pt. 4, 1903, (320-360, pl. VI, 5 figs. in text); [abstract], London, J. R. Microsc. Soc., **1904**, (178).

Gaskell, Walter H. On the origin of Vertebrates deduced from the study of Ammocoetes. Part XI. London, J. Anat. Physiol., 17, 1903, (168-219, 6 figs. in text).

### BLOOD, LYMPH.

Loeb, Leo. On the blood lymph cells and inflammatory processes of *Limulus*. [With bibliography]. J. Med. Res., Boston, Mass., 7, 1902, (145–158).

### SENSE OBGANS.

**Spencer**, W. K. The hypostomic eyes of Trilobites. Geol. Mag., London, [4], **10**, 1903, (489-492, 3 figs. in text).

# 2815 DEVELOPMENT.

Richters, [Ferninand]. Die Eier und Eiablage der Tardigraden. Verh. D. zool. Ges., Leipzig, 13, 1903, (53).

# 2819 ETHOLOGY.

Richters, Ferd. Pseudo-Parasiten an Bärthierchen. Prometheus, Berlin, 15, 1903, (44-45).

### 2827 GEOGRAPHICAL DISTRIBUTION.

d EUROPE.

# db RUSSIA IN EUROPE.

Norman, A. M. Podosomata in: Notes on the natural history of East Finmark (contd.). Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (166-173). Baldwin, Walter. Bellinurus bellulus from Sparth, Rochdale. Manchester, Trans. Geol. Soc., 28, 1903, (198-202).

Fearnaides, W. G. On some new fossils from Penmorfa, and their bearing on the Cambro-Ordovician Succession near Tremadoc. London, Rep. Brit. Ass., 1902, (614-615).

**GHI**, L. Note on the occurrence of Keisley Limestone pebbles in the Red Sandstone Rocks of Peel (Isle of Man). London, Q. J. Geol. Soc., **59**, 1903, (307-310).

Lamplugh, G. W. Trilobita in: The Geology of the Isle of Man. Mem. Geol. Surv. U. K. London, **1903**, (95, 258).

g NORTH AMERICA.

gg North Eastern United States.

Hitchcock, C[harles] H[enry]. Notice of a species of Acidaspis [A. uhitfieldi, n. sp.] from a boulder of Marcellus shale, found in drift, at West Bloomfield, New Jersey. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (97-98, with 1 pl.). Separate. 24.5 c.m.

Searle, Clifton J. A new Eurypterid fauna from the base of the Salina of Western New York [with bibliography]. Thesis . . M.S. . . University of Rochester. Albany Univ., N.Y., Bull. St. Mus., No. **69**, 1903, (1080-1108, with 21 pls.).

k ARCTIC.

kd Islands North of Europe and Asia.

Richters, F. Nordische Tardigraden. Zool. Anz., Leipzig, 27, 1903, (168–172).

# 2831 TAXONOMY AND SYSTEMATIC.

### TRILOBITA.

### GENERAL.

**Carpenter**, G. H. On the relationships between the classes of the Arthropoda. Dublin, Proc. R. Irish Acad., 24, 1903, (320-360). Reed, F. R. C. The Lower Palaeozoic Trilobites of the Girvan District, Ayrshire. Part I. London, Monogr. Palaeont. Soc., 57, 1903, (1-48, pls. I-VI).

**Spencer**, W. K. The "hypostomic eyes" of Trilobites. Geol. Mag., London, [4], **10**, 1903, (489-492, 3 figs. in text).

Woodward, H. Note on some fragmentary remains of fossils from the upper part of Mount Noyes (Canadian Rockies). *l.e.* (297-298, 3 figs. in text).

### SPECIAL.

Acidaspis uhifieldi<sup>†</sup> n. sp. New Jersey Devonian. **Hitchcock**, C. H. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (97–98, with 1 pl.).

Agnostus gircanensis † n. sp. Reed, F. R. C. London, Monogr. Palaeont. Soc., 57, 1903, (4-6).

Ampyz drummuckensis † n. sp. **Reed**, F. R. C. *l.c.* (18–19).

Asaphus (Isotelus) instabilis † n. sp. Reed, F. R. C. l.c. (46-48).

Brachymetopus strzeleckii † McCoy, Woodwardian Museum Notes. **Reed**, F. R. C. Geol. Mag., London, [4], 10, 1903, (193–196, with 2 figs in text).

Dionide richardsoni<sup>†</sup> n. sp. **Reed**, F. R. C. London, Monogr. Palaeont. Soc., **57**, 1903, (26-28).

Griffithides (Phillipeia) tapajotensis † n. sp. Brazil. **Katzer**, F. Grundzüge der Geologie des unteren Amazonasgebietes (des States Pará in Brasilien). Leipzig (M. Weg), 1903, (III + 298).

Homalonotus barratti † n. sp. Devonian alates of Cornwall. Woodward, H. Geol. Mag., London, [4], 10, 1903, (29-31, 1 fig. in text).

Lichas † some Wenlock species. Beed, F. R. C. *l.c.* (2-12, pl. 1).

var. tuberculatus † n. var. **Beed**, F. R. C. *l.c.* (7-8, pl. I, fig. 6).

(Dicranopeltis) woodwardi<sup>†</sup> n. sp. **Beed**, F. R. C. *l.c.* (9–10, pl. 1, figs. 7–8).

Phacops<sup>†</sup>, Devonian slates of Cornwall. **Woodward**, H. *l.c.* (31). Phacops † nn. spp. Deutschland, Oberdevonien. Drevermann, F. Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. St. Pers., (99-207).

Proetus<sup>†</sup> nn. spp. Deutschland, oberdevonisch. Drevermann, F. l.c. (99-207).

Remopleurides † nn. spp. Reed, F. R. C. London, Monogr. Palaeont. Soc., 57, 1903, (33-39).

Shumardia scotica † n. sp. **Beed**, F. R. C. *l.c.* (42-43).

Trinucleus subradiatus † n. sp. **Beed**, F. R. C. *l.c.* (12–14).

### XIPHOSURA.

#### GENERAL.

Fritel, P. H. Crustacés fossiles. Les Mérostomes. Naturaliste, Paris, (sér. 2), 24, 1902, (221-224, av. fig.).

# SPECIAL.

Bellinurus bellulus, from Sparth, Rochdale. Beldwin, W. Manchester, Trans. Geol. Soc., 28, 1903, (198-202).

*Limulus*, blood lymph cells. **Loeb**, L. J. Med. Res., Boston, Mass., **7**, 1902, (145-158).

# EURYPTERIDA.

#### GENERAL.

Searle, C. J. A new Eurypterid fauna from the base of the Salina of Western New York [with bibliography]. Thesis

New York [with bibliography]. Thesis . . M.S. University of Rochester. Albany Univ., N.Y., Bull. St. Mus., No. 69, 1903, (1080–1108, with 21 pls.).

### SPECIAL.

Eurypterus pittsfordensis<sup>†</sup> n. sp. New York, Silurian. Searle, C. J. Albany Univ., N.Y., Bull. St. Mus., No. 69, 1903, (1080-1108).

Hughmilleria, n. gen., H. socialis<sup>†</sup> n. sp. var. robusta<sup>†</sup> n. var. New York, Silurian. **Searle**, C. J. *l.c.* (1080– 1108).

Pterygotus monroensis<sup>†</sup>. New York, Silurian. Searle, C. J. *l.c.* (1080-1108).

### PANTOPODA.

Norman, A. M. [Podosomata in :] Notes on the natural history of East Finmark (contd.). Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (166).

**Stebbing**, T. R. R. The Nobodies a sea-faring family [Popular account of Pycnogonida, introducing some modifications of nomenclature]. Knowledge, London, **25**, 1902, (37-40, 73-76, 137-140, 185-189); **26**, 1903, (14-17, 145-148, many figs. in text).

# TARDIGRADA.

### GENEBAL.

Richters, Ferd. Pseudo-Parasiten an Bärthierchen. Prometheus, Berlin, 15, 1903, (44-45).

### SPECIAL.

Diphascon spitzbergense n. sp. Richters, F. Zool. Anz., Leipzig, 27, 1903, (168-172).

Echiniscus nn. spp. Richters, F. l.c. (168-172).

Macrobiotus nn. spp. Richters, F. l.c. (168-172).

Milnesium alpigenum und M. tardigradum. Botessi, E. Verh. Ges. D. Natf., Leipzig, 74, (1902), II, 1, 1903, (166).

### LIST OF NEW GENERA AND SPECIES.

- ACIDASPIS [Trilobita].
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ASAPHUS [Trilobita]. ------- instabilis<sup>†</sup>. Reed. 16.

DIONIDE [Trilobita].

------ richardsoni<sup>†</sup>. Reed. 16.

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lotzi†. Drevermann. 4. miserrimus†. Drevermann 4.
sulcatus†. Drevermann. 4
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REMOPLEURIDES [Trilobita]. ————————————————————————————————————
SHUMARDIA [Trilobita]. 
TRINUCLEUS [Trilobita]. subradiatus <sup>†</sup> . Reed. 16.

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# 3003-3031 **ARACHNIDA**.

# TITLES.

Anderson, John H. Spotted fever (tick fever) of the Rocky Mountains. A new disease [caused by species of *Der*macentor, probably *D. reticulatus*]. Appendix: A report of two cases . . . by Dr. G. A. Gates]. Washington, D.C., Trees. Dept., Pub. Hith. Mar. Hosp. Serv., Hyg. Lab. Bull. No. 14, 1903, (50). 23 cm. [3027 gi 3031]. 1

Bachmann, [Franz Ewald]. Tödtliche Verletzungen durch südafrikanische Scorpione. Verh. Ges. D. Natf., Leipzig, 73, (1901), II, 2, 1902, (584–587). [3019 3031]. 2

Banks, Nathan. A list of Arachnida from Hayti, with descriptions of new species. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (340-345, with pl.). [3027 he 3031]. 3

Daddy-long-legs from Mt. Katahdin, Maine. Philadelphia, Ps., Ent. News Acad. Nat. Sci., 13, 1902, (308-309). [3027 gg 3031]. 4

A new genus of Solpugida [Hemerotrecha californica n. gen. et sp. from California]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (78-79, with text fig.). [3027 gi 3031].

Secondary sexual characters in spiders. Washington, D.C., Proc. Ent. Soc., 5, 1903, (104–107). [3007 3031]. 6

Berlese, Antonio. Diagnosi di alcune nuove specie di Acari italiani, mirmecofili e liberi. Zool. Anz., Leipzig, 27, 1903, (12-28). [3031]. 7

(n 2-9053)

Bioletti, F. T. and Twight, E. H. Erinose of the vine. [Phytoptus vitis]. Agric. Exp. Sta., California, Berkeley, Bull. No. 136, 1901, (7, with 5 figs.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (768). [3003 3031]. 8

Birulia, A. A. Beiträge zur Kenntniss der Scorpionenfauna Ostpersiens (II Beitrag). St. Peterburg, Bull. Ac. Sc., (5 F), **19**, No. 2, 1903, (67–80). [3027 3031]. 9

Bemerkungen über einige neue oder wenig bekannte Scorpionenformen Nord-Afrikas. St. Peterburg, Bull. Ac. Sc., (5 F), **19**, No. 3, 1903, (105-113). [3027 3031]. 10

Sur une nouvelle espèce de scorpion, provenant de Madagascar. (Russ.) St. Peterburg, Ann. Mus. Zool. Ac. Sc., **8**, 1903, (X-XI). [3031 3027 fh]. 11

Mote sur la distribution géographique de quelques scorpions du Caucase. (Russ.) St. Peterburg, Ann. Mus. zool. Ac. Sc., 1903, (XVII-XIX). [3027 db 3031]. 12

**Bösenberg**, W. Die Spinnen Deutschlands, V. Zoologica, Stuttgart, Heft **35**v (= Bd 14, Lfg 5/6), 1903, (I-V, 385-465, mit 7 Taf.). [3027 de 3031]. 13

Bonnet, A. Sur le développement post-embryonnaire des Ixodes. Paris, C. R. Acad. sci., 137, 1903, (419-420). [3015 3031]. 14

Brandes, G[ustav]. Einiges über die Bibermilbe. Zs. Natw., Stuttgart, **76**, 1903, (144). [3031]. 15 Brébion. Résistance vitale d'un scorpion. Chalon-sur-Saône, Bul. soc. sci. nat., (n. sér., 9), 29, 1903, (130). [3019 3031]. 16

**Cambridge**, F. O. P[ickard]. On some new species of spiders belonging to the families *Pisauridae* and *Senoculidae*; with characters of a new genus. London, Proc. Zool. Soc., **1903**, 1, (151-168, pls. XIV-XV). [3031]. 17

A revision of the genera of the Araneæ or spiders, with reference to their type species. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (32–51); **12**, 1903, (481–495). [3031]. 18

------ On some secondary sexual characters in the genus Aranea Linn. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (59-60, with 1 text fig.). [3007 3031]. 19

Arachnida Araneida II. Biol.-Centr.-Amer., London, **1903**, (425– 440, pls. XL-XLI, 441–448, pl. XI.II, 449–464, XLIII-XLIV). [3007 3027 hb 3031]. 21

List of the Araneidae or spiders of the Channel Islands. Rep. (Juernsey Soc. Nat. Sci., **1902**, (1903), (141-144). [3027 de 3031]. 22

Arachnida, in "Three weeks in South Kerry, June, 1902." Irish Nat., Dublin, **12**, 1903, (69). [3027 de]. 23

On new and rare British spiders. Dorchester, Proc. Dorset Nat. Hist. F. Cl., **24**, 1903, (149–171, pl. A). [3027 de 3031]. 24

**Carpenter**, G. H. On the relationships between the classes of the Arthropoda. Dublin, Proc. R. Irish Acad., **24**, Sect. B, Pt. **4**, 1903, (320-360, pl. VI, 5 text-figs.); [abstract], London, J. R. Microsc. Soc., **1604**, (178). [0231 0207 2431 2807 2831 3007]. 25

**Daday**, E[ugen] von. Die Eylaisarten Ungarns. Math.-natw. Ber. Ungarn, Leipzig, **18**, (1900), 1903, (341-364). [3031 3027 dk]. 26

Mikroskopische Süsswasserthiere aus Turkestan. (Hung.) Math. Termt. Ért., Budapest, **21**, 1903. [0227 ci 1431 2631 3031] 27 Dahl, Friedr. Ueber abgebrochene Copulationsorgane männlicher Spinnen im Körper der Weibchen. Berlin, Sitz-Ber. Ges. natf. Freunde, **1902**, (36–45). [3019 3031]. 28

Ueber Stufenfänge echter Spinnen am Riesengebirge. (Eine vergleichend ethologische Studie). Berlin, SitzBer. (ies. natf. Freunde, **1902**, (185-203, mit Tab.). [3027 de 3019 3031]. 29

Berichtigungen zu dem Vortrag über Stafenfänge echter Spinnen am Riesengebirge. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (183-184). [3027 de 3019 3031]. 30

Täuschende Aehnlichkeit zwischen einer deutschen Springspinne (Ballus depressus) und einem am gleichen Orte vorkommenden Rüsselkäfer (Strophosomus capitatus). Berlin, SitzBer. Ges. natf. Freunde, **1903**, (273-278). [3031 3019 4819 4831]. 31

Eine eigenartige Metamorphose der Troguliden, eine Vorwandlung von Amopaum in Dieranolasma und von Metopoetea in Trogulus. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (278-292). [3015 3031]. 32

Wird der Skorpion durch seinen Stich dem Menschen gefährlich? Natw. Wochenschr., Jens, **19**, 1903, (97-99). [3031 3019]. 33

Davydov, K. N. Les résultats du voyage scientifique au Java et les autres tles de l'Archipel Malais. I. Sur les organes excréteurs et la phagocytose 6liminatrice chez le *Telyphonus* de Java. (Comm prélim.) St. Peterburg, Bull. Ac. Sc., (5 Sér.), **18**, No. 5, 1903, (201-206). [3007 3011 3031]. 34

Dementjew, A. M. Neue Pflanzonparasiten, welche die Chlorose der Weinrebe verursachen. Zs. Pflanzenkrankh., Stuttgart, **13**, 1903, (65-82). [3019 3031]. 35

Deventer, W. van. Insekteneier, welche oft auf Zuckerrohr angetroffen werden. (Holländisch) Arch. Java Suiker., Soerabaia, **19**, 1903, (437–446, 2 Taf.). [2419 2431 3031 3019]. 36

Ellinguen, Edv. Pseudoscorpiones found in Norway I. (Norw.) Kristiania, Forh. Vid. Selsk., **1903**, No. 5, (18). [3027 da 3031]. 37 371

**Evans, W.** Chelifer (Chernes) tullgreni Strand, in Scotland. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (120, 249). [3031 3027 de]. 38

Fabre, J. H. Exode des araignées. Louvain (Imprimerie Polleunis et Centerick), 1903, (25). 8vo. 1 fr. [3019 3031]. 39

Favier, abbé C. Observation à propos d'une araignée de Madagascar. Paris, Ann. Soc. ent., 71, 1902, (488-498, av. pl.). [3019 3031]. 40

**George**, C. F. Lincolnshire freshwater mites. Naturalist, London, **1903**, (83, 84, 5 figs., 111, 112, 8 figs., 215-216, 252, 3 figs., 304, 2 figs., 421, 422, 5 figs.). [3027 de 3031]. 41

Godfrey. Ichneumon parasitic on Obisium. Ann. Scot. Nat. Hist., Edinburgh, 1903, (247). [3019]. 42

Halbert, J. N. Notes on Irish species of *Eylais*. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (505–515, with 10 figs.). [3027 de 3031]. 43

Hansen, H. J. On six species of Koenenia, with remarks on the order Palpigradi. Entomol. Tidskr., Stockholm, 22, 1901, (193-240, with pl.). [3007 3031]. 45

Hanstein, R. von. Ueber Bryobia ribis Thomas. Berlin, SitzBer. Ges. natf. Freunde, 1902, (128-136). [3031] 46

Heller, Eugen. Die Opilioniden Württembergs. Insektenbörse, Leipzig, 20, 1903, (379-380, 394-395, 405, 411-412). [3027 de 3031]. 47

Hickman, R. W. Scabies in cattle [caused by *Psoroptes*]. Washington, D.C., U. S. Dept. Agric. Rep. Bur. Anim. Indust., **1902**, 1903, (45-61, with pl.). [3031 3019]. 48

**Hineck**, G. Deperimento delle viti per cansa di un acaro (*Coepophagus echinopus*). Bollettino di Entomologia agraria, Padova, 9, 1902, (33-35). [0060 3019 3031]. 49

**Hogg**, H. R. On the Australasian spiders of the Subfamily Sparassinae. London, Proc. Zool. Soc., **1902**, 2, 1903, (414-466, 20 text-figs.). [3027 is 3031].

Hogg, H. R. Two new Australian spiders of the family *Ctenisidae*. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (308-312). [3027 ic 3031]. 51

Howlett, W. F. [Note on copulation in a "water-mite."] Zoologist, London, (Ser. 4), 7, 1903, (355). [3019 3031]. 52

**Eutchinson**, Charles E. A bolasthrowing spider [Ordgarius cornigerus]. Sci. Amer., New York, N.Y., **89**, 1903, (172). [3019 3031]. 53

Istvánfi, Gyula. Das gemeinsame Auftreten der Pilzes, *Ithyphallus* und der Milbe, *Coepophatus* in Ungarn. (Hung.) Math. Termt. Ert., Budapest, 21, 1903, (157-176). [3031 3027 dk]. 54

Jacot, [E.]. Etude sur les arachnides. Fragment d'entomologie. Messager Suisse Rom., Fribourg, 16, 1903, (45, 54, 68-69). [3003 3031]. 55

Joerss, [Karl Ernst Johann]. Demodez s. Acarus folliculorum und seine Beziehung zur Lidrandentzündung. Giessen, Ber. Ges. Natk., **33**, 1899–1902, (113–115). [3019 3031]. 56

Kew, H. Wallis. North of England Pseudoscorpions. Naturalist, London, 1903, (293-300, 2 text-figs.). [3027 de 3031]. 57

Koenike, F. Vier unbekannte norddeutsche Hydrachniden. (Vorläuf. Mitt.) Zool. Anz., Leipzig, **26**, 1903, (534–536). [3031]. 59

Kossel, H[ermann], Schütz, [Johann Wilhelm], Weber, A[ugust], Meissner, [Hermann]. Ueber die Hämoglobinurie der Rinder in Deutschland. Berlin, Arb. Gesundhtsamt, 20, 1903, (1-77, mit 3 Taf.). [0419 0431 3019 3031].

**Kraepelin**, K[arl]. Scorpione und Solifugen Nordost-Afrikas, gesammelt 1900 und 1902 von Carlo Freiherrn von Erlanger und Oscar Neumann. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (557-578). [3027 fb 3031]. 61

Küster, Ernst. Cecidiologische Notizen 2. Ueber zwei einheimische Milbengallen: Eriophyes diversipunctatus u. E. frazinicola. Flora, Marburg, 92, 1903, (380-395). [3031]. 62

(n 2-9053)

Kulczyński, Vl[adislaus, Wladyslaw]. Aranearum et Opilionum species in insula Creta a Comite Dre Carolo Attems collectae. Kraków, Bull. Intern. Acad., 1903, (32-58, with 1 pl.). [3031 63 3027 dm].

Kulwieć, Kazimierz. Parasites des (Polonais) Wszechświat, insectes. Warszawa, 22, 1903, (213-217, 276-279). [4619 4819 1419 3019]. 64 64

Largaiolli, Vittorio. Idracne del Trentino. Quarto contributo allo studio delle Idracne italiane [?]. Tridentum, Trient., 6, 1903, (132-136). [3027 dk 65 3031].

Laveran, A. Au sujet du rôle des tiques dans la propagation des piro-plasmoses. Paris, C. R. soc. biol., 55, 1903, (61–63). [3019 3031]. 66

Lewis, R. T. On an undescribed species of Chelifer. London, J. Quek. Microsc. Cl., 8, 1903, (497-498, pl. XXV); [abstract], London, J. R. Microsc. Soc., **1904**, (62). [3031]. 67

Loman, J. C. C. Vergleichend anatomische Untersuchungen an chilenischen und andern Opilioniden. Zool. Jahrb., Jena, Suppl. 6, 1903, (117-200, mit 4 Taf.). [3007 3031]. 68

On the classification of Helder, Tijdschr. Ned. Opiliones. Dierk. Ver., 8, 1903, (62-66). [3031]. 69

Ludwig, F[riedrich]. Warnung vor dem Polstermaterial "Crin d'Afrique". Prometheus, Berlin, 15, 1903, (196–198). 69. [3019].

Mariani, M. Di una nuova specie di acaro dell' ordine dei Metastigmata, gen. Argas (Argas andresi, n. sp.). Camerino (tip. Savini), 1902, (6). [3031]. 70

Marshall, Ruth. Ten species of Arrenuri belonging to the subgenus Megalurus Thon., with Bibliography. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (145-172, with pl.). [3031]. 71

Marucci, [V.]. Nota preliminare sugli Idracnidi del lago di Castel Gandolfo. Mon. zool. ital., Firenze, 13, [3027 dh 1902, (Supplemento), (35). 72 3031].

Verunreinigung der Maurizio, A. Kraftfuttermittel durch Milben. Schweiz.

Aarau, 30, 1902. Landw. Zeitschr., (1001–1004, mit 2 Fig.). [3019 3031] 73

Mégnin, [Pierre]. Rôle des tiques ou Ixodes dans la propagation des piro-Paris, C.-R. soc. biol., 55, plasmoses. 74 1903, (4–6). [3019 3031]. Un dernier mot sur le rôle des Ixodes [Rhipicephalus] dans la propagation des piroplasmoses. Paris, C.-R. soc. biol., 55, 1903, (147-149). 75

Encore un mot sur la biologie des Ixodes. Paris, C.-R. soc. biol., **55**, 1903, (175–176). [3019 3031]. 76

[3019 3031].

Melander, Axel Leonard. Some additions to the Carboniferous terrestrial Arthropod fauna of Illinois. Chicago, Ill., J. Geol. Univ. Chic., 11, 1903, (178-198, with pl.). [2427 gg 3031 77 3831].

Michael, Albert D. British Tyro-glyphidae. Vol. ii. London (Ray Society), 1903, (VII and 183, pls. xx-xxxix). [3027 de 3015 3031]. 78 78

Meissner, [Hermann] v. Kossel, H.

Montgomery, Thomas H[arrison], jun. Studies on the habits of spiders, particularly those of the mating period [with bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (59-149, with pl.). [3019 3031]. 79

Monti, Rina. Ueber eine neue Lebertia-Art. [L. paresii n. sp.]. Zool. Anz., Leipzig, 26, 1903, (688-693). 80 [3031].

Müller, Herm. Hydrachniden. (Ham-Hamburgische Elb-Untersuchung.) burg, Jahrb. wiss. Anst., 19, Beih. 2, 1903, (155-161). (1901), [3027 de 81 3031].

Neumann, I. G. Note sur les Ixodidés. Arch. parasit., Paris, 6, 1902, (109-128, av. 6 fig.). [3019 3031]. 82

Note sur une collection d'ectoparasites recueillis en Abyssinie par M. le baron C. von Erlanger. Arch. parasit., Paris, 6, 1902, (293-294). [3019 83 4019 4219].

Nordenskiöld, Erik. Ueber F. D. Wasastjernas "Monographia Acarorum". Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, VI Section, (2-4). [3031]. 84 Nosek, Antonin. Verzeichniss der Pseudoskorpioniden. (Böhmisch) Prossnitz, Věstn. kl. Přirod., 1901, (43). [3031]. 85

mung der Spinnengattungen Mitteleuropas. (Böhmisch) Prossnitz, Věstn. kl. Přirod., 1903, (54, mit 2 Taf.). [3031]. 86

<u>Ubersicht der Pseudo-</u> scorpioniden und deren geographische Verbreitung. (Böhmisch) Progr. Gymn. Časlav, **1901**, (28). [3027 dk 3031]. 87

Ondemans, A[ntonie] C[ornelis]. Notes on Acari, fifth series. 's Gravenhage, Tijdschr. Ent., 45, 1903, (123-150, with 3 pl.). [3031]. 88

Motes on Acari, 7th series. Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (17-34, with 4 pls.). [3031]. 90

Notes on Acari, 8th series. Helder, Tijdschr. Ned. Dierk. Ver., (Ser. 2), 8, [1903], (70-92, with 2 pls.). [3031]. 91

Symbiose von Coptorthosoma und Greenia. Eine Prioritätsfrage. Zool. Anz., Leipzig, 27, 1903, (137–139). [4631 4619 3031 3019]. 92

**Pappenheim**, Paul. Beiträge zur Kenntnis der Entwicklungsgeschichte von *Dolomedes fimbriatus* Clerck, mit besonderer Berücksichtigung der Bildung des Gehirns und der Augen. Zs. wiss. Zool., Leipzig, **74**, 1903, (109– 154, mit 2 Taf.). [3015 3031]. 93

Patterson, Alice Jean. The spinner family . . With drawings in the text by Bruce Horsfall. Chicago (A. C. McClury & Co.), 1903, (XI + 15-159, with illustr.). 20 cm. [3003 3031]. 94

Peckham, Elizabeth G[ifford] v. Peckham, George W[illiams].

Peckham, George W[illiams] and Peckham, Elizabeth G[ifford]. New species of the family Attidae from South Africa, with notes on the distribution of the genera found in the Ethiopian region. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903]. (173-278, with pl.). [3027 fg 3031]. 95

Piersig, Richard. Neues Verzeichnis der bisher im sächsischen Erzgebirge  
 sufgefundenen
 Hydrachniden-Formen.

 Annaberg, Ber. Ver. Natk., 11, (1898-1903), 1903, (34-46, mit 2 Taf.).
 [3027 dc 3031].

Pocock, R. I. On a new species of marine spider of the genus Desis from Zanzibar. London, Proc. Zool. Soc., 1903, 2, 1903, (389-392, 1 text-fig.). [3027 ff 3031]. 97

On some new harvestspiders of the order Opiliones from the Southern Continents. London, Proc. Zool. Soc., **1902**, 2, 1903, (392–413, with 6 text-figs.). [3027 ff gg fh ih 3031]. 98

On the geographical distribution of spiders of the order Mygalomorphae. [Also on distrib. of some Arachnomorphae.] London, Proc. Zool. Soc., 1903, 1, (340-368, with 4 text-figs.). [3027 3031]. 99

On some genera and species of South American Aviculariidae. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (81-115). [3027 h 3031]. 100

Some Arachnida collected by Mr. G. W. Bury in Yemen. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (214-220, with 2 text - figs.). [3027 ee 3031]. 101

Arachnida of the orders Pedipalpi, Solifugae, and Araneae. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (220-226, with 1 text-fig.). [3027 df fh hf 3031]. 102

Some new spiders from the Cameroons collected by Mr. G. L. Bates. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (258-264). [3027 fd 3031]. 103

Fifteen new species and two new genera of Tropical and Southern Opiliones. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (433-450, pls. XI-XII). [3027 3031]. 104

The systematic position of the genus Hadrotarsus Thorell. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (619-621, 4 text-figs.). [3007 3031].

A new Carboniferous Arachnid. Geol. Mag., London, [4], 10, 1903, (247-251, 2 text-figs.). [3007 3031]. 106 **Pocock**, R. I. Further remarks upon the Carboniferous Arachnid Anthracosiro with the description of a second species of the genus. Geol. Mag., London, [4], 10, 1903, (405-408, 1 text-fig.). [3031]. 107

Notes on the commensalism subsisting between a gregarious spider Stegodyphus sp., and the moth Batrachedra stegodyphobius Wism. Ent. Mag., London, **39**, 1903, (167-170). [3019 3031 4419 4431]. 108

Arachnida In "The Natural History of Sokotra and Abd-el-Kuri. . . Edited by Henry O. Forbes." Special Bull. Liverp. Mus. 1903, (175-208, pl. XIV and pl. XXVI, fig. 1-4a, 2 text-figs.). [With notes by H. O. Forbes and W. R. Ogilvie Grant.] Quoted hereafter as Nat. Hist. Sokotra. [3003 3027 ff 3031]. 109

and **Bothschild**, N. C. On a new "Bird's-dung" spider from Ceylon. London, Proc. Zool. Soc., **1903**, 1, (48-51, pl. X). [3015 3027 ef 3031]. 110

Police, G. Sui centri nervosi sottointestineli dell' *Euscorpius italicus*. Napoli, Boll. Soc. Nat., **15**, (1901), 1902, (1-24, con tav.). [3007 3031]. 111

Poljansky, J. Zur Embryologie des Skorpions. (Dotter und Embryonalhüllen). Zool. Anz., Leipzig, 27, 1903, (49-58). [3015 3031]. 112

**Purcell**, W. F. On the scorpions, Solifugae, and a trap-door spider collected by the Rev. Henri A. Junod at Shilouvane, near Leydsdorp, in the Transvaal. Nov. Zool., Tring, **10**, 1903, (303-306, 2 text-figs.). [3027 fg 3031]. 113

Descriptions of new genera and species of South African Solpugidae with text figures. Cape Town, Ann. S. Afric. Mus., **3**, pt. I, 1903, (1-12). [3027 fg 3031]. 114

New Arachnida collected by Mr. S. C. Cronwright Schreiner at Hanover, Cape Colony. Cape Town, Ann. S. Afric. Mus. **3**, pt. I, 1903, (13-40, with 1 pl.). [3027 fg 3031]. 115

New South African spiders of the families Migidae, Ctenizidae, Barychelidae, Dipluridae, and Lycosidae. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (69–141, pl. VIII). [3027 fg 3031]. Quail, A. A fly and a spider (Salius monachus and Porrhothele antipodiana). Wellington, Trans. N. Zeal. Inst., 35, 1903, (256-258). [4619 3019]. 117

**Bainbow**, W. J. Studies on Australian Araneidae. No. 1. Sydney, N.S.W., Rec. Austr. Mus., **5**, 1903, (63–66, with 2 text figs.). [3031]. 118

Beitmayer, Carl Aug. Beobachtungen an der Wasserspinne. Bl. Aquarienkunde, Magdeburg, 14, 1903, (30-32). [3031]. 119

Rothschild, N. C. v. Pocock, R. I.

 Bucker, Augusta.
 A new Koenenia

 from Texas.
 Q. J. Microsc. Sci., London,

 (N. Ser.), 47, 1903, (215-231, pl. XVIII);

 [abstract], London, J. R. Microsc. Soc.,

 1903, (609).

 [3027 gi 3031].

 120

 Further observations on

 Kosnenia.

 Zool.

 Jahrb., Jena, Abt. f.

 Syst., 18, 1903, (401-434, mit 3 Taf.).

 [3031].

**Sainte-Claire Deville**, J. Exploration entomologique des grottes des Alpes-Maritimes. Ann. Soc. ent., Paris, **71**, 1902, [1903], (695-709, av. fig.). [2427 *df* 2431 2631 3031 3431 3631 3831 4831]. 122

**Ščelkanovcev**, J. P. Beiträge zur Anatomie der Pseudoscorpioniden. (Russ.) Moskva, Zap. Univ. [Sectio hist. nat.], **18**, 1903, (I-V + 1-202, mit 3 Taf.). [3007 3031]. 123

- v. Stschelanovtzeff.

**Ščerbina**, A. Die Lymphe als Heilmittel beim Biss der Malmignatte (*Latrodectus malmignatus* Walk.) A. d. biolog Instit. am Krankenhaus von Novo-Ekaterinskoje. (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, **IV**, No. 4, 1903, (28, mit 4 Fig. u.5 Diagr.). [3003 3011 3031]. 124

**Scharff**, R. F. Some remarks on the Atlantis problem. Dublin, Proc. R. Irish Acad., **24** B, 1903, (268-302, 2 figs.). [Distribution of Arachnida, pp. 291 and 292.] [3027 lb 0227]. 125

Schimkewitsch, W[ladinir]. Ueber die Entwicklung von Telyphonus caudatus (L.). Zool. Anz., Leipzig, **28**, 1903, (665-685); [abstract], London, J. R. Microsc. Soc., **1903**, (41). [3015 3031]. 126

Schütz, [Johann Wilhelm] v. Kossel, H.

Schweizerbarth, [Elise] von. Skorpionen. Natur und Haus, Dresden, 11, 1903, (121-122). [3019 3031]. 127 **Silvestri**, Filippo. Sopra un acaro radicicolo che produce una speciale malattia nelle viti (*Coepophagus echinopus*). Bollettino di Entomologia agraria, Padova, **9**, 1902, (49-56, con fig.). [3019 3031]. 128

**Simon**, E. Descriptions d'arachnides nouveaux de la famille des Salticidae (Attidae). Bruxelles, Ann. soc. ent. Belgique, **46**, 1902, (24-56). [3031].

\_\_\_\_\_ Description d'arachnides nouveaux. Bruxelles, Ann. soc. ent. Belgique, 47, 1903, (21-39). [3031]. 130

Description d'Arachnides nouveaux de la famille des Aviculariides faisant partie des collections du Muséum. Bul. Muséum, Paris, **1902**, (595–599). [3031].

Descriptions d'Arachnides nouveaux de Madagascar, faisant partie des collections du Muséum. Bul. Muséum, Paris, **1903**, (133–140). [3031 3027 *fb*]. 132

Études arachnologiques (33° Mémoire). Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (719-736). [3031 3027 fd ed]. 133

<u>Études</u> arachnologiques (34° Mémoire). Paris, Ann. soc. ent., 72, (2° semest.), 1903, (304–314). [3031 3027 eg hl he]. 134

Descriptions de quelques Arachnides nouveaux de la section des Cribellatés. Paris, Bul. soc. ent., **1902**, (240-243). [3031]. 135

**Smith**, Frank P. Notes on the spiders . . . Epping Forest. Stratford, Essex Nat., **13**, 1903, (22-23, 49-60, pls. IV, V). [3027 de 3031]. 136

Zora maculata and Oonops pulcher, Grimsby. Naturalist, London, **1903**, (30). [3027 de]. 137

Aranaea from Epping Forest. Naturalist, London, **1903**, (164– 165). [3027 de]. 138

Soar, C. R. A few words on freshwater mites (*Hydrachnidae*). Edinburgh, Trans. Nat. Soc., 5, 1903, (40-46, pls. III-VI). [3027 de 3031]. 139

Note on the occurrence of living Hydrachnid larvæ in the stomach of a trout. London, J. Quek. Microsc. Cl., 8, 1903, (463-464, 4 text-figs.); [abstract], London, J. R. Microsc. Soc., 1903, (609). [3019]. 140

**Stcherbatchoff**, [Nadine]. Le Demodez folliculorum Simon dans les follicules ciliaires de l'homme. Thèse Med. Lausanne (Guex), 1903, (23, av. 1 pl.). 8vo. [3019 3031 6019]. 141

**Stowe.** [Acarid galls.] Naturalist, London, **1903**, (383). [3019 3027 de]. 142

**Strand**, Embr. Theridiiden und Argiopiden, gesammelt von Mr. H. Seebohm in Krasnojarsk (Sibirien) 1878. Bergens Mus. Aarb., **1903**, No. 10, (8). [3027 ea]. 143

Our spiders. (Norw.) Bergen, Naturen, **27**, 1903, (180–191). [3007 3031]. 144

Stschelkanovtseff, J. P. Beiträge zur Kenntnis der Segmentierung und des Körperbaues der Pseudoscorpione. Zool. Anz., Leipzig, **26**, 1903, (318–334). [3007]. 145

----- v. Ščelkanovcev.

Thon, K. Die neuen Exkretionsorgane bei der Hydrachniden-Familie *Limnocharidae* Kr. Verh. D. zool. Ges., Leipzig, **13**, 1903, (166–168). [3007 3031]. 146

Monographie der Wassermilben Böhmens I Linnocharidae Kram. (Bohemian) Arch. Pf(rod. Vyzk. Čech., Prag, 12, Nr 2, 1903, (75, mit 37 Textfig.). [3007 3031]. Ueber eine neue parasi-

tische Ataz-Art aus Texas. Wien, Ann. Nat. Hist. Hofmus., **16**, 1901, (31-35, mit 1 Taf.). [3031]. 148

Thor, Sig. Eine acarinologische Reise nach Schwarzbach bei Zweibrücken. Nyt Mag. Naturv., Kristiania, 41, 1903, (69-72). [3031]. 149

Zwei neue Formen aus der alten Neuman'schen Typensammlung. Nyt Mag. Naturv., Kristiania, 41, 1903, (73-75, 4 fig.). [3007 3031]. 150

Tullgren, Albert. Chelonethi from Camerun in West Africa, collected by Dr. Yngve Sjöstedt. Entomol. Tidskr., Stockholm, 22, 1901, (97–101, with pl.). [3027 fd 3031]. 151

On Ixodes archicola Eichwald [possibly identical with Hyalomma aegyptium Tullgr.]. Entomol. Tidskr., Stockholm, **22**, 1901, (102). [3031]. 152 Twight, E. H. v. Bioletti, F. T.

Ulrich, Carl Jost. A contribution to the subterranean fauna of Texns. [Arthropoda, with nn. spp. in Crustacea, Arachnida and Aptera.] Contributions from the Zoological Laboratory of the Indiana University No. **34** in Lincoln, Nebr., Trans. Amer. Microsc. Soc., **23**, 1901, [1902], (83-100, with pl.). [0219 2427 gi 2631 3031 3631]. 153

Waterston, J. Roncus cambridgii L. K., in Argyllsbire. Ann. Scot. Nat. Hist, Edinburgh, **1903**, (187). [3031 3027 de]. 154

Weber, A[ugust] v. Kossel, H.

with, C. [J.]. New and old *Phalangidae* from the Indian region. London, J. Linn. Soc. Zool., **28**, 1903, (466-509). [3027 ef 3031]. 155

A new Acaride, Opilioacarus segmentatus. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, 1903, VI Section, (4-5). [3007 3031]. 156

Wolcott, Robert H[enry]. The North American species of *Limnesia*. [With bibliography.] Lincoln, Stud. Zool. Lab., Univ. Nebr. No. 56, 1903, ([85]– 107, with pl.). Separate. 23.3 cm. [3027 g 3031]. 157

**Woodruffe-Peacock** and **Stowe**. [Acarid galls]. Naturalist, London, **1903**, (305–306). [3019 3027 de]. 158

Woodworth, C. W. The red spider [Tetranychus mytilaspidis] of citrus trees. Agric. Exp. Sta., California, Berkeley, Bull. No. **145**, 1902, (19, with text-fig.). 23 cm. [Review], Washington, D.C., U.S. Dept. Agric. Off. Exp. Sta., Rec., **14**, 1903, (782). [3019 30315]

#### 3003 COMPREHENSIVE AND GENERAL WORKS.

#### GENERAL.

Jacot, E. Etude sur les arachnides. Fragment d'entomologie. Messager Suisse Rom., Fribourg, 16, 1903, (45, 54, 68-69).

**Patterson**, Alice Jean. The spinner family . . . with drawings in the text by Bruce Horsfall. Chicago (A. C.

McClurg & Co.), 1903, (xi + 15-159, with illustr.). 20 cm.

Pocock, R. I. Arachnida. In The Nat. Hist. Sokotra. Special Bull. Liverp. Mus., 1903, (175-208, pls. XIV, XXVI, figs. 1-4a, 2 text-figs.).

#### ECONOMICS.

Bioletti, F. T. and Twight, E. H. Erinose of the vine [*Phytoptus ritis*]. Agric. Exp. Sta., California, Berkeley Bull. No. **136**, 1901, (7, with 5 figs.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1902, (768).

ščerbina, A. Die Lymphe als Heilmittel beim Biss der Malmignatte (Latrodectus malmignatus, Walk.) Aus dem biologischen Institut am Krankenhaus von Novo - Ekaterinskoje. (Russ.) Trd. B. entom. Učen. Kom. M. Keml., St. Peterburg, IV, No. 4, 1903, (28, mit 4 Fig. u. 5 Diagr.).

### **3007** STRUCTURE.

#### GENERAL.

Cambridge, F. O. Pickard. Arachnida Aranei'da II. Biol.-Centr.-Amer., London, **1903**, (425–440, pls. XL, XLI, 441–448, pl. XLII, 449–464, pls. XLIII, XLIV).

Hansen, H. J. On six species of *Koenenia*, with remarks on the order Palpigradi. Entomol. Tidskr., Stockholm, **22**, 1901, (193-240, with pl.).

**Pocock**, R. I. The systematic position of the genus *Hadrotarsus* Thorell. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (619–621).

A new Carboniferous Arachnid. Geol. Mag., London, [4], 10, 1903, (247-251, 2 text-figs.).

**Ščelkanovcev**, Ja. P. Beiträge zur Anatomie der Pseudoscorpioniden. (Russ.) Moskva. Zap. Univ. (Sectio hist.-nat.), **18**, 1903, (I-V, 1-202, mit 3 Taf.).

**Strand**, Embr. Our spiders. (Norw.) Bergen, Naturen, **27**, 1903, (180–191).

Thon, K. [Anatomie der Hydrachniden.] Prag, Arch. Přírod. Vyzk. Čech., 12, Nr. 2, 1903, (75, mit 37 Textig.). With, C. A new Acaride Opilioacarus segmentatus. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, V1 Section, (4-5).

#### COMPARATIVE ANATOMY.

**Carpenter**, G. H. On the relationships between the classes of the Arthropoda. Dublin, Proc. R. Irish Acad., **24**, Sect. B, pt. 4, 1903, (320-360, pl. VI, 5 text figs.); [abstract], London, J. R. Microsc. Soc., **1904**, (178).

Loman, J. C. C. Vergleichend anatomische Untersuchungen an chilenischen und andern Opilioniden. Zool. Jahrb., Jena, Suppl. 6, 1903, (117-200, mit 4 Taf.).

**Thor**, Sig. Zwei neue Formen aus der alten Neuman'schen Typensammlung. Nyt Mag. Naturv., Kristiania, **41**, 1903 (73-75, 4 fig.).

#### NERVOUS SYSTEM.

**Police**, G. Sui centri nervosi sottointestinali dell' *Euscorpius italicus*. Napoli, Boll. Soc. Nat., **15**, (1901), 1902, (1-24, con tav.).

#### EXCRETORY ORGANS.

**Davydov**, K. N. Les résultats du voyage scientifique au Java et les autres lles de l'Archipel Malais. I. Sur les organes excréteurs et la phagocytose éliminatrice chez le *Telyphonus* de Java. (Comm. prélim.) St. Peterburg., Bull. Ac. Sc., (5 Ser.), **18**, No. 5, 1903, (201-206).

Thom, K. Die neuen Exkretionsorgane bei der Hydrachniden-Familie *Limnocharidae* Kr. Verh. D. zool. Ges., Leipzig, **13**, 1903 (166–168).

#### SPECIAL EXTERNAL CHARACTERS.

Banks, Nuthan. Secondary sexual characters in spiders. Washington, D.C., Proc. Ent. Soc., 5, 1903, (104-107).

**Cambridge**, F. O. P. On some secondary sexual characters in the genus *Aranea* Linn. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (59-60, with 1 text-fig.). Stechelkanovtseff, J. P. Beiträge zur Kenntnis der Segmentierung und des Körperbaues der Pseudoscorpione. Zool. Anz., Leipzig, 26, 1903, (318-334).

#### 3011 PHYSIOLOGY.

FUNCTIONS OF SPECIAL STRUCTURES.

**Davydov**, K. N. Les résultats du voyage scientifique au Java et les autres lles de l'Archipel Malais. I. Sur les organes excréteurs et la phagocytose éliminatrice chez le *Telyphonus* de Java (Comm. prélim.) St. Peterburg, Bull. Ac. Sc., (5 Sér.), **18**, No. 5, 1903, (201– 206).

**Ščerbina**, A. Die Lymphe als Heilmittel beim Biss der Malmignatte (*Latrodectres malmignatus* Walk.) A. d. biolog. Instit. au Krankenhaus von Novo-Ekaterinskoje. (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, **IV**, No. 4, 1903, (28 mit 4 Fig. u. 5 Diagr.).

#### **3015** DEVELOPMENT.

#### GENERAL.

Michael, Albert D. British Tyroglyphidae, Vol, ii, London, (Ray Society), 1903, (VII + 183, pls. XX-XXXIX). 8vo.

Pocock, R. I. and Rothschild, N. C. On a new "Bird's dung" spider from Ceylon. London, Proc. Zool. Soc., 1903, 1, (48-51, pl. X).

#### ENBRYOLOGY.

**Pappenheim**, Paul. Beiträge zur Kenntnis der Entwicklungsgeschichte von *Dolomedes fimbriatus* Clerck, mit besonderer Berücksichtigung der Bildung des Gehirns und der Augen. Zs. wiss. Zool., Leipzig, **74**, 1903, (109–154, mit 2 Taf.).

Poljansky, J. Zur Embryologie des Skorpions. (Dotter und Embryonalhüllen). Zool. Anz., Leipzig, 27, 1903, (49-58).

Schimkewitsch, W[ladimir]. Ueber die Entwicklung von Telyphonus caudatus (L.) *l.c.* 26, 1903, (665–685); [abstract], London, J. R. Microsc. Soc., 1903, (41).

#### POSTEMBRYONIC ONTOGENY.

Bonnet, A. Sur le développement postembryonnaire des Ixodes. Paris, C.-R. Acad. sci., 137, 1903, (419-420).

#### METAMORPHOSIS AND LARVAL FORMS.

Dahl, Friedrich. Eine eigenartige Metamorphose der Troguliden, eine Verwandlung von Amopaum in Dieranolasma und von Metopoetea in Trogulus. Berlin, SitzBer. Ges. natf. Freunde, 1903, (278-292).

# 3019 ETHOLOGY.

#### GENERAL.

**Favier**, *abbé* G. Observation à propos d'une araignée de Madagascar. Paris, Ann. Soc. ent., **71**, 1902, (488-498, av. pl.).

Neumann, L. G. Note sur les Ixodides. Arch. parasit., Paris, 6, 1902, (109-128).

Quall, A. A fly and a spider (Salius monachus and Porrhothele antipodiana). Wellington, Trans. N. Zeal. Inst., **35**, 1903, (256-268).

### HABITS.

**Eutchinson**, Charles E. A bolas throwing spider. [Ordgarius cornigerus.] Sci. Amer., New York, N.Y., **89**, 1903, (172).

Montgomery, Thomas H[arrison], jun. Studies on the habits of spiders, particularly those of the mating period, [With bibliography.] Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (59-149, with pl.).

#### MIGRATION.

Fabre, J. H. Exode des araignées. Louvain (Imprimerie Polleunis et Ceuterick), 1903, (25 pl.). 8vo. 1 fr.

#### PARENTAL RELATIONS.

Schweizerbarth, [Elise] von. Skorpionen. Natur und Haus, Dresden, 11, 1903, (121-122).

# SEXUAL RELATIONS.

Dahl, Friedr. Ueber abgebrochene Copulationsorgane männlicher Spinnen im Körper der Weibchen. Berlin, Sitz-Ber. Ges. natf. Freunde, **1902**, (36–45).

Howlett, W. F. [Note on copulation in a "water mite."] Zoologist, London, (Ser. 4), 7, 1903, (355).

#### HABITAT.

Dahl, Fr[iedrich]. Ueber Stufenfänge echter Spinnen am Riesengebirge. (Eine vergleichend ethologische Studie.) Berlin, SitzBer. Ges. natf. Freunde, **1902**, (185-203, mit Tab.).

Berichtungen zu dem Vortrag über Stufenfänge echter Spinnen am Riesengebirge. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (183-184).

**Deventer**, W. van. Insekteneier, welche oft auf Zuckerrohr angetroffen werden. (Holländisch) Arch. Java Suiker., Soerabaia, **11**, 1903, (437–446, 2 Taf.).

Kew, H. W. Snails and spiders on towers. Naturalist, London, 1903, (342-343).

#### SYMBIOSIS.

Oudemans, A. C. Symbiose von Coptorthosoma und Greenia. Eine Prioritätsfrage. Zool. Anz., Leipzig, 27, 1903, (137–139).

**Pocock**, R. I. Notes on the commensalism subsisting between a gregarious spider *Stegodyphus* sp., and the moth *Batrachedra* stegodyphobius Wlsm. Ent. Mag., London, **39**, 1903, (167-170).

# PARASITISM.

Godfrey. Ichneumon parasitic on Obsidium. Ann. Scot. Nat. Hist., Edinburgh, 1903, (247).

Joerss, [Karl Ernst Johann]. Demodex s. Acarus folliculorum und seine Beziehung zur Lidrandentzündung. Giessen, Ber. Ges. Natk., **33**, 1899-1902, (113-115). Kulwieć, K. Parasites des insectes. (Polonais) Wszechświat, Warszawa, 22, 1903, (213-217, 246-249).

Leveran, A. Au sujet du rôle des tiques dans la propagation des piroplasmoses. Paris, C.-R. soc. biol., 55, 1903, (61-63).

**Mégnin**, [Pierre]. Rôle des tiques ou Ixodes dans la propagation des piroplasmoses. *l.c.* (4-6).

Un dernier mot sur le rôle des Ixodes [*Rhipicephalus*] dans la propagation des piroplasmoses. *l.c.* (147-149).

Encore un mot sur la biologie des Ixodes. *l.c.* (175-176).

Neumann, L. G. Note sur une collection d'Ectoparasites recueillis en Abyssinie par M. le baron C. von Erlanger. Arch. parasit., Paris, **6**, 1902, (293– 294).

**Soar**, C. R. Note on the occurrence of living Hydrachnid larvae in the stomach of a trout. London, J. Quek. Microsc. Cl., **8**, 1903, (463-464, 4 textfigs.); [abstract], London, J. R. Microsc. Soc., **1903**, (609).

**Stcherbatchoff**, [Nadine]. Le Demodez folliculorum Simon dans les follicules ciliaires de l'homme. Thèse Méd. Lausanne (Guese), 1903, (23, av. 1 pl.).

stowe. [Acarid galls.] Naturalist, London, 1903, (383).

Woodruffe-Peacock and Stowe. [Acarid galls.] *l.c.* (305-306).

#### DEFENSIVE PROCESSES.

Brédion. Résistance vitale d'un scorpion. Chalon-sur-Saône, Bul. soc. sci. nat., (n. sér. 9), 29, 1903, (130).

Dahl, Friedr. Täuschende Aehnlichkeit zwischen einer deutschen Springspinne (Ballus depressus) und einem am gleichen Orte vorkommenden Rüsselkäfer (Strophosomus capitatus). Berlin, SitzBer. Ges. natf. Freunde, **1903**, (273-278).

#### UTILITY AND HARMFULNESS.

Bachmann, [Franz Ewsld]. Tödtliche Verletzungen durch südafrikanische Scorpione. Verh. Ges. D. Natf., Leipzig, 78, (1901), II, 2, 1902, (584-587). Dementjew, A. M. Neue Pflanzenparasiten, welche die Chlorose der Weinrebe verursachen. Zs. Pflanzenkrankh., Stuttgart, **13**, 1903, (65–82).

Hickman, R. W. Scabies in cattle [caused by *Psoroptes*]. Washington, D.C., U. S. Dept. Agric. Rep. Bur. Anim. Indust., **1902**, 1903, (45-61, with pl.).

**Hineck**, G. Deperimento delle viti per causa di un acaro (*Coepophagus echinopus*). Bollettino di Entomologia agraria, Padova, **9**, 1902, (33-35).

Kossel, H[ermann], Schütz, [Johann Wilhelm], Weber, A[ugust], Miessner, [Hermann]. Ueber die Hämoglobinurie der Rinder in Deutschland. Berlin, Arb. Gesundhtsamt, 20, 1903, (1-77, mit 3 Taf.).

Ludwig, F[riedrich]. Warnung vor dem Polstermaterial "Crin d'Afrique". Prometheus, Berlin, **15**, 1903, (196–198).

Maurizio, A. Verunreinigung der Kraftfuttermittel durch Milben. Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (1001-1004, mit 2 fig.).

**Silvestri**, Filippo. Sopra un acaro radicicolo che produce una speciale malattia nelle viti (*Coepophagus echinopus*). Bollettino di Entomolgia agraria, Padova, **9**, 1902, (49–56, con fig.).

Woodworth, C. W. The red spider [Tetranychus mytilaspidis] of citrus trees. Agric. Exp. Sta., California, Berkeley, Bull. No. 145, 1902, (19, with text fig.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1903, (782).

# **3027** GEOGRAPHICAL DISTRIBUTION.

a THE EARTH AS A WHOLE.

**Pocock**, R. I. On the geographical distribution of spiders of the order Mygalomorphae. [Also on distrib. of some Arachnomorphae.] London, Proc. Zool. Soc., **1903**, 1, (340–368, with 4 text-figs.).

------- Fifteen new species and two new genera of Tropical and Southern Opiliones. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (433-450, pls. XI-XII).

# d EUROPE.

#### da SCANDINAVIA.

Ellingsen, Edv. Pseudoscorpiones found in Norway. I. (Norw.) Kristiania, Forh. Vid. selsk., **1903**, No. 5, (18).

#### db RUSSIA IN EUROPE.

**Birulia**, A. A. Note sur la distribution géographique de quelques scorpions du Caucase. (Russ.) St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (XVII-XIX).

#### de GERNAN EMPIRE.

Bösenberg, W. Die Spinnen Deutschlands, V. Zoologica, Stuttgart, Heft **35**V (= Bd 14, Lfg 5/6), 1903, (I-V, 385-465, mit 7 Taf.).

Dahl, Fr[iedrich]. Ueber Stufenfänge echter Spinnen am Riesengebirge. (Eine vergleichend ethologische Studie.) Berlin, SitzBer. Ges. natf. Freunde, 1902, (185-203, mit Tab.).

———— Berichtigungen zu dem Vortrag über Stufenfänge echter Spinnen am Riesengebirge. *l.c.* **1903**, (183–184).

**Heller, Eugen.** Die Opilioniden Württembergs. Insektenbörse, Leipzig, **20**, 1903, (379-380, 394-395, 405, 411-412).

Müller, Herm. Hydrachniden. (Hamburgische Elb-Untersuchung.) Hamburg, Jahrb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (155–161).

Piersig, Richard. Neues Verzeichnis der bisher im sächsischen Erzgebirge aufgefundenen Hydrachniden-Formen. Annaberg, Ber. Ver. Natk., **11**, (1898– 1903), 1903, (34–46, mit 2 Taf.).

#### de BRITISH ISLANDS.

**Cambridge**, F. O. P. List of the Araneidae or spiders of the Channel Islands. Rep. Guernsey Soc. Nat. Sci., 1902, (1903), (141-144).

Cambridge, F. O. P. On new and rare British spiders. Dorchester, Proc. Dorset. Nat. Hist. F. Cl., 24, 1903, (149– 171, pl. A.).

Arachnida in "Three weeks in South Kerry, June, 1902." Irish Nat., Dublin, 12, 1903, (69).

Evans, W. [Chelifer (Chernes) tullgreni = C. dubius] from Linlithgow. Ann. Scot. Nat. Hist., Edinburgh, 1903, (120, 249).

George, C. F. Lincolnshire freshwater mites. Naturalist, London, 1903, (83-84, 5 figs., 111-112, 8 figs., 215-216, 252, 3 figs., 304, 2 figs., 324, 2 figs., 421, 422, 5 figs.).

Halbert, J. N. Notes on Irish species of *Eylais*. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (505-515, with 10 figs.).

Kew, H. Wallis. North of England Pseudoscorpions. Naturalist, London, 1903, (293-300, 2 text-figs.).

Michael, Albert D. British Tyroglyphidae, Vol. ii. London, (Ray Society), 1903, (VII, 183, pls. XX-XXXIX).

**smith.** Zora maculata and Oonops pulcher Grimsby. Naturalist, London, **1903**, (30).

Forest. *l.e.* (164-165).

**Soar**, C. R. A few words on freshwater mites (*Hydrachnidae*). Edinburgh, Trans. Nat. Soc., **5**, 1903, (40–46, pls. III-VI).

stowe. [Acarid galls.] Naturalist, London, 1903, (383).

Waterston. [Roncus cambridgii from Argyllshire.] Ann. Scot. Nat. Hist., Edinburgh, 1903, (187).

Woodruffe - Peacock and Stowe. [Acarid galls.] Naturalist, London, 1903, (305-306).

#### dg Spain.

**Pocock**, R. I. Descriptions of four new Arachnida of the orders Pedipalpi, Solifugae, and Aranease. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (220– 226, with 1 text-fig.). **Marucci**, [V.]. Nota preliminare sugli Idracnidi del lago di Castel Gandolfo. Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (35).

# dh Austria-Hungary.

Daday, E. von. Die Eylaisarten Ungarns. Math.-natw. Ber. Ungarn, Leipzig, 18, (1900), 1903, (341-364).

Istváníň, Gyula. Das gemeinsame Auftreten des Pilzes: *Ithyphallus* und der Milbe: *Coepophatus* in Ungarn. (Ungarisch) Math. Termt. Ert., Budapest, 21, 1903, (157-176).

Largatolli, Vittorio. Idracne del Trentino. Quarto Contributo allo studio delle Idracne italiane [?]. Tridentum, Trient, 6, 1903, (132–136).

Nosek. Übersicht der Pseudoscorpioniden und deren geographische Verbreitung. (Böhmisch) Progr. Gymn. Časlav, 1901, (28).

# dm MEDITERRANEAN AND ISLANDS.

Kulczyński, Vl[adislaus, Władysław]. Aranearum et Opilionum species in insula Creta a Comite Dre Carolo Attems collectae. Kraków, Bull. Intern. Acad., 1903, (32–58, with 1 pl.).

e Asia.

ea ASIATIO RUSSIA.

**Strand**, Embr. Theridiiden und Argiopiden gesammelt von Mr. H. Seebohm in Krasnojarsk (Sibirien 1878). Bergens, Mus. Aarb., **1903**, No. 10, (8).

ed COCHIN CHINA : TONQUIN.

Simon, E. Études arachnologiques (33° Memoire). Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (719-736).

ee Sian.

Pocock, R. I. Some Arachnida collected by Mr. G. W. Bury in Yemen. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (214-220, with 2 text-figs.). ef BRITISH INDIA : CEYLON.

Pocock, R. I. and Rothschild, N. C. On a new "Bird's-dung" spider from Ceylon. London, Proc. Zool. Soc., **1903**, 1, (48-51, pl. X).

With, C. [J.]. New and old *Phalan*giidae from the Indian Region. London, J. Linn. Soc. Zool., 28, 1903, (466-509).

# eg MALAY PENINSULA.

**Simon,** E. Études arachnologiques (34° Mémoire). Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (304-314).

# ch PERSIA.

**Birulla**, A. A. Beiträge zur Kenntniss der Scorpionenfauna Ostpersiens (II. Beitrag). St. Peterburg, Bull. Ac. Sc., (5 F.), **19**, No. 2, 1903, (67–80).

# f AFBICA.

#### fa MEDITERRANEAN STATES.

Birulia, A. A. Bemerkungen über einige neue oder wenig bekannte Scorpionenformen Nord-Afrikas. St. Peterburg, Bull. Ac. Sc., (5 F.), **19**, No. 3, 1903, (105–113).

# fb North East Africa.

**Kraepelin**, K[arl]. Scorpione und Solifugen Nordost-Afrikas, gesammelt 1900 und 1902 von Carlo Freiherrn von Erlanger und Oscar Neumann. Zool. Jahrb. Jena, Abt. f. Syst., **18**, 1903, (557-578).

# fd WEST AFRICA.

Pocock, R. I. Some new spiders from the Camaroons collected by Mr. G. L. Bates. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (258-264).

**Simon**, E. Études arachnologiques (33° Mémoire). Paris, Ann. soc. ent., **71**, (2° semest.), 1902 [1903], (719-736).

Tullgren, Albert. Chelonethi from Camerun in Westafrika collected by Dr. Yngve Sjöstedt. Entomol. Tidakr., Stockholm, 22, 1901, (97-101, with pl.).

# f EAST AFRICA.

**Pocock**, R. J. On a new species of marine spider of the genus *Desis* from Zanzibar. London, Proc. Zool. Soc., **1902**, 2, 1903, (389-392, 1 text-fig.).

On some new harvest spiders of the order Opiliones from the Southern Continents. *l.e.* (392-413, with 6 text-figs.).

Arachnida. In Nat. Hist. Sokotra . . Special Bull. Liverp. Mus., **1903**, (175-208, pl. XIV and pl. XXVI, figs. 1-4a, 2 text-figs.).

fg South Africa.

**Peckham**, George W[illiams] and **Peckham**, Elizabeth G[ifford]. New species of the family *Attidae* from South Africa, with notes on the distribution of the genera found in the Ethiopian region. Madison, Trans. Wis. Acad. Sci., **14**, (1902), 1903, (173-278, with pl.).

**Pocock**, R. I. On some new harvestspiders of the order Opiliones from the Southern Continents. London, Proc. Zool. Soc., **1902**, 2, 1903, (392–413, with 6 text-figs.).

**Purcell**, W. F. Descriptions of new genera and species of South African Solpugidae, with eight text-figures. Cape Town, Ann. S. Afric. Mus., 3, pt. I, 1903, (1-12).

New Arachnida collected by Mr. S. C. Cronwright Schreiner at Hanover, Cape Colony. *l.c.* (13-40, with 1 pl.).

New South African spiders of the families Migidae, Ctenizidae, Barychelidae, Dipluridae and Lycosidae. l.c. (69-141, pl. VIII).

On the scorpions, Solifugae, and a trap-door spider collected by the Rev. Henri A. Junod at Shilouvane, near Leydsdorp, in the Transvaal. Nov. Zool., Tring, **10**, 1903, (305-306, 2 text-figs.).

# fh MADAGASCAR.

**Birulia**, A. A. Sur une nouvelle espèce de scorpion provenant de Madagascar. (Russ.) St. Peterburg, Ann. Mus. zool. Ac. Sc., **1903**, (X-XI). **Pocock**, R. I. On some new harvestspiders of the order Opiliones from the Southern Continents. London, Proc. Zool. Soc., **1903**, 2, 1903, (392–413, with 6 text-figs.).

———— Descriptions of four new Arachnida of the orders Pedipalpi, Solifugae, and Araneae. Ann .Mag. Nat. Hiat., London, (Ser. 7), 11, 1903, (220-226, with 1 text-fig.).

**Simon**, E. Descriptions d'Arachnides nouveaux de Madagascar, faisant partie des collections du Muséum. Bul. Muséum, Paris, **1903**, (133-140).

# g NORTH AMERICA.

Wolcott, Robert H[enry]. The North American species of *Limnesia*, [with bibliography]. Lincoln, Stud. Zool. Lab., Univ. Nebr. No. 56, 1903, ([85]-107, with pl.). Separato, 23.3 cm.

gg NORTH EASTERN UNITED STATES.

Banks, Nathan. Daddy-long-legs from Mt. Katahdin, Maine. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (308-309).

qi WESTERN UNITED STATES.

Anderson, John F. Spotted fever (tick fever) of the Rocky mountains. A new disease [caused by species of Dermacentor, probably D. reticulatus]. [Appendix: A report of two cases . . . by Dr. G. A Gates.] Washington, D.C., Treas. Dept., Pub. Hith. Mar. Hosp. Serv., Hyg. Lab. Bull. No. 14, 1903, (50). 23 cm.

Banks, Nathan. A new genus of Solpugida [Hemerotrecha californica n. gen. et sp. from California]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (78-79, with text-fig.).

**Bucker**, Augusta. A new Koenenia from Texas. London, Q. J. Microsc. Sci., (N. Ser.), **47**, 1903, (215–231, pl. XVIII); [abstract], J. R. Microsc. Sci., London, **1903**, (609).

# h CENTRAL AND SOUTH AMERICA.

**Pocock**, R. I. On some genera and species of South American Aviculariidae. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (81-115).

# hb CENTRAL AMERICA.

**Gambridge**, F. O. Pickard. Arachnida Araneida II. Biol. Centr.-Amer., London, **1903**, (125–440, pls. XLI, XLI, 441–448, pl. XLII, 449–464, pls. XLIII, XLIV).

#### he WEST INDIAN ISLANDS.

Banks, Nathan. A list of Arachnida from Hayti, with descriptions of new species. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (340-345, with pl.).

#### he EQUADOR.

**Simon**, E. Études arachnologiques (34° Mémoire). Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (304-314).

#### hf PERU.

**Pocock**, R. I. Descriptions of four new Arachnida of the Orders Pedipalpi, Solifugae and Araneae. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (220-226, with 1 text-fig.).

# hl TIERRA DEL FUEGO AND NEIGH-BOURING ISLANDS.

**Simon**, E. Études arachnologiques (34° Mémoire). Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (304–314).

#### i ACSTRALASIA.

#### ic AUSTRALIA.

**Hogg**, H. R. On the Australian spiders of the subfamily *Sparassinae*. London, Proc. Zool. Soc., **1902**, 2, 1903, (414-466, 20 text-figs.).

Two new Australian spiders of the family *Ctenisidae*. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (308-312, 3 text-figs.).

# ih WEST AUSTRALIA.

**Pocock**, R. I. On some new harvestspiders of the order Opiliones from the Southern Continents. London, Proc. Zool. Soc., **1902**, 2, 1903, (392–413, with 6 text-figs.). ATLANTIO.

1b Azores: Canaries: Madeira: Cape Verde.

Scharff, R. F. Some remarks on the Atlantis problem. Dublin, Proc. R. Irish Acad., 24, B, 1903, (268-302, 2 fgs.). [Distribution of Arachnida, (291-292)].

# 3031 TAXONOMY AND SYSTEMATIC.

# GENERAL.

Jacot, [E.]. Étude sur les arachnides. Fragment d'entomologie. Messager Suisse Rom., Fribourg, 16, 1903, (45, 54, 68-69).

**Pocock**, R. I. Arachnida. Nat. Hist., Sokotra, **1903**, (175-208, pl. XIV, XXVI figs. 1-4a, 2 text-figs.).

**Purcell**, W. F. On the scorpions, Solifugae, and a trap-door spider collected by the Rev. Henri A. Junod at Shilouvane, near Leydsdorp, in the Transvaal. Nov. Zool., Tring, **10**, 1903, (303-306, 2 text-figs.).

**Sainte-Olaire Deville**, J. Exploration entomologique des grottes des Alpes-Maritimes. Paris, Ann. soc. ent., **71**, 1902, [1903], (695-709, av. fig.).

Simon, E. Études arachnologiques (33° Mémoire). *l.c.* (2° semest.), (719-736).

<u>Études arachnologiques</u> (34° Mémoire). *l.c.* 72, (2° semest.), 1903, (304-314).

#### SCORPIONIDA.

#### GENERAL.

Bachmann, [F. E.]. Tödtliche Verletzungen durch südafrikanische Scorpione. Verh. Ges. D. Natf., Leipzig, 73, (1901), 11, 2, 1902, (584-587).

Birulia, A. A. Beiträge zur Kenntniss der Scorpionenfauna Ostpersiens (II. Beiträg). St. Peterburg, Bull. Ac. Sc., (5), 19, No. 24, 1903, (67–80).

Bemerkungen über einige neue oder wenig bekannte Scorpionenformen Nord-Afrikas. *l.e.* No. 3, 1903, (105-113).

l

**Birulia**, A. A. Note sur la distribution géographique de quelques scorpions du Caucase. (Russ.) St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (XVII-XIX).

Brébion. Résistance vitale d'un scorpion. Chalon-sur-Saône, Bul. soc. sci. nat., (n. sér., 9), 29, 1903, (130).

Dahl, F. Wird der Skorpion durch seinen Stich dem Menschen gefährlich? Natw. Wochenschr., Jena, 19, 1903, (97-99).

Poljansky, J. Zur Embryologie des Skorpions. (Dotter und Embryonalhüllen). Zool. Anz., Leipzig, 27, 1903, (49-58).

Schweiserbarth, [E.] von. Skorpionen. Natur und Haus, Dresden, 11, 1903, (121-122).

#### SPECIAL.

Butheolus glabrifrons n. sp. Nordost-Afrika. **Kraspelin**, K. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (564).

Buthus deserticola n. sp. Algier. Birulia, A. A. St. Peterburg, Bull. Ac. Sc., (5 F.), **19**, No. 3, 1903, (105–113).

*palpator* n. sp. Ostpersien. Birulia, A. A. *l.c.* No. 2, 1903, (67-80).

Euscorpius italicus, centri nervosi sottointestinali. **Police**, G. Napoli, Boll. Soc. Nat., **15**, (1901), 1902, (1-24, con tav.).

Hemibuthus zarudnyi n. sp. Ostpersien. Birulia, A. A. St. Peterburg, Bull. Ac. Sc., (5 F.), **19**, No. 20, 1903, (67-80).

Hemiscorpion persicum n. sp. Ostpersien. Birulia, A. A. l.c. (67-80).

Heteroscorpion n. gen. H. madagascarense n. sp. Madagascar. (Russ.) Birulia, A. A. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (X-XI).

Nebo hierichonticus : pallidimanus n. subsp. Yemen. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (214).

# PEDIPALPI.

#### GENERAL.

Nosek. Verzeichniss der Pseudoscorpioniden. (Böhmisch) Prossnitz, Vöstn. kl. přirod., 1901, (43). Tullgren, A. Chelonethi from Camerrun in Westafrika collected by Dr. Yngve Sjöstedt. Entomol. Tidskr., Stockholm, 22, 1901, (97-101, with pl.).

#### SPECIAL.

Heterophrynus elaphus n. sp. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (220-222).

Telyphonus de Java, organes excréteurs et la phagocytose éliminatrice. **Davydov**, K. N. St. Peterburg, Bull. Ac. Sc., (5 F.), **18**, 1903, (201-206).

caudatus (L). Schimkewitsch, W. Zool. Anz., Leipzig, 26, 1903, (665–685); [abstract], London, J. R. Microsc. Soc., 1903, (41).

# ARANEIDA.

#### GENERAL.

Banks, N. Secondary sexual characters in spiders. Washington, D.C., Proc. Ent. Soc., 5, 1903, (104–107).

Bösenberg, W. Die Spinnen Deutschlands, V. Zoologica, Stuttgart, Heft **35**v (- Bd 14, Lfg 5/6), 1903, (I-V, 385-465, mit 7 Taf.).

Cambridge, F. O. P. On new and rare British spiders. Dorchester, Proc. Dorset Nat. Hist. F. Cl., 24, 1903, (149 171, pl. A).

A revision of the genera of the Araneae or spiders, with reference to their type species. [Sixth instalment.] Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (481-495).

Arachnida Araneida II. Biol. Centr.-Amer., London, **1903**, (425– 440, pls. XL-XLI, 441–448, pl. XLII, 449–464, pls. XLIII-XLIV).

List of the Araneidae or spiders of the Channel Islands. Rep. Guernsey Soc. Nat. Sci, 1902 (1903), (141-144).

Dahl, F. Ueber abgebrochene Copulationsorgane männlicher Spinnen im Körper der Weibchen. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (36-45).

Ueber Stufenfänge echter Spinnen am Riesengebirge. (Eine vergleichend ethologische Studie.) *l.c.* (185-203, mit Tab.). Dahl, F. Berichtigungen zu dem Vortrag über Stufenfänge echter Spinnen am Riesengebirge. *l.c.* **1903**, (183 184).

Deventer, W. van. Insecten- (auch Spinnen-) eier . . . auf Zuckerrohr. (Holländisch) Arch. Java Suiker., Soerabaia, 11, 1903, (437–446, 2 Taf.).

Pabre, J. H. Exode des araignées. Louvain (Imprimerie Polleunis et Centerick), 1903, (25).

Favier, abbé C. Observation à propos d'une araignée de Madagascar. Paris, Ann. Soc. ent., 71, 1902, (488-498, av. pl.).

Hogg, H. R. On the Australasian spiders of the sub-family *Sparassinae*. London, Proc. Zool. Soc., **1902**, 2, 1903, (414-466, 20 text-figs.).

Montgomery, T. H., jun. Studies on the habits of spiders, particularly those of the mating period. [With bibliography]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (59-149, with pl.).

Nosek, A. Bestimmungsschlüssel der Araneidengattungen Mitteleuropas. (Böhmisch) Prossnitz, Vöstn. kl. Přirod., 1903, (54, mit 2 Taf.).

Patterson, A. J. The spinner family . . . with drawings in the text by Bruce Horsfall. Chicago (A. C. McClurg & Co.), 1903, (ix + 15–159, with illustr.).

**Pocock**, R. I. On the geographical distribution of spiders of the order Mygalomorphae . . . [Also on distribution of some Arachnomorphae]. London, Proc. Zool. Soc., **1903**, 1, (340–368, with 4 text-figs.).

**Bainbow**, W. J. Studies on Australian Araneidae. No. 1. Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (63-66, with 2 text-figs.).

smith, F. P. Notes on the spiders . . . Epping Forest. Stratford, Essex Nat., 13, 1903, (22-23, 49-60, pls. IV, V).

Strand, E. Our spiders. (Norw.) Bergen, Naturen, 27, 1903, (180-191).

#### SPECIAL.

Acanthodon nn. spp. S. Africa. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (87-91).

(n 2-9053)

Acanthoscurria nn. spp. South America. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (86-90).

Acropholius n. gen., A. mathiauxi, A. alluaudi nn. spp. **Simon**, E. Bul. Muséum, Paris, **1902**, (595–599).

Admestina bitaeniata n. sp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (28).

Aelurillus cristatopalpus n. sp. Simon, E. l.c. (36-37).

Aganippe occidentalis n. sp. Australia. Hogg, H. R. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (309-311, 2 text-figs.).

Agelena Walch, type A. labyrinthica Clerck. Cambridge, F. O. P. l.c. 12, 1903, (493).

R. I. Nat. Hist. Sokotra, **1903**, (193).

*Agorius formicinus* n. sp. **Simon**, E. Paris, Ann. soc. ent., **72**, (2<sup>•</sup> semest.), 1903, (307).

Alcimochthes melanophthalmus n. sp. Simon, E. l.c. 71, (2° semest.), 1902, [1903], (726).

Alcimonotus n. gen. A. gounellei n. sp. simon, E. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (53).

Almota n. gen., A. quinii n. sp. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, (1902), 1903, (193-194).

Anaptomecus n. gen., A. longiventris n. sp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (27-28).

Ancylotrypa pusilla n. sp. Cape Colony. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (27).

Angaeus lenticulosus n. sp. Simon, E. Paris, Ann. soc. ent., 71, (2<sup>e</sup> semest.), 1902, [1903], (729).

Anomalomma un. spp. S. Africa. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (109, 110, pl. VIII, figs. 1, 2).

Anyphacna gracilipes n. sp. Hayti. Banks, N. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (340-345).

Aphyctoschema n. gen., A. hygrophila n. sp. **Simon**, E. Paris, Bul. soc. ent., **1902**, (240-243). Apyre nn. spp. **Simon**, E. Bul. Museum, Paris, **1903**, (134-135).

Aranea purpurescens, secondary sexual characters. **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (59–60).

Arbanitis maculipes n. sp. Australia. Hogg, H. R. *l.e.* (311-312, 1 text-fig.).

Archemorus curtulus n. sp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1902, (27).

Argyroneta aquatica. **Beitmayer**, C. A. Bl. Aquarienkunde, Magdeburg, **14**, 1903, (30–32).

Ariannes campistratus n. sp. **Simon**, E. Paris, Anu. soc. ent., **71**, (2° seme.t.), 1902, [1903], (720).

Arrecerus Simon, type A. monoceros Wid. **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (33).

Artoria fascicularis n. sp. S. Africa. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (133).

Ashtabulu nn. spp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (31-32).

Atrophothele n. gen., A. socotrana n. sp. Pocock, R. I. Nat. Hist. Sokotra, 1903, (183–184).

Altus Walck, type A. pubescens Fabricius. **Gambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (489-490).

Atypus, type A. subterraneus (Roemer.) Cambridge, F. O. P., Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (481).

Aricularia minatrix n. sp. Venezuela. **Pocock**, R. I. *l.c.* **11**, 1903, (81– 82).

Avitus longidens n. sp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (30).

Ballus depressus, Mimicry von Strophosomus capitatus. Dahl, F. Berlin, SitzBer. Ges. natf. Freunde, 1903, (273-278).

Baryphas nn. spp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (42-43).

Bassaniodes n. gen., B. socotrensis n. sp. Pocock, R. I. Nat. Hist. Sokotra, **1903**, (198). Batesiella n. gen., B. erinita n. sp. Cameroons. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (258-259).

Bathyphantes, B. longipes Menge. Cambridge, F. O. P. l.e. (34-35).

Bavia annamita n. sp. **Simon**, E. Paris, Ann. soc. ent., **71**, (2<sup>e</sup> semest.), 1902, [1903], (730).

*thorelli* n. sp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (24-25).

Bianor biocellosus n. sp. Simon, E. l.c. (33).

rusticulus n. sp. S. Africa. Peckham, (†. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, (1902), 1903, (215).

Blaisea n. gen., B. lyrata n. sp. Simon, E. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (722-733).

Bolepthyphantes, type B. index (Thor.) Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (49).

Bolostromus riveti n. sp. Simon, E. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (304-314).

Brachionopus nn. spp. S. Africa. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (105).

Brachycentrum, type B. elongatum (Wid.) Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (47).

Brachypelma Sim., description of genus. Central America. **Pocock**, R. I. *l.e.* (102-103).

Calathotarsus n. gen., C. coronatus n. sp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (21).

Calommata simoni n. sp. Cameroons. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (259).

Camaricus pulchellus n. sp. **Simon**, E. Paris, Ann. soc.ent., **71**, (2° semest.), 1902, [1903], (727).

Centromeria, type C. bicolor (Blackw.). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (50).

Centromerus, type C. sylvaticus (Blackw.). Cambridge, F. O. P. l.c. (46).

# Arachnida.

Ceratina, type C. brevis. (Wid.). Cambridge, F. O. P. *l.c.* (36).

Ceratinella, type C. brevis, (Wid.). Cambridge, F. O. P. l.c. (44).

Ceratinopsis, type C. interplies, (O. P. Cambr.). Cambridge, F. O. P. l.c. (45).

Cerceis, type C. prominens (Westring). Cambridge, F. O. P. l.e. (34).

Cestotrema n. gen., C. bastardi n. sp. Simon, E. Bul. Muséum, Paris, 1903, (595-599).

Chaeidamna nn. spp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (50-53).

Chiracanthium socotrense n. sp. Pocock, R. I. Nat. Hist., Sokotra, 1903, (195).

Chresiona n. gen., C. nagrosignata, C. convexa, C. quadrilineata, C. albescens nn. spp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (36-37).

Cicurina, type C. cicur Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (43).

Citharoscelus nn. spp. South America. Pocock, R. I. *l.e.* (99-102).

Clothe Walck, type C. durandi Walck. Cambridge, F. O. P. l.c. 12, 1903, (495).

. Clytaetra thisbe n. sp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (24).

Codeta bouchardi n. sp. Simon, E. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (305).

Coelossia trituberculata n. sp. Simon, E. Bal. Muséum, Paris, **1903**, (139).

Copa lineata n. sp. Simon, E. l.c. (138).

Copocrossa bimaculata n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (187).

harpina n. sp. Simon, E. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (306).

Cornicularia, type C. unicornis (O. P. Cambr.). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (41).

(x 2-9053)

Coryssiphus n. gen., C. praeusta, C. cunerascens, C. unicolor nn. spp. Cape of Good Hope. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (30– 32).

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Cosmophasis australis n. sp. Simon, E. l.c. 46, 1902, (25-26).

Longiventris n. sp. Simon, E. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (732).

E. *l.c.* **72**, (2<sup>e</sup> semest.), 1903, (308).

Crustulina, type C. guttata (Wider). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (36).

Ctenium, type C. pingue (Westring). Cambridge, F. O. P. l.c. (43).

Ctenus Walck, type C. dubius Walck. Cambridge, F. O. P. *l.c.* **12**, 1903, (488).

nn. spp. Cameroons. Pocock, R. I. *l.c.* 11, 1903, (262-264).

Cybele haytiensis n. sp. Hayti. Banks, N. Philadelphis, Pu., Proc. Acad. Nat. Sci., 55, 1903, (344).

Cyclosa, type C. conica (De Geer). **Gambridge,** F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (35).

Cyllobelus australis n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (195).

Cyphalonotus columnifer n. sp. simon, E. Bul. Muséum, Paris, 1903, (140).

Cyrba dotata n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (185).

Cyrtauchenius dentatus n. sp. Cape Colony. Purcell, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (29).

Cyrtopholis, description of gen. and spp. 2 nn. spp. South America. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (94-96, 96-98).

Dendryphantes purcellii n. sp. S. Africa. **Peckham**, G. W. and **Peckham**, E. G. Madison, Trans. Wis. Acad. Sci., **14**, 1902, [1903], (173-278, with pl.).

Desis crosslandi n. sp. Zanzibar. Pocock, R. I. London, Proc. Zool. Soc., 1902, 2, 1903, (390).

2 0 2

Diadocyrtus n. gen., D. decorsei n. sp. Simon, E. Bull. Muséum, Paris, 1902, (595-599).

Dicymbium type D. clavipes Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (38).

Dicyphus type D. tumidus Monge. Cambridge, F. O. P. l.c. (40).

Dimizonops n. gen., D. insularis n. sp. Pocock, R. I. Nat. Hist. Sokotra, 1903, (199).

Diplocephalus nn. spp. Cambridge, O. P. Dorchester, Proc. Dorset Nat. Hist. F. Cl., 24, 1903, (155).

Diplostyla, type D. concolor (Wid.). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (45).

Dolomedes nn. spp. Cameroons. Pocock, R. I. l.c. (260-262).

fimbriatus, Entwicklungsgeschichte, mit besonderer Berücksichtigung der Bildung des Gehirns und der Augen. **Pappenheim**, P. Zs. wiss. Zool., Leipzig, **74**, 1903, (109–154, mit 2 Taf.).

Donuea n. gen., D. decorsei n. sp. simon, E. Bul. Muséum, Paris, 1903, (138).

Drapeta, type D. aeneus Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (43).

Drapetisca, type D. socialis (Sundevall). Cambridge, F. O. P. l.c. (36).

Drassus Walck, type D. lucifugus Walck. Cambridge, F. O. P. l.c. 12, 1903, (493).

Drepanodus, type D. obscurus Menge. Cembridge, F. O. P. l.c. (42).

Ectanosticta australis n. sp. Simon, E. Paris, Bul. coc. ent., 1902, (240– 243).

Elaphidion, type E. flagelliferum Menge. **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (40-41).

Elaphipus, type E. flagellifer Menge. Cambridge, F. O. P. *l.c.* (41).

Emplesiogonus scutulatus n. sp. Simon, E. Bul. Muséum, Paris, 1903, (134).

*Entypeza* n. gen., *E. nebulosa* n. sp. **Simon**, E. *l.c.* **1902**, (595-599).

Eodelena n. gen., E. spenceri n. sp. Australia. Hogg, H. R. London, Proc. Zool. Soc., **1902**, 2, 1903, (464–465).

Epecthinula n. gen., E. minutissima n. sp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (27-28).

Epeira Walck, type E. apodisa Walck. Cambridge, F. O. P. l.c. 12, 1903, (494).

Ephebopus fossor n. sp. Ecuador. Pocock, H. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (85).

*Epidius brevipalpus* n. sp. **Simon, E.** Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (730).

Episinus Walck, type E. truncatus, Walck. Cambridge, F.O. P. I.c. (495).

Erasinus flavibarbis n. sp. **Simon**, E. Bruxelles, Ann. Soc. ent., Belgique, **46**, 1902, (50).

Eresus Walck, type E. c.innaberinus Olivier. **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7). **12**, 1903, (489).

Erigonella, type E. hiemalis (Blackw.). Cambridge, F. O. P. l.c. 11, 1903, (49).

*Euophrys* nn. spp. S. Africa. **Peck**ham, G. W. and **Peckham**, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (201-204).

Euryopis, type E. flaromaculata (Koch, C. L.). Cambridge, F. O. P. l.c. (36).

Euslichothriz, type E. obscurus (Blackw.). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (46).

Exagrus atropurpureus n. sp. S. Africa. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **8**, 1903, (IC6).

*Exarcha heteropogon* n. sp. **Simon**, F. Paris, Ann. Soc. ent., **71**, (2 semest.), 1902, [1903], (719-736).

*Firmicus duriusculus* n. sp. **Simon**, E. Paris, Ann. soc. ent., **71**, (2 semest.), 1902, [1903], (728).

Forsythula n. gen., F. majori n. sp. Madagascar. Pocock, R. I. Ann. Mag. Nat. Hist., Loudon, (Ser. 7), 11, 1903, (223-225).

Galeosoma n. gen., G. scuttatum n. sp. S. Africa. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1803, (92).

Gasteracantha nn. spp. **Simon, F.** Paris, Ann. soc. ent., **72**, (2<sup>c</sup> semest.), 1903, (301-303). Genysochoera n. gen., G. decorsei n. sp. Simon, E. Bul. Muséum, Paris, 1903, (595-599).

Gnaphosa Latreille, type G. lapidosa (Walck.). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (485-486).

Gonatium, type G. cheliferum (Wider). Cambridge, F. O. P. l.c. 11, 1903, (37).

Gongylidium, type G. nigricans Menge. Cambridge, F. O. P. l.c. (37).

Gorgyrella schreineri n. sp. Cape Colony. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (25, pl. I, figs. 3-4).

Grammonota, type G. pictilis (O. P. Cambridge). **Cambridge**. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (45).

Habrocestum nn. spp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (238-241).

Hadrotarsus, systematic position of the genus. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (619-621, 4 text-figs.).

Hapalopus pictus n. sp. Peru. Pocock, R. I. l.c. (110-111).

Harmonicon riveti n. sp. Simon, E. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (314).

Harpactira baviana n. sp. Cape Colony. Purcell, W. F. Cape Town, Ann. S. Afric. Mus., 3 1903, (30, pl. 1, fig. 9).

Harpactirella nn. spp. S. Africa. Purcell, W. F. *l.c.* (101-103).

Hebestatis n. gen. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (21).

Heligmonuerus caffer n. sp. Transvaal. Purcell, W. F. Nov. Zool., Tring, 10, 1903, (305-306).

Heliophanus nn. spp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (189-193).

*peckhami* n. sp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (26).

Helophora, type H. pallescens (Westr.). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (35). Hemiphantes, type II. arcticus Strand. Cambridge, F. O. F. l.c. (49).

Herbessus n. gen., H. decorsei n. sp. Simon, E. Bul. Muséum, Paris, 1903, (136).

Hermacha nn. spp. S. Africa. Purcell, W. F. Cape Town. Ann. S. Afric. Mus., 3, 1903, (99).

Hermachastes nn. spp. S. Africa. Purcell, W. F. *l.c.* (97).

Hesydrus, description of species. South America. **Cambridge**, F. O. P. London, Proc. Zool. Soc., **1903**, 1, (164-165, pl. XV, figs. 21-25).

Heteropoda blaisei n. sp. Simon, E. Paris, Ann. soc. ent., 71, (2 semest.), 1902, [1903], (721).

*keyserlingi* n. sp. Queensland. **Hogg**, H. R. London, Proc. Zool. Soc., **1902**, 2, 1903, (416-418, 20 text-figs.).

Hispo alboguttata n. sp. **Simon**, E. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (306).

Holocnemus labyrinthi n. sp., Creta. **Eulosyński**, W. Kraków, Bull. Intern. Acad., **1903**, (32-58, with 1 pl.).

Homalattus nn. spp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (218-219).

E. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (34).

Homoeomma Auss., description of genus and spp. South America. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (111-112).

Hyllus nn. spp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (208-210).

*Hypomma*, type *H. bifrons* (Blackw.). **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (47).

Hypeslomma, type H.acuminata(Wid.) Cambridge, F. O. P. l.c. (48).

Hypeithylla n. gen., H. linearis n. sp. Madagascar. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (38).

Icius separatus n. sp. Hayti. Banks, N. Philadelphia, Pa., Proc. Acad. Sci., 55, (340-345). Ideocaira n. gen., I. transversa, I. triquetra nn. spp. Natal. **Simon**, E. Bruxelles, Anu. Soc. ent. Belgique, **47**, 1903, (26).

Illipula n. gen., I. anguicula n. sp. Simon, E. l.c. (39).

Irura mandarina n. sp. Simon, E. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (735).

Isaloides toussaintii n. sp. Hayti. Banks, N. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (340-345).

Isopeda nn. spp., and many old species, Australia. Hogg, H. R. London, Proc. Zool. Soc., 1902, 2, 1903, (430-451).

Kima variabilis n. sp. S. Africa-Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (253).

Klamathia n. gen., K. flava n. sp. S. Africa. **Peckham**, G. W. and **Peckham**, E. G. *l.c.* (230-231).

Langona avara n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. *l.c.* (241).

Laseola jucunda n. sp. Cambridge, O. P. Dorchester, Proc. Dorset Nat. Hist., F. Cl., 24, 1903, (152).

Latrodectus Walck, type L. tredecimguttatus (Rossi). **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (495).

\_\_\_\_\_ nn. spp. Dahl, F. Berlin, SitzBer. Ges. natf. Freunde, 1902, (36-45).

*malmignatus* Walk., die Lymphe als Heilmittel beim Biss. **Söerbina**, A. Trd. B. entom. Ucén. Kom. M. Zeml., St. Peterburg, **IV**, No. 4, 1903, (28, mit 4 fig. u. 5 Diagr.).

Lepthyphantes, type L. muscicola Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (36).

bridge, O. P. Dorchester, Proc. Dorset Nat. Hist. F. Cl., 24, 1903, (153).

Leptothriz, type L. clavipes Menge. 'Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (42).

Lethia, type L. varia Menge. Cambridge, F. O. P. l.c. (42). Leucauge nn. spp. Cambridge, F. O. P. Biol. Centr.-Amer., London, 1903, (440-442).

Lingphia lehmanni n. sp. **Simon**, E. Paris, Ann. soc. ent., **72**, 2<sup>e</sup> semest. 1903, (311).

Lophocarenum, type L. stramineum Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (38).

Lophomma, type L. stictocephalum Menge. Cambridge, F. O. P. l.c. (39-40).

Lycosa Latreille, type L. lugubris (Walck.). **Cambridge**, F. O. P. *l.c.* **12**, 1903, (483–485).

cell, W. F. *l.c.* (119-128, pl. VIII, figs. 12-19).

Macopaeus madagascarensis n. sp. S. Africa. **Peckham**, G. W. and **Peckham**, E. G. Madison, Trans. Wis. Acad. Sci., **14**, 1902, [1903], (182).

Macrargus, type M. rufus (Wider.). Cambridge, F. O. P. Ann Mag. Nat-Hist., London, (Ser. 7), 11, 1903, (46).

Macrothele cretica n. sp. Creta. Kulcsyński, W. Kraków, Bull. Intern. Acad., 1903, (35, 1 pl.).

Margaromma nn. spp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (35-36).

Marpesia, type M. arenicola Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (44).

Massagris mirificus n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (186).

Mecostrabus n. gen., M. aciculus n. sp. Simon, E. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (726-727).

Meeynogea n. gen., M. bigibba, M. tucumana nn. spp. Simon, E. Bruxelles, Ann. soc. ent. Belgique, 47, 1903, (25).

Mendoza carlinii. n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (204). . Mengea n. nom for Pedina, type M. scopigera Grube. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (35).

Mesilla n. gen., M. vittiventris n. sp. Ecuador. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (30).

Metacyrba pietipes n. sp. Hayti. Banks, N. Philadelphia. Pa., Proc. Acad. Nat. Sci., 55, 1903, (343).

Metriopelma nn. spp. Ecuador, Trinidad. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (113-115).

Mexcala elegans n. sp. S. Africa. Pockham, G. W. and Pockham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (247).

Micrargus, type M. herbigradus (Blackw.). **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, **1903**, (46).

Microctenonyz, type M. subitaneus (O. P. Cambr.). **Cambridge**, F. O. P. *l.e.* (47).

Micromata Latreille, type M. accentuata Walck. Cambridge, F. O. P. l.c. 12, 1903, (486-488).

Microneta, type M. quisquiliarum (Westr.). Cambridge, F. O. P. l.c. 11, 1903, (41-42).

Minotauria n. gen., M. attemsi sp. Creta. Kulczyński, W. Kraków, Bull. Intern. Acad., **1903**, (39).

Missulina Walckenaer, type M. occatoria Walck. **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (488).

Modunda aperta n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (210).

Moebelia, type M. penicillata (Westr.). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (48).

Moggridgea nn. spp. S. Africa. Purcell, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (68, 71).

mn. spp. Simon, E. Braxelles, Ann. Soc. ent. Belgique, 47, 1903, (22-23).

Colony. Purcell, W. F. Cape Town, Ann. S. Afric. Mus., 3, 1903, (18). Monocentropus longimanus n. sp. Yemen. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (219-220).

Myrmarachne nn. spp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (249-250).

Myro maculatus n. sp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (34).

Myrtale alluaudi n. sp. **Simon**, E. Bul. Muséum, Paris, **1903**, (133).

Nemesia arboricola n. sp. Malta. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (225-226).

Nemospiza n. gen., N. conspicillata n. sp. Transvaal. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (25-26).

Neosparassus n. gen., N. magareyi, N. thoracicus nn. spp. and many o'd species. Hogg, H. R. London, Proc. Zool. Soc., 1902, 2, 1903, (423-429).

Neottiura, type N. bimaculata (Linn). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (36).

Nyssus Walck., type N. coloripes Walck. Cambridge, F. O. P. *l.c.* 12, 1903, (493).

Odo guttipes n. sp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (29).

Oedipus, type O. aenescens. (Simon). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (49).

Oletera Walckenaer, type O. picea (Sulzer). Cambridge, F. O. P. l.c. 12, 1902, (488).

Ommatauzzesis n. gen., O. macrops n. sp. Tasmania. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (37).

Omoedus piceus n. sp. Simon, E. l.c. 46, 1902, (35).

Ordgarius cornigerus, habits. Hutchinson, C. E. Sci. Amer., New York, N.Y., 89, 1903, (172).

Oreonetides, type O. adipatus (L. Koch). **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (49).

**Dahl, F.** Berlin, SitzBer. Ges. natf. Freunde, **1903**, (185-203). Orthobula sicca n. sp. Madagascar. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (34).

Pachydactylus, type P. pronus Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (37).

Padillothorax taprobanicus n. sp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (24).

Pamphobetus nn. spp. South America. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (91-93).

Panaretus nirounensis n. sp. **Simon**, E. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (304).

Paractenonyz, type P. parallelus (Wid.). **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (47).

Paradossenus n. gen., P. nigricans n. sp. Lower Amazons. Cambridge, F. O. P. London, Proc. Zool. Soc., 1903, 1, (155–156, pl. XIV, figs. 6-9).

Parajotus n. gen., P. obscurofemoratus n. sp. S. Africa. **Peckham**, G. W. and **Peckham**, E. G. Madison, Trans. Wis. Acad. Sci., **14**, 1902, [1903], (200-201).

Paraphysa Simon, description of genus. Chili. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (103).

Pardosa nn. spp. S. Africa. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (134–139, pl. VIII, figs. 21– 27).

R. I. Nat. Hist. Sokotra, **1903**, (193).

Paromostola n. gen., P. abernethyi n. sp. Purcell, W. F. Cape Town, Ann. S. Afric. Mus., 3, 1903, (93-94).

Partona euchirus n. sp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (34).

Patrera n. gen., P. fulvastra n. sp. Ecuador. Simon, E. l.c. 47, 1903, (29-30).

Pediana nn. spp. Australia. Hogg, H. R. London, Proc. Zool. Soc., 1902, 2, 1903, (460-462).

Pedina, type P. scopigera (Grube). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (35). Pellenes nn. spp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (235).

Ponestomus n. gen., P. planus n. sp. **Simon**, E. Paris, Bul. Soc. ent., **1902**, (240-243).

Pensacola nn. spp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 46, 190?, (38-40).

Pertica n. gen., P. badia n. sp. Simon, E. l.c. 47, 1902, (23-24).

Pescennina n. gen., P. epularis n. sp. Simon, E. l.c. 47, 1903, (32-33).

Phalops, type P. cornutus (Wid.). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (40).

Philaeus manicus n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (205).

Phlegra imperiosa n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. l.c. (242).

Pholcus Walck., type P. pluchii Scopoli. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (494).

Phormictopus Poc., description of genus and sp. San Domingo. Pocock, R. I. *l.c.* 11, 1903, (90).

Phrynarachne nn. spp. **Simon**, E. Bul. Muséum, Paris, **1903**, (137).

rothschildi n. sp. Ceylon. Pocock, R. I. and Bothschild, N. C. London, Proc. Zool. Soc., 1903, 1, (48-51, pl. X).

Phryzotrichus Simon, description of genus. South America. Pocock, R. I. *l.c.* (103).

Phylloeca, type P. sunderalli (Westr.). Cambridge, F. O. P. *l.c.* (49).

Plastonomus n. gen., P. oclogutlatus n. sp. Simon, F. Bul. Muséum, Paris, 1903, (134).

Platyoides grandidieri n. sp. Simon, E. l.c. (139).

Platyopis, type P. sulcifrons (Wider). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (37). Plesiometa n. gen. **Cambridge**, F. O. P. Biol. Centr.-Amer., London, **1903**, (438).

Pochyta solers n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (199)

Poecilomigas n gen., P. pulchripes n. sp. Natal. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (23).

Poecilorchestes decoratus n. sp. Simon, E. l.c. 46, 1902, (34).

Polemus nn. spp. **Simon**, E. *l.c.* 46, 1902, (43-44).

Portia durbanii n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (183).

Proceippa n. gen., P. lightfooti n. sp. S. Africa. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (111, pl. VIII, fig. 3).

Pronopius, type P. providus Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (42).

Prosthesima cretica n. sp. Creta. Kulczyński, W. Kraków, Bull. Intern. Acad., 1903, (42).

Prosopotheca Simon, type P. incisa (O. P. Cambridge). **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (33).

Psalmopoeus nn. spp. Colombia. Pocock, R. I. *l.e.* (82-84).

Psammitis, type P. sabulosus Hahn. Cambridge, F. O. P. l.c. (43).

Pseudauzimus n. gen., P. reticulatus n. sp. Simon, E. Paris, Bul. soc. ent., 1902, (240-243).

Pseudicius nn. spp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (211-212).

nn. spp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (27).

Pseudogonatium, type P. fuscomarginatum Strand. **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (50).

Pterartoria n. gen., P. caldaria, P. fissivittata, P. flavolimbata, P. polysticta, P. sagae, P. subcrucifera nn. spp. S. Africa. **Purcell**, W. F. Cape Town, Anu. S. Afric. Mus., **8**, 1903, (112-117, pl. VIII, figs. 5-10).

Pterinopelma nn. spp. South America. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (108-110).

Pterotricha n. nom. Kuleryński, W. Kraków, Bull. Intern. Acad., 1903, (44).

Pycnacantha fuscosa n. sp. Simon, E. Bul. Muséum, Paris, 1903, (139).

Rhene biguttata n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 13, 1902, [1903], (221).

*flavicomans* n. sp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (33).

Rhitymna fasciolata n. sp. **Simon**, E. Bul. Muséum, Paris, **1903**, (138).

Rubrius nn. spp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (34-36).

Runcinia annamita n. sp. **Simon**, E. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (728).

Saitis nn. spp. S. Africa. **Peckham**, G. W. and **Peckham**, E. G. Madison, Trans. Wis. Acad. Sci., **14**, 1902, [1903], (196-198).

Sassacus nn. spp. Simon, E. Bruxelles, Ann. Soc. Ent. Belgique, 46, 1902, (28-30).

Scartes, type S. parculus Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (44).

Scotina, type S. gracilipes (Blackwall). Cambridge, F. O. P. l.c. (43).

Senoculus, species, S. albidus n. sp. South America. Cambridge, F. O. P. London, Proc. Zool. Soc., 1903, 1, (166-168, pl. XIV, fig. 14).

Seothyra n. gen., S schreinerin. sp. Cape Colony. Purcell, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (31, 32, pl. 1, figs. 5, 7).

Singa crewii n. sp. Hayti. Banks, N. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (342).

Sittacus nn. spp. S. Africa. **Peckham**, G. W. and **Peckham**, E. G. Madison, Trans. Wis. Acad. Sci., **14**, 1902, [1903],. (213-214). 3031

Smermisia tullgreni n. sp. **Simon**, E. Paris, Ann. Soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (311).

Sonoita n. gen., S. lightfooti n. sp. S. Africa. **Peckham**, G. W. and **Peckham**, E. G. Madison, Trans. Wis. Acad, Sci., **14**, 1902, [1903], (184).

Sparassus Walck., type S. viridissimus. De-Ger. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (492).

R. I. Nat. Hist. Sokotra, **1903**, (196).

Sphaerobothria Karsch, description of genus. Guatemala. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (103).

Sphasus Walck., type S. indicus Walck. Cambridge, F. O. P. l.c. 12, 1903, (488-489).

Sphingius tristiculus n. sp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (33).

Spiracme, type S. striata Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (43).

Spiropalpus, type S. spiralis Emerton. Cambridge, F. O. P. l.e. (45).

Stasimopus nn. spp. Cape Colony. Purcell, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (19-22, pls., figs. 1-2).

Stegodyphus sp. notes on commensalism between Batrachedra stegodyphobius. **Pocock**, R. I. Ent. Mag., London, **39**, 1903, (167-170).

Stemonyphantes, S. trilineatus (Linnaeus). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (36).

Stenaelurillus leucogramma n. sp. simon, E. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (37).

Stiphidion n. gen., S. facetum n. sp. Simon, E. Paris, Bul. soc. ent., 1902, (240-243).

Storena Walck., type S. cyanea Walck. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (495).

Stylophora, type S. concolor (Wid.). Cambridge, F. O. P. l.c. 11, 1903, (35). Tagulinus histrio n. sp. Simon, E. Paris, Ann. soc. ent. 71, (2 semest.), 1902, [1903], (725).

Tasata n. gen., T. parcepunctata n. sp. Argentins. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (29).

Telamonia nn. spp. **Simon**, E. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (721, 731).

------ aequipes n. sp. S. Africa. Fockham, G. W. and Pockham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (188).

Tetragnatha nn. spp., nn. nomm. Mexico. Cambridge, F. O. P. Biol. Centr.-Amer., London, **1903**, (431-436).

*granti* n. sp. **Pocock.** R. I. Nat. Hist. Sokotra, **1903**, (186–188).

Textrix cretica n. sp. Creta. Kulcsyński, W. Kraków, Bull. Intern. Acad., **1903**, (52).

Thammaca nn. spp. Simon, E. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (33).

Thanatus forbesii n. sp. Pocock, R. I. Nat. Hist. Sokotra, 1903, (199).

vulgaris: cretica n. subsp. Creta. Kulczyński, W. Kraków, Bull. Intern. Acad., 1903, (48).

Thanatidius spinipes n. sp. Lower Amazons. Cambridge, F. O. P. London, Proc. Zool. Soc., **1903**, 1, (156–157, pl. XIV, figs. 10–12).

Thaumasia relox Simon, T. annulipes n. sp. Lower Amazons. **Cambridge**, F. O. P. *l.e.* (154, pl. XIV, fig. 1, 2).

Thelechoris australis u. sp. S. Africa. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (106).

Theridion Walck., type T. redimitum Linn. **Cambridge**, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (494).

Theridiosoma blasei n. sp. Simon, E. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (720).

Theridula, type T. sphaerula (Hentz). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (44). Theridium eigenmanni n. sp. Banks in Ulrich, C. J. Lincoln. Nebr., Trans. Amer. Microsc. Soc., 23, 1901, [1902], (83-100, with pl.).

Thomisus Walck., type T. onustus Walck. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (491).

*Thyene* nn. spp. S. Africa. **Peck**ham, G. W. and **Peckham**, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (223-230).

------ nn. spp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **46**, -1902 (40).

Thyenula n. gen., T. jurenca n. sp. Simon, E. l.c. (41).

Tmeticus, type T. leptocaulis Menge. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (38).

Tomopisthes aethiops n. sp. Simon, E. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (312).

Torania scutata n. sp. Cameroons. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (264).

*Trabaea* nn. spp. S. Africa. **Purcell,a** W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (130-133, pl. VIII, fig. 20).

Trachynotus, type T. obtusus (Blackw). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (48).

Trechalea, description of species and 3 nn. spp. South America. **Cambridge**, F. O. P. London, Proc. Zool. Soc., **1903**, 1, (157-164, pl. XV).

Trematocephalus, type T. perforatus (Thor.). Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (48).

Tularosa n. gen., T. ogdenii n. sp. S. Africa. Peckham, G. W. and Peckham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903] (245-246).

*Typostola* nn. spp. Australia. **Hogg**, H. R. London, Proc. Zool. Soc., **1902**, 2, 1903, (455–459).

Uloborus Latreille, type L. walekenaerius Latreille. Cambridge, F. O. P. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (495).

Utipiellum, type U. mirabile (L. Koch). Cambridge, F. O. P. l.c. 11, 1903, (50). Valloa [Velloa?] n. gen., V. modesta, V. elegans nn. spp. South Africa. Pockham, G. W. and Pockham, E. G. Madison, Trans. Wis. Acad. Sci., 14, 1902, [1903], (216-218).

Viciria nn. spp. S. Africa. Peckham, G. W. and Peckham, E. G. *l.e.* (232-234).

\_\_\_\_\_ nn. spp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (46–49).

Vinnius nn. spp. **Simon**, E. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (44-46).

Wulfila parvula n. sp. Banks, N. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (342).

Xenesthis monstrosus n. sp. New Granada. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (93-94).

Xysticus hepaticus n. sp. Simon, E. Bul. Museum, Paris, 1903, (135).

Zophoryctes n. gen., Z. flavopilosus n. sp. Simon, E. l.c. 1902, (595-599).

#### SOLIFUGAE.

Blossia echinata n. sp. Cape Colony. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (16, pl. 1, fig. 10).

------- litoralis n. sp. S. Africa. Purcell, W. F. *l.c.* (4)

Daesia nn. spp. Yemen. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (217-219, 1 text-fig.).

schreinerin. sp. S. Africa. Purcell, W. F. Cape Town, Ann. S. Afric. Mus., 3, 1903, (14, pl. 1, fig. 11).

Galeodes granti n. sp. Yemen. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (215-216).

Gluvia chapmani n. sp. Spain. Pocock, R. I. l.c. (222-223, 1 text fig.).

Hemerotrecha n. gen., H. californica n. sp. Banks, N. Philadelphis, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (78-79, with text-fig.).

Lipophaga n. gen., L. trispinosa n. sp. S. Africa. **Purcell**, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (10-11). Paragaleodes crlangeri n. sp. Nordost-Afrika. **Kraspelin**, K. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (557-578).

Rhagodes nn. spp. Yemen. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (216-217).

Solpuga nn. spp. Transvaal. **Purcell**, W. F. Nov. Zool., Tring, **10**, 1903, (304-305, 2 text figs.).

collinita n. sp. S. Africa. Purcell, W. F. Cape Town, Anu. S. Afric. Mus., **3**, 1903, (3).

Torsus n. gen. for T. capensis, Purc. : Ceroma (olim) capensis. Purcell, W. F. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (10).

# CHERNETIDA.

#### GENERAL.

Kew, H. W. North of England Pseudoscorpions. Naturalist, London, 1903, (293-300, 2 text-figs.).

Nosek, A. Übersicht der Pseudoscorpioniden und deren geographische Verbreitung. (Böhmisch) Čáslav, Gymn. Progr., **1901**, (28).

**Ščelanovosv**, J. P. Beiträge zur Anatomie der Pseudoscorpioniden. (Russ.) Moskva, Zap. Univ. [Sectio hist. nat.], **18**, 1903, (I-V + 1-202, mit 3 Taf.).

#### SPECIAL.

Chelifer nn. spp. Camerun. Tullgren, A. Entomol. Tidskr., Stockholm, 22, 1901, (97-101).

*sculpturatus* n. sp. Natal. Lewis, R. T. London, J. Quek. Microsc. Cl., 8, 1903, (497–498, pl. XXV).

(Chernes) tullgreni Strand, in Scotland. Evans, W. Ann. Scot. Nat. Hist., Edinburgh, 1903, (120-121).

Chethonius sinuatus n. sp. Camerun. Tullgren, A. Entomol. Tidskr., Stockholm, 22, 1901, (97-101).

Obisium brevifemoratum n. sp. Norway. Ellingsen, E. Kristiania, Forh. Vid. selsk., **1903**, No. 5, (18). Roncus cambridgii L.K., in Argyllshire. Waterston, T. Ann. Scot. Nat. Hist., Edinburgh, 1903, (187).

# PHALANGIDA.

# GENERAL.

Banks, N. Daddy-long-legs from Mt. Katahdin, Maine. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (308-309).

Dahl, F. Eine eigenartige Metamorphose der Troguliden, eine Verwandlung von Amopaum in Dicranolasma und von Metopoetea in Trogulus. Berlin, SitzBer. Ges. natf. Freunde, 1903, (287-292).

Heller, E. Die Opilioniden Württembergs. Insektenbörse, Leipzig, 20, 1903, (379-380, 394-395, 405, 411-412).

Loman, J. C. C. . . . Classification of Opiliones. Helder, Tijdechr. Ned. Dierk. Ver., 8, 1903, (62-66).

#### SPECIAL.

Acumontia, description of species and 2 nn. spp. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903. (441-444, pl. XI, figs. 2-2<sup>•</sup>).

nn. spp. Madagascar. **Pocock**, R. I. London, Proc. Zcol. Soc., **1902**, 2, 1903, (405–409).

Adaeum areolatum n. sp. Africa. Pocock, R. I. *l.c.* (401–402).

Anthracosiro† n. gen., A. woodwardi† n. sp. Pocock, R. I. Geol. Mag., London, [4], 10, 1903, (247-251, 2 textfigs.).

*fritschii*<sup>†</sup> n. sp. **Pocock**, R. I. *l.c.* (405–408, 1 text-fig.).

Biantes nn. spp. Pocock, R. I. Nat. Hist. Sokotra, 1903, (200-204).

Ceratobunus nn. spp. With, C. J. London, J. Linn. Soc. Zool., 28, 1903, (476-478).

Dicranolasma nn. spp. Dahl, F. Berlin, SitzBer. Ges. natf. Freunde, 1903, (278-292). Epedanus geniculatus n. sp. Hong Kong. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (446-447, pl. XII, fig. 1).

Gagrella nn. spp. With, C. J. London, J. Linn. Soc. Zool., 23, 1903, (466-506).

Hadrachue n. gen., H. horribilis† n. sp. Illinois, Carboniferous. Melander, A. L. Chicago, Ill., J. Geol. Univ. Chic., 11, 1903, (178–198).

Hinzuanus leighi n sp. Natal. Pocock, R. I. London, Proc. Zool. Soc., 1902, 2, 1903, (412).

*Hypsibunus vigilans* n. sp. **With**, C. J. London, J. Linn. Soc. Zool., **28**, 1903, (475).

Kustarachne<sup>†</sup> nn. spp. Illinois, Carboniferous. Melander, A. L. Chicago, Ill., J. Geol. Univ. Chic., **11**, 1903, (178-198).

Lomanella n. gen., L. raniceps n. sp. Tasmania. **Pocock**, R. I. London, Proc. Zool. Soc., **1902**, 2, 1903, (411– 412).

Macropealis hoggi n. sp. Victoria. Pocock, R. I. *l.c.* (398–399).

Monoxyomma n. gen., M. spinatum n. sp. New South Wales. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (444-446, pl. XI, figs. 1-1c).

Pantopealie nn. spp., P. nigripalpie: spiculosa n. subsp. New Zealand. Pocock, R. I. London, Proc. Zool. Soc., 1902, 2, 1903, (399-400).

nn. spp. New Zealand. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (436-438).

Pelitnus nn. spp. Malay Peninsula. Pocock, R. I. London, Proc. Zool. Soc., 1902, 2, 1903, (413).

Phalangium nn. spp. Africa. Pocock, R. I. l.c. (392-398).

*bettoni* n. sp. British East Africa. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (438– 439).

Plistobunus n. gen., P. rapax n. sp. Hong Kong. Pocock, R. I. l.e. (447-448, pl. XII, fig. 2).

Podactis pictulus n. sp. Ceylon. Pocock, R. I. l.c. (448-449, pl. XII, figs. 3, 3a). Prionostemma n. nom. for Prionomma Loman and P. insculptum, P. santillans, P. bicolor, P. citrinum nn. spp. Venezuela and Guatemala. **Pocock**, R. I. *l.c.* (433-435).

Sorensenella n. gen., S. prehensor n. sp. New Zealand. **Pocock**, R. I. London, Proc. Zool. Soc., **1902**, 2, 1903, (409-411).

bicornis n. sp. New Zealand. **Pooock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (439-441, pl. XI, figs. 3, 3a).

Triaenobunus pectinatus n. sp. Tasmania. Pocock, R. I. London, Proc. Zool. Soc., 1902, 2, 1903, (400-401).

Triaenonyz nn. spp. New Zealand. Pocock, R. I. *l.c.* (403-405).

Trogulus nn. spp. Dahl, F. Berlin, SitzBer. Ges. natf. Freunde, 1903, (278-292).

Zaleptus nn. spp. With, C. J. London, J. Linn. Soc. Zool., 28, 1903, (479-482).

# ACARI.

#### General.

Bonnet, A. Sur le développement post-embryonnaire des Ixodes. Paris, C.-R. Acad. sci., 137, 1903, (419-420).

Howlett, W. F. [Note on copulation in a "water-mite."] Zoologist, London, (Ser. 4), 7, 1903, (355).

Largaiolli, V. Idracne del Trentino. Quarto contributo allo studio delle Idracne italiane (?). Tridentum, Trient, 6, 1903, (132-136).

Laveran, A. Au sujet du rôle des tiques dans la propagation des piroplasmoses. Paris, C.-R. soc. biol., 55, 1903, (61-63).

Maruoci, [V.]. Nota preliminare sugli Hydracnidae del lago di Castel Gandolfo. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (35).

Maurisio, A. Verunreinigung der Kraftfuttermittel durch Milben. Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (1001-1004, mit 2 Fig.).

**Mégnin**, [P.]. Rôle des tiques ou Ixodes dans la propagation des piroplasmoses. Paris, C.-R. soc. biol., **55**, 1903, (4-6).

Encore un mot sur la biologie des Ixodes. *l.c.* (175-176). Michael, A. D. British Tyroglyphidae. Vol. II. London, (Ray Society), 1903, (VII, 183, pls. XX-XXXIX).

Maller, Herm. Hydrachniden (Hamburgische Elb-Untersuchung). Hamburg, Jarb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (155-161).

Nordenskiöld, E. Über F. D. Wasastjernas "Monographis Acarorum." Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au juillet 1902, 1903, VI Section, (2-4).

**Oudemans**, A. C. Notes on Acari. 's Gravenhage, Tijdschr. Ent., **45**, 1903, (123-150, with 3 pls.).

Notes on Acari. Sixth series. *l.e.* **46**, [1903], (1-24, with 3 pl.).

Notes on Acari. Helder, Tijdschr. Ned. Dierk Ver., (Ser. 2), 8, [1903], (17-34, with 4 pls., 70-92, with 2 pl.).

Pierrig, R. Neues Verzeichnis der bisher im sächsischen Erzgebirge aufgefundenen Hydrachniden-Formen. Annaberg, Ber. Ver. Natk., 11, (1898– 1903), 1903, (34-46, nuit 2 Taf.).

**Soar**, C. R. A few words on freshwater mites (*Hydrachnidac*). Edinburgh, Trans. Nat. Soc., **5**, 1903, (40-46, pls. III-VI).

Thon, K. [Hydrachniden Böhmens. (*Limnocharidae*)]. Prag, Arch. Přirod. Výsk. Čech., **12**, No. 2, 1903, (75, mit 34 Textfig.).

Die neuen Exkretionsorgane bei der Hydrachniden-Familie Limnocharidae Kr. Verh. D. 2001. Ges., Leipzig, 13, 1903, (166–168).

Thor, Sig. Eine acarinologische Reise nach Schwarzbach bei Zweibrücken. Nyt Mag. Naturv., Kristiania, 41, 1903, (69-72).

#### SPECIAL.

Acotyledon n. gen., A. paradoza n. sp. Oudemans, A. C. s' Gravenhage, Tijdschr. Ent., 45, 1903, (147).

Anoetus neglectus n. sp. **Oudemans**, A. C. *l.c.* **46**, [1903], (1-24). Argas andresi n. sp. di acaro dell' ordine dei Metastigmata. Mariani, M. Camerino (tip. Savini), 1902, (6).

Arrhenurus, old and new species from Lincolnshire. George, C. F. Naturalist, London, 1903, (83-84, 215-216, 252, 304, 324, with figs.).

nn. spp. Irish. Halbert, J. N. Zool. Anz., Leipzig, 26, 1903, (268-271).

globator Müll var. megalurus n. var. et nn. spp. **Maraball**, R. Madison, Trans. Wis. Acad. Sci., **14**, 1902, [1903], (148).

T. Math. Termt. Ért., Budapest, 21, 1903, (355-357).

Atax adensameri n. sp. Texas. Thon, K. Wien, Ann. Nat. Hist. Hofmus., 16, 1901, (31-35, mit 1 Taf.).

Brachypodopsis n. gen., B. gracilis n. sp. Pierrig, R. Annaberg, Ber. Ver. Natk., 11, (1898-1903), 1903, (34-46).

Bryobia ribis Thomas. Hanstein, R. von. Berlin, SitzBer. Ges. natf. Freunde, 1903, (128-136).

Ceratizodes n. gen. for Izodes putus. Neumann, L. Arch. parasit., Paris, 6, 1902, (109-128).

Cerophagus n. gen, C. bomborum n. sp. Oudemans, A. C. s' Gravenhage, Tijdschr. Ent., 46, 1903, (13–15).

Coenonychus n. gen., C. fallax n. sp. Oudemans, A. U. l.c. (1-2).

Coepophagus echinopus, deperimento della vite per causa di [questo] acaro. Hineck, G. Bollettino di Entomologia agraria, Padova, 9, 1902, (33-35).

Faunistische-Beschreibung. Istvánfi, G. Math. Termt. Ért., Budapest, 21, 1903, (157– 176).

acaro radicicolo che produce una speciale matattia nelle viti. **Silvestri**, F. Bollettino di Entomologia agraria, Padova, **9**, 1902, (49-56, con fig.).

Cosmolaelaps n. subgen. (Laelaps). Berless, A. Zool. Anz., Leipzig, **27**, 1903, (19-20).

Damaeus nn. spp. Dementjew, A. M. Zs. Pflanzenkrankh., Stuttgart, 13, 1903, (65-82).

# Arachnida,

Demodez folliculorum, seine Beziehung zur Lidrandentzündung. Joerss, [K. E. J.]. Giessen, Ber. Ges. Natk., 33, 1899–1902, (113–115).

dans les follicules ciliaires de l'homme. **Stcher**batchoff, [N.]. Thèse Méd. Lausanne (Guese), 1903, (23, av. 1 pl.). 8vo.

Dermarentor reticulatus. Rocky Mountains. Anderson, John F. Washington, D.C., Treas. Dept., Pub. Hith. Mar. Hosp. Serv. Hyg. Lab. Bull. No. 14, 1903, (50).

Disparipes nn spp. Italia. Berlese, A. Zoo!. Anz., Leipzig, 27, 1903, (23-24).

Eremaeus hessei n. sp. Oudemans, A. C. s' Gravenhage, Tijdschr. Ent., 45, 1903, (143).

*norus* n. sp. **Oudemans**, A. C. *l.c.* **46**, 1903, (6).

Eriophyes diversepunctatus und E. frazinicola. Kuster, E. Flora, Marburg, 92, 1903, (380-395).

Erythraeus lomani n. sp. Oudemans A. C. s'Gravenhage, Tijdschr. Ent., 45, 1903, (141).

Erythrocheylus (~ Erythracarus) n gen., E. littoralis n. sp. Italia. Berlese, A. Zool. Anz., Leipzig, 27, 1903, (26-27).

Eylais, species from Ireland, with 3 nn. spp and 2 nn. varr. Halbert, J. N. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (505-515, with 10 figs.).

. \_\_\_\_\_ nn. spp. Ungarn. **Daday**, E. von. Math.-natw. Ber. Ungarn, Leipzig, **18**, (1900), 1903, (341-364).

*mellipons* n. sp. **Thor**, S. Nyt. Mag. Naturv., Kristiania, **41**, 1903, (73-75, 4 fig.).

Fusacarus n. gen., F. laminipes n. sp. Michael, A. British Tyroglyphidae, Vol. II. London, (Ray Society), 1903, (9-12, pl. XXI).

Glycyborus n. gen. Oudemans, A. C. s' Gravenhage, Tijdschr. Ent., 46, 1903, (8).

Greenia, Symbiose mit Coptorthosoma. Oudemans, A. C. Zool. Anz., Leipzig, 27, 1903, (137-139).

A. C. *l.c.* 45, 1903, (126).

Hericia georgei n. sp. Michael, A. British Tyroglyphidae, Vol. 11. London, (Ray Society), 1903, (38-41, pl. XXXIX).

Histiophorus castoris. Brandes, G. Zs. Natw., Stuttgart, **76**, 1903, (144).

Hoploderma ellipsoidalis n. sp. Dementjew, A. M. Zs. Pflanzenkrankh., Stattgart, **13**, 1903, (65-82).

Hydrachna nn. spp. Ireland. Halbert, J. N. Zool. Anz., Leipzig, 26, 1903, (265-267).

Deutschland. **Koenike**, F. *l.c.* (534-536).

Hydrogamasus silvestrii n. sp. Italia. Berlese, A. l.c. 27, 1903, (27).

Hydryphantes nn. spp. Norddeutschland. Koenike, F. *l.c.* 25, 1903, (534– 536).

**Thor**, S. Nyt. Mag. Naturv., Kristiania, **41**, 1903, (73-75, 4 fig.).

Hypoaspis greeni n. sp. Oudemans, A. C. s'Gravenhage, Tijdschr. Ent., 45, 1903, (128).

Imparipes histricinus n. sp. Italia. Berlese, A. Zool. Anz., Leipzig, 27, 1903, (24).

Ixodes arenicola Eichwald, possibly identical with Hyalomma aegyptium Tullgr. Tullgren, A. Entomol. Tidskr., Stockholm, 22, 1901, (102).

reduvius. Kossel, H., Schütz, [J. W.], Weber, A., Miessner, [H.]. Berlin, Arb. Gesundhtsamt, 20, 1903, (1-77, mit 3 Taf.).

*minor* n. sp. Neumann, L. G. Arch. parasit., Paris, **6**, 1902, (109-128, av. 6 fig.).

Laelaps (Laelaspis, Cosmolaelaps nn. subgen.) nn. spp. Italia. Berlese, A. Zool. Anz., Leipzig, 27, 1903, (14–19).

Laelaspis n. subgen. (Laelaps). Italia. Berlese, A. *l.c.* (13).

Lebertia paresii n. sp. Monti, R. l.e. 26, 1903, (689-693).

quadripora n. sp. Norddeutschland. Koenike, F. l.c. (534-536). Limnesia nn. spp. Wolcott, R. H. Lincoln, Stud. Zool. Lab., Univ. Nebr., No. 56, 1903, ([85]-107, with pl.).

Liponyesus nn. spp. Oudemans, A. C. Helder, Tijdschr. Ned. Dierk. Ver., 8, 1903, (18-22).

Myrmonyssus (~ Laelaps) n. gen., M. acuminatus, M. brachiatus, M. diplogenius nn. spp. Italia. Berlese, A. Zool. Anz., Leipzig, **27**, 1903, (16–18).

Nanacarus n. gen., N. minutus n. sp. Oudemans, A. C. s' Gravenhage, Tijdschr. Ent., 46, 1903, (8-11).

Opilioacarus n. gen., O. segmentatus, n. sp. With, C. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, (4-5).

Oribata myrmobates n. sp. Italia. Berlese, A. Zool. Anz., Leipzig, 27, 1903, (25).

jew, A. M. Zs. Pflanzenkrankh., Stuttgart, **13**, 1903, (65-82).

Pediculoides nn. spp. Italia. Berlese, A. l.c. (24-25).

Phytoptus vitis. Bioletti, F. T. and Twight, E. H. Agric. Exp. Sta., California, Berkeley, Bull., No. **136**, 1901, (7, with 5 figs.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., **13**, 1902, (768).

Piersigia limophila Protz. George, C. F. Naturalist, London, 1903, (111-112, 8 text-figs.).

Pionides ensifer (Koenike). George, C. F. l.c. (421, 5 text-figs.).

Peoroptes, habits. Hickman, R. W. Washington, D.C., U. S. Dept. Agric. Rep. Bur. Anim. Indust., **1902**, 1903, (45-61, with pl.).

Rhipicephalus, influence sur la propogation des piroplasmoses. **Mégnin**, P. Paris, C.-R. soc. biol., **55**, 1903 (147-149).

------ nn. spp. Neumann, I. G. Arch. parasit., Paris, 6, 1902, (109-128).

Rhizoglyphus agilis n. sp. Michael, A. British Tyroghyphidæ, Vol. II, London, (Ray Society), 1903, (96-97, pl. XXXII).

Tarsonemus soricicola n. sp. Oudemans, A. C. s' Gravenhage, Tijdschr. Ent., 46, 1903, (5).

Tetranychus mytilaspidis. Woodworth, C. W. Agric. Exp. Sta., Californis, Berkeley, Bull., No. 145, 1902, (19, with text-fig.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1903, (782).

Thrombidium novum n. sp. Oudemans, A. C. s' Gravenhage, Tijdschr. Ent., 46, (3).

mans, A. C. *l.c.* 45, 1903, (142).

Tricholarsus nn. spp. Oudemans, A. C. *l.c.* (145–146).

Trombidium vagabundum n. sp. Italia. Berlese, A. Zool. Anz., Leipzig, 27, 1903, (28).

Tyroglyphus spp., T. heteroromus n. sp. Michael, A. British Tyroglyphidae. Vol. II. London, (Ray Society), 1903, (106-136).

A. C. s' Gravenhage, Tijdschr. Ent., **46**, 1903, (18).

Uropoda nn. spp. Italia. Berlese, A. Zool. Anz., Leipzig, 27, 1903, (20-21).

. C. s' Gravenhage, Tijdschr. Ent., 45, 1903, (138).

# PALPIGRADI.

Koenenia, further observations. Rucker, A. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (401–434, mit 3 Taf.).

nn. spp. S. America and Siam. Hansen, H. J. Entomol. Tidskr., Stockholm, 22, 1901, (193-240, with pl.).

*forenciae* n. sp. Texas. Rucker, A. London, Q. J. Microsc. Sci., (N. Ser.), **47**, 1903, (215–231, pl. XVIII).

#### LIST OF NEW GENERA AND SPECIES.

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Bassaniodes n. gen. [Araneida]. Pocock. 109. socotrensis. Pocock. 109. Batesiella n. gen. [Araneida]. Pocock. 103. crinita. Pocock. 103. BAVIA [Araneida]. - annamita. Simon. 133. thorelli. Simon. 129. BIANOR [Araneida]. biocellosus. Simon. 129. rusticulus. Peckham and Peckham, 95. BIANTES [Phalangida]. ----- bicolor. Pocock. 109. flaviventris. Pocock. 109. Blaises n. gen. [Araneida]. Simon. 133. lyrata. Simon. 133. BLOSSIA [Solifugae]. echinata. Purcell. 115. litoralis. Purcell. 114. BOLOSTRONUS [Araneida]. - riveti. Simon. 134. BRACHIONOPUS [Araneida]. — annulatus. Purcell. 116. — tristis. Purcell. 116. Brachypodopsis n. gen. [Acari]. Piersig. 96. gracilis. Piersig. 96. BUTHEOLUS [Scorpionida]. glabrifrons. Kraepelin. 61. BUTHUS [Scorpionida]. - deserticola. Birulía. 10. palpator. Birulía. 9. Calathotarsus n. gen. [Araneida]. Simon. 130. coronatus. Simon. 130. CALOMMATA [Araneida]. \_\_\_\_\_ simoni, Pocock. 103. CAMARICUS [Araneida]. - pulchellus. Simon. 133. Ceratizodes n. gen. [Acari]. Neumann. 8ž. CERATOBUNUS [Phalangida]. - brevipes. With. 155. calcuttensis. With. 155. pulcher. With. 155. Cerophagus n. gen. [Acari]. Oudemans. 89. bomborum. Oudemans. 89. Cestotrema n. gen. [Araneida]. Simon. 131. - bastardi. Simon. 31.

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HERMACHASTES [Araneida]. flavopunctatus, Purcell, 116. gooldi, Purcell, 116. schreineri, Purcell, 116. tricalcaratus, Purcell, 116. HETEBOPHEYNUS [Pedipalpi]. - elaphus. Pocock. 102. HETEROPODA [Araneida]. — blaisei Simon. 133. — keyserlingi. Hogg. 50. Heteroscorpion n. gen. [Scorpionida]. Birulia. 11. - madagascarense. Birulia. 11. HINZUANUS [Phalangida]. - leighi. Pocock. 98. HISPO [Araneida]. - alboguttata. Simon. 134. Peckham. 95. obscurus. Peckham and Peckham. 95. punctatus. Peckham and Peckham. 95. - smilis. Peckham and Peckham. 95. HOPLODERMA [Acari]. ---- ellipsoidalis. Dementjew. 35. Hydrachna [Acari]. ----- dissimilis. Halbert. 44. - incisa. Halbert. 44. —— processifera. Koenike. 59. ruber var. neumani n. var. Thor. 150. HYLLUS [Araneida]. Peckham and - moestus. Peckham. 95. and natalii. Peckham Peckham. 95. perspicuus. Peckham and Peckham. 95. HYPOASPIS [Acari]. greeni. Oudemans. 88. HYPSIBUNUS [Phalangida]. ----- vigilans. With. 155.

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arcuatus. Simon. 129.         aurantiacus. Simon. 129.         biaccentuatus. Simon. 129.         marginellus. Simon. 129.         resplendens. Simon. 129.         trochilus. Simon. 129.         schoollus. Simon. 129.         schoollus. Simon. 129.         albidus. Cambridge. 17.         Sechyra n. gen. [Araneida].         schreineri. Purcell. 115.         SINGA [Araneida].         ereucii. Banks. 3.         SITTACUS [Araneida].         uphamii. Peckham and Peckham. 95.         uphamii. Peckham and Peckham. 95.         SMERNISIA [Araneida].         tullgreni. Simon. 134.	<ul> <li>histrio. Simon. 133.</li> <li>TARSONEMUS [Acari].</li> <li>soricicola. Oudemans. 89.</li> <li>Tasata n. gen. [Araneida]. Simon. 130.</li> <li>parcepunctata. Simon. 130.</li> <li>TELAMONIA [Araneida].</li> <li>aeguipes. Peckham and Peckham. 95.</li> <li>argenteola. Simon. 133.</li> <li>leucaspis. Simon. 134.</li> <li>virgata. Simon. 133.</li> <li>TETRAGNATHA [Araneida].</li> <li>alba. Cambridge. 21.</li> <li>bidens. Cambridge. 21.</li> <li>bidens. Cambridge. 21.</li> <li>dentigera. Cambridge. 21.</li> <li>granti. Pocock. 109.</li> <li>pallescens n. nom. Cambridge. 21.</li> </ul>
arcuatus. Simon. 129.         aurantiacus. Simon. 129.         biaccentuatus. Simon. 129.         marginellus. Simon. 129.         resplendens. Simon. 129.         trochilus. Simon. 129.         schoollus. Simon. 129.         schoollus. Simon. 129.         albidus. Cambridge. 17.         Sechyra n. gen. [Araneida].         schreineri. Purcell. 115.         SINGA [Araneida].         ereucii. Banks. 3.         SITTACUS [Araneida].         uphamii. Peckham and Peckham. 95.         uphamii. Peckham and Peckham. 95.         SMERNISIA [Araneida].         tullgreni. Simon. 134.	<ul> <li>histrio. Simon. 133.</li> <li>TARGONEMUS [Acari].</li> <li>soricicola. Oudemans. 89.</li> <li>Tasata n. gen. [Araneida]. Simon. 130.</li> <li>parcepunctata. Simon. 130.</li> <li>TELAMONIA [Araneida].</li> <li>aequipes. Peckham and Peckham. 95.</li> <li>argenteola. Simon. 133.</li> <li>leucaspis. Simon. 134.</li> <li>virgata. Simon. 133.</li> <li>TETBAGNATHA [Araneida].</li> <li>alba. Cambridge. 21.</li> <li>banksi n. nom. Cambridge. 21.</li> <li>bidens. Cambridge. 21.</li> <li>granti. Pocock. 109.</li> <li>pallescens n. nom. Cambridge. 21.</li> <li>TEXTRIX [Araneida].</li> <li>cretica. Kulczyński. 63.</li> </ul>
arcuatus. Simon. 129.         aurantiacus. Simon. 129.         biaccentuatus. Simon. 129.         marginellus. Simon. 129.         resplendens. Simon. 129.         trachilus. Simon. 129.         schreinellas.         albidus. Cambridge. 17.         Seothyra n. gen. [Araneida]. Purcell.         115.         schreineri. Purcell. 115.         SINGA [Araneida].         erewii. Banks. 3.         SITTACUS [Araneida].         uphamii. Peckham and Peckham. 95.         uphamii. Peckham and Peckham. 95.         SIMERMISIA [Araneida].         collinita. Purcell. 114.         junodi. Purcell. 113.	<ul> <li>histrio. Simon. 133.</li> <li>TARGONEMUS [Acari].</li> <li>soricicola. Oudemans. 89.</li> <li>Tasata n. gen. [Araneida]. Simon. 130.</li> <li>parcepunctata. Simon. 130.</li> <li>TELAMONIA [Araneida].</li> <li>aequipes. Peckham and Peckham. 95.</li> <li>argenteola. Simon. 133.</li> <li>leucaspis. Simon. 134.</li> <li>virgata. Simon. 133.</li> <li>TETBAGNATHA [Araneida].</li> <li>alba. Cambridge. 21.</li> <li>banksi n. nom. Cambridge. 21.</li> <li>bidens. Cambridge. 21.</li> <li>granti. Pocock. 109.</li> <li>pallescens n. nom. Cambridge. 21.</li> <li>TEXTRIX [Araneida].</li> <li>cretica. Kulczyński. 63.</li> </ul>
arcuatus. Simon. 129.         aurantiacus. Simon. 129.         biaccentuatus. Simon. 129.         marginellus. Simon. 129.         resplendens. Simon. 129.         trachilus. Simon. 129.         settorius. Simon. 129.         settorius. Simon. 129.         albidus. Simon. 129.         settorius. Cambridge. 17.         sitter. Simon. 134.         settorius. Cambridge. 17.         settorius. Cambridge. 2.         uphamit. Peckham and Peckham. 95. </td <td><ul> <li>histrio. Simon. 133.</li> <li>TARSONEMUS [Acari].</li> <li>soricicola. Oudemans. 89.</li> <li>Tasata n. gen. [Araneida]. Simon. 130.</li> <li>parcepunctata. Simon. 130.</li> <li>TELAMONIA [Araneida].</li> <li>aeguipes. Peckham and Peckham. 95.</li> <li>argenteola. Simon. 133.</li> <li>leucaspis. Simon. 133.</li> <li>terrada. Simon. 133.</li> <li>dentidaj.</li> <li>alba. Cambridge. 21.</li> <li>bidens. Cambridge. 21.</li> <li>bidens. Cambridge. 21.</li> <li>dentigera. Cambridge. 21.</li> <li>granti. Pocock. 109.</li> <li>pallescens n. nom. Cambridge. 21.</li> <li>TEXTRIX [Araneida].</li> <li>cretica. Kulczyński. 63.</li> </ul></td>	<ul> <li>histrio. Simon. 133.</li> <li>TARSONEMUS [Acari].</li> <li>soricicola. Oudemans. 89.</li> <li>Tasata n. gen. [Araneida]. Simon. 130.</li> <li>parcepunctata. Simon. 130.</li> <li>TELAMONIA [Araneida].</li> <li>aeguipes. Peckham and Peckham. 95.</li> <li>argenteola. Simon. 133.</li> <li>leucaspis. Simon. 133.</li> <li>terrada. Simon. 133.</li> <li>dentidaj.</li> <li>alba. Cambridge. 21.</li> <li>bidens. Cambridge. 21.</li> <li>bidens. Cambridge. 21.</li> <li>dentigera. Cambridge. 21.</li> <li>granti. Pocock. 109.</li> <li>pallescens n. nom. Cambridge. 21.</li> <li>TEXTRIX [Araneida].</li> <li>cretica. Kulczyński. 63.</li> </ul>

THANATUS [Araneida]. Kulczyński. 63. THANATIDIUS [Araneida]. spinipes. Cambridge. 17. THAUMASIA [Araneida]. annulipes. Cambridge. 17. THELECHORIS [Araneida]. australis. Purcell. 116. THERIDIOSOMA [Araneida]. ----- blaisei. Simon. 133. THERIDIUM [Araneida]. eigenmanni. Banks. 153. russicum. Oudemans. 88. THYENE [Araneida]. Peckham and australis. Peckham. 95. coronata. Simon. 129. Peckham and crudelis. Peckham. 95. —— leighii. Peckham and Peck-ham. 95. ----- ogdenii. Peckham and Peckham. 95. ---- pulchra. Peckham and Peckham. 95. - vittata. Simon. 129. Thyenula n. gen. [Araneida]. 129. Simon. ------ juvenca. Simon. 129. TOMOPISTHES [Araneida]. - asthiops. Simon. 134. TOBANIA [Araneida]. - scutata. Pocock. 103. Toreus n. gen. [Solifugae]. Purcell. 114. TEABAEA [Araneida]. lineata. Purcell. 116. — nigricope. Purcell. 116. — unicolor. Purcell. 116. — varia. Purcell. 116. TRECHALEA [Araneida]. amazonica. Cambridge. 17. ellacombei. Cambridge. 17. keyserlingi. Cambridge. 17. TRIAENOBUNUS [Phalangida]. ----- pectinatus. Pocock. 98.

TRIAENONYX [Phalangida]. aspera. Pocock. 98. coriacea. Pocock. 98. - sublactis. Pocock. 98. hipposiderus. Oudemans. 88. TROMBIDIUM [Acari]. ---- vagabundum. Berlese. 7. Tularosa n. gen. [Araneida]. Peckham and Peckham. 95. ogdenii. Peckham and Peckham. 95. — major. Hogg. 50. UROPODA [Acari]. ------ distinguenda. Berlese. 7. ------ leonardiana. Berlese. 7. — wagneri. Oudemans. 88. Valloa [Velloa?] n. gen. [Araneida]. Peckham and Peckam. 95. Peckham and elegans. Peckham. 95. Peckham ----- modesta. and Peckham. 95. VICIBIA [Araneida]. alba. Peckham and Peckham. 95. chrysophaea. Simon. 133. diademata. Simon. 129. epileuca. Simon. 133. eguestris. Simon. 133. flavipes. Peckham and avipes. Peck Peckham. 95. lupula. Simon. 129. Peckham and morigera. Peckham. 95. mustela. Simon. 129. niveimana. Simon. 129. Peckham and parmata. Peckham. 95. polysticta. Simon. 129. semicoccinea. Simon. 129. sponsa. Simon. 129. terebrifera : nigrina n. subsp. Simon. 133.

# Arachnida.

VINNIUS [Araneida].         calcarifer.         carinatus.         simon.         129.         maculaticeps.         simon.         129.         maculaticeps.         Simon.         129.         watus.         Simon.         129.         watus.         Simon.         129.         WULFILA [Araneida].         parvula.         Banks.         3.	XYSTICUS [Araneida]. ————————————————————————————————————
XENESTHIS [Araneida].	131.
——— monstrosus. Pocock. 100.	<i>flavopilosus</i> . Simon. 131.

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3203-3231 PROTOTRACHEATA (or ONYCHOPHORA).

#### TITLES.

Bouvier, E. L. Un Péripate de Costa-Rica. Paris, Bul. soc. ent., **1902**, (239-240). [3231 3227 hb]. 1

Onychophore nouveau de Costa-Rica. Paris, Bul. soc. ent., 1902, (258). [3231 3227 hb]. 2

Sur le Peripatus tholloni, extrait d'une lettre adressée de Ngömö (Ogôoué) par M. le Pasteur Haug à M. le professeur Bouvier. Bul. Muséum, Paris, **1903**, (221 – 222). [3231 3227 fd 3219]. 3

Bruntz, L. Excrétion et phagocytose chez les Onychophores. Paris, C.-R. Acad. sci., **136**, 1903, (1148-1150). [3211]. 4

**Evans**, Richard. On *Peripatus guianensis* (sp. nov.). Q. J. Microsc. Sci., London, (N. Ser.), **47**, 1903, (145–160, pls. XIII, XIV); [abstract], London, J. R. Microsc. Soc., **1903**, (608 – 609). [3231]. 5

Gaskell, W. H. The origin of Vertebrates deduced from the study of Ammocoetes. XI. The origin of the vertebrate body cavity and excretory organs; the meaning of the somites of the trunk and of the ductless glands. J. Anat. Physiol., London, (Ser. 2), **17**, 1903, (168-219, with fig.). [0207 0223 2807 3223 52431]. 6

Montgomery, Tho[ma]s H[arrison] jvn. The spermatogenesis of *Peripatus* (*Peripatopsis*) balfouri up to the formation of the spermatid. [With bibliography.] [Reprint.] Philadelphia, Cont. Zool. Lab., Univ. Pa., **1901**, 1902, (277-368, with pl.). [0215 3215 3231]. 7

#### 3211 PHYSIOLOGY.

Bruntz, L. Excrétion et phagocytose chez les Unychophores. Paris, C.-R. Acad. sci., **136**, 1903, (1148-1150).

#### 3215 DEVELOPMENT.

#### SPERMATOGENESIS.

Montgomery, T[homa]s H[arrison], jun. The spermatogenesis of *Peripatus* (*Peripatopsis*) balfouri up to the formation of the spermatid. [With bibliography]. [Reprint.] Philadelphia, Cont. Zool. Lab., Univ. Pa., **1901**, 1902, (277-368, with pl.).

#### 3219 ETHOLOGY.

Bouvier, D. L. Sur le *Peripatus* tholloni, extrait d'une lettre adressée de Ngômõ (Ogôoué) par M. le Pasteur Haug à M. le professeur Bouvier. Bul. Muséum, Paris, **1903**, (221-222).

#### 3223 ÆTIOLOGY.

Gaskell, Walter H. On the origin of vertebrates deduced from the study *Ammocoetes*. Part XI. J. Anat. Physiol., London, **37**, 1903, (168-219, 6 figs. in text).

#### 3227 GEOGRAPHICAL DISTRI-BUTION.

f AFRICA.

fd WEST AFRICA.

Bouvier, D. L. Sur le Peripatus tholloni, extrait d'une lettre adressée de

Ngõmõ (Ogôoué) par M. le Pasteur Haug à M. le professeur Bouvier. Muséum, Paris, 1903, (221-222). Bul.

#### h CENTRAL AND SOUTH AMERICA.

hb CENTRAL AMERICA.

Bouvier, E. L. Un Péripate de Costa-Rica. Paris, Bul. soc. ent., 1902, (239-240).

----- Onychophore nouveau de Costa-Rica. l.c. (258).

#### 3231 TAXONOMY AND SYSTEMATIC.

Peripatus balfouri, spermatogenesis. Montgomery, T. H., jun. [Reprint.] Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, (277-368, with pl.).

Peripatus biolleyi n. sp. Costa-Rica. Bouvier, E. L. Paris, Bul. soc. ent., 1902, (258).

guianensis n. sp. British Guiana. Evans, R. London, Q. J. Microsc. Sci., (N. Ser.), 47, 1903, (145– 160, pls. XIII, XIV).

nicola n. var. Costa Rica. Bouvier, E. L. Paris, Bul. soc. ent., 1902, (239-240).

----- tholloni. Bouvier, D. L. Bul. Muséum, Paris, 1903, (221-222).

#### LIST OF NEW GENERA AND SPECIES.

PERIPATUS.	hiallani	Bouvier.	9
	guianensi	s. Evans.	J
	nıcarague	meie var. ie	unmicola
	n. var.	Bouvier.	1.

# 3403-3431 **MYRIOPODA**.

#### TITLES.

Attems, Carl Graf. Beiträge zur Myriopodenkunde. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (63–154, mit 7 Taf.). [3431].

<u>Myriopoden.</u> (Fauna Arctica, **3**.) Jena, 1903, (33-57). [3427 k 3431]. 3

**Biackman**, Maulsby W. The spermatogenesis of the Myriapods. II. On the chromatin in the spermatocytes of *Scolopendra heros*. [With bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (187-217, with text fig.). [0215 3415 3431]. 4

Blanchard, Raphaël. Nouvelles observations sur le pseudo-parasitisme des myriapodes chez l'homme. Arch. parasit., Paris, 6, 1902, (245-256, av. 2 fig.). [3419]. 5

Brockhausen, H. Ueber leuchtende Skolopender. Münster, Jahresber. Prov-Ver. Wiss., 31, (1902-03), 1903, (163-164); Naturfreund, Witten, 1, 1902, (45-46). [3419]. 6

Brölemann, Henry W. Myriapodes recueillis par M. E. Goumelle au Brésil. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (649-694, av. fig. et. pl.). [3431 3427 hh].

Myriapodes recueillis à l'1le de Cocos, par M. le professeur P. Biolley. Paris, Ann. soc. ent., **72**, 1903, (128-143, av. fig.). [3431 3427 mb]. 8 Myriapodes recueillis au Pará par monsieur le prof. E. A. Goeldi, directeur du musée. Zool. Anz., Leipzig, **26**, 1903, (177–191). [3427 hh 3431]. 9

Bruntz, L. Sur la présence de reins labiaux et d'un organe phagocytaire chez les Diplopodes. Paris, C.-R. Acad. sci., 136, 1903, (57-59); [abstract], London, J. R. Microsc. Soc., 1903, (177). [3407 3431]. 10

Carl, Joh. Exotische Polydesmiden. Rev. Suisse Zool., Genève, 10, 1902, (563-679). [3427 e 3427 ik 3431]. 11

------- Revision amerikanischer Polydesmiden. Rev. Suisse Zool., Genève, 11, 1903, (543-562, av. 2 pls.), [3431]. 12

**Causard**, M. Recherches sur la respiration branchiale chez les Myriapodes diplopodes. Bul. sci. France-Belgique, Paris, **37**, 1903, (461-479, av. 1 pl.). [3411 3407]. 13

**Chalande**, Jules. Contribution à la faune des Myriapodes de France. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (221). [3431 3427 df]. 14

Chamberlin, Ralph V[ary]. Henicops dolichopus, a new chilopod from Utah. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 24, 1902, (797-800). [3427 gi 3431]. 15

<u>Myriopods from Beulah,</u> New Mexico. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (35-40). [3427 gi 3431]. 16

New Lithobii from California and Oregon. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (152-160). [3427 gi 3431]. 17

Chamberlin, Ralph V[ary]. Henicope. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (335). [3431]. 18

Duboscq, O. v. Léger, L.

Kilingsen, Edw. More on Norwegian Myriopods? (Norw.) Kristiania, Forh. Vid. Selsk., No. 6, **1903**, (11). [3427 da]. 19

Face, H[enri]. Myriopodes du Valais. Lausanne, Bul. Soc. Sci. Nat., **38**, 1902, (XXXV-XXXVI); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (73-74). [3427 *di*]. 20

La faune myriopodique du Valais. Aarau, Verh. Schweiz. Natf. Ges., **85**, 1902, (80–81); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (554– 556). [3427 di]. 21

Myriopodes du Valais (Vallée du Rhône et vallées latérales). Rev. Suisse Zool., Genève, **10**, 1902, (31-164, av: 3 pl.). [3427 *di* 3419 3423]. 22

Hansen, H. T. The genera and species of the order Symphyla. Q. J. Microsc. Sci., London, (N. Ser.), 47, 1903, (1-101, pls. I-VII). [3431]. 23

Hemenway, Josephine. The structure of the eye of *Scutigera* (*Cermatia*) *forceps* [with bibliography]. [Reprint from Wood's Holl, Mass., Mar. Biol. Lab. Bull., 1, 1900, No. 4, (205-213)]. Bryn Mawr, Pa., Bryn Mawr Coll. Monogr., (Repr. Ser.), 1, 1901, (205-213). [3407 3431]. 24

J[**3rvi**], T. H. Über im Meerwasser lebende Myriopoden. Luonnon Ystävä, Helsingfors, **1903**, 11–12, (303–304). [3419]. 25

Lécaillon, A. Sur le développement de l'ovaire de *Polyzenus lagurus* de Geer. Paris, C.-R. Acad. sci., **136**, 1903, (1691-1093). [0215 3415 3431]. 26

Léger, L. et Dubosoq, O. Les grégarines et l'épithélium intestinal chez les Trachéates. Arch. parasit., Paris, 6, 1902, (377-473, av. fig. et 5 pls.). [0419 0431 2419 3419]. 27

Lignau, N. Die Myriopoden der Pontusküsten des Caucasus. (Russ.) Odessa, Ann. Soc. Nat., **25**, Liefg 1, 1903, (82-125), deutsches Rés., (126-148, Taf. I-II). [3407 3427 3431]. 28

Marlatt, C[harles] L[ester]. The house centipede (Scutigera forceps Raf.) [Reprint from Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 4, (47-50)]. Washington, D.C., Cir. U. S. Dept. Agric. Div. Ent., (Ser. 2), No. 48, 1902, (4). [3419 3431]. 29

Méhely, Lajos. Beiträge zur Fauna von Deliblót und des Lokoa-Gebirges. (Ungarisch) Allatt. Közlem., Budapeet, 2, 1903, (93-104). [0227 dk 3431 5831 5631 6031]. 30

Morse, Max. Unusual abundance of a Myriapod. Parajulus pennsylvanicus (Brandt). Science, New York, N.Y., (N. Ser.), 18, 1903, (59-60). [3419 3431]. 31

Muralevič, V. S. Zur Biologie der Cermatia (Scutigera) coleoptrata Newp. (Russ.) Moskva, Trd. kruž. izal. russ. prir., 1, 1903, (101-106). [3419 3431]. 32

Pocock, R. I. A new clasping-organ in a Centipede. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (621-624, 2 figs. in text); [abstract], London, J. R. Microsc. Soc., 1903, (496). [3407 3431]. 33

Remarks upon the morphology and systematics of certain Chilognathous Diplopods. I. On the terminology and evolution of the gonopods and of the penis. II. Descriptions of new forms. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (515-532, figs. I-III in text). [3407 3423 3431].

Class Diplopoda. Biol. Centr.-Amer., London, **1903**, (41–56, pls. IV, V, 3 figs. in text). [3427 hb 3431]. 35

Myriapoda. In "The Natural History of Sokotra and Abd-el-Kuri. ." Edited by Henry O. Forbes. Special Bull. Liverp. Mus. 1903, (427-439, pl. XXVI, fig. 5, 2 figs. in text). Quoted hereafter as Nat. Hist. Sokotra. [3427 ff 3431]. 36

Rossi, Giovanni Luigi. Sulla respirazione cutanea e branchiale dei Diplopodi. Zool. Anz., Leipzig, 27, 1903, (150-156). [3407 3411]. 37 Le glandole odorifere dell' *Iulus communis.* Zs. wiss. Zool., Leipzig, 74, 1903, (64-80, mit 1 Taf.); [abstract], London, J. R. Microsc. Soc., 1903, (297). [3407 3431]. 38 Sulla organizzazione dei Miriapodi. Roma, Ric. Lab. anat.

norm., 9, fasc. 1°, 1902, (5-88, con tav. e fig.). [3407 3431]. 39 **Bossi**, Giovanni Luigi. Sull'apparecchio digerente dell'*lulus communis*. Nota preliminare. Firenze, Boll. Soc. Entom., **34**, 1902, (3-9, con. tav.). [3407 3431]. 40

**Bothenbühler**, H. Zur Myriapodenfauna der Schweiz. II. Beitrag. Myriapoden des bündnerischen Rheingebiets. Rev. Svisse Zool., Genève, **10**, 1902, (549-561). [3427 di]. 41

 
 Sainte-Claire Deville, J.
 Exploration

 entomologique des grottes des Alpes-Maritimes.
 Maritimes.
 Alpes-Maritimes.

 1902, [1903], (695-709, av. fig.).
 [2431

 2427 df
 2631
 3031
 3431

 3831
 4831].
 42

Verhoeff, Karl W. Ueber die Interkalarsegmente der Chilopoden, mit Berücksichtigung der Zwischensegmente der Insekten. Arch. Natg., Berlin, **69**, Bd 1, 1903, (427-441, mit 1 Taf.). [3407 2407]. 43

Chilopoden von Südsteiermark, Krain und Kroatien. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (90-93). [3427 dk 3431]. 44

Ueber Diplopoden. 1. Aufsatz: Formen aus Tirol, Italien und Cypern. 2. Aufs.: Griechische Tausendfüssler. Arch. Natg., Berlin, 68, Bd 1, 1902, (175–198, mit 1 Taf.); 69, Bd 1, 1903, (135–154, mit 2 Taf.); 3. Aufsatz, *Ib.*, (183-196, mit 2 Taf.) [3407 3127 *dh dk dl* 3131]. 45

Williams, Stephen] R. Variation in L'thobius forficatus. [With bibliography]. Amer. Nat., Boston, Mass., 31, 1903, (299-312); [abstract], London, J. R. Microsc. Soc., 1903, (608). [3423 3431].

#### 3407 STRUCTURE.

#### GENERAL.

**Pocock**, R. I. Remarks upon the morphology and systematics of certain Chilognathous Diplopods. 1. On the terminology and evolution of the gonopods and of the penis. II. Descriptions of new forms. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (515-532, figs. I-III in text).

Rossi, G. Sulla organizzazione dei Miriapodi. Roma, Ric. Lab. anat. norm. 9, fasc. 1°, 1902, (5-88, con tuv. e fig.).

(n 2-9053)

#### EXTERNAL MORPHOLOGY.

Attems, Carl Graf. Synopsis der Geophiliden. Zool. Jahrb., Jens, Abt. f. Syst., 18, 1903, (155-302, mit 5 Taf.).

Lignau, N. Die Myriopoden der Pontusküsten dos Caucasus. (Russ.). Odessa, Ann. Soc. Nat., 25. Liefg 1, 1903, (82–125), deutsches Res., (126– 148, Taf. I-II).

**Pocock**, R. I. A new clasping-organ in a Centipede. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (621-624, 2 figs. in text.); [abstract], London, J. R. Microsc. Soc., **1903**, (496).

Verhoeff, Karl W. Ueber die Interkalarsegmente der Chilopoden, mit Berücksichtigung der Zwischensegmente der Insekten. Arch. Natg., Berlin, **69**, Bd 1, 1903, (427-441, mit 1 Taf.).

#### ALIMENTARY SYSTEM.

**Rossi**, G. Sull'apparecchio digerente dell'*Iulus communis*. Nota preliminare. Firenze, Boll. Soc. Entom., **34**, 1902, (3-9, con tav.).

CIRCULATORY AND RESPIRATORY ORGANS.

**Cansard**, M. Recherches sur la respiration branchiale chez les Myriapodes diplopodes. Bul. sci. Frunce-Belgique, Paris, **37**, 1903, (461–479, av. 1 pl.).

**Rossi**, Giovanni Luigi. Sulla respirazione cutanea e branchiale dei Diplopodi. Zool. Anz., Leipzig, 27, 1903, (150-156).

#### SPECIAL GLANDS.

**Bossi**, Giovanni. Le glandole odorifere dell'*Iulus communis.* Zs. wiss. Zool., Leipzig, **74**, 1903, (64-80, mit 1 Taf.); [abstract], London, J. R. Microsc. Soc., **1903**, (297).

#### REPRODUCTIVE ORGANS.

Verhoeff, Karl W. Ueber Diplopoden. 3. Aufsatz. Arch. Natg., Berlin, 69, Bd 1, 1903, (183-196, mit 2 Taf.).

#### EXCRETORY ORGANS.

Brunts, L. Sur la présence de reins labiaux et d'un organe phagocytaire chez les Diplopodes. Paris, C.-R. Acad. sci., 136, 1903, (57-59); [abstract], London, J. R. Microsc. Soc., 1903, (177).

#### 3411 PHYSIOLOGY.

#### RESPIRATION.

**Causard**, M. Recherches sur la respiration branchiale chez les Myriapodes diplopodes. Bul. sci. France, Belgique, Paris, **37**, 1903, (461-479, av. 1 pl.).

**Rossi**, Giovanni Luigi. Sulla respirazione cutanea e branchiale dei Diplopoli. Zool. Anz., Leipzig, **27**, 1903, (150-156).

# 3415 DEVELOPMENT.

#### OOGENESIS AND OVUM.

Lécaillon, A. Sur le développement de l'ovaire de *Polyzenus lagurus* de Geer. Paris, C.-R. Acad. sci., **136**, 1903, (1691–1693).

#### SPERMATOGENESIS.

**Blackman**, Maulsby W. The spermatogenesis of the Myriapods. II. On the chromatin in the spermatocytes of *Scolopendra heros*. [with bibliography]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **5**, 1903, (187-217, with text fig.).

## 3419 ETHOLOGY.

#### GENERAL.

Morse, Max. Unusual abundance of a Myriapod, Parajulus penneylvanicus (Brandt). Science, New York, N.Y., (N. Ser.), 18, 1903, (59 60).

Muralevič, V. S. Zur Biologie der Cermatia (Scutigera) coleoptrata Newp. (Russ.) Moskva, Trd. kruž. izsl. russ. prir., 1, 1903, (101-106).

#### HABITS.

Face, Henri. Myriopodes du Valais (Vallée du Rhône and vallées latérales). Rev. Suisse Zool., Genève, **10**, 1902, (31-164, av. 3 pl.).

Marlatt, C[harles] L[ester]. The house centipede (Scutigera forceps Raf.) [Reprint from Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 4, (47-50)]; Washington, D.C., Cir. U. S. Dept. Agric. Div. Ent., (Ser. 2), No. 48, 1902, (4). 23.4 cm.

#### LUMINOSITY.

Brockhausen, H. Ueber leuchtende Skolopender. Münster, Jahresber. Prov-Ver. Wiss., **31**, (1902–03), 1903, (163– 164); Naturfreund, Witten, **1**, 1902, (45–46).

#### HABITAT.

J[ärvi], T. H. [Über im Meerwasser lebende Myriopoden]. (Finnisch) Luonnon Ystävä, Helsingfors, **1903.** 11-12, (303-304).

#### PARASITISM.

**Blanchard**, Raphäel. Nouvelles observations sur le pseudo-parasitisme des myriapodes chez l'homme. Arch. parasit., Paris, **6**, 1902, (245-256, av. 2 fig.).

Léger, L. et Duboscq, O. Les grégarines et l'épithélium intestinal chez les Trachéates. *l.c.* (377–473, av. fig. et 5 pl.).

# 3423 VARIATION AND ÆTIOLOGY.

#### GENERAL.

Face, Henri. Myriopodes du Valais (Vallée du Rhône et vallées latérales). Rev. Suisse Zool., Genève, **10**, 1902, (31-164, av. 3 pl.).

**Pocock**, R. I. Pemarks upon the morphology and systematics of certain Chilognathous Diplopods. I. On the terminology and evolution of the gonopods and of the penis. III. Descriptions of new forms. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (515-552, figs. I-III in text).

Williams, S[tephen] R. Variation in Lithobius forficatus. [With bibliography]. Amer. Nat., Boston, Mass., **37.** 1903, (299-312); [abstract], London, J. R. Microsc. Soc., **1903**, (608).

#### 3427 GEOGRAPHICAL DISTRIBUTION.

#### d Europe.

#### da Scandinavia.

Ellingeen, Edv. . . Norwegian myriopods. (Norw.) Kristiania, Forh. Vid. selsk., **1903**, No. 6, (II).

#### db RUSSIA IN EUROPE.

Lignau, N. Die Myriopoden der Pontusküsten des Caucasus. (Russ.) Odessa, Ann. Soc. Nat., 25, Liefg 1, 1903, (82–125), deutsches Rés., (126– 148, Taf. I–II).

#### df FRANCE.

**Chalande**, Jules. Contribution à la faune des Myriapodes de France. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (221).

#### dh ITALY.

Verhoeff, Karl W. Ueber Diplopoden. 1. Aufsatz: Formen aus Tirol, Italien und Cypern. 2. Aufs.: Griechische Tausendfüssler. Arch. Natg., Berlin, 68, Bd 1, 1902, (175-198, mit 1 Taf.); 69, Bd 1, 1903, (135-154, mit 2 Taf.).

#### di Switzerland.

**Paes**, H[enri]. Myriopodes du Valais. Lausanne, Bul. Soc. Sci. Nat., **38**, 1902, (XXXV-XXXVI); Arch. Sci. Phys., (Benève, (sér. 4), **14**, 1902, (73-74).

La faune myriopodique du Valais. Aarau, Verh. Schweiz Natf. Ges., 85, 1902, (80-81); Arch. Sci. Phys., Genève, (sér. 4), 14, 1902, (554-556).

Myriopodes du Valais (Vallée du Rhône et vallées latérales). Rev. Suisse Zool., Genève, **10**, 1902, (31-164, av. 3 pl.).

**Bothenbühler**, H. Zur Myriopodenfauna der Schweiz. II. Beitrag: Myriopoden des bündnerischen Rheingebietes. *i.e.* (549-561).

#### dk AUSTRIA-HUNGARY.

Verhoeff, Karl W. Ueber Diplopoden. 1. Aufsatz: Formen aus Tirol, İtalien und Cypern. 2. Aufs.: Griechische Tausendfüssler. Arch. Natg., Berlin, 68, Bd 1, 1902, (175-198, mit 1 Taf.); 69, Bd 1, 1903, (135-154, mit 2 Taf.).

Chilopoden von Südsteiermark, Krain und Kroatien. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (90-93).

(n 2-9053)

#### dl BALKAN PENINSULA.

Verhoeff, Karl W. Ueber Diplopoden. 1. Aufsatz: Formen aus Tirol, İtalien und Cypern. 2. Aufs.: Griechische Tausendfüssler. Arch. Natg., Berlin, **63**, Bd 1, 1902, (175–198, mit 1 Taf.); **69**, Bd 1, 1903, (135–154, mit 2 Taf.).

e Asia.

Carl, Joh. Exotische Polydesmiden. Rev. Suisse Zool., Genève, 10, 1902, (563-679).

#### ej MALAY PENINSULA.

Carl, Joh. Exotische Polydesmiden. Rev. Suisse Zool., Genève, 10, 1902, (563-679).

- f AFRICA.
- ff EAST AFRICA.

**Pocock**, R. I. Myriapoda. In Nat. Hist. Sokotra. Special. Bull. Liverp. Mus.

a NORTH AMERICA.

Carl, Joh. Exotische Polydesmiden. Rev. Suisse Zool., Genève, 10, 1902, (563-679).

gi WESTERN UNITED STATES.

**Chamberlin**, Ralph V. Myriopods from Beulah, New Mexico. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (35-40).

fornia and Oregon. *l.c.* (152-160).

Ilenicops dolichopus, a new Chilopod from Utah. Smithsonian Inst., Nation. Mus. Proc., 24, 1902, (797-800).

#### h CENTRAL AND SOUTH AMERICA.

Carl, J[oh.]. Revision amerikanischer Polydesmiden. Rev. Suisse Zool., Genève, 11, 1903, (543-562, av. 2 pls.).

#### hb CENTRAL AMERICA.

Pocock, R. I. Class Diplopoda. Biol. Centr. Amer., London, 1903, (41-56, pls. IV, V, 3 figs. in text).

2 E 2

Brölemann, Henry W. Myriapodes recueillis par M. E. Goumelle au Brésil. Paris, Ann. soc. ent., 71, (2<sup>e</sup> semest.), 1902, [1903], (649-694, av. fig. et pl.).

Myriapodes recueillis au Pará par monsieur le prof. E. A. Goeldi, directeur du musée. Zool. Anz., Leipzig, **26**, 1903, (177–191).

i AUSTRALASIA.

if VICTORIA.

Carl, Joh. Exotische Polydesmiden. Rev. Suisse Zool., Genève, 10, 1902, (563-679).

#### ik New Zealand.

Carl, Joh. Exotische Polydesmiden. Rev. Suisse Zool., Genève, 10, 1902, (563-679).

#### k ARCTIC.

Attems, Carl Graf. Myriopoden. (Fauna Arctica, 3.) Jena, 1903, (33-54).

## m INDIAN OCEAN.

mb OCEAN AND ISLANDS S. OF EQUATOR.

Brölemann, Henry W. Myriapodes recueillis à l'île de Cocos, par M. le professeur P. Biolley. Paris, Ann. soc. e.t., 72, 1903, (128-143, av. fig.).

# 3431 TAXONOMY AND SYSTEMATIC.

#### GENERAL.

Attems, C. Graf. Beiträge zur Myriopodenkunde. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (63-154, mit 7 Taf.).

<u>Myriopoden.</u> (Fauna Arctica, 8.) Jena, 1903, (33-54).

Brölemann, H. W. Myriapodes recueillis par M. E. Goumelle au Brésil. Paris, Ann. Soc. ent., **71**, (2<sup>e</sup> semest.), 1902, [1903], (649-694, av. fig. et pl.).

Pile de Cocos, par M. le professeur P.

Biolley. *l.c.* **72**, 1903, (128-143, av. fig.).

**Chalande**, J. Contribution à la faune des Myriapodes de France. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (221).

Chamberlin, R. V. Myriopods from Beulah, New Mexico. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (35-40).

Lignau, N. Myriopoden der Pontusküsten des Caucasus. (Russ.) Odessa, Ann. Soc. Nat., 25, Liefg 4, 1903, (82– 125), deutsches Rés. (126–128, Taf. 1-11).

**Pocock**, R. I. Myriopoda. Nat. Hist. Sokotra, 1903, (427–439, pl. XXVI, fig. 5, 2 figs. in text).

Rossi, G. . . Myriopoda: . . organizzazione. Roma, Ric. Lab. anat. norm., 9, fasc. 1°, 1902, (5-88, con tav. e fig.).

**Sainte-Claire Deville**, J. Exploration entomologiques des grottes des Alpes-Maritimes. Ann. soc. ent., Paris, **71**, 1902, [1903], (695-709, av. fig.).

#### CHILOPODA.

#### GENEBAL.

Attems, C Synopsis der Geophiliden. Zool. Jahrb., Jens, Abt. f. Syst., 18, 1903, (155-302, mit 5 Taf.).

Verhoeff, K. W. Chilopoden von Südsteiermark, Krain und Kroatien. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (90-93).

#### SPECIAL.

Cermatia (Scutigera) coleoptrata Newp., biologie. **Muralevič**, V. S. Moskva, Trd. kruž. izsl. russ. prir., 1, 1903, (101–106).

Chaetechelyne circula n. sp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (280).

*Cryptops* nn. spp. **Attems**, C. *l.c.* (106-109).

javanica n. var. Attems, C. l.c. (63).

R. I. Nat. Hist. Sokotra, 1908, (433).

Diplochora n. gen., D. fusata n. sp. Attems, C. Zool. Jahrb., Jens, Abt. f. Syst., 18, 1903, (281). Geophilus, parasite of. Grawley, H. Philadelphia, Pa., Proc. Acad. Nat. Sci., 1903, (337-338).

Mexico. Chamberlin, R. V. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (37).

Henia, nn. spp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (277-278).

Henicops [spp.] Chamberlin, R. V. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (335).

*dolichopus* n. sp. Utah. **Chamberlin**, R. V. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **24**, 1902, (797-800).

Insigniporus n. gen., I. sturanyi n. sp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (269-270).

Lithobius nn. spp., 1 n. subsp. Attems, C. *l.c.* (113-115).

mn. spp. New Mexico. Chamberlin, R. V. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (35-36).

Oregon. Chamberlin, R. V. *l.c.* (152-160).

**Iignau**, N. Odessa, Ann. Soc. Nat., **25**, Liefg 4, 1903, (82-125, deutsches Rés. 126-128 mit Taf I-II).

*forficatus*, mathematical variation. **Williams**, S. R. Amer. Nat., Boston, Mass., **37**, 1903, (299-312).

*mediterraneus* n. sp. France. **Chalande**, J. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (221).

Maoriella n. gen., M. macrostigma, M. aucklandica nn. spp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (283-285).

Orphnaeus bohlsi n. sp. Attems, C. l.c. (203).

Otostigma nn. spp. Attems, C. l.e. (97-99).

Parostostigmus, external sexual organs. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (621-624, 2 figs. in text). Pectiniun juis nn. spp. Attems, C. Zool. Jahrh., Jena, Abt. f. Syst, 18, 1903, (191-193).

Schendyla carniolensis n. sp. Südsteiermark. Verhoeff, K. Berlin, Sitz. Ber. Ges. natf. Freunde, **1902**, (90-93).

*gounellei* n. sp. Brésil. Brölemann, H. W. Paris, Ann. soc. ent., **71**, (2<sup>e</sup> semest.), 1902, [1903], (685).

*maroccana* n.s p. **Attems**, C. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (189).

Scolopendra heros, spermatogenesis. Blackman, M. W. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (187-217, with text fig.).

Scutigera (Cermatia) forcepe, structure of the eye. **Hemenway**, J. [Reprint from Wood's Holl, Mass., Mar. Biol. Lab. Bull., **1**, 1900, No. **4**, (205-215), Bryn Mawr, Pa., Bryn Mawr Coll. Monogr., (Repr. Ser.), **1**, 1901, (205-213).

habits. Marlatt, C. L. [Reprint from Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent. (N. Ser.), No. 4, (47-50).]; Washington, D.C., Cir. U. S. Dept. Agric. Div. Ent., (Ser. 2), No. 48, 1902, (4).

#### DIPLOPODA.

#### GENERAL.

Brunts, L. Sur la présence de reins labiaux et d'un organe phagocytaire chez les Diplopodes. Paris, C.-R. Acad. sci., 136, 1903, (57-59).

Carl, J. Exotische Polydesmiden. Rev. Suisso Zool., Genève, 10, 1902, (563-679).

Revision amerikanischer Polydesmiden. *l.c.* 11, 1903, (543-562, av. 2 pls.).

**Pocock**, R. I. Remarks upon the morphology and systematics of certain Chilognathous Diplopods. I. On the terminology and evolution of the gonopods and of the penis. II. Descriptions of new forms. Ann. Mag. Nat. Hist., I.ondon, (Ser. 7), **12**, 1903, (515-532, figs. i-iii in text).

Verhoeff, Karl W. Ueber Diplopoden. 1. Aufsatz : Formen aus Tirol, Italien und Cypern. 2. Aufs.: Griechische Tausendfüssler. Arch. Natg., Berlin, 68, Bd 1, 1902, (175-198, mit 1 Taf.); 69, Bd 1, 1903, (135-154, mit 2 Taf.).

#### SPECIAL.

Ancptoporus n. gen. Pocock, R. I. Nat. Hist. Sokotra, 1903, (437-438).

Aulacobolus n. gen. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (531).

Brachydesmus nn. spp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (124-126).

Brachyiulus nn. spp. Attems, C. l.c. (133-137).

K. W. Arch. Natg., Berlin, (149-150).

Cambalopsis tjumpeana n. sp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (68-71).

Ceratosoma elaphron : latifolium n. subsp. Attems, C. l.c. (128).

Cleidogona nn. spp. Mexico and Guatemala. Pocock, R. I. Biol. Centr.-Amer., London, **1903**, (52).

Cylindroiulus nn. spp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (138-140).

Dimerogonus n. gen., D. orophilus, D. insulanus nn. spp. Attems, C. l.c. (81-88).

Epinannolene n. gen., E. pittieri n. sp. Cocos. Brölemann, H. W. Paris, Anu. soc. ent., 72, 1903, (135-136).

Eucentrobolus n. gen., E. tamulus n. sp. S. India. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (528-531).

Eurhinocricus n. subgen. (Rhinocricus) Cocos. Brölemann, H. W. Paris, Ann. soc. ent., 72, 1903, (131).

Fontariopsis n. gen., F. socotrensis n. sp. Pocock, R. I. Nat. Hist. Sokotra, 1903, (455-436).

Glomeris prominens n. sp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (121).

Haplosomides n. gen., II. mölleri n. sp. Attems, C. l.c. (68).

Hendersonula n. gen., H. collina n. sp. Southern India. Pocock, R. I. Ann.

Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (520-522).

Huttoniella n. gen. New Zealand. Pocock, R. I. l.c. (518-520).

Julus nn spp. Caucasus. Lignau, N. Odessa, Ann. Soc Nat., 25, Liefg 4, 1903, (82–125), deutsches Res., (126–128, Taf. I-II).

*communis*, apparecchio digerente. Nota preliminare. **Bossi**, G. Firenze, Boll. Soc. Entom., **34**, 1902, (3-9, con tav.).

fere. **Rossi**, G. Zs. wiss. Zool., Leipzig, **74**, 1903, (64-80, mit 1 Taf.).

*unilineatus*, faunistisch. **Méholy**, L. Állatt. Közlem., Budapest, **2**, 1903, (99).

*Leptodesmus* nn. spp. Brésil. **Bröle**mann, H. W. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (649–694, av. fig. et pl.).

*folium* n. sp. Cocos. **Bröle**mann, H. W. *l.c.* **72**, 1903, (128-143, av. fig.).

Lysiopetalum nn. spp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (129–131).

verhoeff, K. W. Arch. Natg., Berlin, (147).

Mongoliulus n. gen. Pocock, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (522-528).

Nannolene nigrescens n. sp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (90-91).

Orobainosoma cyanopidum n. sp. Attems, C. l.c. (127).

Pachyiulus continentalis n. sp., P. insularis: penicillata n. subsp. Attems, l.c. (146-148).

Paraiulus nn. spp. Mexico. Pocock, R. I. Biol. Centr.-Amer., London, 1903, (55-56).

Mexico. **Chamberlin**, R. V. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (38-40). Paraiulus oregonensis n. sp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (91).

*pennsylvanieus*, migration. **Morse**, M. Science, New York, N.Y., (N. Ser.), **18**, 1903, (59-60).

Platydesmus nv. spp. Guatemala. Pocock, R. I. Biol. Centr.-Amer., London, 1903, (45-47).

*Polybunobolus* n. gen. **Pocock**, R. I. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (531).

Polydesmus klisurensis n. sp. Tyrol. Verhoeff, K. W. Arch. Natg., Berlin, (150).

*montenegrinus* n. sp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (124).

ponticus n. sp. Caucasus. Lignau, N. Odessa, Ann. Soc. Nat., 25, Liefg 4, 1903, (82-125, deutsches Res. 126-12<sup>-</sup>, mit Taf. I-II).

Polyzenus lagurus de Geer, développement de l'ovaire. Licatilon, A. Paris, C.-R. Acad. sci., 136, 1903, (1691-1693).

Rhinocricus nn. spp. Pará. Brölemann, H. W. Zool. Anz., Leipzig, 26, 1903, (187-189).

(Eurhinocricus) biolleyi n. sp. Cocos. **Brölemann**, H. W. Paris, Ann. soc. ent , **72**, 1903, (132).

*transrersalis* n. sp. Brésil. Br31emann, H. W. *l.c.* 71, (2° semest.), 1902, [1903], (682).

Schizophyllum nn. spp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (144-146).

S.phonophora nn. spp. Guatemala. Pocock, R. I. Biol. Centr.-Amer., London, **1903**, (50-51).

Siphono'us brevicornis n. sp. Victoria. **Pocock**, R. I. Ann. Mag. Nat. Hist.. London, (Ser. 7), **12**, 1903, (531).

Spirobolellus cruentatus n. sp. Pará. Brölemann, H. W. Zool. Anz., Leipzig, 26, 1903, (177-191).

Spirobolus bulbiferus n. sp. **Attems**, C. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (71-72).

Spiros'reptus nn. spp. Attems, C. l.c. (73-79, mit 7 Taf.).

\_\_\_\_\_ nn spp. Brésil. Brölemann, H. W. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (678-680). Spiros'replus collectivus n. sp. Attems, C. Zool. Jahrb. Jena, Abt. f. Syst., 18, 1903, (88-90).

(Scaphiostreptus ?) pseudofuscipes n. sp. Pará. Brölemann, H. W. Zool. Anz., Leipzig, **26**, 1903, (178).

Strongylosoma nn. spp. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (66-67).

**Verhoeff**, K. W. Arch. Natg., Berlin, **68**, 1902, (197).

puetulatum n. sp. Brésil. Brölemann, H. W. Paris, Ann. soc. ent., 71, (2° somest), 1902, [1903], (690).

tropiferum n. sp. S. pallipes n. subsp. et nn. varr. S. italicum var. punica n. var. Attems, C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (123).

Trimerophorella n. gen., T. niricomes n. sp. Tyrol. Verhoeff, K. W. Arch. Natg., Berlin, 68, 1902, (175-176).

#### SYMPHYLA.

#### GENERAL.

Hansen, H. J. The genera and species of the order Symphyla. Q. J. Microse. Sci., London, (N. Ser.), 47, 1903, (1-101, pls. I-V1I).

#### SPECIAL.

Scolopendrella nn. spp. Hansen, H. J. Q. J. Microsc. Sci., London, (N. Ser.), 47, 1903, (70-89).

Scutigerella nn. spp. Hansen, H. J. l.c. (33-58, pls. I-VII).

#### LIST OF NEW GENERA AND SPECIES.

Aneptoporus n. gen. [Diplopoda]. Pocock. 36.

Aulacobolus n. gen. [Diplopoda]. Pocock. 34.

BRACHYDESMUS [Diplopoda].

<del></del>	cornuatus.	Attems.	1.
	вріпсвив.	Attems.	1.
	uncinatus.	Attems.	1.

Myriopoda.

D	
REVCHAIGE	us [Diplopoda] klisurensis. Verhoeff. 45.
	klisurensis. Verhoeff. 45.
	latesquamosus. Attems. 1. recticauda Attems 1.
	syrensis. Verhoeff. 45.
	recticauda. Attems. 1. syrensis. Verhoeff. 45. taygetanus. Attems. 1.
	vicinus. verhoen. 45.
	18 [Diplopoda]. tjampeana. Attems. 1.
CERATOSOM	[Diplopoda].
	elaphron : latifolium n. subsp. Attems. 1.
CHAETECHE	LYNE [Chilopoda].
	circula. Attems. 2.
CLEIDOGON	[Diplopoda].
	godmani. Pocock. 35. stolli. Pocock. 35.
C'RVDTOPS [	Chilopoda].
	abbreriatus. Attems. 1.
	abbreriatus. Attems. 1. megaloporus var. javanica
	n. var. Attems. 1. polyodonotus. Attems. 1.
	polyodonotus. Attems. 1. socotrensis. Pocock. 36. triserratus. Attems. 1.
	triserratus. Attems. 1.
	unguiculatus. Attems. 1.
Cylindroiu	uts [Diplopoda].
	deubeli. Attems. 1. hyperopherus. Attems. 1.
Dimension	ngperopherus. Rucins. 1. ns n. gen. [Diplopoda].
DIMELORON	
	Attems. 1.
	Attems. 1. insulanus. Attems. 1.
	Attems. I. insulanus. Attems. 1. orophilus. Attems. 1.
 Diplochora	Attems. J. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2.
	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2.
	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2.
	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. 
Epinannole	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8.
Epinannole	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. blus n. gen, [Diplopoda]. Pocock. 34.
Epinannole	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8.
Epinannole Eucentrobo	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. blus n. gen, [Diplopoda]. Pocock. 34.
Epinannole Eucentrobo Eurhinocri	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. pittan. gen, [Diplopoda]. Pocock. 34. tamulus. Pocock. 34. cus n. subg. [Diplopoda]. Brölemann. 8.
Epinannole Eucentrobo	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. pittieri. Brölemann. 8. pocock. 34. tamulus. Pocock. 34. cus n. subg. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Pocock. 38.
Epinannole Eucentrobo Euchinocri Fontariope	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. olus n. gen, [Diplopoda]. Pocock. 34. tamulus. Pocock. 34. cus n. subg. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Pocock. 36. socotrensis. Pocock. 36.
Epinannole Eucentrobo Euchinocri Fontariope	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. pittieri. Brölemann. 8. procock. 34. tamulus. Pocock. 34. cus n. subg. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Pocock. 36. socotrensis. Pocock. 36. [Chilopode]
Epinannole Eucentrobo Euchinocri Fontariope	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. pittieri. Brölemann. 8. procock. 34. tamulus. Pocock. 34. cus n. subg. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Pocock. 36. socotrensis. Pocock. 36. [Chilopode]
Epinannole Eucentrobo Euchinocri Fontariope	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. olus n. gen, [Diplopoda]. Pocock. 34. tamulus. Pocock. 34. cus n. subg. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Pocock. 36. socotrensis. Pocock. 36. [Chilopoda]. atopodon. Chamberlin. 16. caucasicus. Attems. 2.
Epinannole Eucentrobo Euchinocri Fontariope	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. pittieri. Brölemann. 8. pocock. 34. tamulus. Pocock. 34. cus n. subg. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Bröcock. 36. socotrensis. Pocock. 36. [Chilopoda]. atopodon. Chamberlin. 16. caucasicus. Attems. 2. kobelli. Attems. 2.
Epinannole Eucentrobo Euchinocri Fontariope	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. pittieri. Brölemann. 8. pocock. 34. tamulus. Pocock. 34. cus n. subg. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Bröcock. 36. socotrensis. Pocock. 36. [Chilopoda]. atopodon. Chamberlin. 16. caucasicus. Attems. 2. kobelli. Attems. 2.
Epinannole Eucentrobo Euchinocri Fontariope	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. pittieri. Brölemann. 8. pocock. 34. tamulus. Pocock. 34. cus n. subg. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Pocock. 36. socotrensis. Pocock. 36. [Chilopoda]. atopodon. Chamberlin. 16. caucasicus. Attems. 2. kobeli. Attems. 2. kobeli. Attems. 2. metopias. Attems. 2. michaelseni. Attems. 2.
Epinannole Eucentrobo Euchinocri Fontariope	Attems. 1. insulanus. Attems. 1. orophilus. Attems. 1. n. gen. [Chilopoda]. Attems. 2. fusata. Attems. 2. me n. gen. [Diplopoda]. Brölemann. 8. pittieri. Brölemann. 8. pittieri. Brölemann. 8. pocock. 34. tamulus. Pocock. 34. cus n. subg. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Brölemann. 8. is n. gen. [Diplopoda]. Bröcock. 36. socotrensis. Pocock. 36. [Chilopoda]. atopodon. Chamberlin. 16. caucasicus. Attems. 2. kobelli. Attems. 2.

GEOPHILUS [Chilopoda]. palpiger. Attems. 2. schauinslandi. Attems. 2. sitocola. Attems. 2. sorrentinus. Attems. 2. syriacus. Attems. 2. xylophagus. Attems. 2. GLOMERIS [Diplopoda]. prominens. Attems. 1. Haplosomides n. gen. [Diplopoda]. Attems. 1. mölleri. Attems. 1. Hendersonula n. gen. [Diplopoda], Pocock. 34. collina. Pocock. 34. HENIA [Chilopoda]. biconica. Attems. 2. crinita. Attems. 2. HENICOPS [Chilopoda]. dolichopus. Chamberlin, 15.§ Huttoniella n. gen. [Diplopoda]. Pocock. 34. n. gen. [Chilopoda]. Insigniporus Attems. 2. sturanyi. Attems. 2. JULUS [Diplopoda]. bellus. Lignau. 28. currocaudatus. Lignau. 28. litoreus. Lignau. 28. napolitanus. Attems. 1. placidus. Lignau. 28. ruber. Lignau. 28. LEPTODESMUS [Diplopoda]. bahiensis. Brölemann. 7. carminatus. Brölemann. 7. clavuria. Brölemann. 7. corcoradis. Brölemann. 7 deserticola. Brölemann. 7 expansus. Brölemann. 7. folium. Brölemann. 8. 7. 7. gibbula. Brölemann. 7. gibbus. Brölemann. 7. gounellei. Brölemann. 7. latirentris. Brölemann. 7. simillimus. Brölemann. 7. LITHOBIUS [Chilopoda]. angelus. Chamberlin. 17. bellulus. Chamberlin. 17. beulae. Chamberlin. 16. castellopes. Chamberlin. 17. chumasanus. Chamberlin. 17. clarigerens. Chamberlin. 17. dolomiticus. Attems. 1. glyptocephalus. Chamberlin. 16. § Also described in N, 2, i, No. 6951.

# Myriopoda.

PLATYDESMUS [Diplopoda]. marmoreus. Pocock. 35. mesomelas. Pocock. 35. perpictus. Pocock. 35. LITHOBIUS [Chilopoda]. - intrepidus : sicula n. subsp. Attems. 1. – latus. Attems. 1. - liber. Lignau. 28. triangulifer. Pocock. 35. - mediterraneus. Chalande. Polybunobolus n. gen. [Diplopoda]. Pocock. 34. 14. mesechinus. Chamberlin. 17. pantokratoris. Attems. 1. POLYDESMUS [Diplopoda]. pitophilus. Chamberlin. 17. podokes. Attems. 1. remez. Chamberlin. 17. ------- klisurensis. Verhoeff. 45. montenegrinus. Attems. 1. ponticus. Lignau. 28. sastianus. Chamberlin. 17. RHINOCRICUS [Diplopoda] sierravagus. Chamberlin. — biolleyi. Brölemann. 8. 17. goeldii. Brölemann. 9. rehemens. Lignau. 28. insulus. Brölemann. 9. transversalis. Brölemann, 7. LYSIOPETALUM [Diplopoda]. camaldulense. Attems. 1. SCHENDYLA [Chilopoda]. hamatum. Attems. 1. isotropum. Attems. 1. ----- carniolensis. Verhoeff. 44. gounellei. Brölemann. 7. pedefissum. Verhoeff. 45. maroccana, Attems. 2. Maoriella n. gen. [Chilopoda]. Attems. SCHIZOPHYLLUM [Diplopoda]. 2 diplurum. Attems. 1. tetuanum. Attems. 1. aucklandica. Attems. 2. macrostigma. Attems. 2. SCOLOPENDRELLA [Symphyla]. Mongoliulus n. gen. [Diplopoda]. antennata. Hansen. 23. brevipes. Hansen. 23. Pocock. 34. NANNOLENE [Diplopoda]. neotropica. Hansen. 23. ----- nigrescens. Attems. 1. pusilla. Hansen. 23. silvestrii. Hansen. 23. OBOBAINOSOMA [Diplopoda]. simplex. Hansen. 23. cyanopidum. Attems. 1. subnuda. Hansen. 23. texana. Hansen. 23. OBPHNAEUS [Chilopoda]. - bohlsi. Attems. 2. rulgaris. Hansen. 23. SCUTIGERELLA [Symphyla]. OTOSTIGMA [Chilopoda]. angulosa. Hansen. 23. armata. Hansen. 23. bürgeri. Attems. 1. \_\_\_\_\_ michaelseni. Attems. 1. ealdaria. Hansen. 23. capensis. Hansen. 23. chilensis. Hansen. 23. rlatei. Attems. 1. PACHYIULUS [Diplopoda]. continentalis. Attems. 1. crassicornis. Hansen. 23. insularis : penicillata n. orientalis. Hansen. 23. pauperata. Hansen. 23. sbsp. Attems. 1. PARATULUS [Diplopoda]. plebeia. Hansen. 23. — amulensis. Pocock. 35. unguiculata. Hansen. 23. aztecus. Pocock. 35. neomexicanus. Chamberlin. 16. cornuta. Pocock. 35. oregonensis. Attems. 1. globiceps. Pocock. 35. PECTINIUNGUIS [Chilopoda]. SIPHONOTUS [Diplopoda]. europaeus. Attems. 2. - brevicornis. Pocock. 34. plusiodontus. Attems. 2. SPIROBOLELLUS [Diplopoda]. PLATYDESNUS [Diplopoda]. - cruentatus. Brölemann. 9. ----- analis. Pocock. 35. ----- hirudo. Pocock. 35. SPIROBOLUS [Diplopoda]. lineatus. Pocock. 35. ——— bulbiferus. Attems. 1.

SPIROSTREPTUS [Diplopoda].	
boyoricus. Attems. 1	· jaranicum. Attems. 1.
coalitus. Attems. 1.	pallipes: werneri n. subsp.
collectivus. Attems.	
coniferus. Attems. 1 deserticola. Bröleman	werneri var. mag-
gounellei. Brölemann.	
immanis. Attems. 1.	ucerneri var. tenuis
mölleri. Attems. 1.	n. var. Attems. 1.
pseudo - fuscipes.	Bröle- — pustulatum. Brölemann. 7.
mann. 9.	trichonotum. Attems. 1.
tjisaroanus. Attems.	1 tropiferum. Attems. 1.
STRONGVLOSONA [Diplopoda].	
cyprium. Verhoeff. 4	
italicum var. punica r	n. var. vernoen. 45.
Attems. 1.	nivicomes. Vernoeii. 45.

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3603-3631.

# APTERA (or APTERY-GOGENEA). ANOPLURA. MALLOPHAGA.

#### TITLES.

Ågren, Hugo. Zur Kenntniss der Apterygoten - Fauna Süd - Schwedens. Stettiner ent. Ztg, **64**, 1903, (113–176, mit 1 Taf.). [3627 da 3631]. 1

Axelson, Walter M. Beiträge zur Kentniss der Collembolen-Fauna Sibiriens. Helsingfors, Öfvers. F. Vet. Soc., 45, [No. 20], 1902–1903, (1–13, mit 1 Taf.). [3631 3627 ea]. 2

Banks, Nathan. New Smynthuridae from the District of Columbia. Washington, D.C., Proc. Ent. Soc., 5, 1903. (154-155). [3627 gh 3631]. 3

Bekker, E. E. Beiträge zur Kenntnis der vergleichenden Anatomie der Kopfdrüsen bei den Collembolen (Russ.) Moskva, Dnevn. Zool. Otd. Imp. Obšć. liub. jest., III, 5, 1903, (1-19, mit 1 Taf.). 35 cm. [3607 3631]. 4

**Börner**, C[arl]. Neue altweltliche Collembolen, nebst Bemerkungen zur Systematik der Isotominen und Entomobryinen. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (129-182, mit 1 Taf.). [3631]. 5

**Carl**, J[oh]. Sur un organe embryonnaire chez un collembole. Arch. Sci. Phys., Genève, (sér. 4), **16**, 1903, (601– 604). [3607 3631]. 6

Carriker, M. A., jun. Mallophaga from birds of Costa Rica, Central America. Lincoln, Nebr., Univ. Stud., 38, 1903, (123-197, with pl.). [3627 hb 3631 5803 5827 hb 5831]. 7

# THY SANOPTERA (or PHYSOPODA). SIPHONAPTERA (or

# APHANIPTERA).

**Cary**, L. R. The grass thrips (Anaphothrips striata]. Agric. Exp. Sta., Maine, Orono, Bull. No. **83**, 1902, (95-128, with 7 pls.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., **14**, 1902, (373). [3603 3631]. 8

Cholodkovaky, N[ikolaj]. Zur Morphologie der Pediculiden. Zool. Anz., Leipzig, 27, 1903, (120-125). [3607 3631]. 9

**Davenport**, C[harles] B[enedict]. The Collembola of Cold Spring Beach [Long Island], with special reference to the movements of the *Poduridae*. Brooklyn, N.Y., Inst. Arts. Sci. Cold Spring Harbor Monog., No. **2**, 1903, (32, with pl.). 25 cm. [3619 3631]. 10

Enderlein, Günther. Die Landarthropoden der von der Tiefsee-Expeditior besuchten antarktischen Inseln. I. Die Insekten und Arachnoideen der Kerguelen. II. Die Landarthropoden der antarktischen Inseln St. Paul und Neu-Amsterdam. (Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition, Bd 3, Lfg 7). Jena, 1903, (197-270, mit 10 Taf.). 35 cm. [2427 oc mb 2431 3631 4231 4431]. 11

**Escherich**, K[arl]. Beiträge zur Kenntnis der Thysanuren. Reihe I. Zool. Anz., Leipzig, **26**, 1903, (345-366). [3619 3631 4619]. 12

**Galli-Valerio**, B. The part played by the fleas of rats and mice in the transmission of bubonic plagues. J. trop. Med., London, **5**, 1903, (33-35). [0060 3619]. 13 Guthrie, Joseph E. The Collembola of Minnesota. (Geological and natural history survey of Minnesota. Zoological series IV. Edited by Henry F. Nachtrieb). Minneapolis, 1903, (VI-110, with pl.). 23.8 cm. [3627 gi 3631]. 14

Kellogg, Vernon L[yman]. Two new genera of Mallophaga [Philoceanus n. gen. (from Procellaria tethys) and Nesiotinus n. gen. (from Aptenodytes longirostris)]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (85-91, with text-fig.). [3631]. 15

Kohant, R. Ueber die Flöhe Ungarns. (Ungarisch) Allatt Közlem., Budapest, 2, 1903 (25-46, 53-68, mit 7 Taf.) [3627 dk 3631].

Lécallion, A. Sur la disposition, la structure et le fonctionnement de l'appareil reproducteur mâle des collemboles. Paris, Bul. soc. philom., (sér. 9), 4, 1902, (99-103). [3607 3611 3631]. 16

Leonardi, Gustavo. Danni causati dalla Ileliothrips haemorroidalis agli agrumi. Bollettino di Entomologia agraria, Padova, 9, 1902, (241-244). [3603 3631]. 17

Ladwig, Fr. Ein neues Thysanopterocecidium, verursacht durch Phloeothrips tepperi Uzel n. sp. Gers, Jahresber. Ges. Natw., **43**-45, (1900-1902), 1903, (85). [3631 3603]. 18

Morse, Max. Synopsis of North American invertebrates. 19. The Trichodectidae. Amer. Nat., Boston, Mass., 37, 1903, (609-624). [0227 g 3627 g 3631]. 19

Neumann, L. G. Deux nouvelles Pédiculines. [*Haematopinus praecisus* non *praecitus*]. (Note rectificative). Arch. parasit., Paris, **6**, 1902, (144, av. fig.). [3631]. 20

Nuttall, G. H. F. Note on the supposed transmission of plague by fless and of relapsing fever by bed-bugs. J. trop. Med., London, **5**, 1903, (65). [0060 3603 3631]. 21

**Bainbow**, W. J. Notes on fleas parasitic on the tiger cat. Sydney, N.S.W., Rec. Austr. Mus., **5**, 1903, (53-55). [3631]. 22

**Ribaga**, Constantino. I principali insetti dell'ordine dei Fisapodi dannosi alle piante coltivate. Bollettino di Entomologia agraria, Padova, 9, 1902, (169-177, 193-205, 227-235). [3603 3631]. 23 Aptera, etc.

the Daleian collection. Ent. Mag., London, **39**, 1903, (144–146). [3631]. 25

A new British flea: Ceratophyllus dalei n. sp. Entomologist, London, **36**, 1903, (297, pl. V). [3627 de 3631]. 26

A collection of fleas received from Baron Carlo von Erlanger and Mr. Oscar Neumann. Nov. Zool., Tring, **10**, 1903, (312-315). [3631]. 27

Further contributions to the knowledge of the Siphonaptera. Nov. Zool., Tring, **10**, 1903, (317-325, pls. IX, X). [3631]. 28

A new British flea: Ccratophyllus londiniensis. Ent. Rec., London, 15, 1903, (64, 65). [3627 de 3631]. 29

A new British flea: Typhloceras poppei Wagner. Ent. Rec., London, 15, 1903, (196, pl. IX). [3627 de 3631]. 30

Ceratophyllus fringillae, Walker. Ent. Rec., London, 15, 1903, (308-309, pl. XV). [3631]. 31

**Sainte-Olaire Deville**, J. Exploration entomologique des grottes des Alpes-Maritimes. Ann. Soc. ent., Paris, **71**, 1902, [1903], (695-709, av. fig.). [2427 df 2431 2631 3031 3431 3631 3831 4831]. 32

**Seaton**, Frances. The compound eyes of *Machilis*. Amer. Nat., Boston, Mass., **87**, 1903, (319-329, with pl.). [3607 3631]. 33

**Swenk**, Myron H. A synopsis of the North American species of Japyz. [United States and Mexico.] New York, N.Y., J. Ent. Soc., 11, 1903, (129–132). [3627 gf ha 3631]. 34

Tiraboschi, Carlo. Beitrag zur Kenntnis der Pestepidemiologie. Ratten, Mäuse und ihre Ektoparasiten. Vorläufige Mitteilung. Arch. Hyg., München, 46, 1903, (251-263). [3603 3631 6031]. 35

Ulrich, Carl Jost. A contribution to the subterranean fauna of Texas. [Arthropoda, with nn. spp. in Crustacea Arachnida and Aptera.] Contributions from the Zoological Laboratory of the Indian University No. **34** in Lincoln Nebr., Trans. Amer. Microsc. Soc., **23**, 1901, [1902], (83-100, with pl.). [0219 2427 gi 2631 3031 3631]. 35

Verhoeff, Karl W. Ueber die Endsegmente des Körpers der Chilopoden, Dermapteren und Japygiden und zur Systematik von *Japyz*. Halle, Nova Acta Loop., 81, 1903, (257-298, mit 2 Taf.). [2407 3631]. 37

Volgts, Hans. Beitrag zur Collembolenfauna von Bremen. Bremen, Abh. natw. Ver., 17, 1903, (283-289). [3627 dc 3631]. 38

wagner, Jul. Notice on insects with a double receptaculum seminis. Zool. Anz., Leipzig, 27, 1903, (148–150). [3607]. 39

La chasse des Aphaniptères. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (68-69). [3603]. 40

Notice sur le genre Vermipeylla et sur la fam. des Vermipeyllidae Wagn. (Russ.). Rev. Russ. Ent., Jaroslavlí, 3, 1903, (294-296). [3631]. 41

Notice sur les espèces voisines de Pulez pallidus Tasch. (Russ.) Rev. Russ. Eut., Jaroslavlí, **3**, 1903, (308-310). [3631]. 42

Aphanipterologische Studien V. Ueber den gegenseitigen Bezug der Gruppen Aphaniptera und der Säugetiere und über die Einteilung der Gattung Typhlogeylla Tasch. St. Peterlurg, Hor. Soc. Ent. Ross., **36**, 1903, (125-156, Taf. II). [3607 3619 3631 6019]. 43

Beiträge zur Kenntniss der Vogelpuliciden. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (278-293, Taf., III, IV). [3631]. 44

Willem, Victor. L'influence de la lumière sur la pigmentation de *Isotomu tenebricola*. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (193-196). [0223 3611 3631]. 45

Les collemboles recueillis par l'expédition antarctique belge. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (260-262). [3631]. 46

Les rapports d'Actaletes avec les autres collemtoles. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (11-12). [3631]. 47 48

#### 3603 COMPREHENSIVE AND GENERAL WORKS.

#### GENERAL.

Nuttall, G. H. F. Note on the supposed transmission of plague by fleas and of relapsing fever by bed-bugs. J. trop. Med., London, 5, 1903, (65).

Wagner, J. La chasse des Aphanipterès. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (68-69).

#### ECONOMICS.

Cary, L. R. The grass thrips [Anaphothrips striata]. Agric. Exp. Sta., Maine, Orono, Bull. No. 83, 1902, (95-123, with 7 pls.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1902, (373).

Leonardi, Gustave. Danni causati dalla Heliothripa haemorroidalis agli agrumi. Bollettino di Entomologia agraria, Padova, 9, 1902, (241-244).

Ludwig, Fr. Ein neues Thysanopterocecidium, verursacht durch Phloeothrips tepperi Uzel. n. sp. Gera, Jahresber. Ges. Natw., 43-45, (1900-1902), 1903, (85).

**Ribaga**, Constantino. I principali insetti dell'ordine dei Fisapodi dannosi alle piante coltivate. Bollettino di Entomologia agraria, Padova, **9**, 1902, (169-177, 193-205, 227-235).

Tiraboschi, Carlo. Beitrag zur Kenntnis der Pestepidemiologie. Ratten, Mäuse und ihre Ektoparasiten. Vorläufige Mitteilung. Arch. Hyg., München, 46, 1903, (251-263).

#### 3607 STRUCTURE.

#### GENERAL.

Cholodkovaky, N[ikolaj]. Zur Morphologie der Pediculiden. Zool. Anz., Leipzig, 27, 1903, (120-125).

#### SENSE ORGANS.

**Seaton**, Frances. The compound eyes of *Machilis*. Amer. Nat., Boston, Mass., **37**, 1903, (319-329, with pl.).

#### SPECIAL GLANDS.

Better, Ernest Egorovič. Beiträge zur Kenntnis der vergleichenden Anatomie der Kopfdrüsen bei den Collembolen. (Russ.) Moskva, Dnevn., Zool. Otd. Imp. Oběč. líub. jest., III, 5, 1903, (1-19, mit 1 Taf.). 35 cm.

#### REPRODUCTIVE ORGANS.

**Lécaillon**, A. Sur la disposition, la structure et le fonctionnement de l'appareil reproducteur mâle des collemboles. Paris, Bul. soc. philom., (cér. 9), 4, 1902, (99-103).

Wagner, Jul. Aphanipterologische Studien. V. St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (125-156, Taf. II).

#### RUDIMENTARY ORGANS AND ORGANS OF UNCERTAIN NATURE.

**Carl**, J[oh.]. Sur un organe embryonnaire chez un collembole. Arch. Sci. Phys., Genève, (sér. 4), **16**, 1903, (601-604).

#### 3611 PHYSIOLOGY.

#### GENERATIVE ORGANS.

**Lécallion**, A. Sur la disposition, la structure et le fonctionnement de l'appareil reproducteur mâle des collemboles. Paris, Bul. soc. philom., (sér. 9), **4**, 1902, (99-103).

#### ENVIRONMENTAL EFFECTS.

Willem, Victor. L'influence de la lumière sur la pigmentation de *Isotoma tenebricola*. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (193-196).

#### 3619 ETHOLOGY.

#### HABITS.

**Davenport**, C[harles] B[enedict]. The Collembola of Cold Spring Beach [Long Island], with special reference to the movements of the *Poduridae*. Brooklyn, N.Y., Inst. Arts Sci. Cold Spring Harbor Monog., No. **2**, 1903, (32, with pl.). 25 cm.

#### SYMBIOSIS.

**Escherich**, K[arl]. Beiträge zur Kenntnis der Thysanuren. Reihe I. Zool. Anz., Leipzig, **26**, 1903, (345– 366).

#### PARASITISM.

**Galli-Valerio**, B. The part played by the fleas of rats and mice in the transmission of bubonic plagues. J. trop. Med., London, **5**, 1903, (33-35).

Wagner, Jul. Aphanipterologische Studien. V. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (125-156, Taf. II).

#### 3627 GEOGRAPHICAL DISTRIBUTION.

d EUROPE.

da SCANDINAVIA.

Ägren, Hugo. Zur Kenntniss der Apteryg.ten - Fauna Süd - Schwedens. Stettiner ent. Ztg, 64, 1903, (113-176, mit 1 Taf.).

#### de GERMAN EMPIRE.

Volgts, Hans. Beitrag zur Collembolenfauna von Bremen. Bremen, Abh. natw. Ver., 17, 1903, (283-289).

#### de BRITISH ISLANDS.

Rothschild, Hon. N. C. A new British flea; Ceratophyllus dalei n. sp. Entomologist, London, **36**, 1903, (297, pl. V).

------ A new British fles: Ceratophyllus londiniensis. Ent. Rec., London, 15, 1903, (64-65).

A new British flea: Typhloceras poppei Wagner. l.c. (196, pl. IX).

#### dk AUSTRIA-HUNGARY.

Kohaut, R. Ueber die Flöhe Ungarns. (Ungarisch) Allatt Közlem, Budapest, 2, 1903, (25-46, 53-68, mit 7 Taf.).

#### db RUSSIA IN EUROPE.

Lignau, N. Die Myriopoden der Pontusküsten des Caucasus. (Russ.) Odessa, Ann. Soc. Nat., **25**, Liefg 1, 1903, (82-125), deutsches Rés., (126-148, Taf. I-II).

#### df FRANCE.

**Chalande**, Jules. Contribution à la faune des Myriapodes de France. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (221).

#### dh ITALY.

Verhoeff, Karl W. Ueber Diplopoden. 1. Aufsatz: Formen aus Tirol, Italien und Cypern. 2. Aufs.: Griechische Tausendfüssler. Arch. Natg., Berlin, 68. Bd 1, 1902, (175-198, mit 2 Taf.); 69. Bd 1, 1903, (135-154, mit 2 Taf.).

#### di Switzerland.

**Paes**, H[enri]. Myriopodes du Valais. Lausanne, Bul. Soc. Sci. Nat., **38**, 1902, (XXXV-XXXVI); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (73-74).

La faune myriopodique du Valais. Aarau, Verh. Schweiz Natf. Ges., 85, 1902, (80-81); Arch. Sci. Phys., Genève, (sér. 4), 14, 1902, (554-556).

Myriopodes du Valais (Vallée du Rhône et vallées latérales). Rev. Suisse Zool., Genève, **10**, 1902, (31-164, av. 3 pl.).

Bothenbühler, H. Zur Myriopodenfauna der Schweiz. II. Beitrag: Myriopoden des bündnerischen Rheingebietes. *i.e.* (549-561).

### dk AUSTRIA-HUNGARY.

Verhoeff, Karl W. Ueber Diplopoden. 1. Aufsatz: Formen aus Tirol, İtalien und Cypern. 2. Aufs.: Griechische Tausendfüssler. Arch. Natg., Berlin, 68, Bd 1, 1902, (175-198, mit 1 Taf.); 69, Bd 1, 1903, (135-154, mit 2 Taf.).

Chilopoden von Südsteiermark, Krain und Kroatien. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (90-93).

(n 2-9053)

#### dl BALKAN PENINSULA.

Verhoeff, Karl W. Ueber Diplopoden. 1. Aufsatz: Formen aus Tirol, İtalien und Cypern. 2. Aufs.: Griechische Tausendfüssler. Arch. Natg., Berlin, 63, Bd 1, 1902, (175–198, mit 1 Tat.); 69, Bd 1, 1903, (135–154, mit 2 Taf.).

ε ΛSIA.

Carl, Joh. Exotische Polydesmiden. Rev. Suisse Zool., Genève, 10, 1902, (563-679).

eg MALAY PENINSULA.

Carl, Joh. Exotische Polydesmiden. Rev. Suisse Zool., Genève, 10, 1902, (563-679).

- f AFRICA.
- f EAST AFRICA.

**Pococir**, R. I. Myriapoda. In Nat. Hist. Sokotra. Special. Bull. Liverp. Mus.

g NORTH ANERICA.

Carl, Joh. Exotische Polydesmiden. Rev. Suisse Zool., Genève, 10, 1902, (563-679).

gi WESTERN UNITED STATES.

**Chamberlin**, Ralph V. Myriopods from Beulah, New Mexico. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (35-40).

------ New Lithobii from California and Oregon. *l.c.* (152-160).

Ilenicops dolichopus, a new Chilopod from Utah. Smithsonian Inst., Nation. Mus. Proc., 24, 1902, (797-800).

#### h CENTRAL AND SOUTH AMERICA.

Carl, J[oh.]. Revision amerikanischer Polydesmiden. Rev. Suisse Zool., Genève, 11, 1903, (543-562, av. 2 pls.).

#### hb CENTRAL AMERICA.

**Pocock**, R. I. Class Diplopoda. Biol. Centr. Amer., London, **1903**, (41-56, pls. IV, V, 3 figs. in text).

2 E 2

Bekker, E. E. . . . vergleichende Anatomie der Kopfdrüsen bei den Collembolen. (Russ.) Moskva, Dnevn. Zool. Otd. Imp. Obšč. l'ub. jest., III, 5, 1903, (1-19, mit 1 Taf.).

**Carl**, J. Un organe embryonnaire. Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (601-604).

**Davenport**, C. B. The Collembola of Cold Spring Beach [Long Island], with special reference to the movements of the *Poduridas*. Brooklyn, N.Y., Inst. Arts Sci Cold Spring Harbor Monog. No. 2, 1903, (32, with pl.).

Guthrie, Joseph E. The Collembola of Minnesota. (Geological and natural history survey of Minnesota. Zoological series IV. Edited by Henry F. Nachtrieb. Minneapolis, 1903, (vi + 110, with pl.).

Lécallion, A. Sur la disposition, la structure et le fonctionnement de l'appareil reproducteur mâle des collemboles. Paris, Bul. soc. philoun., (sér. 9), 4, 1902, (09-103).

Voigts, H. Beitrag zur Collembolenfauna von Bremen. Bremen, Abh. natw. Ver., 17, 1903, (283-289).

**Willem**, V. La position des Anurophoriens dans la classification des collemboles. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (21-23).

#### SPECIAL.

Achorutes reuteri n. nom. = A. manubrialis Reut. Ågren, H. Stettiner ent. Ztg, 64, 1903, (113-176, mit 1 Taf.).

Achorutoïdes n. gen., A. antarcticus n. sp. **Willem**, V. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (260).

Actaletes, anatomy, peculiarities. Willem, V. l.c. 46, 1902, (11-12).

Anurophorus isotoma n. sp. Börner, C. Berlin, SitzBer. Ges. Natf. Freunde, 1903, (138).

Cryptopygus n. gen., C. antarticus n. sp. Willem, V. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (261).

Cyphoderus heymonsi n. sp. Börner, C. Berlin, SitzBer. Ges. natf. Freunde, 1903, (158).

Dicyrtoma frontalis n. sp. District of Columbia. Banks, N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (154-155).

Entomobrya nn. spp. Guthrie, J. E. The Collembola of Minnesota. Minneapolis, 1903, (73-75).

*comosa* n. sp. Börner, C. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (145).

Friesia caldaria n. sp. Guthrie, J. E. The Collembola of Minnesota. Minneapolis, 1903, (95).

decemoculata n. sp. Börner, C. Berlin, SitzBer. Ges. natf. Freunde, 1903, (134).

Heteromurus nn. spp. Börner, C. l.c. (156).

Isotoma nn. spp. Börner, C. l.c. (140-142).

nn. spp. Guthrie, J. E. The Collembola of Minnesota. Minneapolis, 1903, (63-72).

börneri n. sp. Antarktisches Gebiet. Enderlein, G. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition, Bd 3, Lfg 7, Jena, 1903, (239).

V. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (262).

*poppiusi* n. sp. Siberia. **Axelson**, W. M. Helsingfors, Ofvers. F. Vet. Soc., **45**, [No. 20], 1902–1903, (1-13).

*tenebricola*, l'influence de la lumière sur la pigmentation. **Willem**, V. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (193-196).

Lepidocyrtus nn. spp. Börner, C. Berlin, SitzBer. Ges. natf. Freunde, 1903, (149–154).

nn. spp. **Guthrie**, J. E. The Collembola of Minnesota. Minnespolis, 1903, (86-89).

Megalothorax incertue n. sp. Börner, C. Berlin, SitzBer. Ges. natf. Freunde, 1903, (160).

Neanura nn. spp. Börner, C. l.c. (135-136).

guadrioculata n. sp. Guthrie, J. E. The Collembola of Minnesota. Minneapolis, 1903, (101).

Onychiurus pseudinermis n. sp. Börner, C. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (132). Orchesella nn. spp. Guthrie, J. E. The Collembola of Minnesots. Minneapolis, 1903, (61).

Paronella fuelleborni n. sp. Börner, C. Berlin, SitzBer. Ges. natf. Freunde, 1903, (143).

Pentapleotoma (Uzelia) n. gen., P. dahli n. sp. Börner, C. l.c. (137).

Podura lamelligera n. sp. Börner, C. I.c. (143).

Pseudachorutes palmiensis n. sp. Börner, C. l.c. (133).

Pseudosinella voigtsi n. sp. Bremen. Börner, C. in Voigts, H. Bremen, Abh. natw. Ver., 17, 1903, (285).

Sira flava n. sp. **Ågren**, H. Stettiner ent. Ztg, **64**, 1903, (157).

Sminthurides nn. spp. Börner, C. *l.c.* (160-161).

Sminthurus nn. spp. Börner, C. l.c. (164-165).

nn. spp. District of Columbia. Banks, N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (154-155).

nn. spp. Guthrie, J. E. The Collembola of Minnesota. Minneapolis, 1903, (50-52).

H. Stettiner ent. Ztg, **64**, 1903, (163).

Xenylla nn. spp. Börner, C. Berlin, SitzBer. Ges. natf. Freunde, 1903, (130).

J. E. The Collembola of Minnesota. Minneapolis, 1903, (95).

#### ANOPLURA.

Cholodkovsky, N. Zur Morphologie der Pediculiden. Zool. Anz., Leipzig, 27, 1903, (120-125).

#### SPECIAL.

Haematopinus praecisus non praecitus. Neumann, L. G. Arch. parasit., Paris, 6, 1902, (144, av. fig.).

(**x** 2-9053)

#### MALLOPHAGA.

#### GENEBAL.

Carriker, M. A., jun. Mallophaga from birds of Costa Rica, Central America. Lincoln, Nebr., Univ. Stud., 3, 1903, (123-197, with pl.).

Morse, M. Synopsis of North American invertebrates. 19. The *Trichodectidae*. Amer. Nat., Boston, Mass., 37, 1903, (609-624). Separate 24 cm. (Contributions from the Department of Zoology and Entomology of the Ohio State University No. 12).

#### SPECIAL.

Colpocephalum nn. spp. Carriker. M. A., jun. Lincoln, Nebr., Univ. Stud., 3, 1903, (123-197).

Decophorus nn. sp. **Carriker**, M. A., jun. l.c. (123-197).

Goniocotes eurysema n. sp. Carriker, M. A., jun. l.c. (123-197, with pl.).

Goniodes nn. spp. Carriker, M. A., jun. l.c. (123-197, with pl.).

Kelloggia n. gen., K. brevipes n. sp. Carriker, M. A., jun. l.c. (123-197, with pl.).

Laemobothrium nn. spp. Carriker, M. A., jun. l.c. (123-197, with pl.).

Lipeurus postemarginatus n. sp., L. longipes var. tinami n. var. Carriker, M. A., jun. l.c. (123-197, with pl.).

Menopon nn. spp. et nn. varr. Carriker, M. A. jun. l.c. (123-197).

Nesiotinus n. gen., N. demersa n. sp. **Kellogg**, V. L. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **5**, 1903, (85-91, with text-fig.).

Nirmus nn. spp. et nn. varr. Carriker, M. A., jun. Lincoln, Nebr., Univ. Stud., 3, 1903, (123-197, with pl.).

Nitzschia nn. spp. Carriker, M. A. jun. l.c. (123-197).

Ornicholax n. gen., O. robustus n. sp. Carriker, M. A., jun. l.c. (123-197, with pl.).

Philoceanus n. gen., P. becki n. sp. **Kellogg**, V. L. Wood's Holl., Mass., Mar. Biol. Lab. Bull., **5**, 1903, (85-91, with text-fig.). Physostomum nn. spp. Carriker, M. A. jun. Lincoln, Nebr., Univ. Stud., 3, 1903, (123-197, with pl.).

#### THYSANOPTERA.

#### GENERAL.

**Ribaga**, C. I principali insetti dell' ordine dei Fisapodi dannosi alle piante coltivate. Bollettino di Entomologia agraria, Padova, **9**, 1902, (169-177, 193-205, 227-235).

#### SPECIAL.

Anaphothripe striata. Cary, L. R. Agric. Exp. Sta., Maine, Orono, Bull. No. 83, 1902, (95-128, with 7 pls.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1902, (373).

Heliothripe haemorroidalis, danni [da essa] causati agli agrumi. Leonardi, G. Bollettino di Entomologia agraria, Padova, 9, 1902, (241-244).

Phloeothrips tepperi Uzel. Ludwig, F. Gera, Jahresber. Ges. Natw., 43-45, (1900-1902), 1903, (85).

#### SIPHONAPTERA.

#### GENERAL.

Kohaut, R. Ueber die Flöhe Ungarns. (Ungarisch) Allatt. Közlem., Budapest, 2, 1903, (25-46, 53-68, mit 7 Taf.).

Nuttall, G. H. F. Note on the supposed transmission of plague by fleas and of relapsing fever by bed-bugs. J. trop. Med., London, 5, 1903, (65).

Rainbow, W. J. . . Fleas parasitic on the tiger cat. Sydney, N.S.W., Rec. Austr. Mus., 5, 1903, (53-55).

Rothschild, N. C. Types of Siphonapters in the Daleian collection. Ent. Mag., London, **39**, 1903, (144-146).

Wagner, Jul. Beiträge zur Kenntniss der Vogelpuliciden. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (278-293, Taf. III, IV).

#### SI'ECIAL.

Ciratophyllus nn. spp. aus Vögel. Wagner, J. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (278-293, Taf. III, IV). Ceratophyllus dalein.sp. Rothschild, Hon. N. C. Entomologist, London, 36, 1903, (297-298).

fringillae Walker. Rothschild, N. C. Ent. Rec., London, 15, 1903, (308-309, pl. XV).

----- londiniensis n. sp. Bothschild, N. C. l.c. (64-65).

*terribilis* n. sp. Canada. **Rothschild**, N. C. Nov. Zool., Tring, **10**, 1903, (317–318, pl. IX).

Ceratopsylla nn. spp. Rothschild, N. C. l.c. (321-325, pl. X).

acgyptius n. sp. Cairo. Rothschild, N. C. Ent. Mag., London, 39, 1903, (83–84, pl. I).

Hystrichopsylla tripectinata n. sp. Tiraboschi, C. Arch. Hyg., München, 46, 1903, (251-263).

Neopsylla n. gen. Wagner, J. St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (138).

Palaeopsylla n. gen. Wagner, J. l.e. (137).

Parapsyllus n. gen., for Pulez longicornis. Antarktisches Gebiet. Enderlein, G. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition, Bd 3, Lfg 7, Jena, 1903, (259).

Pulez nn. spp. East Africa. Rothschild, Hon. N. C. Nov. Zool., Tring, 10, 1903, (312-314, pl. V).

nn. spp. Egypt and Soudan. **Bothschild**, N. C. Ent. Mag., London, **39**, 1903, (84–87, pls. I– II).

*pallidus* Tasch., notice sur les espèces voisines; 2 nn. spp. (Russ.) Wegner, J. Rev. Russ. Ent., Jaroslavli, 3, 1903, (308-310).

Stephanocircus nn. spp. Rothschild, N. C. Nov. Zool, Tring, 10, 1903, (318-319, pl. IX).

*Typhloceras* n. gen., *T. poppei* n. sp. **Wagner**, J. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (152–154).

poppei Wagner, new to Britain. Rothschild, N. C. Ent. Rec., London, 15, 1903, (196-197, pl. IX).

Typhlopsylla Einteilung; T. proxima n. sp. Wirt Crocidura aranea. Wagner, J. St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (141-147). Vermipsylla Schimk. and fam. Vermipsyllidae Wagn., notice. (Russ.) Wagner, J. Rev. Russ. Ent., Jaroslavli, 8, 1903, (294-296).

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#### LIST OF NEW GENERA AND SPECIES.

	_
ACHORUTES [Collembola].	
reuteri n. nom. Agren. 1.	0
Achorutoides n. gen. [Collembola]. Willem. 46.	G
Willem. 46.	
antarcticus. Willem. 46.	
ANUROPHORUS [Collembola].	
ieotoma. Börner. 5.	Н
CERATOPHYLLUS [Siphonapters]. ————————————————————————————————————	-
dalei. Rothschild. 26. londiniensis. Rothschild. 29.	н
oligochaetus. Wagner. 44.	
musicus. Wagner. 44.	
<ul> <li>oligochaetus. Wagner. 44.</li> <li>rusticus. Wagner. 44.</li> <li>spinosus. Wagner. 44.</li> <li>terribilis. Rothschild. 28.</li> <li>CERATOPSYLLA [Siphonaptera].</li> </ul>	Is
terribilia, Rothschild, 28,	-
Conservation [Sinkersenters]	-
CERATOPSYLLA [Siphonaptera].	
aegyptius. Rothschild. 24. eaminae. Rothschild. 28.	~
distinctus. Rothschild. 28.	-
fosteri Rothschild, 28.	_
fosteri. Rothschild. 28. insignis. Rothschild. 28.	_
martialis. Rothschild. 28. reductus. Rothschild. 28.	-
reductus. Rothschild. 28.	
wolffsohni. Rothschild. 28.	т
COLPOCEPHALUM [Mallophaga].	J
extraneum. Carriker. 7.	_
extraneum. Carriker. 7. 	_
luroris. Carriker. 7.	
mirabile. Carriker. 7.	
osborni var. costaricensc	K
n. var. Carriker. 7.	
Cryptopygus n. gen. [Collembola].	_
Willem, 40.	L
<i> antarcticus.</i> Willem. 46.	-
CYPHODERUS [Collembola].	-
heymonsi, Börner. 5.	L
DECOPHORUS [Mallophaga].	
brunneri Carriker, 7.	_
cancellosus. Carriker. 7.	
— platystoma var. umorosus n.	_
var. Carriker. 7.	-
transversifrons. Carriker. 7.	
underwoodi. Carriker. 7.	
DICYBTOMA [Collembola].	_
frontalis. Banks. 3.	L
ENTOMOBRYA [Collembola].	_
bicolor. Guthrie. 14.	-
comosa. Börner. 5.	-
clitellaria. Guthrie. 14.	
(n <b>2-90</b> 53)	

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FRIESIA IC	ollembola].
	caldaria. Guthrie. 14.
	decemoculata. Börner. 5.
GONIOCOTE	[Mallophaga].
	eurysema. Carriker. 7.
	-
GONIODES	Mallophaga]. aberrans. Carriker. 7.
	aberrans. Carriker. 7. minutus. Carriker. 7.
GRASSIELLI	[Thysanura]. dilatata. Escherich. 12.
	uana. Escherich. 12.
	nana. Escherich. 12. pallens. Escherich. 12.
Trento	
HETERONUL	us [Collembola]. caerulescens. Börner. 5.
	tetrophthalmus. Börner. 5.
Umania	PSYLLA [Siphonaptera].
	tripectinata. Tiraboschi. 35.
T	-
ISOTOMA [C	Collembola]. <i>Agreni</i> . Börner. 5.
	bidenticula. Guthrie. 14. börneri. Enderlein. 11. caeruleara. Guthrie. 14.
	börneri. Enderlein. 11.
<del>~ `````````````````````````````````</del>	caeruleara. Guthrie. 14.
	catena. Guthrie. 14.
	minima. Guthrie. 14. muskegis. Guthrie. 14.
<u> </u>	octo-oculata. Willem. 46.
	poppiusi. Axelson. 2.
JAPYX [Co	llembola]. chilensis. Verhoeff. 37. minimus. Swenk. 34.
	chilensis. Verhoeff. 37.
	minimus. Swenk. 34. novaezeelandiae. Verhoeff.
	27
Kelloggia	n. gen. [Mallophaga]. Carriker. 7.
	Carriker. 7.
	breripes. Carriker. 7.
LAEMOBOTH	RIUM [Mallophaga].
	delogramma, Carriker. 7.
	oligothriz. Carriker. 7.
LEPIDOCYR	rus [Collembola].
	aenescens. Guthrie. 14.
	annulicornis. Börner. 5. decemoculatus. Guthrie. 14.
<del></del>	decemoculatus. Gutarie. 14. domesticus Börner. 5.
	fallax Börner, 5.
	flavovirens. Börner. 5.
	flavorirens. Börner. 5. nyassicus. Börner. 5.
	sexoculatus. Guthrie. 14.
Lepisma [A	ptera].
	braunsi. Escherich. 12.
<del></del>	elegans. Escherich. 12. emiliae. Escherich. 12. 12.
	braunsi. Escherich. 12. elegans. Escherich. 12. emiliae. Escherich. 12. indica. Escherich. 12.
	$\frac{1}{2}$

3631	436	
LIFEURUS [Mallophaga].	Ornicholaz	
longipes var. tinami n. var. Carriker. 7.		
postemarginatus. Carriker. 7.	Paleeopsyl	
MEGALOTHORAX [Collembola]. ————————————————————————————————————	Parapsyllt	
MENOPON [Mallophaga].		
difficile. Carriker. 7.	PARONELLA	
——————————————————————————————————————		
macrocybe. Carriker. 7.	Pentapleo	
ortalidis. Carriker. 7.	Letterhioo	
—— palloris. Carriker. 7.		
praecursor var. meridionale		
n. var. Carriker. 7.	Philoceant	

stenodesmum. Carriker. 7. thoracicum var. fuscum n. var. Carriker. 7. - var. majus n. var. Carriker. 7. tilyrus. Carriker. 7.

- tridens var. costaricense n. var. Carriket. 7.
- NEANURA [Collembola].

#### pseudomuscorum. Börner, 5. quadrioculata. Guthrie. 14. verrucosa. Börner. 5.

- n. gen. [Aphaniptera]. Neopsylla. Wagner. 43.
- n. gen. [Mallopha Kellogg. 15. demersa. Kellogg. 15. Nesiotinus [Mallophaga].
- NICOLETIA [Aptera].
- texensis, Ulrich. 36.
- NIRMUS [Mallophaga]. brachythorax var. ptilicgonis n. var. Carriker. 7. caligincus. Carriker. 7. francisi. Carriker. 7. fuscus var. epustulatus n. var. Carriker. 7. hastiformis. Carriker. 7. melanococcus. Carriker. 7. parabolocybe. Carriker. 7. pseudophaeus. Carriker. 7.
- rhamphasti. Carriker. 7.
- NITZSCHIA [Mallophaga]. bruneri. Carriker. 7. var. meridionalis n. var. Carriker. 7.
- **ONTCHIURUS** [Collembola]. - pseudinermis. Börner. 5. ORCHESELLA [Collembola]. ----- albosa. Guthrie 14. - zebra. Guthrie. 14.

- Aptera. etc.
- [Mallophaga]. x n. gen. [ Carriker. 7. robustus. Carriker. 7.
- 11a n. gen. [Aphaniptera]. Wagner. 43.
- us n. gen. [Aphaniptera]. Enderlein. 11.
- [Collembola]. fuelleborni. Börner. 5.
- tama n. gen. [Collembola]. Börner. 5. dahli. Börner. 5.
- us n. gen. [Mallophage]. Kellog. 15. becki. Kellogg. 15. oceanus
- Physostomum [Mallophaga]. doratophorum. Carriker. 7. jiminezi. Carriker. 7.
  - leptosomum. Carriker.
  - subangulatum. Carriker. 7.
- PODURA [Collembola].
- lamelligera. Börner. 5.
- PSEUDACHORUTES [Collembola]. - palmiensis. Börner. 5.
- PSEUDOSINELLA [Collembola].
- roigtei. Börner. 336.
- - chephrenis. Rothschild. 24.

  - cleoratras. Rothschild. 24. conformis. Wagner. 42. gerbilli. Wagner. 42. isidis. Rothschild. 27. nubicus. Rothschild. 24.
  - regis. Rothschild. 27.
  - witherbyi. Rothschild. 24.

SIRA [Collembola].

- flava. Ågren. 1. —— flava. Ågren. 1. —— villosa. Börner. 5.

SMINTHURIDES [Collembola].

hystrix. Börner. 5. inaequalis. Börner. 5.

SMINTHURUS [Collembola].

- currisetis. Guthrie. 14. erinaceus. Börner. 5. facialis. Banks. 3.
- friedlaenderi. Börner. 5.
- longisetis. Guthrie. 14.
- minnesotensis. Guthrie. 14.
  - repandus. Agren. 1. trilineatus. Banks. 3.

STEPHANOCI	BCUS [Siph	onaptera].	
	minerva.	onaptera]. Rothschild	. 28.
	thoma <b>si</b> .	Rothschild.	28.
Typhlocers	us n. ger Wagner	n. [Siphons r. 43.	ptera]
<u> </u>	poppei.	Wagner. 43	3.
TYPHLOPSYI	LLA [Siphor	aptera].	

------ proxima. Waguer. 43.

AENTLIA [COHEMDOIA].			
	gracilis.		
	schillei.	Börner.	5.
	tallbergi.	Börner.	5.

# 3903-3831 ORTHOPTERA, NEUROPTERA AND TRICHOPTERA.

#### TITLES.

Adelung, N. N. Blattodées (Orthoptera) rapportées par M. le capitaine G. W. Kochovski de l'Abyssinie méridionale et des contrées limitrophes en 1898. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (300-337, Taf. XX). [3827 3831]. 1

Agnus, Al. N. Description d'un Névroptère fossile nouveau (*Homoioptera* gigantea). Naturaliste, Paris, (sér. 2), 25, 1903, (53-55, av. fig.). [3831]. 2

Antony, Maude H. v. Needham, James J.

Banks, Nathan. Notes on Brachynemuri of the B. ferox group. Washington, D.C., Proc. Ent. Soc., 5, 1903, (173-178, with 1 pl.). [3831]. 3

 Neuropteroid insects from

 Arizona.
 Washington, D.C., Proc. Ent.

 Soc., 5, 1903, (237-245, with pl.).
 [3827 gi 3831].

A revision of the Nearctic Chrysopidae [with bibliography]. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., 29, 1903, (137-162, with pl.). [3827 g 3831]. 5

A new species of Brachynemurus. Philadelphia, Pa., Ent. Nows Acad. Nat. Sci., 13, 1902, (86). [3831]. 6

A new species of Habrophlebia. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (235). [3831]. Banks, Nathan. [Troctes needhami and T. bicolor Enderlein synonyms of T. niger and T. bicolor Banks.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (241). [3831]. 8

New name for Dictyopteryx Pictet [Perlodes]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (241). [3831]. 9

Some new Neuropteroid insects. New York, N.Y., J. Ent. Soc., **11**, 1903, (236-243). [3831]. 10

Bentivogilo, [T.]. Sul valore sistematico delle varietà della specie *Platyenemis pennipes* Pall. (Sunto). Mon. zool. ital., Firenze, **13**, 1902, (Supplemento), (22). [3331]. 11

Berlese, Antonio. La grillotalpa ed il modo seguito per combatterla a Nola. Bollettino di Entomologia agraria, Padova, 9, 1902, (104-116, 128-140, 150-159, 185-189). [3831]. 12

Berry, Edward W. New or hitherto unknown Ephemerid nymphs of the eastern United States. [New Jersey.] Amer. Nat., Boston, Mass., **37**, 1903, (25-31). [3827 gg 3831]. 13

Beutenmüller, William. A new katydid [*Cyrtophyllus floridensis* n. sp.] from Florida. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (637– 638). [3827 gh 3831]. 14

Bianchi, V. L. v. Jacobson, G. G.

**signell**, [Preservation of dragonflies]. Ent. Mag., London, **39**, 1903, (151). [3803]. 15

Blatchley, W[illis] S[tanley]. The Orthoptera of Indiana. An illustrated descriptive catalogue of the species known to occur in the state, with bibliography, synonymy and descriptions of new species. Indiana, Rep. Dept. Geol. Nat. Res., Indianapolis, 27, 1902, [1903], (123-471, with pl.). [3827 gg 383]. 16

Boltvar, Ignacio. Contributions à l'étude des Mecopodinae. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (167-178). [3827 ia 3831]. 17

Borg, Hjalmar. Annotations on Swedish Neuroptera. (Norw.) Entomol. Tidskr., Stockholm, 22, 1901, (175–176). [3827 da 3831]. 18

Borgogno, C. Un combat singulier. Moineau contre sauterelle verte. Nantes, Bul. Soc. Sci. Nat., (Sér. 2, 3), 13, 1903, (III). [3819 3831 5819 5831]. 19

Brauner, A. Notices sur divers Odonates. (Russ.) Rev. Russ. Ent., Jaroslavlí, 3, 1903, (89–91). [3827 db 3831]. 20

Brimley, C. S. List of dragonflies (Odonata) from North Carolina, especially from the vicinity of Raleigh. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (150–157). [3827 gh 3831].

Telagrion daeckii (Odonata) at Raleigh, North Carolina. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (335-336). [3827 gh 3831]. 22

Brockhausen, H. Ueber den Ohrwurm. Münster, Jahresber. ProvVer. Wiss., 29, (1900–1901), 1901, (31–32). [3831]. 23

Brown, H. H. Butterflies and dragonflies in Banffshire. Ann. Scot. Nat. Hist., Edinburgh, 1903, (247). [3827 de 4427 de]. 24

Bruner, Laurence. Directions for collecting, preparing and preserving specimens of Orthopters for the cabinet. [Reprint from Special Bulletin No. 2 from the Department of Entomology in the University of Nebraska.] J. Appl. Microsc., Rochester, N.Y., 6, 1903, (2374-2379). [3803]. 25

Grasshopper notes for 1901. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 38, 1902, (39-49). [3827 gi 3831]. 26

Killing destructive locusts with fungous diseases. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (50-61). [3803 3831]. 27

Bugnion, E. Observation relative à un cas de mimétisme. (Blepharis mendica). Lausanne, Bul. Soc. Sci. Nat., (sér. 4), 39, 1903, (385–388, 1 pl.); Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (342–344). [3823 3831]. 28

Burr, M. Notes on the Forficularia. VII. Some hitherto unpublished descriptions of new species, by the late M. Auguste de Bormans. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (231-241, 265-270). VIII. Five new species from the de Bormans collection. *l.e.* (270-276). [3831]. 30 Burr, M. Wingless Forficula auricularia. Ent. Rec., London, 15, 1903, (254). [3823 3831]. 31

Orthoptera in the Isle of Wight. Ent. Rec., London, 15, 1903, (254-257). [3827 de]. 32

[The use of earwig forceps]-Ent. Rec., London, **15**, 1903, (262). [3819]. 33

Synopsis of the Orthoptera of W. Europe. Ent. Rec., London, 15, 1903, (314-319 (still incomplete)). [3827 d 3831]. 34

Orthoptera. Nat. Hist. Sokotra, (411–426, pl. XXV). [3827 ff 3831]. 35

------ Orthoptera-Fauna of the Maldive and Leccadive Islands, 1, (234-236). [3827 ma 3831]. 36

Calvert, P[hilip] P[owell]. Neuroptera --Odonata [from Beulah, New Mexico]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902, (42-43). [3827 gi 3831]. 37

Variation in Hetaerina titia Drury (Odonata). Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (192-193). [3323 3831]. 38

Additions to the Odonata of New Jersey, with descriptions of two new species (in *Telegrion* and *Somatochlora*). Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, [[33]–41, with pl.). [3827 gg 3831]. 40

[Lestes eurinus Say to be added to New Jersey lists of Odonata]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (158). [3827 gg 3831]. 42

[Spiders as enemies of dragonflies.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (161-162). [3819 3831]. 43

On some American Gomphinae (Odonata). Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (183-192, with pl.). [3827 h 3831]. 44 **Galvert**, P[hilip] P[owell]. [Note on Maryland Odonata, with paper by F. Ris]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (219-220). [3827 gh 3831]. 45

Distribution of New York dragon flies [Odonata]; additional data. Albany Univ., N.Y., Bull. St. Mus., No. **63**, 1903, (276-279). [3827 gg 3831]. 46

On Gomphus fraternus, externus and crassus (Order Odonata). Philadeiphia, Pa., Ent. News, Acad. Nat. Sci., 12, 1901, ([65]-73, with pl.); [reprint], Philadelphia, Cont. Zool. Lab. Univ. Pa., 1901, 1902, ([65]-73, with pl.). [3831]. 47

Neuroptera, Odonata. Biol. Centr.-Amer., London, **1903**, (129-144, pl. V). [3831]. 48

--- v. Ris. F.

**Gaudell**, Andrew Nolson. Notes on Orthoptera from Colorado, New Mexico, Arizona, and Texas, with descriptions of new species. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (775–809, with 1 pl.). [3827 gi 3831].

The Phasmidae or walkingsticks of the United States. Washington, D.C., Smithsonian Inst., Nation. Mns. Proc., 26, 1903, (863-885, with 4 pls.). [3827 gf 3831]. 50

 Some new or unrecorded

 Orthopters from Arizona.
 Washington,

 D.C., Proc. Ent. Soc., 5, 1903, (162–

 166).
 [3827 gi 3831].

Motes on the nomenclature of *Blattidae*. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (232–235). [3831].

Motes on the Orthoptera of Bermuda with the description of a new species [Gryllus bermudensis n. sp.]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (329-331). [3827 la 3831]. 53

A greedy insect. [Mantid]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (60). [3819 3831]. 54

Note on Phasmidae. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (314–316). [3831]. 55

Child, C. M. and Young, A. N. Regeneration of the appendages in nymphs of the Agrionidae. Arch. EntwMech., Leipzig, 15, 1903, (543-602, mit 3 Taf.). [3811]. 56

**Clément**, A. L. Le criquet marbré. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (97-98, av. fig.). [3831 3819 3815]. 57

Cockerell, T[heodore] D[ru] A[lison]. Notes on the Orthopteran genus Leprus. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (305-307). [3831]. 58

**Conklin**, Edwin G[rant]. Amitosis in the egg follicle cells of the cricket. [*Gryllus*] [with bibliography]. Amer. Nat., Boston, Mass., **37**, 1903, (667–675). [3815 3831]. 59

**Gurrie**, Rolla P. Myrmeleonidae from Arizona. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (272-284). [3827 gi 3831]. 60

The Odonata collected by Messrs. Schwarz and Barber in Arizona and New Mexico. Washington, D.C. Proc. Ent. Soc., 5, 1903, (298-303). [3827 gi 3831]. 61

Davis, K. C. Sialididae of North and South America [with bibliography]. Albany, Univ. N.Y., Bull. St. Mus., No. 63, 1903, (442–499, with pl.). [3827 gh 3831]. 62

**Dobson**, H. T. Emergence of Aeschna grandis. Entomologist, London, **36**, 1903, (253–254). [3815 3831]. 63

Du Buysson, R. Catalogue des orthoptères locustides des collections du Muséum (1<sup>re</sup> liste). Bul. Muséum, Paris, 1903, (225-227). [3831]. 64

Eaton, A. E. A new species of Ephemeridae from Norway. Ent. Mag., London, 39, 1903, (30). [3827 da 3831]. 65

Enderlein, Günther. Ueber die Morphologie, Gruppierung und systematische Stellung der Corrodentien. Zool. Anz., Leipzig, **26**, 1903, (423-437). [3831 3807]. 66

Ein neuer Copeognathentypus, zugleich ein neuer deutschen Wohnungsschädling. Zool. Anz., Leipzig, **27**, 1903, (76). [3831 3819]. 67

Ueber die Stellung von Leptella Reut. und Reuterella nov. gen., die Vertreter zweier neuer europäischer Copeognathensubfamilien. Zool. Anz., Leipzig, **27**, 1903, (131–134). [3831]. Enderlein, Günther. Zur Kenntniss amerikanischer Psociden. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (351-364, mit 2 Taf.). [3827 g 3831]. 69

Zur Kenntnis europäischer Psociden. Zool Jahrb., Jena, Abt. f. Syst., **18**, 1903, (365–382, mit 1 Taf.). [3831 3827*d*]. 70

Neue Copeognathen aus Kamerun. Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (1-8, mit 1 Taf.). [3827 fd 3831]. 71

Micropsocus musae (Kunstler et Chaine), eine vermeintliche Gallmücke (*Kiefferia musae* n. g. n. sp. Kunstler et Chaine 1902). Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (288-292). [3831 4231]. 72

Die Copeognathen des Indo-australischen Faunengebietes. Budapest, Ann. Hist.-Nat Mus. Nat. Hung., 1, 1903, (179-344, mit Taf. III-XIV, und 12 text-fig.). [3807 3827 ef eg i 3831]. 73

Pinot, A. Sur le genre Euthymia de la tribu des Acridiidae, famille des Acridiodea, ordre des insectes orthoptères. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, (620-636, av. fig.). [3831]. **74** 

Förster, F. Ueber die Formen der Aeschnidengattung Jagoria Karsch. Insektenbörse, Leipzig, **20**, 1903, (245). [3831]. 75

Neotropische Libellen. Insektenhörse, Leipzig, **20**, 1903, (355– 356). [3827 h 3831]. 76

Odonaten aus Neu-Guinen. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (508-554). [3827 ia 3831]. 77

Forbes, H. O. Pseudo-neuroptera. Nat. Hist. Sokotra, (397). [3827 ff 3831]. 78

**Pröhlich.** Ueber das Vorkommen von Pachytylus cinerascens Fieb. und anderer Insekten bei Kahl am Main. Berliner Ent. Zs., **48**, 1903, (146–148). [2427 de 3831]. 79

**Pröhlich**, Carl. Die Odonaten und Orthopteren Deutschlands mit besonderer Berücksichtigung der bei Aschaffenburg vorkommenden Arten, nach der analyt. Methode beab. IV. Mitteilung des naturwissenschaftlichen Vereins zu Aschaffenburg, hrsg. zur Feier seines 25-jährigen Bestehens. Jena (G. Fischer), **1903**, (VI + 106, mit 6 Taf.). 23 cm. 4 M. [3827 de 3831]. 80

**Progratt**, Walter W. Notes on the genus *Psychopsis* Newman, with descriptions of new species. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (453-456, with 1 pl.). [3831].

The white ant city, a nature study. Agric. Gaz., Sydney, N.S.W., 14, 1903, (726-730, with 1 pl. and text-figs.). [3819 3831]. 82

Locusts and grasshoppers. Part I. Agric. Gaz., Sydney, N.S.W., 14, 1903, (1102-1110, with 1 pl.). [3819]. 83

Gentil. Note sur la présence du Bacillus gallicus Charp. au Mans. Mans (le), Bul. soc. agricult. sci., (sér. 2), 30, 1901-1902, (425-426). [3827 df 383]]. 84

Giard, A. La ponte des Libellules du genre Lestas. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (189-192). [3819 3831]. 85

Graf, J. L. Additions to the above list [with a list of the dragon-flies observed in western Pennsylvania, by E. B. Williamson]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (113-114). [3827 gg 3831]. 86

Gross, J. Ueber das Palmén'sche Organ der Ephemeriden. Zool. Jahrb., Jena, Abt. f. Anat., 19, 1903, (91-106, mit 1 Taf.). [3807 3831]. 87

Grünberg, Karl. Zur Kenntniss der Odonatenfauna des ost-afrikanischen Seengebiets. Ergebnisse der Nyassa-See und Kinga-Gebirgs-Expedition der Hermann und Elice geb. Heckmann-Wentzel-Stiftung. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (695-726). [3827 **ff** 3831]. 88

Neue Odonaten aus dem Njassa-Gebiet, gesammelt von Dr. Fülleborn. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (230-237). [3827 ff 3831]. 89

Hancock, J. L. The genus Phyllonotus [renamed Phyllotettiz]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1903, (188). [3831]. 90

Heath, Harold. The habits of California termites. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (47-63). [3819 3827 gi 3831]. 91 Herbig, Conrad. Anatomie und Histologie des tibialen Gehörapparates von Gryllus domesticus. Arch. mikr. Anat., Bonn, 61, 1903, (697-729, mit 2 Taf.). [3807 3831]. 92

Higgins, Helen T. The development and comparative structure of the gizzard in the Odonata Zygoptera. [Thesis] . . B.S. . . University of Pennsylvania . . 1900]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 53, 1901, (126-141, with pl.): [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, ([126]-141, with pl.). [3807 3815 3831]. 93

Hindse, B. K. Zur Orthopterenfauna des Gouvernements Uja. (Russ.) Moskva, Trd. kruž. izel. russ. prir., 1, 1903, (107-110). [3827 db]. 94

Hoag, M. E. [Lestes uncatus Kirby in Iowa]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 13, 1902, (88-89). [3827 gi 3831]. 95

Jacobson, G. G. and Bianchi, V. L. Orthoptera and Pseudoneuroptera des russischen Reiches und der angrenzenden Gebiete, nach Dr. R. Tümpel's: Die Geradflügler Mitteleuropas. (Russ.) Lief. V. St. Peterburg, 1903, (353-432, mit Taf. 18-21). 28 cm. [3803 3827 db]. 96

Jacot, [E.]. Les sauterelles. Dissertation entomologique. Messager Suisse Rom., Fribourg, 16, 1903, (76, 116–117). [3803 3831]. 97

Jakovlev, V. E. Une nouvelle espèce du genre Parameles Sauss. de la Crimée. (Russ.) Rev. Russ. Ent., Jaroslavlí, 3, 1903, (41-43, av. 2 figs.). [3831]. 98

Kempny, Peter. Nachtrag zur Perliden-Fauna Norwegens. Wien, Verh. ZoolBot. Ges., 51, 1901, (788-791). [3827 da 3831]. 99

Kirby, W. F. Notes on Forficulidae, with descriptions of new species in the collection of the Natural History Museum, South Kensington. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (60-68). [3831]. 100

Notes on Blattidae, &c., with descriptions of new genera and species in the collection of the British Museum, South Kensington. No. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (404-415); II. *ib.*, 12, 1903, (273-280); III, *ib.*, (373-381). [3831]. 101 ------ Planipennia. Nat. Hist. Socotra, (404-405). [2827 ff 3831]. 103

**Elapálek**, F. Ueber die Morphologie der Genitalsegmente und Genitalanhänge bei den Trichopteren I. Die Familien *Rhyacophidae*, *Philopotanuilae*, und *Hydroptylidae*. (Böhmisch) Prag, Rozpr. Céské Ak. Frant. Jos., **11**, 1902, No. 35, (39, 2 Taf.). [3807 3331] 104

die Morphologie der Körperringe und Geschlechtsanhäuge bei Trichopteren. 1. Deskript. Teil. Familien Hydropsychidae, Molannidae, Leptoceridae, Phryganaeidae, Sericostomatidae, Limnophilidae. 11. Vergleich. Teil. (Böhmisch) Prag, Rozpr. Cöské Ak. Frant. Jos., 12, 1903, Nr. 43, (62, 2 Taf.). [3807 3831]. 105

**Erause**, Ernst. Die Elefanten-Heuschrecke. Prometheus, Berlin, **14**, 1903, (665–668). [3831]. 106

**Erauss**, Hermann August. Orthopteren aus Australien und dem malayischen Archipel, gesammelt von Professor Dr. Richard Semon. Jena, Denkschr. med. Ges., **8**, 1903, (743-770, mit Taf.). [3831 3827 i eq]. 107

Beitrag zur Kenntnis der Orthopteren Deutsch - Südwestafrikas. Wien, Verh. ZoolBot. Ges., **51**, 1901, (281-293). [3819 3827 fg 3831]. 108

Krausse, Anton H. Zwei neue Phaneropteriden. Insektenbörse, Leipzig, 20, 1903, (308-309). [3831]. 109

De Phaneropteridarum Br. novis speciebus quinque. Insektenbörse, Leipzig, 20, 1903, (372-373). [3831]. 110

Zwei neue Phaneropteridenspezies. Insektenbörse, Leipzig, **20**, 1903, (395). [3831]. 111

**Krejči**, August. Nachträge zur "Übersicht der böhmischen Orthopteren" v. J. 1896. Prag, SitzBer. Ges. Wiss., **1903**, Nr. 23, (2). [3827 dk]. 112

Krüger, L. Die Arten der Odonnten-Gattung Neurothemis. Stettiner ent. Ztg, 64, 1903, (248-291). [3831]. 113

Küster, Hermann. Die Uebertragung bakterieller Infektionen durch Insekten. Centralbl. Bakt., Jena, Abt. 1, 33, Referate, 1903, (90-94). [3819 3831]. 114

A new species of Embia Latz from the Crimea. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (208-210). [3831]. 116

Laidlaw, F. F. Odonata. Part I. [in] Fascic. Malay. Zool., 1, (185–200). Includes some notes by Dr. F. Förster. [3827 eg 3831]. 117

Lauterborn, Robert. Tracheenkiemen an den Beinen einer Perliden-Larve (Taeniopteryx nebulosa L.). Zool. Anz., Leipzig, **26**, 1903, (637–642). [3831 3807]. 118

und **Eimsky-Korsakow**, M. Eine merkwürdige Hydroptiliden-Larve (Ithytrichia lamellaris Eaton). Zool. Anz., Leipzig, **28**, 1903, (280–288). [3831 3807]. 119

Loir, A. La destruction des termites. Paris, C.-R. Acad. sci., **136**, 1903, (1290-1291). [3819 3831]. 120

Ludwig, F[riedrich]. Zwei neue Pflanzenschädlinge unserer Gewächshäuser und Gärten. [Japanische Heuschrecken u. Amseln.] Zs. Pflanzenkrankh., Stuttgart, **13**, 1903, (210-213). [3831 3819 5831 5819]. 121

McClendon, J. F. The larvae of Myrmeleon texanus Banks and M. rusticus Hagen. [Contributions from the Zoological laboratory of the University of Texas. No. 33]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (209-213, with 1 pl.). [3831 3815]. 122

The life history of Ulula hyalina Latreille. Austin, Cont. Zool. Lab. Univ. Tex., No. 27; Amer. Nat. Boston, Mass., 36, 1902, (421-429). [3815 3831]. 123

McLachlan, R. An annotated list of Odonata collected in West Central Spain, by Dr. T. A. Chapman and Mr. G. C. Champion in June and July, 1902. Ent. Mag., London, **39**, 1903, (7-9). [3827 dg 3831]. 124

sense) collected by the Rev. A. E. Eaton in South Norway in July, 1902, with synonymic and other notes. Ent. Mag., London, **39**, 1903, (32-35). [3803 3827 da]. 126

McLachlan, R. Hemianax ephippiger, Burm., taken at Devonport in February. Ent. Mag., London, **39**, 1903, (96). [3831]. 127

------- Amphibiotica. Nat. Hist. Sokotra, (398-403, pls. XXIV, XXIVA). [3827 ff 3831]. 128

Machon. Acridiens de l'Argentine. Arch. Sci. Phys., Genève, (sér. 4), 15. 1903, (571). [3827 hi 3831]. 129

Marchal. Les criquets en 1901. Autun, Bul. soc. sci. nat., 15, 1902, (Proc.-verb. 28-30). [3819 3831]. 130

Une remarquable éclosion d'Ephémères. Autun, Bul. soc. sci. nat., 15, 1902, (Proc.-verb. 260-262). [3819 3831]. 131

Marlatt, C[harles] L[ester]. The white ant (*Termes flavipes* Koll.) Revised reprint from Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 4, (70-76); Washington, D.C., Cir. U. S. Dept. Agric. Div. Ent., (Ser. 2), No. 50, 1902, (8). [3819 3831].

Cockroaches. [Periplaneta and Ectobia]. Revised reprint from Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 4, (84-95); Washington, D.C., Cir. U. S. Dept. Agric. Div. Ent., (Ser. 2), No. 51, 1902, (15). 23.4 cm. [3819 3831]. 133

Martynov, Andrej. Die Entstehung der peritrophen Hüllen bei den Larven der Trichopteren. (Russ.) Moekvs, Dnevn. Zool. Otd. Imp. Obšč. liub. jest., III, 5, 1903, (20-24, mit 1 Taf.). 35 cm. [3815 3811]. 134

Melander, Axel Leonard. Notes on the structure and development of *Embia texana*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (99-118). [3815 3831]. 135

Some additions to the Carboniferous terrestrial Arthropod fauna of Illinois. Chicago, Ill., J. Geol. Univ. Chic., 11, 1903, (178-198, with pl.). [2427 gg 3031 3831]. 136

Monti, Rina. Contributo alla conoscenza della Dolichopoda geniculata (O. G. Costa). Nota 1. Milano, Rend. Ist lomb., (Ser. 2), 35, (fasc. 12), 1902, (470-491, con. tav.). [3831]. 137 Morgan, H. A. The differential grasshopper [Melanoplus differentialis] in the Mississippi delta---other common species. Washington, D.C., Bull, U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 30, 1901, (7-33). [3819 3827 gh gi 3831]. 138

Morton, F. Notes sur l'élevage des Phyllies. Lausanne, Bull. Soc. Sci. Nat. (sér. 4), 39, 1903, (401-407, 1 pl.); Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (748-750). [3819 3831]. 139

Namiye, [Motoyoshi]: Odonata of Prov. Tosa. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (297). [3827 ec 3831]. 140

Plates IX-XIII illustrating Japanese Odonata. Dobuts. Z., Tokyo, 15, 1903. [3831]. 141

Meedham, James G. A genealogic study of dragon-fly wing venation. Thesis. . Ph. D. . . Cornell. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (703-764, with 24 pls.). [3823 3831]. 142

A new genus and species of dragon-fly [Cyanocharis valga n. gen. and sp.] from Brazil. Washington, D.C., Proc. Biol. Soc., 16, 1903, (55-58). Separate 23.3 cm. [3827 hl 3831].

143 Hagenia brevistylus]. Philadelphia, Pa., Ent. News. Acad. Nat. Sci., 14, 1903, (159). [3827 gg 3831]. 144

Food of brook trout [Salmo fontinalis] in Bone pond. [Species of Chironomidae, Ephemeridae and Trichoptera]. Albany, Univ. N. Y., Bull. St. Mus., No. 68, 1903, (204-217, with pl.). [3831 4231 5419 5431]. 145

Life histories of Odonata, Suborder Zygoptera, Damsel flies. Albany Univ., N. Y., Bull. St. Mus., No. **68**, 1903, (218-276, with pl.). [3815 3831]. 146

Remarks on Hydroptilid larvae and their metamorphosis. Zool. Anz., Leipzig, 27, 1903, (108-110). [3815 3831]. 147

\_\_\_\_\_ and Antony, Maude H. The skewness of the thorax in the Odonata. New York, N.Y., J. Ent. Soc., 11, 1903, (117-125, with 1 pl.). [3807 3823 3831]. 148 Phillips, J. L. Notes on Melanoplus femoratus. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (87). [3831]. 149

Pierantoni, U. Nuovo contributo alla conoscenza del sistema nervoso stomatogastrico degli Ortotteri. Napoli, Boll. Soc. Nat., 15, (1901), 1902, (54-60, con. tav.). [3807 3831]. 150

Poche, Franz. Entgegnung [betr. Krauss' Bearbeitung der Hemimeriden]. Zool. Anz., Leipzig, **26**, 1903, (229–230). [3831].

Zur Nomenclatur der Orthopteren, nebst einigen allgemein nomenclatorischen Bemerkungen in Hinsicht auf die neuen internationalen Nomenclaturregeln. Zool. Anz., Leipzig, 26, 1903, (233-241). [0070 3803]. 152

Behn, James A. G. On the genus Phrynotettix Glover (Haldemanella Auct.). Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (595-598). [3831]. 153

Contributions toward a knowledge of the Orthopters of Japan and Korea. I. Aerididae. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (629-637). [3827 eb ec 3831]. 154

Notes on the Orthoptera of New Mexico and Western Texas. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903,] (717-727). [3827 gi 3831]. 155

A revision of the Orthopterous genus Homoeogamia. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (177-192). [3831]. 156

<u>Forficulidas.</u> Studies in American Forficulidas. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (299–312). [3831]. 157

Orthoptera [from Beulah, New Mexico]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902, (41-42). [3827 gi 3831]. 158

Notes on West Indian Orthopters, with a list of the species known from the island of Porto Rico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (129-136). [3827 he 3831]. Rehn, James A. G. Studies in American Blattidae. Philadelphia, Pa., Acad. Nat-Sci. Trans. Amer. Ent. Soc., 29, 1903, (259-290). [3527 gh 3831]. 160

A new Aptenopedes from Florida. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (14). [3827 gh 3831]. 161

[Pairing of] Schistocerea alutacea and rubiginosa. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (89). [3819 3831]. 162

Nomenclatural notes on two genera of Orthoptera. [Blatta and Acrydium]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (101-102). [3831]. 163

Two new species of N. American Stenopelmatinae. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (240-241). [3827 gf 3831]. 164

Records of New Jersey and Pennsylvania Orthoptera. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (309-316). [3827 gg 3831]. 165

Notes on some interesting species of *Forficulidae* and *Blattidae* from the eastern United States. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (125-126). [3827 gg gh 3831]. 166

A new genus of the orthopterous sub-family Phaneropterinae. [Alogopteron carribbeum n. gen. et sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (141-142). [3831]. 167

A new roach of the genus Ischnoptera from Florida. Philadelphia, Pa., Ent. News. Acad. Nat. Sci., **14**, 1903, (233-234). [3827 gh 3831]. 168

[Falcicula] of Gryllidae, with a note on the genus Aphonogryllus [re-named Aphonomorphus]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (258-260). [3831].

On two earwigs of the genus Labia from Costa Rica. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., **14**, 1003, (292-293). [3827 hb 3831]. 170

Notes and remarks on North American Blattidae, Mantidae and Phasmidae, with a catalogue of the Forficulidae, Blattidae, Mantidae and Phasmidae recorded from Texas. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (325-331). [3827 gi 3831]. 171

Rimsky-Korsakow, M. r. Lauterborn, Robert.

**Bis**, F. Note on a small collection of dragonfiles (Odonata) from Baltimore, Maryland [with note by Philip P. Calvert]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (216-220). [3827 gh 3831]. 172

Die schweizerischen Arten der Perliden-Gattung Nemura. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1902, (378-405, mit 6 pls.). [3827 di 3831]. 173

Vorweisung europäischer und amerikanischer Libellen. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1903, (436-443). [3827 3807 3831]. 174

------ Einiges ueber Kurzflügelige Perliden. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (443-446). [3831]. 175

Trichopteren des Cantons Tessin und angrenzender Gebiete. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **11**, 1903, (5–18, mit 1 pl.). [3827 di dh 3831]. 176

**Sainte-Claire Deville**, J. Exploration entomologique des grottes des Alpes-Maritimes. Ann. soc. ent., Paris, **71**, 1902, [1903], (695-709, av. fig.). [2431 2427 *df* 2631 3031 3431 3631 3831 4831]. 177

**Sajó**, Karl. Mimicry im Kreise der Wasserjungfern. Prometheus, Berlin, **14**, 1903, (733-734). [3819]. 178

Sander, L. Die Wanderheuschrecken und ihre Bekämpfung in unseren afrikanischen Kolonieen. Berlin, 1902, (554) [Review] by W. F. K., Nature, London, 67, (244). [3819 3831]. 179

Saussure, Henri de. Diagnosen von 4 neuen Gattungen der Eumastaciden (Orthoptera Acridoidea). Zool. Anz., Leipzig, 26, 1903, (412–415). [3831]. 180

Analecta Entomologica. II. Notice sur la tribu des Eumastaciens. Rev. Suisse Zool., Genève, **11**, 1903, (43-112, 1 pl.). [3827 fe 3831]. 181 Sellards, E. H. Some new structural characters of Paleozoic cockroaches [with description of *Megablattina beecheri* n. gen. et sp. from Illinois Coal Measures]. Amer. J. Sci., New Haven, Conn., (Ser. 4), 15, 1903, (307-315, with 2 pls.). [3831]. 182

Megablattina Sellards (non Brongniart) a correction. [Archoblattina n. nom.]. Amer. J. Sci., New Haven, Conn., (Ser. 4), 15, 1903, (488). [3831]. 183

Semenov, A. P. Les Dermatoptères du voyage de N. A. Zarudny dans la Perse orientale en 1900-1901. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (192-198). [3827 ch]. 184

Dermatoptera nova aut minus cognita. II. Rev. Russ. Ent., JaroslavII, **3**, 1903, (19-21). [3831].

Notices sur les Dermatoptères de la faune de la Russie I. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (196-199). [3827 db ea 3831]. 186

**sheldon**, John L. Cultures of *Empusa* [with bibliography]. J. Appl., Microsc., Rochester, N.Y., **6**, 1903, (2212-2220, with pl.). [3831]. 187

**Shelford**, R. Bionomical notes on some Bornean *Mantidae*. Zoologist, London, (Ser. 4), **7**, 1903, (293–304). [3819 3827 eg 3831]. 188

Silantjev, A. A. Capture d'un termite (Calotermes flavicollis, Fabr.) au Caucase. (Russ.) Rev. Russ. Ent., Jaroslavlí, 3, 1903, (29). [3827 db]. 189

**Stifvenius**, A[ntti] J[ohannes]. Uber im Wasser lebende Schmetterlinge und auf Land lebende Trichopteren. (Finnisch) Luonnon Ystävä, Helsingfors, **1903**, 6-8, (125-128). [4419 3819 4415 3831]. 190

**Silvestri**, Filippo. Intorno la società dei Termiti considerati in rapporto alla agricoltura e all'uomo. Bollettino di Entomologia agraria, Padova, **9**, 1902, (25-31). [3803 3831]. 191

**Simpson**, C. B. Photographing nests of *Hydropeyche*. Washington, D.C., **Proc.** Ent. Soc., **5**, 1903, (93-94, with figs. 4, 5). [3803 3831]. 192

(Limnsphilus indivisus Walker). Washington, D.C., Proc. Ent. Soc., 5, 1903, (98-100). [3831]. Notes on the internal anatomy of *Peranabrus scabricollis* (Thom.). New York, N.Y., J. Ent. Soc., **11**, 1903, (183-188, with 2 pls.). [3807 3831]. 195

**Speiser**, P[aul]. Kein neuer Typus von Hypermetamorphose! Zool. Anz., Leipzig, **26**, 1903, (515-516). [3815]. 196

**Stebbing**, E. P. Insect pests of the Sugar-cane in India. Calcutta, Ind. Mus. Notes, **5**, 1903, (64–91). [2419 3819 4019 4419 4619 4819]. 197

**Strand**, Embr. Trichoptera and Neuroptera-Planipennia collected in Norway. (Norw.) Entomol. Tidskr., Stockholm, **22**, 1901, (93-96). [3897 da 3831]. 198

**Struck**, Rudolf. Beiträge zur Kenntnis der Trichopterenlarven. Lübeck, Mitt. geogr. Ges., (2. Reihe), H. **17**, 1903, (41-124, mit 7 Taf.). [3807 3815]. 199

**Topper**, J. G. O. Notes and remarks on the described genera and species of the Australian and Polynesian *Phasmidae* or "spectre insects." Vict. Nat., Melbourne, **19**, 1903, (138-142). [3810 3827 *n* i 3831]. 200

Thienemann, A. Analkiemen bei den Larven von Glossosoma boltcni Cut. und einigen Hydropsychiden. Zool. Anz., Leipzig, **27**, 1903, (125–129). [3831 3807]. 201

Tschuproff, Helene. Ueber die Entwicklung der Keimblätter bei den Libellen. (Vorläuf. Mitt.) Zool. Anz., Leipzig, 27, 1903, (29–34). [3815]. 202

Tümpel, R. Die Geradflügler Mitteleuropas. [Umschlagtitel:] Beschreibung der bis jetzt bekannten Arten mit biolog. Mitteilungen, Bestimmungstabellen u. Anleitung für Samnler . . Eisenach (M. Wilckens) [corrig.: Leipzig (F. E. Perthes)], 1901, (IV + 308, mit 23 Taf.). 28 cm. Dazu Supplementlfg: Samulungs-Etiketten für Geradflügler. Ebenda (ohne Paginirung). [3803] 203 Ulmer, Georg. Weitere Beiträge zur Metamorphose der deutschen Trichopteren. Stettiner ent. Ztg, **64**, 1903, (179-226, mit 3 'Taf.). [3815 3831]. 204

Beiträge zur Metamorphose der deutschen Trichopteren. [Forts.] Allg. Zs. Ent., Neudamm, **8**, 1903, (11– 15, 70–73, 90–93, 209–211, 315–316). [3815 3831]. 205

Ueber das Vorkommen von Krallen an den Beinen einiger Trichopterenpuppen. Allg. Zs. Ent., Neudamm, 8, 1903, (261-265). [3807 3831]. 206

Zur Trichopteren - Fauna von Thüringen und Harz. (Mit Beschreibung einiger neuer Metamorphose-Stadien.) Allg. Zs. Ent., Neudamm, **8**, 1903, (341-350). [3827 de 3815 3831]. 207

Zur Trichopteren - Fauna von Hessen. Allg. Zs. Ent., Neudamm, 8, 1903, (397-406). [3827 dc 3831].

208

Deutsche Wasserinsekten und ihre Entwicklung. Aus d. Heimat, Stuttgart, 15, 1902, (33–48, 81–85). [3815]. 209

Verhoeff, Karl W. Ueber Dermapteren (2. Aufsatz : Neue ungeflügelte Eudermopteren - Gattungen). Berlin, SitzBer. Ges. natf. Freunde, **1902**, (7–18). [3831]. 210

Die verwandtschaftliche Stellung von Hemimerus. Berlin, Sitz-Ber. Ges. natf. Freunde, **1902**, (87–89). [3831]. 211

Vosseler, J[ulius]. Ueber einige Beobachtungen aus dem kleinasiatischen Insektenleben. Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (IC). [3819]. 212

Wadsworth, Mattie. Sixth addition to the list of dragonflies (Odonata) of Manchester, Kennebec county Maine. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 190?, (246-247). [3826 gg 3831]. 213

Weele, H. W. van der. Description of a new-genus and species of Holophthalmous Ascalaphidae. Leiden, Notes Mus. Jentink, 23, 1903, (234-236). [3827 hh 3831]. 214

Werner, Franz. Neue Locustiden aus Westasien. Zool. Anz., Leipzig, 26, 1903, (528-531). [3831]. 215 Werner, Franz. Die Orthopterenfauna von Pernitz. (Piestingthal, N-Oe.) Wien, JahrBer. Entom. Ver., 11, (1900), 1901, (103-108). [3827 dk]. 216

Westerlund, John Agardh. Pseudoneuroptera in the neighbourhood of Ronneby, (South Sweden). (Swedish) Entomol. Tidskr., Stockholm, **32**, 1901, (137-142). [3827 da 3831]. 217

Williams, C. E. Exhibition of living Gongylus gongyloides, a floral Mantis. Cambridge, Proc. Phil. Soc., 12, 1903, (279). [3819 3831]. 218

Williamson, E. B. A new species of Gomphus (Odonata) related to G. fraternus. Philadelphia, Pa., Ent. News Sci., 13, 1902, (47-49). [3831]. 219

A list of the dragonflies observed in western Pennsylvania [with Additions to the above list, by J. L. Graf]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (65-71, 108-114, with pl.). [3827 gg 3831]. 220

Dragonflies (Odonata) from the Magdalen islands. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (144-146). [3827 gd 3831]. 221

A proposed new genus [Coryphaeschina] of Odonata (dragonflies) of the subfamily Aeschniae, group Aeschna [with synopsis of three species of Coryphaeschna by Philip P. Calvert]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (2-10, with pl.). [3831]. 222

Spiders as enemies of dragonflies. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (160-161). [3819 3831]. 223

The dragonflies (Odonata) of Tennessee, with a few records for Virginia and Alabama. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (221-229). [3827 gh 3821]. 224

A hybrid dragonfly of the genus Gomphus (Odonata). Philadelphis, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (253-258). [3823 3831]. 225

Woodworth, C. W. Grasshoppers in California. Agric. Exp. Sts., California, Berkeley, Bull. No. 142, 1902, (36, with 17 figs.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sts. Rec., 14, 1903, (471-472). [3827 gi 3831]. 226 Xambeu. Instinct de la maternité chez le *Chelidura dilatata* Lafresnaye, orthoptère du groupe des Forficuliens. Naturaliste, Paris, (sér. 2), 25, 1903, (143-144). [3819 3831]. 227

Young, A. N. v. Child, C. M.

#### 3803 COMPREHENSIVE AND GENERAL WORKS.

#### GENERAL.

Jacobson, G. G. und Bianchi, V. L. Orthoptera und Pseudoneuroptera des russischen Reiches und der angrenzenden Gebiete; nach Dr. R. Tümpel's, Die Geradflügler Mitteleuropas. (Russ.) Lief. V. St. Peterburg, 1903, (353-432, mit Taf. 18-21). 28 cm.

Jacot. [E.] Les sauterelles. Dissertation entomologique. Messager Suisse Rom., Fribourg, **16**, 1903, (76, 116-117).

McLaohlan, R. Neuroptera (in the Linnean sense) collected by the Rev. A. E. Eaton in South Norway in July, 1902, with synonymic and other notes. Ent. Mag., London, **39**, 1903, (32-35).

**Poche**, Franz. Zur Nomenclatur der Orthopteren, nebst einigen allgemein nomenclatorischen Bemerkungen in Hinsicht auf die neuen internationalen Nomenclaturregeln. Zool. Anz., Leipzig, **26**, 1903, (233-241).

Tümpel, R. Die Geradflügler Mitteleuropas. [Umschlagtitel :] Beschreibung der bis jetzt bekannten Arten mit biolog. Mitteilungen, Bestimmungstabellen u. Anleitung für Sammler . . . Eisenach (M. Wilckens) [corrig.: Leipzig (F. E. Perthes)], 1901, (IV + 308, mit 23 Taf.). 28 cm. Dazu Supplementlfg: Sammlunge-Etiketten für Geradflügler. Ebenda (ohne Paginirung).

#### TECHNIQUE.

**Bignell.** [Preservation of dragonflies.] Ent. Mag., London, **39**, 1903, (151).

Bruner, L. Directions for collecting, preparing and preserving specimens of Orthoptera for the cabinet. [Reprint from Special Bulletin No. 2 from the Department of Entomology in the University of Nebraska]. J. Appl. Microsc., Rochester, N.Y., **6**, 1903, (2374-2379).

**Simpson**, C. B. Photographing nests of *Hydropsyche*. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (93-94, with figs. 4, 5).

#### Economics.

Berlese, Antonio. La grillotalpa ed il modo seguito per combatterla a Nola. Bollettino di Entomologia agraria, Padova, 9, 1902, (104-116, 128-140, 150-159, 185-189).

Bruner, Laurence. Killing destructive locusts with fungous diseases. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 38, 1902, (50-61).

**Silvestri**, Filippo. Intorno la società dei Termiti considerati in rapporto alla agricoltura e all'uomo. Bollettino di Entomologia agraria, Padova, **9**, 1902, (25-31).

#### 3807 STRUCTURE.

#### General.

Enderlein, Günther. Ueber die Morphologie, Gruppierung und systematische Stellung der Corrodentien. Zool. Anz., Leipzig, **26**, 1902, (423–437).

Lauterborn, R[obert] und Rimsky-Korsakow, M. Eine merkwürdige Hydroptiliden-Larve (Ithytrichia lamellaris Eaton). l.c. (280-288).

**Bis**, F. Vorweisung europäischer und amerikanischer Libellen. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (436-443).

**Snodgrass**, Robert E. Notes on the internal anatomy of *Peranabrus scabricollis* (Thom.). New York, N.Y., J. Ent. Soc., **11**, 1903, (183–188, with 2 pls.).

struck, Rudolf. Beiträge zur Kenntnis der Trichopterenlarven. Lübeck, Mitt. geogr. Ges., (2. Reihe), H. 17, 1903, (41-124, mit 7 Taf.).

# 3807

NERVOUS SYSTEM AND ORGANS OF SENSE.

Herbig, Conrad. Anatomie und Histologie des tibialen Gehörapparates von Gryllus domesticus. Arch. mikr. Anat., Bonn, 61, 1903, (697-729, mit 2 Taf.).

Pierantoni, U. Nuovo contributo alla conoscenza del sistema nervoso stomatogastrico degli Ortotteri. Napoli, Boll. Soc. Nat., **15**, (1901), 1902, (54-60, con tav.).

#### ALIMENTARY SYSTEM.

Higgins, Helen J. The development and comparative structure of the gizzard in the Odonata Zygoptera. [Thesis . . B.S. . University of Pennsylvania . . 1900]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 53, 1901, (126-141, with pl.); [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, ([126]-141, with pl.).

### CIECULATORY AND RESPIRATORY OBGANS.

Thienemann, A. Analkiemen bei den Larven von *Glossosoma boltoni* Curt. und einigen Hydropsychiden. Zool. Anz., Leipzig, **27**, 1903, (125-129).

### REPRODUCTIVE ORGANS.

**Elapalek**, F. Über die Morphologie der Genitalsegmente und Genitalanhänge bei den Trichopteren. I. Die Familien *Rhyacophalidae*, *Philopotamidae*, und *Hydroptylidae*. Prag, Rozpr. České Ak. Frant. Jos., **11**, 1902, Nr. 35, (39, 2 Taf.).

Über die Morphologie der Körperringe und Geschlechtsanhänge bei Trichopteren. I. Deskript. Teil. Familien Hydropsychidae, Mollanidae, Leptoceridae, Phryganaeidae, Sericostomatidae, Limnophilidae. 11. Vergleich-Teil. (böhmisch) l.e. **12**, 1903, Nr. 43, (62, 2 Taf.).

### SPECIAL EXTERNAL CHARACTERS.

Enderlein, Günther. Die Copeognathen des Indo-australischen Faunengebietes. Budapest, Ann. Hist.-Nat. Mus. Hung., 1, 1903, (179-377, mit Taf. III-XIV. u. 12 Textifig.). Lauterborn, Robert. Tracheenkiemen an den Beinen einer Perliden-Larve (*Taeniopteryx nebulosa* L.). Zool. Anz., Leipzig, **26**, 1903, (637–642).

Needham, James G. and Antony, Maude. The skewness of the thorax in the Odonata. New York, N.Y., J. Ent. Soc., 11, 1903, (117–125, wit 1 pl.).

**Ulmer**, Georg. Ueber das Vorkommen von Krallen an den Beinen einiger Trichopterenpuppen. Allg. Zs. Ent., Neudamm, **8**, 1903, (261-265).

### OBGANS OF UNCERTAIN NATURE.

Gross, J. Ueber das Palmén'sche Organ der Ephemeriden. Zool. Jahrb., Jena, Abt. f. Anat., 19, 1903, (91-106, mit 1 Taf.).

### 3811 PHYSIOLOGY.

FUNCTION OF SPECIAL STRUCTURES.

Martynov, Andrej. Die Entstehung der peritrophen Hüllen bei den Larven der Trichopteren. (Russ.) Moskva, Dnevn. Zool. Otd. Imp. Oböč. liub. jest, III, 5, 1903, (20-24, mit 1 Taf.) 35 cm.

### REGENERATION.

**Child**, C. M. and **Young**, A. N. Regeneration of the appendages in nymphs of the Agrionidae. Arch. EntwMech., Leipzig, **15**, 1903, (543-602, mit 3 Taf.).

### 3815 DEVELOPMENT.

#### GENERAL.

**Clément**, A. L. Le criquet marbré. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (97-98, av. fig.).

Higgins, Helen T. The development and comparative structure of the gizzard in the Odonata Zygoptera. [Thesis . . . B.S. . . University of Pennsylvania . . 1900]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 53, 1901, (126–141, with pl.); [reprint], Philadelphia, Cont. Zool. Lab., Univ. Pa., 1901, 1902, ([126]–141, with pl.). McClendon, J. F. The life history of Ulula hyalina Latreille. Austin, Cont. Zool. Lab. Univ. Tex., No. 27; Amer. Nat. Boston, Mass., 36, 1903, (421-429).

Melander, Axel Leonard. Notes on the structure and development of *Embia texana*. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (99-118).

Needham, James G. Life histories of Odonata, Suborder Zygoptera, Damsel flies. Albany Univ., N.Y., Bull. St. Mus. No. 68, 1903, (218-276, with pl.).

#### EMBRYOLOGY.

**Conktin**, Edwin G[rant]. Amitosis in the egg follicle cells of the cricket [*Gryllus*]. [With bibliography.] Amer. Nat., Boston, Mass., **37**, 1903, (667–675).

Tschuproff, Helene. Ueber die Entwicklung der Keimblätter bei den Libellen. (Vorläuf. Mitt.) Zool. Anz., Leipzig, **27**, 1903, (29-34).

#### METAMORPHOSIS AND LARVAL FORMS.

Dobson, H. T. Emergence of Aeschna grandis. Entomologist, London, 36, 1903, (253-254).

McClendon, J. F. The larvae of Myrmeleon texanus Banks and M. rusticus Hagen. [Contributions from the Zoological laboratory of the University of Texas. No. 33.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (209-213, with 1 pl.).

Martynov, Andrej. Die Entstehung der peritrophen Hüllen bei den Larven der Trichopteren. (Russ.) Moskva, Dnevn. Zool. Otd. Imp. Obäč. Ifub. jest, III, 5, 1903, (20-24, mit 1 Taf.). 35 cm.

**Needham**, James G. Remarks on Hydroptilid larvae and their metamorphosis. Zool. Anz., Leipzig, **27**, 1903, (108-110).

**Speiser**, P[aul]. Kein neuer Typus von Hypermetamorphose! *l.c.* **26**, 1903, (515-516).

Struck, Rudolf. Beiträge zur Kenntnis der Trichopterenlarven. Lübeck, Mitt. geogr. Ges., (2. Reiho), H. 17, 1903, (41-124, mit 7 Taf.).

(n 2-9053)

**Ulmer**, Georg. Beiträge zur Metamorphose der deutschen Trichopteren. [Forts.] Allg. Zs. Ent., Neudamm, **8**, 1903, (11-15, 70-73, 90-93, 209-211, 315-316).

von Thüringen und Harz. (Mit Beschreibung einiger neuer Metamorphose-Stadien.) *l.c.* (341-350).

Weitere Beiträge zur Metamorphose der deutschen Trichopteren. Stettiner ent. Ztg, 64, 1903, (179-226, mit 3 Taf.).

Deutsche Wasserinsekten und ihre Entwicklung. Aus d. Heimat, Stuttgart, **15**, 1902, (33–48, 81–85).

### 3819 ETHOLOGY.

#### GENERAL.

**Clément**, A. L. Le criquet marbré. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (97– 98, av. fig.).

**Proggatt**, Walter W. The white ant city, a nature study. Agric. Gaz., Sidney, N.S.W., **14**, 1903, (726-730, 1 pl. and text figs.).

Part I. *l.c.* (1102-1110, with 1 pl.).

**Erauss**, Hermann A. Beitrag zur Kenntniss der Orthopteren Deutsch-Südwestafrikas. Wien, Verh. ZoolBot. Ges., **51**, 1901, (281-293).

Marchal. Les criquets en 1901. Autun, Bul. soc. sci. nat., 15, 1902, (Proc.-verb. 28-30).

d'Ephémères. *l.c.* (Proc.-verb. 260-262).

Morton, W. Notes sur l'élevage des Phylies. Lausanne, Bull. Soc. Sci. Nat., (sér. 4), 39, 1903, (401-407, av. 1 pl.); Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (748-750).

Tepper, J. G. O. . . Described genera and species of the Australian and Polynesian *Phasmidae* or "spectre insects." Vict. Nat., Melbourne, **19**, 1903, (138-142).

### HABITS.

**Gaudell**, A. N. A greedy insect [Mantid]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (60).

Heath, Harold. The habits of California termites. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (47-63). Marlatt, C[harles] L[ester]. The white ant (Termes flavipes Koll.) [Revised reprint from Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 4, (70-76).] Washington, D.C., Cir. U. S. Dept. Agric. Div. Ent., (Ser. 2), No. 50, 1902, (8). 23.4 cm.

Cockroaches. [Periplaneta and Ectobia.] [Revised reprint from Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 4, (84– 95).] Le. No. 51, 1902, (15). 23.4 cm.

Morgan, H. A. The differential grasshopper [Melanoplus differentialis] in the Mississippi delta—other common species. Washington, D.C. Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 30, 1901, (7-33).

Shelford, R. Bionomical notes on some Bornean Mantidae. Zoologist, London, (Ser. 4), 7, 1903, (293-304).

#### PARENTAL RELATIONS.

Xambeu. Instinct de la maternité chez le *Chelidura dilatata* Lafresnaye, orthoptère du groupe des Forficuliens. Naturaliste, Paris, (sér. 2), 25, 1903, (143-144).

### SEXUAL RELATIONS.

**Behn**, J. A. G. [Pairing of] Schistocerca alutacea and rubiginosa. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (89).

#### OVIPOSITION.

Giard, A. La ponte des Libellules du genre *Lestas*. Fenille jeunes natural., Paris, (sér. 4), 33, 1903, (189-192).

# HABITAT.

**Silfvenius**, A[ntti] J[ohannes]. Über im Wasser lebende Schmetterlinge und auf Land lebende Trichopteren. (Finnisch) Luonnon Ystävä, Helsingfors, **1903**, 6-8, (125-128).

# ENEMIES.

Borgogno, C. Un combat singulier. Moinean contre sauterelle verte. Nantes, Bul. soc. sci. nat., (sér. 2, 3), 13, 1903, (III). Calvert, Philip P. [Spiders as enemies of dragonflies.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (161-162).

Williamson, E. B. Spiders as enemies of dragonflies. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (160-161).

### DEFENSIVE PROCESSES.

Burr. [The use of earwig forceps.] Ent. Rec., London, 15, 1903, (262).

Calvert. [Resemblances in Odonata] (Neuroptera). Biol. Centr.-Amer., London, 1903, (134).

**Sajó**, Karl. Mimicry im Kreise der Wasserjungfern. Prometheus, Berlin, **14**, 1903, (733-734).

Vosseler, J[ulius]. Ueber einige Beobachtungen aus dem kleinasiatischen Insektenleben. Stuttgart, Jahreshelte Ver. Natk., 59, 1903, (IC).

Williams, C. E. Exhibition of living Gongylus gongyloides, a floral Mantis. Cambridge, Proc. Phil. Soc., 12, 1903, (279).

### UTILITY AND HARMFULNESS.

Enderlein, Günther. Ein neuer Copeognathentypus, zugleich ein neuer deutscher Wohnungsschädling. Zool. Anz., Leipzig, **27**, 1903, (76).

Küster, Hermann. Die Uebertragung bakterieller Infektionen durch Insekten. Centralbl. Bakt., Jena, Abt. 33, Referate, 1903, (90-94).

Lotr, A. La destruction des termites. Paris, C.-R. Acad. sci., **136**, 1903, (1290-1291).

Ludwig, F[riederich]. Zwei neue Pflanzenschädlinge unserer Gewächshäuser und Gärten. [Japanische Heuschrecken u. Amseln.] Zs. Pflanzenkrankh., Stuttgart, 13, 1903, (210-213).

Sander, L. Die Wanderheuschrecken und ihre Bekämpfung in unseren afrikanischen Kolonieen. Berlin, 1902, (544). [Review] by W. F. K., Nature, London, 67, (244).

**Stebbing**, E. P. Insect pests of the sugarcane in India. Calcutta, Ind. Mus. Notes, 5, 1903, (64-91).

### 3823 VARIATION AND ÆTIOLOGY.

#### GENERAL.

**Calvert**, Philip P. Variation in *Hetaerina titia* Drury (Odonata). Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (192–193).

Needham, James G. and Antony, Maude H. The skewness of the thorax in the Odonata. New York, N.Y., J. Ent. Soc., 11, 1903, (117-125, with 1 pl.).

### SCESTANTIVE VARIATION.

Bugnion, E. Observation relative à un cas de mimétisme. (Blepharis mendica). Lausanne, Bul. Soc. Sci. Nat., (sér. 4), 39, 1903, (385–388, av. 1 pl.); Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (342–343).

Burr, M. Wingless Forficula auricularia. Ent. Rec., London, 15, 1903, (254).

### CROSSES AND HYBRIDS.

Williamson, E. B. A hybrid dragonfly of the genus Gomphus (Odonata.) Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (253-258, with 1 pl.).

#### EVOLUTION.

**Needham**, James G. A genealogic study of dragon-fly wing venation. Thesis . . Ph. D. . . Cornell. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (703-764, with 24 pls.). Separate. **24.3** cm.

# **3827** GEOGRAPHICAL DISTRIBUTION.

#### b LAND AS A WHOLE.

**Ris**, F. Vorweisung europäischer und amerikanischer Libellen. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (**436–44**3).

(N 2--9053)

d EUROPE.

Burr, M. Synopsis of the Orthoptera of W. Europe. Ent. Rec., London, 15, 1903, (314-319, (still incomplete)).

Enderlein, Günther. Zur Kenntnis europäischer Psociden. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (366-382, mit Taf.).

da SCANDINAVIA.

Borg, Hjalmar. Annotations on Swedish Neuroptera. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (175– 176).

Eaton, A. E. A new species of *Ephemeridae* from Norway. Ent. Mag., London, **39**, 1903, (30).

Kempny, Peter. Nachtrag zur Perliden-Fauna Norwegens. Wien, Verh. ZoolBot. Ges., **51**, 1901, (788-791).

McLachlan, R. Neuropters (in the Linnean sense) collected by the Rev. A. E. Eaton in South Norway in July, 1902, with synonymic and other notes. Ent. Mag., London, 39, 1903, (32-35).

**Strand**, Embr. Trichopters and Neuropters-Planipennia collected in Norway. (Norw.) Entomol. Tidskr., Stockholm, **22**, 1901, (93-96).

Westerlund, John Agardh. Pseudoneuroptera in the neighbourhood of Ronneby, (South Sweden). (Swedish) *l.c.* (137-142).

### db RUSSIA IN EUROPE.

Brauner, A. Notices sur divers Odonates. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (89-91).

Hindse, B. K. Zur Orthopterenfauna des Gouvernements Ufa. (Russ.) Moskva, Trd. kruž. iszl. russ. prir., **1**, 1903, (107-110).

Jacobson, C. G. and Bianchi, V. L. Orthoptera and Pseudoneuroptera des russichen Reiches und der angrenzenden Gebiete nach Dr. R. Tümpel's Die Geradfügler Mitteleuropas. (Russ.) Lief. V. St. Peterburg, 1903, (353-432, mit Taf. 18-21).

2 g 2

Semenov, A. P. Notices sur les Dermaptères de la faune de la Russie I. (Russ.) Rev. Russ. Ent., Jaroslavlí, 3, 1903, (196-199).

**Silantjev**, A. A. Capture d'un termite au Caucase. (Russ.) *l.c.* (29).

#### de GERMAN EMPIRE.

**Fröhlich**, Carl. Die Odonaten und Orthopteren Deutschlands mit besonderer Berücksichtigung der bei Aschaffenburg vorkommenden Arten, nach der analyt. Methode beab. IV. Mitteilung des naturwissenschaftlichen Vereins zu Aschaffenburg, hrsg. zur Feier seines 25-jährigen Bestehens. Jena (G. Fischer), 1903, (VI + 106, mit 6 Taf.). 23 cm. 4 M.

**Ulmer**, Georg. Zur Trichopteren-Fauna von Thüringen und Harz. (Mit Beschreibung einiger neuer Metamorphose-Stadien.) Allg. Zs. Ent., Neudamm, **8**, 1903, (341–350).

von Hessen. l.c. (397-406).

### de BRITISH ISLANDS.

Brown, H. H. Butterflies and dragonflies in Banfishire. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (247).

Burr, E. Orthoptera in the Isle of Wight. Ent. Rec., London, 15, 1903, (254-257).

### df FRANCE.

Gentil. Note sur la présence du Bacillus gallicus Charp. au Mans. Mans (le), Bul. soc. agricult. sci., (sér. 5), 30, 1901-1902, (425-426).

### dg SPAIN.

McLachlan, R. An annotated list of Odonata collected in West Central Spain, by Dr. T. A. Chapman and Mr. G. C. Champion in June and July, 1902. Ent. Mag., London, **39**, 1903, (7-9).

.

Ris, F. Trichopteren des Cantons Tessin and angrenzender Gebiete. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 11, 1903, (5-18, mit 1 pl.).

### di SWITZERLAND.

Ris, F. Die schweizerischen Arten der Perliden-Gattung Nemura. Schaffhausen, Mitt. Schweiz. Entomol, Ges., 10, 1902, (378-405, mit 6 Taf.).

Trichopteren des Cantons. Tessin and angrenzender Gebiete. *l.c.* **11**, 1903, (5-18, mit 1 pl.).

### dk AUSTRIA-HUNGARY.

**Krej***á*, A. Nachträge zur "Übersicht der Cölmischen Orthopteren" v. T. 1896. Prag, SitzBer. Ges. Wiss., **1903**, Nr. 23, (2).

Werner, Franz. Die Orthopterenfauna von Pernitz. (Piestingthal, N. Oe.). Wien, JahrBer. Entom. Ver., **11**, (1900), 1901, (103-108).

#### e Asia.

de Saussure, Henri. Analecta Entomologica II. Notice sur la tribu des Eumastaciens. Rev. Suisse Zool., Genève, 11, 1903, (43-112, 1 pl.).

#### ea ASIATIC RUSSIA.

Semenov, A. P. Notices sur les Dermaptères de la faune de la Russie. I. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (196-199).

#### eb China.

**Behn**, James A. G. Contributions toward a knowledge of the Orthoptera of Japan and Korea, I *Acrididae*. Philadelphia, Pa., Proc. Acad. Nat. Sci., **54**, 1902, [1903], (629-637).

### ec JAPANESE ISLANDS.

Namiye, [Motoyoshi]. Odonata of Prov. Tosa. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (297). **Behn**, James A. G. Contributions toward a knowledge of the Orthoptera of Japan and Korea. I *Acrididae*. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (629-637).

ef BRITISH INDIA.

Enderlein, Günther. Die Copeognathen des indo-australischen Faunengebietes. Budapest, Ann. Hist.-Nat. Mus. Hung., 1, 1903, (179-344, mit Taf., III-XIV u. 12 text fig.).

#### eg MALAY PENINSULA.

Enderlein, Günther. Die Copeognathen des indo-australischen Faunengebietes. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (179-344, mit Taf., III-XIV and 12 text fig.).

**Erauss**, Hermaun August. Orthopteren aus Australien und dem malayischen Archipel, gesammelt von Professor Dr. Richard Semon. Jena, Denkschr. med. Ges., **8**, 1903, (743– 770, mit. 1 Taf.).

Laidlaw, F. F. Odonata. Part I [in] Fascic. Malay, Zool., 1, (185-200). Includes some notes by Dr. F. Förster.

**Shelford**, R. Bionomical notes on some Bornean *Mantidae*. Zoologist, London, (Ser. 4), **7**, 1903, (293–304).

#### ch PERSIA.

Semenov, A. P. Les Dermatoptères du voyage de N. A. Zarudny dans la Perse orientale en 1900-1901. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., 36, 1902, (192-198).

f AFRICA.

de Saussure, Henri. Analecta Entomologica. II. Notice sur la tribu des Eumastaciens. Rev. Suisse Zool., Genève, 11, 1903, (43-112, 1 pl.).

### fb NORTH EAST AFRICA.

Adelung, N. N. Blattodées (Orthoptères), rapportées par Mr. le cap. G. W. Kachovski de l'Abyssinie méridionale et des contrées limitrophes en 1898. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (300-337, Taf. XX).

### fd WEST AFRICA.

**Enderlein**, Günther. Neue Copeognathen aus Kamerun. Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (1-8, mit 1 Taf.).

### ff EAST AFRICA.

Burr, M. Orthoptera . . . Nat. Hist. Sokotra, (411-426, pl. XXV).

Forbes, H. O. Pseudoneuroptera. *l.c.* (397).

Grünberg. Neue Odonaten aus dem Njassa-Gebiet, gesammelt von Dr. Fülleborn. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (230-237).

Zur Kenntniss der Odonatenfauna des ost-afrikanischen Seengebiets. Ergebnisse der Nyassa-Seeund Kinga-Gebirgs-Expedition der Hermann und Elise geb. Heckmann-Weutzel-Stiftung. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (695–726).

**Kirby**, W. F. Planipennia. Nat. Hist. Sokotra, (404-405).

McLachlan, R. Amphibiotica. *l.c.* (398-403, pls. XXIV, XXIVA).

### fg South Africa.

**Erauss**, Hermann A. Beitrag zur Kenntniss der Orthopteren Deutsch-Südwestafrikas. Wien, Verh. ZoolBot. Ges., **51**, 1901, (281–293).

#### g North America.

Banks, Nathan. A revision of the Nearctic Chrysopidae [with bibliography]. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., 29, 1903, (137-162, with pl.).

Davis, K. C. Sialididae of North and South America [with bibliography]. Albany, Univ. N.Y., Bull. St. Mus., No. 68, 1903, (442-499, with pl.).

**Enderlein**, Günther. Zur Kenntniss americanischer Psociden. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (351-364, mit 2 Taf.). **Behn**, James A. G. Studies in American *Blattidae*. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc. **29**, 1903, (259-290).

# gd CANADIAN DOMINION EAST.

Williamson, E. B. Dragonfiles (Odonata) from the Magdalen islands. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (144-146).

# gf UNITED STATES.

**Gaudell**, Andrew Nelson. The *Phas*midae or walking sticks of the United States. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (803-885, with 4 pls.) Separate, 24.3 cm.

**Behn**, James A. G. Two new species of N. American Stenopelmatinae. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (240-241).

# gg NORTH EASTERN UNITED STATES.

Berry, Edward W. New or hitherto unknown Ephemerid nymphs of the eastern United States [New Jersey]. Amer. Nat., Boston, Mass., 37, 1903, (25-31).

**Biatchley**, W[illis] S[tanley]. The Orthoptera of Indiana. An illustrated descriptive catalogue of the species known to occur in the State, with bibliography, synonymy, and descriptions of new species. Indiana, Rep. Dept. Geol. Nat. Res. Indianapolis, **27**, 1902, [1903], (123-471, with pl.).

**Calvert**, P[hilip] P[owell]. Distribution of New York dragon flies [Odonata], additional data. Albany Univ., N.Y., Bull. St. Mus., No. **68**, 1903, (276-279).

Additions to the Odonata of New Jersey, with descriptions of two new species. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, ([33]-41, with 1 pl.).

[Lestes eurinus Say to be added to New Jersey list of Odonata.] I.e. (158).

Graf, J. L. Additions to the above list [with a list of the dragonflies observed in western Pennsylvania, by E. B. Williamson]. *l.c.* **13**, 1902, (113-114). Needham, James G. Odonata of New Jersey. [Hagennis brevistylus]. l.e. 14, 1903, (159).

**Behn**, James A. G. Notes on some interesting species of *Forficulidas* and *Blattidae* from the eastern United States. *l.e.* (125-126).

**Wadsworth**, Mattie. Sixth addition to the list of dragon flies (Odonata) of Manchester, Kennebee County, Maine. *l.c.* (246-247).

Williamson, E. B. A list of the dragonflies observed in western Pennsylvania [with additions to the above list, by J. L. Graf]. *l.e.* (65-71, 108-114, with pl.).

# gh South EASTERN UNITED STATES.

Beutenmüller, William. A new katydid [Cyrtophyllus floridensis n. sp.] from Florida. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (637-638). Separate. 24.5 cm.

Brimley, C. S. List of dragonflies (Odonata) from North Carolina, especially from the vicinity of Raleigh. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (150–157).

Telagrion daeckii (Odonata) at Raleigh, North Carolina. *l.c.* (335– 336).

Calvert, Philip P. [Note on Maryland Odonata, with paper by F. Ris]. *l.e.* (219-220).

Morgan, H. A. The differential grasshopper [*Melanoplus differentialis*] in the Mississippi delta—other common species. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (7-33).

**Behn**, James A. G. A new Aptenopedes from Florida. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (14).

Notes on some interesting species of *Forficulidae* and *Blattidae* from the eastern United States. *l.c.* 14, 1903, (125–126).

A new roach of the genus Ischnoptera from Florida. l.c. 14, 1903, (233-234). **Ris**, F. Note on a small collection of dragonflies (Odonata) from Baltimore, Maryland, [with note by Philip P. Calvert]. Le. 14, 1903, (216-220).

Williamson, E. B. The dragonflies (Odonata) of Tennessee, with a few records for Virginia and Alabama. *l.e.* 14, 1903, (221-229).

#### gi WESTERN UNITED STATES.

Banks, Nathan. Neuropteroid insects from Arizona. Washington, D.C., Proc. Ent. Soc., 5, 1903, (237-245, with pl.).

Bruner, Lawrence. Grasshopper notes for 1901. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 38, 1902, (39–49).

**Calvert**, P[hilip] P[owell]. Neuroptera-Odonata [from Beulah, New Mexico]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1902, (42-43).

**Caudell**, A[ndrew] N[elson]. Some new or unrecorded Orthoptera from Arizona. Washington, D.C., Proc. Ent. Soc., 5, 1903, (162-166).

Notes on Orthoptera from Colorado, New Mexico, Arizona, and Texas, with descriptions of new species. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (775-809, with 1 pl.). Separate. 24 cm.

**Currie**, Rolla P. Myrmeleonidae from Arizona. Washington, D.C., Proc. Ent. Soc., 5, 1903, (272-284).

The Odonata collected by Messrs. Schwarz and Barber in Arizona and New Mexico. *l.c.* (298-303).

Heath, Harold. The habits of California termites. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (47-63).

Hoag, M. E. [Lestes uncatus Kirby in Iowa.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 13, 1902, (88-89).

Morgan, H. A. The differential grasshopper [Melanoplus differentialis] in the Mississippi delta—other common species. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (7-33). Rehn, J[ames] A. G. Orthoptera [from Beulah, New Mexico]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902, (41-42).

------ Notes on the Orthoptera of New Mexico and Western Texas. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (717-727).

North American Blattidae, Mantidae and Phasmidae, with a catalogue of the Forficulidae, Blattidae, Mantidae and Phasmidae recorded from Teras. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (325-331).

Woodworth, C. W. Grasshoppers in California. Agric. Exp. Sta., California, Berkeley, Bull. No. **142**, 1902, (36, with 17 figs.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1903, (471–472).

### h Central and South America.

**Calvert**, Philip P[owell]. On some American *Gomphinae*. Philadelphia, Pa., Ent. News Acad. Nat. Sci. 14, 1903, (183-192, with 1 pl.).

**Davis**, K. C. Sialididae of North and South America [with bibliography]. Albany Univ., N.Y., Bull. St. Mus., No. **68**, 1903, (442-499, with pl.).

Förster, F. Neotropische Libellen. Insektenbörse, Leipzig, 20, 1903, (355– 356).

**Behn**, James A. G. Studies in American *Blattidae*. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., **29**, 1903, (259–290).

#### hb CENTRAL AMERICA.

**Bohn**, James A. G. On two earwigs of the genus *Labia* from Costa Rica. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., **14**, 1903, (292– 293).

he WEST INDIAN ISLANDS.

**Behn**, James A. G. Notes on West Indian Orthoptera, with a list of the species known from the island of Porto Rico. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., 29, 1903, (29–136).

#### hh BRAZIL.

Needham, James G. A new genus and species of dragon-fly [Cyanocharis valga n. gen. and sp.] from Brazil. Washington, D.C., Proc. Biol. Soc., 16, 1903, (55-58). Separate 23.3 cm.

Weele, H. W. van der. New genus and species of Holophthalmous Ascalaphidae. Leiden, Notes Mus. Jentink, 23, 1903, (234-236).

### hi ARGENTINA.

Machon . . . Acridiens de l'Argentine. Arch. Sci. Phys., Genève, (sèr. 4), 15, 1903, (571).

### i AUSTRALASIA.

Enderlein, Günther. Die Copeognathen des indo-australischen Faunengebietes. Budapest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (179-344, mit Taf. III-XIV und 12 Tex. fig.).

**Krauss**, Hermann August. Orthopteren aus Australien und dem malayischen Archipel, gesammelt von Professor Dr. Richard Semon. Jena, Denkschr. med. Ges., **8**, 1903, (743-770, mit 1 Taf.).

**Tepper, J.** G. O. Notes and remarks on the described genera and species of the Australian and Polynesian *Phasmidas* or "spectre insects." Vict. Nat., Melbourne, **19**, 1903, (138–142).

# ia NEW GUINEA AND ISLANDS.

Bolivar, Ignacio. Contributions à l'étude des Mecopodinae. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (167-178).

Förster, F. Odonaten aus Neu-Guinea. l.c. (508-554).

#### k ARCTIC.

Banks, Nathan. A revision of the Nearctic Chrysopidae. [with bibliography]. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., 29, 1903, (137-162, with pl.). l ATLANTIC.

la North Atlantic Ocean.

**Gandell**, A. N. Notes on the Orthoptera of Bermuda, with the description of a new species [Gryllus bermudensis n. sp.]. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (329–331).

m. INDIAN OCEAN.

# ma OCEAN AND ISLANDS N. OF EQUATOR.

**Burr.** Orthoptera,—Fauna of the Maldive and Laccadive Islands, 1, (234–236).

n PACIFIC.

**Tepper, J.** G. O. Notes and remarks on the described genera and species of the Australian and Polynesian *Phasmidae* or "spectre insects." Vict. Nat., Melbourne, **19**, 1903, (138–142).

ng GALAPAGOS ISLANDS.

**Snodgrass**, Robert Evans. Papers from the Hopkins Stanford Galapagos expedition, 1898–1899, VIII. Entomological results (7). Schistocerca, Sphingonatus and Halmenus. Washington, D.C., Proc. Acad. Sci., **4**, 1902, (411– 454, with 2 pl.). Separate. 24.5 cm.

# 3831 TAXONOMY AND SYSTEMATIC.

### GENERAL.

Sainte-Claire Deville, J. Exploration entomologique des grottes des Alpes-Maritimes. Ann. soc. ent., Paris, 71, 1902, [1903], (695-709, av. fig.).

#### ORTHOPTERA.

**Blatchley**, W. S. The Orthoptera of Indiana. An illustrated descriptive catalogue of the species known to occur in the state, with bibliography, synonyny, and descriptions of new species. Indiana, Rep. Dept. Geol. Nat. Res., Indianapolis, **27** 1902, [1903], (123-471, with pl.). Borgogno, C. Un combat singulier. Moineau contre sauterelle verte. Nantes, Bul. soc. sci. nat., (sér. 2, 3), 13, 1903, (III).

Burr, M. Synopsis of the Orthoptera of W. Europe. Ent. Rec., London, 15, 1903, (314-319, still incomplete).

Sokotra, (411-426, pl. XXV).

------ Orthoptera, --- Fauna of the Maldive and Laccadive Islands, 1, (234-236).

Gandell, A. N. Notes on Orthoptera from Colorado, New Mexico, Arizona, and Texas, with descriptions of new species. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (775-809, with 1 pl.). Separate. 24 cm.

Some new or unrecorded Orthoptera from Arizona. Washington, D.C., Proc. Ent. Soc., 5, 1903, (162-166).

**Pröhlich**, C. Die Odonaten und Orthopteren Deutschlands mit besonderer Berücksichtigung der bei Aschaffenburg vorkommenden Arten, nach der analyt. Methode beab. IV Mittheilung des naturwissenschaftlichen Vereins zu Aschaffenburg, hrsg. zur Feier seines 25-jährigen Bestehens. Jena (G. Fischer), 1903, (VI + 106, mit 6 Taf.). 23 cm. 4 M.

**Erauss**, H. A. Orthopteren aus Australien und dem malayischen Archipel, gesammelt von Professor Dr. Richard Semon. Jena, Denkschr. med. Ges., **8**, 1903, (743-770, mit 1 Taf.).

Pierantoni, U. Orthoptera; nuovo contributo alla conoscenza del [loro] sistema nervoso stomatogastrico. Napoli, Boll. Soc. nat., 15, (1901), 1902, (54-60, con tav.).

**Behn**, J. A. G. Records of New Jersey and Pennsylvania Orthoptera. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (309-316).

Notes and remarks on North American Blattidae, Mantidas and Phasmidae, with a catalogue of the Forficulidae, Blattidae, Mantidas and Phasmidae recorded from Texas. l.c. 14, 1903, (325-331). **Rehn**, J. A. G. Notes on West Indian Orthoptera, with a list of the species known from the island of Porto Rico. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., **29**, 1903, (29–136).

New Mexico]. l.c. (41-42).

Notes on the Orthoptera of New Mexico and western Texas. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902 [1903], (717-727).

Woodworth, C. W. Grasshoppers in California. Agric. Exp. Sta., California, Berkeley, Bull. No. **142**, 1902, (36 with 17 fig.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1903, (471–472).

### FORFICULIDAE.

#### GENEBAL.

Rehn, J. A. G. Notes on some interesting species of *Forficulidae* from the eastern United States. Philadelphia, Pa., Eut. News Acad. Nat. Sci., 14, 1903, 125-126).

Semenov, A. P. Notices sur les Dermatoptères de la faune de la Russie I. (Russ.) Rev. Russ. Ent., Jaroslavli, 3, 1903, (196-199).

#### SPECIAL.

Ancistroppeter burri n. nom. for A. Inctuosa De Bormans. Mexico and Central America. **Kirby**, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, 68).

jaranus n. sp. Java. de Bormans in Burr, M. l.c. (266-267).

Anisolabis dubronii n. nom. for A. lacta De Borm. **Kirby**, W. F. l.c. (68).

Burma. Burr, M. *l.c.* (270-272).

mans, A. in Burr, M. l.c. (234).

Apterygida buscki n. sp. Porto Rico. Rehn, J. A. G. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., 29, 1903, (129). Carcinophora boliviana n. sp. Bolivia. de Bormans in Burr, M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (233-234).

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Chelidura dilatata, instinct de la maternité. Xambeu. Naturaliste, Paris, (sér. 2), 25, 1903, (143-144).

*peringueyi* n. sp. Cape of Good Hope. **Burr**, M. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (275-277).

Chelisoches nn. spp. Celebes. de Bormans in Burr, M. l.c. (265-266).

Africa. Burr, M. l.c. (274-275).

Ctenieolabis togoensis n. sp. Verhoeff, K. W. Berlin, SitzBer. Ges. natf. Freunde, 1903, (7-18).

Diplatys ridleyi n. sp. Singapore. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (61).

Echinopealis brevibractea n. sp. America. **Rehn**, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (300).

Forficula nn. spp. Caucasus centr. et Rossia merid. **Semenov**, A. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (19-21).

*auricularia.* Brockhausen, H. Münster, Jahresber., ProvVer. Wiss., **29**, (1900/01), 1901, (31-32).

Rec., London, **15**, 1903, (254).

metrica n. sp. America. Bohn, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (311).

*miranda* n. sp. **de Bormans** in **Burr, M.** Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (269-270).

Gonolabina n. gen., G. kuhlgatzi n. sp. Verhoeff, K. W. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (7-18).

Gonolabis inca n. sp. Peru. Burr, E. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (272-273).

Isolabella n. gen., I. graeca n. sp. Verhoeff, K. W. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (15).

Isolabis n. gen., I. braueri n. sp. Verhoeff, K. W. l.c. (11, 14). Labia nn. spp. de Bormans in Burr, M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (235-241).

auricoma n. sp. Costa Rica. Bahn, J. A. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (292-293).

**Burr**, M. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (273–274).

**Behn**, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (305).

Labidura truncata n. sp. Australia. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (67-68).

Leptisolabis n. gen., L. usambarana, L. theorias nn. spp. Verhoeff, K. W. Berlin, SitzBer. Ges. natf. Freunde, 1903, (12, 13).

Opisthocosmia (Sarcinatriz) anomalia n. sp. America. **Rehn**, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (308).

burri n. sp. Celebes. de Bormans in Burr, M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (267).

Pealis pulchra n. sp. America. Rehn, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (303).

*Pygidicrana* nn. spp. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (61-63).

in Burr, M. l.c. (232-233).

Sarcinatrix n. subgen. (Opisthocosmia). **Rehn**, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (308).

Sparatta aculeata n. sp. Celebes. de Bormans in Burr, M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (205).

*dohrni* n. nom. for S. *plana*, Dohrn and De Borm. **Kirby**, W. F. *l.c.* (68).

flaripennula n. sp. America. **Behn**, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (299-312).

Sphingolabis brunneri n. sp. S. America. de Bormans, A. in Burr, M. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (268-269). Sphongiphora leuisi n. sp. Japan. de Bormans, A in Burr, M. l.c. (234– 235).

### HEMIMERIDAE.

#### GENERAL.

Poche, F. Entgegnung [betr. Krauss' Bearbeitung der Hemimeriden]. Zool. Anz., Leipzig, 26, 1903, (229–230).

#### SPECIAL.

Hemimerus, verwandtschaftliche Stelluug. Verhoeff, K. W. Berlin, Sitz-Ber. Ges. natf. Freunde, **1903**, (87-89).

#### BLATTIDAE.

#### GENERAL.

Adelung, N. N. Blattodées rapportées par Mr. le cap. Kochovski de l'Abyssinie mér. et des contrèes limitrophes en 1898. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (300-337, Taf. XX).

**Caudell**, A. N. Notes on the nomenclature of *Blattidae*. Washington, D.C., Proc. Ent. Soc., 5, 1903, (232-235).

**Behn**, J. A. G. Studies in American Blattidae. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., **29**, 1903, (259-290).

Notes on some interesting species of . . . Blattidae from the eastern United States. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (125–126).

**Sellards**, E. H. Some new structural characters of Paleozoic cockroaches. Amer. J. Sci., New Haven, Conn., (Ser. 4), **15**, 1903, (307-315, with 2 pls.).

#### SPECIAL.

Archimandrita tessellata n. sp. **Behn, J. A. G.** Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (287).

Archoblattina<sup>†</sup> n. nom. (= Megablattina Sellards, not Brogniart). Sellards, E. H. Amer. J. Sci., New Haven, Conn., (Ser. 4), **15**, 1903, (488). Arenivaga n. subg. (Homoeogamia). Benn, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (181).

Blaberus distanti n. sp. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (404-405).

Blatta Linnaeus = Stylopyga Fischer v. Wald. Rehn, J. A. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (101-102).

nn. spp. Australia. **Krauss**, H. A. Jona, Denkschr. med. Ges., **8**, 1903, (743–770, 1 Taf.).

brunneri n. sp. Australia. **Eirby**, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (375).

Blattella nn. spp. Rehn, J. A. G. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (267-269).

Calolampra nn. spp. **Rehn**, J. A. G. l.c. (274-275).

*tepperi* n. sp. S. Australia. **Kirby**, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (275).

Catara minor n. sp. Australia. **Erauss**, H. A. Jena, Denkschr. med. Ges., **8**, 1903, (743–770, 1 Taf.).

Corydia nn. spp. China. **Kirby.** W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (406).

Derocalymma stigmosa n. sp. Deutsch Südwest Afrika. **Krauss**, H. A. Wien, Verh. ZoolBot. Ges., **51**, 1901, (282).

Deropeltis nn. spp. l'Abyssinie. Adelung, N. N. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (300-337, Taf. XX).

Dicellonotus nn. spp. India. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (409-410).

Duryodana n. gen. for Blatta palpalis Walk. Kirby, W. F. l.c. 12, 1903, (274).

Dyscologamia cesticulata Sauss., description of species. Singapore. **Kirby**, W. F. *l.c.* **11**, 1903, (406–407).

Ectobia, habits. Marlatt, C. I.. Revised reprint from Washington, D.C., Bull, U. S. Dept. Agric. Div. Ent., (N. Ser.) No. 4, (84-95); Washington, D.C., Cir. U. S. Dept. Agric. Div. Ent. (Ser. 2), No. 51, 1902, (15). Epilampra nn. spp. **Behn**, J. A. G. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer Ent. Soc., **29**, 1903, (272-273).

Eremoblatta n. subgen. (Homoeogamia). Rehn, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (181).

Hedaia nn. spp. Tonkin, Khasia Hills. **Kirby**, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (279– 280).

Heterolampra n. gen., type, Epilampra dilatata, H. staeli (= puncticollis Stål), Philippines, saussurei (= puncticollis Sauss.), China, monticola, pallida, Tonkin, ridleyi Singapore, nn. spp. **Kirby**, W. F. l.c. (276-277).

Heteroplana n. gen., H. thomsoni n. sp. Louisiade Archipelago. **Kirby**, W. F. *l.c.* **11**, 1903, (415).

Homalopteryz templetonii n. sp. Ceylon. Kirby, W. F. l.c. 12, 1903, (275).

Homoeogamia, revision of the spp. Behn, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (177-192).

Ischnoptera intricata n. sp. Indiana. Blatchley, W. S. Indiana, Rep. Dept. Geol. Nat. Res. Indianapolis, 27, 1902, [1903], (123-471, with pl.).

J. A. G. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (264).

*johnsoni* n. sp. **Rehn**, J. A. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (233-234).

Kakerlac Latreille = Loboptera Brunner. **Behn**, J. A. G. *l.c.* **13**, 1902, (101-102).

Latindia schwarzi n. sp. Arizona. Candell, A. N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (162–166).

Leucophaea striata n. sp. Selangor. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (378).

Mallatoblatta brachyptera n. sp. Abyssinie. Adelung, N. N. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (300– 337, Taf. XX).

Megablattina n. gen., M. beecheri<sup>†</sup> n. sp. Illinois, Carboniferous. **Sellards**, E. H. Amer. J. Sci., New Haven, .Conn., (Ser. 4), **15**, 1903, (307-315). Melanozosteria bicolor n. sp. Torres Straits. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (373).

Methana nn. spp. Madagascar., N. S. Wales. Kirby, W. F. *l.c.* (374).

Microdina n. gen. India. Kirby, W. F. l.c. 11, 1903, (409).

Molytria nu. spp. Tonkin, Borneo. Kirby, W. F. l.c. 12, 1903, (274-275).

Mylacrina n. gen., M. wrayi n. sp. India. Kirby, W. F. *l.c.* 11, 1903, (414).

Nauphaeta basalis n. sp. Tonkin. Kirby, W. F. *l.c.* **12**, 1903, (378).

Oxyhaloa nilotica n. sp. Abyssinie. Adelung, N. N. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (300-337, Taf. XX).

Panchlora translucida n. sp. (= hµalina Sauss). Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (378).

Panesthia jaranica Serv. description and 4 nn. spp. India. Kirby, W. F. l.c. 11, 1903, (411-412).

*polita* n. sp. Anstralia. **Krauss**, H. A. Jena, Denkschr. med. Ges., **8**, 1903, (743–770, 1 Taf.).

tepperi n. nom. for *P. transversa* Tepp. (nec Burm.), *P. per-fecta* n. nom. for *P. australis* Sauss. (nec Brunn.). Australia. **Kirby**, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (412, 414).

Pelloblatta n. gen., P. lata n. sp. Rehn, J. A. G. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (283).

Pelmatosilpha nn. spp. Dominica, Trinidad, Queensland. **Kirby**, W. F. Ann. Mag. Nat. Hist., London, **12**, Ser. 7), 1903, (375–376).

J. A. G. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (278).

Periplaneta, habits. Marlatt, C. L. Revised reprint from Washington, D.C., Bull. U. S. Dept, Agric. Div. Ent., (N. Ser.), No. 4, (84-95); Washington, D.C. Cir. U. S. Dept, Agric. Div. Ent., (Ser. 2), No. 51, 1902, (15). Periplaneta lebedinskii n. sp. Abyssinie. Adelung, N. N. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, l.c. 1903, (300-337, Taf. XX).

orientalis als Übertrager von Krankheiten. Küster, H. Centralbl. Bakt., Jena, Abt. 1, 33, Referate, 1903, (90-94).

*epinosostylata* n. sp. Australis. **Krauss**, H. A. Jena, Denkschr. med. Ges., **8**, 1903, (743-770, 1 Taf.).

Plectoptera hastifera n. sp. Rehn, A. G. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (281).

Polyphaga camelorum n. sp. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (407–408).

<u>limbata n. sp.</u> Afghanistan. (= sinensis Sauss.) Kirby, W. F. *l.e.* 12, 1903, (377).

Polyzosteria ceratodi n. sp. Australia. **Krauss**, H. A. Jena, Denkschr. med. Ges., **8**, 1903, (743-770, 1 Taf.).

Prosoplecta rufa n. sp. Philippines. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (379).

Pseudoderopeltis nn. spp. Abyssinie. Adelung, N. N. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (300-337, Taf. XX).

Pseudomops grata n. sp. Rehn, J. A. G. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (260).

*calkeri* n. sp. Tejuca = (*flavipes* Walk.). **Kirby**, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (379).

Pseudophoraspis n. gen. type Epilampra nebulosa. Kirby, W. F. l.c. (275).

Pseudophyllodromia paronacea n. sp. Rehn, J. A. G. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (262).

Rhabdoblatta n. gen. type Epilampra praecipua. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (276).

Rhyparobia nn. spp. Sierra Leone, Shire River. Kirby, W. F. l.c. (377).

*thoracica* n. sp. S. Africa. **Kirby**, W. F. *l.c.* **11**, 1903, (404). Salganea dux n. sp. Russia. Kirby, W. F. *l.c.* (408-409).

Stylopyga semoni n. sp. Australia. **Krauss**, H. A. Jena, Denkschr. med. Ges., **8**, 1903, (743-770, 1 Taf.).

Syntomaptera tepperi n. sp. Australia. Kirby, W. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (374).

Thysanoblatta n. gen. Perisphaeriinae, for T. latipennis n. sp. E. Africa. Kirby, W. F. l.c. (375).

### MANTIDAE.

#### GENERAL.

Candell, A. N. A greedy insect. [Mantid]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (60).

Shelford, R. Bionomical notes on some Bornean *Mantidae*. Zoologist, London, (Ser. 4), 7, 1903, (293-304).

#### SPECIAL.

Blepharis mendica, observation relative à un cas de mimétisme. Bugnion, E. Lausanne, Bul. Soc. Sci. Nat., (sér. 4), 39, 1903, (385-388, av. 1 pl.); Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (342-343).

Deroplatys shelfordi n. sp. Borneo. **Kirby**, W. F. Zoologist, London, (Ser, 4), 7, 1903, (304).

Dystacta. Deutsch Südwest-Afrika. **Erauss**, H. A. Wien, Verh. ZoolBot. Ges., **51**, 1901, (281-293).

Gongylus gongyloides, a floral Mantis. Williams, C. E. Cambridge, Proc. Phil. Soc., 12, 1903, (279).

Gonypeta noctivaga n. sp. Deutsch Südwest Afrika. **Krauss**, H. A. Wien, Verh. ZoolBot. Ges., **51**, 1901, (283).

Mantis religiosa. Messager Suisse Rom., Genève, 15, 1902, (244-245, av. 1 fig.).

Parameles Sauss., P. taurica n. sp. la Crimée (Russ). Jakovlev, V. E. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (40-43, av. 2 figs.).

### PHASMIDAE.

### GENERAL.

**Gaudell, A. N.** The *Phaemidae* or walkingsticks of the United States. Washington, D.C., Smithsonian Inst. Nation. Mus. Proc., **26**, 1903, (863–885, with 4 pls.).

Lewis, R. T. Note on some insects sent from Queensland by Mr. C. J. Pound, F.R.M.S. London, J. Quek. Microsc. Cl., 8, 1903, (553-554).

Morton, W. Notes sur l'élevage des Phylies. Lausanne, Bull. Sci. Nat., (sér. 4), **39**, 1903, (401-407, av. 1 pl.); Arch. Sci. Phys., Genève, (sér. 4), **16**, 1903, (748-750).

Tepper, J. G. O. . . . Phasmidue or "spectre insects." Vict. Nat., Melbourne, 19, 1903, (138-142).

### SPECIAL.

Bacillus gallicus au Mans. Gentil. Mans (le), Bul. soc. agricult. sci., (sér. 2), 30, 1901-1902, (425-426).

Cacozelus semoni n. sp. Krauss, H. A. Jena, Denkschr. med. Ges., 8, 1903, (743-770, 1 Taf.).

Carausius irregulariterlobatus n. sp. **Krauss**, H. A. l.c. (743-770, 1 Taf.).

Cylindomena aenea n. sp. **Krauss**, H. A. *l.c.* (743-770, 1 Taf.).

Diapheromera arizonensis n. sp. United States. **Caudell**, A. N. Washington, D.C., Smitheonian Inst. Nation. Mus. Proc., **26**, 1903, (877).

Dietyoneura clarinervie<sup>†</sup> n. sp. Illinois, Carboniferous. **Melander**, A. L. Chicago, Ill., J. Geol. Univ. Chic., **11**, 1903, (178–198).

Eurycnema cercata n. sp. Australia. **Krauss**, H. A. Jena, Denkschr. med. Ges., **8**, 1903, (743–740, 1 Taf.).

Lamponius portoricensis n. sp. Porto Rico. Rehn, J. A. G. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., 29, 1903 (132).

Megaphasma n. gen., type Diapheromera dentricus Stal. Caudell, A. N. Washington, D.C., Smithsonian Inst. Nation. Mus. Proc., 26, 1903, (878).

Parubucillus n. gen., type Bacillus coloradus Scudder. Candell, A. N. l.c. (865).

Promachus semoni n. sp. Australia. Krauss, H. A. Jena, Denkschr. med. Ges., 8, 1903, (743-770, 1 Taf.).

Pseudosermyle n. gen., P. banksii, P. truncata nn. spp. United States. **Gaudell**, A. N. Washington, D.C., Smithsoniau Inst., Nation. Mus. Proc., **26**, 1903, (867– 871).

Timema californica n. sp. (Timeminae n. subfam.) Scudder, in Caudell, A. N. l.c. (882).

#### GRYLLIDAE.

Aphonomorphus n. non. = Aphonogryllus Rehn (not of Perkins). **Rehn**, J. A. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (258-260).

Falcicula n. gen., F. hebardi n. sp. **Behn**, J. Λ. (4. l.c. (258-260).

Gryllotalpa: modo seguito per combatterla a Nola. Berlese, A. Bollettino di Entomologia agraria, Padova, 9, 1902, (104-116, 128-140, 150-159, 185-189).

Gryllus, anitosis in the egg follicle cells. Conklin, E. G. Amer. Nat., Boston, Mass., **37**, 1903, (667-675).

nn. spp. Blatchley, W. S. Indiana, Rep. Dept. Geol. Nat. Res., Indianapolis, 27, 1902, [1903], (123-471).

*alogue* n. sp. United States. **Rehn**, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., **54**, 1902, [1903], (717–727).

bermudensis n. sp. **Candell**, A. N. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (329–331).

*domesticus*, Anatomie und Histologie des tibialen Gehörapparates. **Herbig**, C. Arch. mikr. Anat., Bonn, **61**, 1903, (697-729, mit 2 Taf).

*Heterotrypus mimulus* n. sp. **Krauss**, H. A. Jena, Denkschr. med. Ges., **8**, 1903, (743-770, 1 Taf.)

Nemobius confusus n. sp. Indiana Blatchley, W. S. Indiana. Rep. Dept. Geol. Nat. Res., Indianapolis, **27**, 1902, [1903], (123-471, with pl.).

### LOCUSTIDAE.

### General.

Du Buysson, R. Catalogue des orthoptères locustides des collections du Muséum (1<sup>re</sup> liste). Bul. Muséum, Paris, **1903**, (225-227).

Jacot, E. Les sauterelles. Dissertation entomologique. Messager Suisse Rom., Fribourg, 16, 1903, (76, 116-117).

**Sheldon**, J. L. Cultures of *Empusa* [with bibliography]. J. Appl. Microsc., Rochester, N.Y., **6**, 1903, (2212-2220, with pl.).

#### SPECIAL,

Alogopteron n. gen., A. carribbeum n. sp. Rehn, J. A. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (141-142).

Biróa n. gen. verwandt mit Phrictaetypus, B. carinata, B. atrospinosa nn. spp. Bolivar, I. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (163-165).

Charisoma n. gen., Ch. karschi n. sp. Bolivar, I. l.c. (170-171).

Conocephalus brunerin.sp. Blatchley, W. S. Indiana, Rep. Dept. (ieol. Nat. Res. Indianapolis, 27, 1902, [1903], (123-471, with pl.).

Cyrtophyllus floridensis n. sp. Bentenmüller, W. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (637-638).

Dicorypha furcifera n. sp. **Erauss**, H. A. Jena, Denkschr. med. Ges., **3**, 1903, (743-770, 1 Taf.).

Diestrammena unicolor Brunner als Pflanzenschädling. Ludwig, F. Zs. Pflanzenkrankh., Stuttgart, 13, 1903, (210-213).

Dolichopoda geniculata: contributo alla [sua] conoscenza. Nota I. Monti, R. Milano, Rend. Ist. lomb., (Ser. 2), 35, fasc. 12, 1902, (470-491, con tav.).

Elimaea nn. spp. Krausse, A. H. Insektenbörse, Leipzig, 20, 1903, (372– 373).

A. H. l.c. (395).

A. H. l.c. (308-309).

Eurycorypha cuspidata n. sp. Deutsch Südwestafrika. Krauss, H. A. Wien, Verh. ZoolBot. Ges., 51, 1901, (292).

Gryllacris auriculata n. sp. **Krauss**, H. A. Jens, Denkschr. med. Ges., **8**, 1903, (743-770, 1 Taf.).

Hetararium brunneri n. sp. **Krauss**, H. Λ. l.c. (743-770, 1 Taf.).

Ischyra martha n. sp. **Krausse**, A. H. Insektenbörse, Leipzig, **20**, 1903, (308–309).

Ityocephala françoisi n. sp. Bolivar, I. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (171-172).

Liotrachela brunneri n. sp. Krausse, A. H. Insektenbörse, Leipzig, **20**, 1903, (395).

Melidia brunneri J. Krauss, H. A. Wien, Verh. ZoolBot. Ges., 51, 1901, (291).

Peranabrus scabricollis, internal anatomy. **Snodgrass**, R. E. New York, N.Y., J. Ent. Soc., **11**, 1903, (183–188. with 2 pls.).

Phrictaetypus viridis Brunn., Beschreibung. Boltvar, I. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (163).

Phrizocnemie hastiferus n. sp. United States. **Rehn**, J. A. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (240-241).

Phyllophora horváthi n. sp.; P. lanceolata Brunn., P. variegata Brunn., P. angustata Brunn., Beschreibung. Bolivar, I. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (175–178).

Rachidorus semoni n. sp. **Krauss**, H. A. Jena, Denkschr. med. Ges., **8**, 1903, (743-770, 1 Taf.).

Saga cappadocica n. sp. Westasien. Werner, F. Zool. Anz., Leipzig, 26, 1903, (528-531).

Sasinia n. gen. verwandt mit Phyllophora, S. spinosa Brunn., faunistisch; S. areolata, S. lactuca nn. spp. Bolivar, I. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (173-175).

Segestidea n. gen. verwandt mit Segestes Stål, S. princeps, S. marmorata, S. punctipennis nn. spp. Bolivar, I. l.c. (166-168). Siliquofera n. gen. verw. mit Phyllophora, S. grandis Blanch. Bolivar, I. l.c. (178).

Stenopelmatus terrenus n. sp. United States. Rehn, J. A. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (240-241).

Udeopsyla vierecki n. sp. United States. Rohn, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (717-727).

### ACRIDIIDAE.

#### GENERAL.

Bruner, L. Grasshopper notes for 1901. Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., (N. Ser.), No. 38, 1902, (39-49).

**Clément, A.** L. Le criquet marbré. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (97– 98, av. fig.).

Machon, Acridiens de l'Argentine. Arch. Sci. Phys., Genève, (sér. 4), 15, 1903, (571).

Marchal. Les criquets en 1901. Autun, Bul. soc. sci. nat., 15, 1902, (Proc.-verb. 28-30).

Rehn, J. A. G. Contributions toward a knowledge of the Orthoptera of Japan and Korea, I *Acrididae*. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (629-637).

Sander, L. Die Wanderheuschrecken und ihre Bekämpfung in unseren afrikanischen Kolonieen. Berlin, 1902, (544). [Review] by W. F. K., Nature, London, 67, (244).

Saussure, H. de. Analecta Entomologica. II. Notice sur la tribu des Eumastaciens. Rev. Suisse Zool., Genève, 11, 1903, (43-112, 1 pl.).

### SPECIAL.

Acridium Geoffroy synonym of Locusta Linnaeus. **Behn**, J. A. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (101-102).

Aptenopedes clara n. sp., Florids. Rehn, J. A. G. *l.c.* (14). Catantops debilis n. sp. Deutsch Südwestafrika. **Krauss**, H. A. Wien, Verh. ZoolBot. Ges., **51**, 1901, (291).

Cirphula sculpta n. sp. **Krauss, H.** A. Jens, Denkschr. med. Ges., **8**, 1903, (743-770, 1 Taf.).

Coptotettix inflatus n. sp. **Krauss**, H. A. *l.c.* (743-770, 1 Taf.).

Encoptolophus subgracilis n. sp. Arizona. **Caudell**, A. N. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (162– 166).

Erianthus nn. spp. India and Ceylon. de Saussure, H. Rev. Suisse Zool., Genève, 11, 1903, (78-83).

Erucius nn. spp. Borneo. de Saussure, H. l.c. (85-86).

Eumastax dentatus n. sp. Costa Rica. de Saussure, H. l.c. (91).

Euschmidtia nn. spp. de Saussure, H. l.c. (104-109).

Euthymia nn. spp. Finot, A. Paris, Ann. Soc. Ent., 71, (2° semest.), 1902, (620-636, av. fig.).

Halmenus nn. spp. Galapagos Islands. **Snodgrass**, R. E. Washington, D.C., Proc. Acad. Sci., **4**, 1902, (411-454, with 2 pl.).

Heliastus guanieri n. sp. United States. **Caudell**, A. N. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (794).

Hemierianthus n. gen. (~ Erianthus), H. gabonicus n. sp. Sansure, H. de. Zool. Anz., Leipzig, 26, 1903, (412– 416); Rev. Suisse Zool., Genève, 11, 1903, (75–76).

Lactista boscanus n. sp. United States. Rehn, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (717-727).

Leprus, notes on the genus; L. cyancus n. sp. Cockerell, T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (305-307).

Ligurotettiz kunzei n. sp. Arizona. Candell, A. N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (162–166).

Locusta Linnæus = Acridium Geoffroy or Cyrtacanthacris Walker. **Behn**, J. A. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (101-102). Malugassa n. gen. (~ Episactites Burr), M. coniceps n. sp. Saussure, H. de. Zool. Anz., Leipzig, 26, 1903, (412-415); Rev. Suisse Zool., Genève, 11, 1903, (88-89).

Mastacides vaginalis n. sp. India. de Saussure, H. Rev. Suisse Zool., 11, 1903, (87).

Mecostethus magister n. sp. Rehn, J. A. G. Philadelphia, Ps., Proc. Acad. Nat. Sci., 54, 1902, [1903], (629-637).

Melanoplus nn. spp. United States. Candell, A. N. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (799-802).

differentialis. Louisana. Morgan, H. A. Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (7-33).

*femoratus*, notes. Phillips, J. L. *l.c.* No. 40, 1903, (87).

*morsei* n. sp. Indiana. **Blatchley**, W. S. Indiana, Rep. Dept. Geol. Nat. Res., Indianapolis, **27**, 1902, [1903], (123-471, with pl.).

Neotettiz hancocki n. sp. Indiana. Blatchley, W. S. *l.c.* (123-471, with pl.).

Orbillue namaqua n. sp. S.W. Africa. Krause, H. A. Wien, Verh. ZoolBot. Ges., 51, 1901, (288).

Pachytylus cinerascens, Vorkommen bei Kahl am Main. Fröhlich. Berliner ent. Ze., 48, 1903, (146-148).

Pamphagus marmoratus. Krause, E. Prometheus, Berlin, 14, 1903, (665–668).

Paramastaz nn. spp. Brazil. de Saussure, H. Rev. Suisse Zool., Genève, 11, 1903, (93-97).

Parapleurus fastigiatus n. sp. Behn, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (629-637).

Parepisactus saltator n. sp. Centr. Amer. de Saussure, H. Rev. Suisse Zool., Genève, 11, 1903, (88).

Phrynotettiz, note on the genus, P. taosanus n. sp. Behn, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (595-598).

Phyllochoreia ? sulcata n. sp. de Saussure, H. l.c. (59).

(N 2-9053)

Phyllotettix n. nom. – Phyllonotus Hancock not Swainson. Hancock, J. L. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (188).

Psinidia sulcifrons var. amplicornus n. var. United States. Caudell, A. N. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 26, 1903, (791).

Pyrgomorpha eanderi n. sp. S. W. Africa. Krauss, H. A. Wien, Verh. ZoolBot. Ges., 51, 1901, (287).

Schiatocerca nn. var. et nn. spp. Galapagos Islands. **Enodgrass**, R. E. Washington, D.C., Proc. Acad. Sci., 4, 1902, (411-454).

pairing. Behn, J. A. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (89).

Scirtomastaz n. gen. (~ Eumastaz), . S. cordillierae n. sp. Saussure, H. de. Zool. Anz., Leipzig, 26, 1903, (412–415); Rev. Suisse Zool., Genève, 11, 1903, (97–98).

Sphingquotus nn. spp. Galapagos Islands. **Snodgrass**, R. E. Washington, D.C., Proc. Acad. Sci., **4**, 1902, (411-454).

Stirapleura mescalero n. sp. Rehn, J. A. G. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (717-727).

Tauchira lucida n. sp. Krauss, H. A. Jens, Denkschr. med. Ges., 8, 1903, (743-770, 1 Taf.).

Xanthomastar n. gen. (\* Eumastar), X. crassipes, X. furcatus nn. spp. Saussure, H. de. Zool. Anz., Leipzig, 26, 1903, (412-415); Rev. Suisse Zool., Genève, 11, 1903, (99-101).

### NEUROPTERA.

Borg, A. Annotations on Swedish Neuroptera. (Swedish). Entomol. Tidskr., Stockholm, 22, 1901, (175–176).

Enderlein, G. Ueber die Morphologie, Gruppierung und systematische Stellung der Corrodentien. Zool. Anz., Leipzig, 26, 1903, (423–437).

McLachlan, R. Amphibiotica. Nat. Hist. Sokotra, (398–403, pls. XXIV– XXIV<sub>A</sub>).

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### NEUROPTEROIDEA.

Cheliphlebia extensa † n. sp. Illinois, Carboniferous. **Melander**, A. L. Chicago, Ill., J. Geol. Univ. Chic., **11**, 1903, (178–198).

Dieconeura maxima† n. sp. Illinois, Carboniferous. **Melander**, A. L. *l.e.* (178-198).

Eucaenus † nn. spp. Illinois, Carboniferous. **Melander**, A. L. *l.c.* (178-198).

Homoioptera gigantea † n. sp. Agnus, Al. N. Naturaliste, Paris, (sér. 2), 25, 1903, (53-55, av. fig.).

Petromartus n. gen., P. indistinctus † n. sp. Illinois, Carboniferous. **Melander**, Λ. L. Chicago, Ill., J. Geol. Univ. Chic., **11**, 1903, (178–198).

Protodictyon n. gen., P. pulchripenne † n. sp. Illinois, Carboniferous. Melander, A. L. l.c. (178-198).

#### PLANIPENNIA.

#### GENERAL.

Banks, N. A revision of the Nearctic Chrysopidae. [With bibliography]. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., 29, 1903, (137-162, with pl.).

Currie, R. P. Myrmeleonidae from Arizona. Washington, D.C., Proc. Ent. Soc., 5, 1903, (272-284).

Davis, K. C. Sialididae of North and South America. [With bibliography]. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (442-499, with pl.).

Kirby, W. F. Planipennia. Nat. Hist. Sokotra, (404–405).

**strand**, E. Trichoptera and Neuroptera-Planipennia collected in Norway. (Norw.) Entomol. Tidskr., Stockholm, **22**, 1901, (93-96).

#### Special.

Acanthaclisis lineata n. sp. **Kirby**, W. F. Nat. Hist. Sokotra, (404).

Albardia n. gen., A. furcata n. sp. Weede, H. W. Leiden, Notes Mus. Jentink, 23, 1903, (234-236). Allochrysa n. gen., A. parcula n. sp. Banks, N. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (143).

Brachynemurus nn. spp. Banks, N. Washington, D.C, Proc. Ent. Soc., 5, 1903, (174-175).

<u>nn.</u> spp. **Currie**, R. P. *l.c.* (277-284).

N. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (86).

*dorsalis* n. sp. **Banks**, N. New York, N.Y., J. Ent. Soc., **11**, 1903, (240).

Ciauliodes nn. spp. N. and S. America. Davis, K. C. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (462-463).

filicornis n. sp. Arizona. Banks, N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (238).

Chrysopa nn. spp. Banks, N. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (146-155).

aztecana n. sp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (239).

Corydalis nn. spp. N. and S. America. Davis, K. C. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (480-482).

texana n. sp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (239).

Eremochrysa n. gen., E. hageni n. sp. Banks, N. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903. (158).

Hemerobius nn. spp. Arizona. Banks, N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (241-242).

Leucochrysa punctata n. sp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (238).

Megalomus latus n. sp. Arizona. Banks, N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (240).

Myrmeleon immaculatus var. occidentalis n. var. Arizona. Currie, R. P. I.c. (274).

mexicanum n. sp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (241). Myrmeleon texanus, and M. rusticus. **McClendon**, J. F. [Contributions from the Zoological laboratory of the University of Texas, No. 33]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (209-213, with 1 pl.).

Neuromus nn. spp. N. and S. America Davis, K. C. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (470).

Psammoleon sinuatus n. sp. Arizona, Currie, R. P. Washington, D.C., Proc. Ent. Soc., 5, 1903, (275).

Psychopsis, notes on the genus. Froggatt, W. W. Sydney, N.S.W., Proc. Linn. Soc., N. S. Wales, 28, 1903, (453-456, with 1 pl.).

newmani n. sp. = P. mimica, Newm. Froggatt, 1902, P. mimica Newman, notes, P. insolens McLachlan, notes, P. calivagus Walker. notes. **Proggatt**, W. W. *l.e.* (453-456, with 1 pl.).

Raphidia minuta n. sp. Arizona. Banks, N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (239).

Sialis nn. spp. N. aud S America. Davis, K. C. Albany, Univ. N.Y., Bull. St. Mus., No. 68, 1903, (450).

Ulula hyalina, life history. **McClen**don, J. F. Austin, Cont. Zool. Lab. Univ. Tex., No. 27; Amer. Nat., Boston, Mass., 36, 1902, (421-429).

### EMBIIDAE.

Embia taurica n. sp. Crimea. Kuznecov, N. I. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (208-210).

A. L. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (93–118).

### TERMITIDAE.

#### GENEBAL.

Forbes, H. O. Pseudo-neuroptera. Nat. Hist. Sokotra, (397).

**Froggatt**, W. W. The white ant city, a nature study. Agric. Gaz., Sydney, N.S.W., **14**, 1903, (726-730, with 1 pl. and text figs.).

Heath, H. The habits of California termites. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (47-63).

(n 2-9053)

**Silvestri**, F. Intorno la società dei Termiti considerati in rapporto alla agricoltura e all'uomo. Bollettino di Entomologia agraria, Padova, **9**, 1902, (25-31).

#### SPECIAL.

Termes flaripes Koll., habits. Marlatt, C. L. [Revised reprint from Washington, D.C., Ball. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 4, (70-76).] Washington, D.C., Cir. U. S. Dept. Agric. Div. Ent., (Ser. 2), No. 50, 1902, (8).

#### PSOCIDAE.

#### GENERAL.

Enderlein, G. Die Copeognathen des indo-australischen Faunengebietes. Budapest, Ann. Hist.-Nat. Mus. Nat. Huug., 1, 1903, (179-344, mit 1 Taf. III-XIV und 12 Textfig.).

Zur Kenntniss amerikanischer Psociden. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (351-364, mit 2 Taf.).

#### SPECIAL.

Amphicatomum trichopteryz Hag., Beschreibung. **Enderlein**, G. Budapest, Ann. Hist. Nat. Mus. Nat. Huag., 1, 1903, (310-312).

Amphipeocus pilosus MacLachl., Beschreibung. Enderlein, G. l.c. (279– 280).

Archipsocus recens n. sp., A. puber Hagen, Beschreibung. Enderlein, G. l.c. (282-289, Taf. VIII).

Azinopescus n. gen. (Procalropus ribaga), A. microps n. sp. Kamerun. Enderlein, G. Zool. Jahrb. Jena, Abt. f. Syst., **19**, 1903, (2-3).

Caecilius nn. spp. America. Enderlein, (†. l.c. (356).

cribrarius Hag., C. multipunctatus Hag., C. aridus Hag., C. pictipennis M'Lachlan, Beschreibung. C. fuscopterus Lat. var. tonkinensis n. var. and 14 nn. spp. Enderlein, G. Budspest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (264–277, Taf. VI, VII, XIII, XIV).

Caecilius pinicola n. sp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (238).

Callistoptera n. gen., C. anna n. sp. Enderlein, G. Budapest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (248–249, Taf. V).

Calopsocus infelix Hagen, Beschreibung. Enderlein, G. l.c. (246-247, Taf. VI).

Cerastipsocus subcostalis n. sp. Enderlein, G. l.e. (215, Taf. IV).

Copostigma n. gen. verwandt mit Psocus, C. dorsopunctatum, C. palliatum, C. maculiceps, C. fumatum, C. indicum. C. brevistylus nn. spp. Enderlein, G. l.c. (229-233, Taf. IV).

Cymatopsocus n. gen. verwandt mit Amphientomum, C. opalinus n. sp. Enderlein, G. l.c. (314-317, Taf. IX-XII).

Deinopsocus n. gen., D. spheciophilus n. sp. America. Enderiein, G. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (358-359).

Dendroneura n. gen., D. ranulosa n. sp. America. Enderlein, G. l.e. (354-355).

Dypsocus coleoptratus Hagen, D. dolabratus Hag., Beschreibung. Enderlein, G. Budapest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (250-251, Taf. V).

Echinopsocus n. geu. verw. mit Psocathropos Rib., E. erinaceus n. sp. Enderlein, G. l.c. (331-332, Taf. X-XII).

Ectopsocus denudatus n. sp., E. briggsi MacLachlan, Beschreibung. Enderlein, G. l.c. (293-296, Taf. VII-XIV).

Elipsocus boops Hag., E. impressus Hag., Beschreibung. Enderlein, G. l.c. (304-305).

Episcopus delicatus Hag., E. roseus (Hag.), Beschreibung und 5 nn. spp. Enderlein, G. l.c. (252-258, Taf. V-VI).

Fülleborniella nn. spp. Enderlein, G. l.c. (280-282, Taf. VII).

Graphopsocus uniformis Hagen, Beschreibung. Enderlein, G. l.c. (241– 242).

Hageniella n. gen. verwandt mit Epirescus (Hag.), H. zonata (Hag.), H. lanata (Hag.), H. molesta (Hag.). Enderlein, G. l.c. (258-259).

Hemicaecilius n. gen., H. bogotanus n. sp. America. Enderlein, G. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (357-358).

Hemipeocus chloroticus var. luridus. n. var. Enderlein, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (233-235, Taf. VI).

Ischnopteryz cineta n. sp. America. Enderlein, G. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (351).

Kolbea nn. spp. Enderlein, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (278-279, Taf. V, XIV).

Lepidopeocus n. gen., L. nepticulides n. sp. Enderlein, G. l.e. (328-331, Taf. IX-XII).

Leptella, systematische Stellung. Enderlein, G. Zool. Anz., Leipzig, 27, 1903, (131-134).

Micropeocus musae (Kunstler & Chaine). Enderlein, G. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (288-292).

waterstradti Enderl., Beschreibung und nn. spp. Enderlein, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (296–299, Taf. VII, XIV).

Myopeocus camerunus n. sp. Kamerun. Enderlein, G. Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (5).

unduosus Hag., M. fraternus MacLachlan, M. griseipennis Mac-Lachlan, M. australis (Brauer), M. norae sealandiae Kolb., Beschreibung; M. kolbei n. sp. Enderlein, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (299-303, Taf. IX-X).

Neurosema apicalis MacLachlan, Beschreibung, Enderlein, G. l.c. (243-245, Taf. V).

Nymphopeocus n. gen., N. destructor n. sp. Enderlein, G. Zool. Anz., Leipzig, 27, 1903, (76).

Perientomum gregarinum Hag., P. superbum Hag., P. incultum Hag., P. morosum Hag., P. triste Hag., Beschreibung; P. biroianum n. sp. Enderlein, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (320-327, Taf. XI-XIII).

hosemanni n. sp. Kamerun Enderlein, G. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (3). Peripsocus nn. spp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (237).

piger Hagen, P. aethiope Hagen, Beschreibung and 5 nn. spp. Enderlein, G. Budapest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (289-293, Taf. VII).

Philotarsus nn. spp. Enderlein, G. l.e. (307-310, Taf. IX-X).

Propeocus pallipes MacLachlan, Beschreibung. Enderlein, G. l.c. (303-304).

Protodypsocus n. gen. verwandt mit Dypsocus, P. fissiceps n. sp. **Enderlein**, G. l.c. (251-252, Taf. XIII).

Pseudocaecilius n. gen. verwandt mit Epipsocus, P. elutus, P. testaceus, P. ornatus, P. lachlani nn. spp. Enderlein, G. l.c. (260-263, Taf. V).

Psilopeocus n. gen. Isolirt stehend, P. nigricornis n. sp. Enderlein, G. l.c. (305-307, Taf. XIV).

Psocus nn. spp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (236– 237).

nn. spp. America. Enderlain, G. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (352-353).

conspersus n. sp. Arizona. Banks, N. Washington, D.C., Proc. Ent. Soc. 5, 1903, (237).

longicornis Fabr., P. consitus Hag., P. oblitus Hag., P. trimaculatus Hag., faunistisch, P. nebulosus Steph., P. taprobanes Hagen, P. circularis Hag., P. obtusus Hag., P. quinquepunctatus MacLachl., Beschreibung und 6 nn. spp. **Enderlein**, G. Budapest; Ann. Hist. Nat. Mus. Hung., 1, 1903, (215-229, Taf. IV).

Psylloneura n. gen. verwandt mit Psyllipsocus, P. simbangana n. sp. Enderlein, G. l.c. (317-319, Taf. IX-XJ).

Pterodela livida n. sp. Enderlein, G. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (374).

Ptilopeocus annulicornis n. sp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (238).

Reuterella n. gen. Enderlein, G. Zool. Anz., Leipzig, 27, 1903, (131-134).

Stenopeocus apertus Hag., S. striatifrons Mac. Lachl., Beschreibung; S. tonkinensis n. sp. **Enderlein**, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (239-241, Taf. VI).

Stigmatopathus n. gen. verwandt mit Amphientomum, St. horvathi n. sp. Enderlein, G. l.c. (312-313, Taf. IX-XII).

Syllysis caudata Hag., Beschreibung. Enderlein, G. l.c. (319-320).

Taeniostigma elongatum Hagen, T. malayanum MacLachl., T. ingens n. sp. Enderlein, G. lc. (235-239).

Troctes spp. Banks, Nathan. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (241).

nn. spp. America. **Enderlein**, G. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (360-361).

divinatorius Müll., Faunistisch. Enderlein, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (335).

Tropusia oleagina Hagen, Beschreibung. Enderlein, G. l.c. (333-334).

#### PERLIDAE.

#### GENERAL.

**Bis**, F. Einiges über kurzflügelige Perliden. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (443–446).

#### SPECIAL.

Dictyopteryz dovrensis n. sp. Norwegen. **Kempny**, P. Wien. Verh. ZoolBot. Ges., **51**, 1901, (788-791).

Nemura, die schweizerischen Arten. Ris, F. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1902, (378–405, mit 6 pls.).

Perlodes n. nom. (= Dictyopteryz Pictet not Stephens). Banks, N. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (241).

Taeniopteryx nebulosa L., Tracheenkiemen an den Beinen einer Larve. Lauterborn, R. Zool. Anz., Leipzig, 26, 1903, (637-642).

### EPHEMERIDAE.

### GENERAL.

Berry, E. W. New or hitherto unknown Ephemerid nymphs of the eastern United States [New Jersey]. Amer. Nat., Boston, Mass., **37**, 1903, (25-31).

Gross, J. Ueber das Palmén'sche Organ der Ephemeriden. Zool. Jahrb., Jena, Abt. f. Anat., **19**, 1903, (91–100, mit 1 Taf.).

Marchal, C. Une remarquable éclosion d'Ephémères. Autun. Bul. soc. sci. nat., 15, 1902, (Proc.-verb. 260– 262).

Needham, J. G. Food of brook trout [Salmo fontinalis] in Bone pond. [Species of Ephemeridae.] Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (204-217, with pl.).

#### SPECIAL.

Callibaetcs skokiana n. sp. Needham, J. G. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (215).

Habrophlebia americana n. sp. Banks, N. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (235, with text-fig.).

in Berry, F. W. Amer. Nat., Boston, Mass., 5, 1903, (26).

Siphlurus acstivalis n. sp. Norway. Eston, A. E. Ent. Mag., London, 39, 1903, (30).

#### ODONATA.

#### GENERAL.

Brauner, A. Notices sur divers Odonates. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (89–91).

Brimley, C. S. List of dragonflies (Odonata) from North Carolina, especially from the vicinity of Raleigh. Philadelphia, P.n., Ent. News Acad. Nat. .Sci., 14, 1903, (150-157).

Calvert, P. P. Neuroptera-Odonata [from Beulah, New Mexico]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902, (42-43). **Calvert**, P. P. Additions to the Odonata of New Jersey, with descriptions of two new species. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, ([33]-**41**, with pl.).

dragonflies. *l.c.* (161-162).

Difference of the same and the

[Note on Maryland Odonata, with paper by F. Ris]. *l.e.* (219-220).

Distribution of New York dragon flies [Odonata]; additional data. Albany Univ., N.Y., Bull. St. Mus., No. **68**, 1903, (276-279).

**Currie**, R. P. The Odonata collected by Messrs. Schwarz and Barber in Arizona and New Mexico. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (298-303).

**Pröhlich**, C. Die Odonaten und Orthopteren Deutschlands mit besonderer Berücksichtigung der bei Aschaffenburg vorkommenden Arten, nach der analyt. Methode beab. IV. Mitteilung des naturwissenschaftlichen Vereins zu Aschaffenburg, hreg. zur Feier seines 25-jährigen Bestehens. Jena (G. Fischer), 1903, (VI + 106, mit 6 Taf.). 23 cm. 4 M.

Graf, J. L. Additions to the above list [with A list of the dragonflies observed in western Pennsylvania, by E. B. Williamson]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (113-114).

Grünberg, Karl. Zur Kenntniss der Odonatenfauna des ost-afrikanischen Seengebiets. Ergebnisse der Nyassa-See- und Kinga-Gebirgs-Expedition der Hermann und Elise geb. Heckmann-Wentzel-Stiftung. Zool. Jahrb., Jena, Abt. f. Syst., **18**, 1903, (695-726).

Neue Odonaten aus dem Njassa-Gebiet, gesammelt von Dr. Fülleborn. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (230-237).

Higgins, H. T. The development and comparative structure of the gizzard in the Odonata Zygoptera. [Thesis . . . B.S. . . University of Pennsylvania . . 1900]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 53, 1901, (126-141, with pl.); [reprint], Philadelphia, Cont. Zool. I.ab., Univ. Pa., 1901, 1902, [[126]-141, with pl.). Laidlaw, F. F. Odonata (from Malay Peninsula). Part 1 in Fascic. Malay. Zool., 1, (185-200).

McLachlan, R. An annotated list of Odonata collected in West Central Spain, by Dr. T. A. Chapman and Mr. G. C. Champion in June and July, 1902. Ent. Mag., London, 39, 1903, (7-9).

Hamiye, [M.]. Odonata of Prov. Tosa. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (297).

Plates illustrating the species of Japanese Odonata. *l.c.* (pls. IX-XIII).

**Beedham**, J. G. A genealogic study of dragon-fly wing venation. Thesis . . PhD. . . Cornell. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **26**, 1903, (703-764, with **24** pls.).

Life histories of Odonata, suborder Zygoptera, Damsel flies. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (218-276, with pl.).

and Antony, M. H. The skewness of the thorax in the Odonata. New York, N.Y., J. Ent. Soc., 11, 1903, (117-125, with 1 pl.).

**Bis**, F. Note on a small collection of dragonflies (Odonata) from Baltimore, Maryland [with note by Philip P. Calvert]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (216-220).

------ Vorweisung europaischer und amerikanischer Libellen. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1903, (436-443).

Wadsworth, M. Sixth addition to the list of dragon flies (Odonata) of Manchester, Kenbec county, Maine. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (246-247).

Westerlund, J. A. Pseudoneuropters in the neighbourhood of Ronneby, (South Sweden). (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (137-142).

Williamson, E. B. A list of the dragonflies observed in western Pennsylvania [with Additions to the above list, by J. L. Graf]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (65-71, 108-114, with pl.).

------ Dragonflies (Odonata) from the Magdalen islands. *l.c.* (144-146). Williamson, E. B. Spiders as enemies of dragonflies. *l.c.* 14, 1903, (160-161).

### SPECIAL.

Aeschna grandis, emergence. Dobson, H. T. Entomologist, London, 36, 1903, (253-254).

Agricenemis consimilis n. sp. Njassa. Grünberg. Berlin, SitzBer. Ges. natf. Freunde, 1902, (230-237)

Agrionoptera similis Sélys, A. papuensis Sélys, A. longitudinalis Sélys, A. biseralis Sélys, Beschreibung, Förster, F. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (533-536).

Anomalagrion hastatum. United States. Calvert, P. P. Biol. Centr.-Amer., London, 1903, (130).

Birénides n. gen. verw. mit Nannophlebia, B. superstes n. sp. Förster, F. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (521-524).

Caconeura torrenticola n. sp. Förster, l.c. (552-554).

Ceratura capreola. Mexico. Calvert, P. P. Biol. Centr.-Amer., London, 1903, (131).

Chlorocnemis inepta n. sp. Njassa. Grünberg. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (230–237).

Chromagrion n. gen. Needham, J. G. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (245).

Coryphaeschna n. gen., type Aeschna ingens Rambur. Williamson, E. B. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (8, 9).

P. P. *l.c.* (8-10, with pl.).

Crotilla Kirby. Förster, F. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (536–537).

Cyanocharis n. gen., C. valga n. sp. Brazil. Needham, J. G. Washington, D.C., Proc. Biol. Soc., 16, 1903, (55–58).

Diaphlebia nezans n. sp. S. America. Calvert, P. P. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (182-184). 3831 Dienaroneura cella

Dieparoneura cellularis n. sp. Njassa. Gründerg. Berlin, SitzBer. Ges. natf. Freande, 1902, (230–237).

Epiqomphus nn. spp. Calvert, P. P. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (188).

Gomphus app. Calvert, P. P. Philadeiphia, Ps., Ent. News, Acad. Nat. Sci., 12, 1901, ([65]-73, with pl.), [roprint], Philadelphia, Cont. Zool. Lab. Univ. Pa., 1901, 1902, ([65]-73, with pl.).

on, E. B. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (47-49).

sordidus × graslinellus hybrid. Williamson, E. B. *l.c.* 14, 1903, (253–258, with pl.).

Gynacantha nn. spp. Njassa. Grünberg. Berlin, SitzBer. Ges. natf., Freunde, 1902, (230-237).

Hagenius brevistylus. New Jersey. Needham, J. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (159).

Hemianax ephippiger Burm., taken at Devonport in February. McLachlan, R. Ent. Mag., London, **39**, 1903, (96).

Hemicordulia assimilis Hagen-Sélys, Beschreibung. Förster, F. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (542).

Hetaerina titia, variation. Calvert, P. P. Philadelphia. Pa., Ent. News Acad. Nat. Sci., 13, 1902, (192-193).

Huonio n. gen. verwandt mit Nannophlebia, H. epinephela, H. thalassophila nn. spp. **Förster**, F. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (515-520).

Hydrobasileus brevistylus var. papuanus n. var. Förster, F. l.c. (528–529).

Ischnura barberi n. sp. United States. Currie, R. P. Washington, D.C., Proc. Ent. Soc., 5, 1903, (302).

R. Nat. Hist. Sokotra, (402).

Jagoria nn. spp. Förster, F. Insektenbörse, Leipzig, **20**, 1903, (245).

Lestes, ponte. Giard, A. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (189-192). Lestes eurinus. New Jersey. **6[alvert]**, P. P. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (158).

<u>uncatus</u> in Iowa. **Hoag**, M. E. *l.c.* **13**, 1902, (88–89).

Mecitogastor garloppi n. sp. Fürster, F. Insektenbörse, Leipzig, 20, 1903, (355–356).

Micronympha bilobata n. sp. Njassa. Grünberg. Berlin, SitzBer. Ges. natf. Freunde, 1902, (230-237).

Microtrigonia n. gen. verwandt mit Birónides, M. marsupialis n. sp. Förster, F. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (524–527).

Nannophlebia Sélys, systemat. Beschreibung. Förster, F. l.e. (520– 521).

Neoneura nn. spp. Mexico and Texas. Calvert, P. P. Biol. Centr.-Amer., London, 1903, (138-140).

Nesotenia mysis Sólys var. puella Först., N. interrogata Sólys ?, Beschreibung, N. eingulata Kirby, N. dahli Ris, N. lineata Brauer, Faunistisch. **Förster**, F. Budapest, Ann. Hist-Nat. Mus. Nat. Hung., **1**, 1903, (529-533).

Neurothemis spp., N. martini n. sp. Krüger, L. Stettiner ent. Ztg, 64, 1903, (248-291).

Notogomphus nyassicus n. sp. Njassa. Berlin, SitzBer. Ges. natf. Freunde, 1902, (230-237).

Olpogastra fülleborni n. sp. Njassa. Grünberg. l.e. (230-237).

Orthetrum fenicheli Först., O. villosovittatum Brauer, Beschreibung. Förster, F. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (537-540).

Palaeargia n. subgen. verwandt mit Argia, P. flavovittala Sélys, Beschreibung. Förster, F. l.c. (549-552).

Palaemnema spp., P. domina n. sp. Mexico. Calvert, P. P. Biol. Centr.-Amer., London, 1903, (135-137).

Palpopleura callista n. sp. Njassa. Grünberg. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (230-237).

Platycnemis pennipes, Pall. Sul valore sistematico delle varietà di [questa] specie (sunto). Bentivogito, [T.]. Mon. zool.ital., Firenze, 13, 1902, (Supplemento), (22). Protoneura, old and new species. Central America. **Calvert**, P. P. Biol. Centr.-Amer., London, **1903**, IV, pt. 4, (140-144).

Pseudagrion lindicum n. sp. Njassa. Grünberg. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (230–237).

Rhinocypha nn. spp. Förster, F. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (546-548).

Somatochlora prozocans n. sp. New Jersey. Calvert, P. P. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (39-77).

Synthemis primigenia n. sp. Förster, F. Budapest, Ann. Hist-Nat. Mus. Nat. Hung., 1, 1903, (542–546).

Telagrion? daeckii n. sp. New Jersey. Calvert, P. P. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (36).

**Brimley**, C. S. *l.c.* (335–336).

Thore williamsoni n. sp. Förster, F. Insektenbörse, Leipzig, 20, 1903, (355– 356).

#### TRICHOPTERA.

### GENERAL.

**Elapálek.** Über die Morphologie der Genitalsegmente und Genitalanhänge bei den Trichopteren. I. Die Familien *Phyacophilidae, Philopotamidae* und *Hydroptylidae.* Prag, Rozpr. České Ak. Frant. Jos., **11**, 1902, Nr. 35, (39, 2 Taf.).

Trichoptera, Morphologie der Geschlechtsanhänge . . die Morphologie der Körperringe und Geschlechtsanhänge bei Trichopteren. I. Deskript. Teil. Familien Hydropeychidae, Molannidae, Leptoceridae, Phryganaeidae, Sericostomatidae, Limnophilidae. II. Vergleich. Teil (böhmisch). l.c. 12, 1903, Nr. 43, (62, 2 Taf.).

Needham, J. G. Remarks on Hydroptilid larvae and their metamorphosis. Zool. Anz., Leipzig, 27, 1903, (108-110).

**shaw**, E. Trichoptera in Lincolnshire and Nottinghamshire. Ent. Mag., London, **39**, 1903, (91-95). **Silfvenius**, A[ntti] J[ohannes]. [Über in Wasser lebenden Schmetterlingen und auf Land lebenden Trichopteren.] (Finnisch) Luonnon Ystävä, Helsingfors, **1903**, 6-8, (125-128).

**strand**, E. Trichoptera and Neuroptera-Planipennia collected in Norway. (Norw.) Entomol. Tidskr., Stockholm, **22**, 1901, (93-96).

**UIMER**, Georg. Beiträge zur Metamorphose der deutschen Trichopteren. [Forts]. Allg. Zs. Ent., Neudamm, **8**, 1903, (11-15, 70-73, 90-93, 209-211, 315-316).

——— Ueber das Vorkommen von Krallen an den Beinen einiger Trichopterenpuppen. *l.e.* (261–265).

Zur Trichopteren - Fauna von Thüringen und Harz. (Mit Beschreibung einiger neuer Metamorphose-Stadien.) *l.c.* (341-350).

von Hessen. *l.c.* (397–406).

Metamorphose der deutschen Trichopteren. Stettiner ent. Ztg, 64, 1903, (179– 226, mit 3 Taf.).

### SPECIAL.

Anabolina n. gen., A. diversa n. sp. Arizona. Banka, N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (244).

Asynarchus pallidus n. sp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (242).

Chimarrha angustipennis n. sp. Arizons. Banks, N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (242).

Glossoma boltoni, Analkiemen bei den Larven. Thienemann, A. Zool. Anz., Leipzig, **37**, 1903, (125–129).

Glyphotaelius bellus n. sp. Banks, N. New York, N.Y., J. Ent. Soc., **11**, 1903, (241).

Homophylax nevadensis n. sp. Banks, N. l.c. (242).

*Hydropsyche*, larvae. **Simpson**, C. B. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (93–94, with figs. 4 and 5, p. 95).

analis n. sp. Banks, N. l.c. (243).

divisa n. sp. Arizona. Banks, N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (244). Hydroptila insubrica n. sp. Schweiz. Ris, F. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 11, 1903, (16).

Ithytrichia lamellaris, Eaton, eine merkwürdige Hydroptiliden - Larve. Lauterborn, R[obert] und **Bimsky-**Korsakow, M. Zool. Anz., Leipzig, 26, 1903, (280-288).

Leptocerus floridanus n. sp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (242).

Limnephilus indivisus. Simpson, C. B. Washington, D.C., Proc. Ent. Soc., 5, 1903, (98–100).

Mystrophora Klapálek, note on the genus. McLachlan, R. Ent. Mag., London, **39**, 1903, (31–32).

Neophylax fuscus n. sp. Banks, N. New York, N.Y., J. Ent. Soc., 11, 1903, (242).

Pellopsyche n. gen., P. signata n. sp. Banks, N. l.c. (243).

# LIST OF NEW GENERA AND SPECIES.

ACANTHACLISIS [Planipennia]. ---- lineata. Kirby. 103. AGBIOCNEMIS [Odonata]. ----- consimilis. Grünberg. 89. Albardia n. gen. [Neuroptera]. Weele. 214. furcata. Weele. 214. Allochrysa gen. [Planipennia]. n. Banks, 5. parvula, Banks. 5. Alogopteron n. gen. [Locustidae]. Rehn. 167. carribbeum. Rehn. 167. Anabolina [Trichoptera]. n. gen. Banks. 4. diversa. Banks. 4. ANCISTROGASTER [Forficulidae]. burrin. nom. Kirby. 100. ----javanus. de Bormans. 29. ANISOLABIS [Forficulidae]. dubronii n. nom. Kirby. \_\_\_\_\_ 100. ? incerta. de Bormans. 29. Aphonomorphus n. nom. [Grylidae]. Rehn. 169.

- APTENOPEDES [Acridiidae]. ----- clara. Rehn. 161.
- APTERYGIDA [Forficulidae]. ----- buscki. Rehn. 159.
- ABCHIMANDRITA [Blattidae].
- ----- tessellata. Rehn. 160.
- ARCHIPSOCUS [Psocidae]. ----- rccens. Enderlein. 73.
- Archoblattina† n. nom. [Blattidae]. Sellards. 183.
- Arenivaga n. subgen. [Blattidae]. Rehn. 156.
- ASYNABCHUS [Trichoptera]. - pallidus. Banks. 10.
- Axinopsocus n. gen. [Psocidae]. Enderlein. 71.
  - microps. Enderlein. 71.

Biros n. gen. [Locustidae]. Bolivar. 17. atrospinosa. Bolivar. 17. carinata. Bolivar. 17.

- Bironides n. gen. [Odonata]. Förster. 77.
  - superstes. Förster. 77.
- BLABERUS [Blattidae].
- distanti. Kirby. 101.
- BLATTA [Blattidae].
- anceps. Krauss. 107.
- brunneri. Kirby. 101. secura. Krauss. 107.
- BLATTELLA [Blattidae]. parida. Rehn. 160.
- spectativa. Rehn. 160.
- titania. Rehn. 160.
- BRACHYNEMURUS [Planipennia].
- assimilis. Banks. 3.
- barberi. Currie. 60. cockerelli. Banks. 6.

- delicatulus. Currie. 60. dissimilis. Banks. 3. dorsalis. Banks. 10. hubbardii, var. nubeculi
  - pennis n. var. Currie. 60. intermedius. Currie. 60.
  - schwarzi. Currie. 60.
- singularis. Currie. 60.
- texanus. Banks. 3.
- yavapai. Currie. 60.
- CACONEURA [Odonata].
  - torrenticola. Förster. 77.

CACOZELUS [Phasmidae].

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Förster. Huonia n. gen. [Odonata]. 77. epinephela. Förster. 77. — thalassophila. Förster. 77. HYDROBASILEUS [Odonata]. ----- brevistylus var. papuanus n. var. Förster. 77. HYDROPSYCHE [Trichoptera]. — analis. Banks. 10. — divisa. Banks. 4. HYDROPTILA [Trichoptera]. ----- insubrica. Ris. 176. ISCHNOPTERA [Blattidae]. ---- intricata. Blatchley. 16. jamaicana. Rehn. 160. johnsoni. Rehn. 168. ISCHNOPTERYX [Psocidae]. ----- cincta. Enderlein. 69. ISCHNURA [Odonata]. - barberi. Currie. 61. (?) granti. 128. McLachlan. ISCHRYRA [Locustidae]. - martha, Krausze. 109. Isolabella n. gen. [Forficulidae]. Ver-hoeff. 210. graeca. Verhoeff. 210. Isolabis n. gen. [Forficulidae]. Verhoeff. 210. - braueri. Verhoeff. 210. ITTOCEPHALA [Locustidae]. — françoisi. Bolivar. 17. JAGORIA [Odonata]. amata. Förster. 75. bühri. Föster. 75. ---- venatrix. Förster. 75. KOLBEA [Psocidae]. hieroglyphica. Enderlein. 73. solox. Enderlein. 73. LABIA [Forficulidae]. auricoma. Rehn. 170. canaca. Burr. 30. flavicollis. De Bormans. 29. tlaviscuta. Rehn. 157. pulchripes. de Bormans. 29. rogenhoferi. de Bormans. 29. - tristis. de Bormans. 29. LABIDURA [Forficulidae]. ----- truncata. Kirby. 100. LACTISTA [Acridiidae]. ---- boscanus. Rehn. 155.

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reicherti. Enderlein. 73.
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hastifera. Rehn. 160. POLTPHAGA [Blattidse]. 
<ul> <li>hastifera. Rehn. 160.</li> <li>POLTPHAGA [Blattidae].</li> <li>camelorum. Kirby. 101.</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> </ul>
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<ul> <li>hastifera. Rehn. 160.</li> <li>POLTPHAGA [Blattidae].</li> <li>————————————————————————————————————</li></ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>semoni. Krauss. 107.</li> <li>PROSOFLECTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroides].</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>semoni. Krauss. 107.</li> <li>PROSOPLECTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea].</li> <li>Melander. 136.</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>— camelorum. Kirby. 101.</li> <li>— limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>— ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>— semoni. Krauss. 107.</li> <li>PROSOPLECTA [Blattidae].</li> <li>— rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroides].</li> <li>Melander. 136.</li> <li>— pulchripenneț. Melander.</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>semoni. Krauss. 107.</li> <li>PROSOPLECTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea].</li> <li>Melander. 136.</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>— camelorum. Kirby. 101.</li> <li>— limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>— ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>— semoni. Krauss. 107.</li> <li>PROSOPLEOTA [Blattidae].</li> <li>— rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea].</li> <li>Melander. 136.</li> <li>Pulchripenne<sup>†</sup>. Melander. 136.</li> <li>Protodypsocus n. gen. [Psocidae]. Ender-</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>eemoni. Krauss. 107.</li> <li>PROSOFLECTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea]. Melander. 136.</li> <li>pulchripenne<sup>†</sup>. Melander. 136.</li> <li>Protodypsocus n. gen. [Psocidae]. Enderlein. 73.</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>eemoni. Krauss. 107.</li> <li>PROSOFLECTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea]. Melander. 136.</li> <li>pulchripenne<sup>†</sup>. Melander. 136.</li> <li>Protodypsocus n. gen. [Psocidae]. Enderlein. 73.</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>semoni. Krauss. 107.</li> <li>PROSOPLEOTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea]. Melander. 136.</li> <li>pulchripenne<sup>†</sup>. Melander. 136.</li> <li>Protodypsocus n. gen. [Psocidae]. Enderlein. 73.</li> <li>fiesiceps. Enderlein. 73.</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTEELA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>semoni. Krauss. 107.</li> <li>PROSOPLEOTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea]. Melander. 136.</li> <li>pulchripenne<sup>†</sup>. Melander. 136.</li> <li>Protodypsocus n. gen. [Psocidae]. Enderlein. 73.</li> <li>fissiceps. Enderlein. 73.</li> <li>PBOTONEUBA [Odunata].</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>semoni. Krauss. 107.</li> <li>PROSOPLECTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea]. Melander. 136.</li> <li>pulchripenne<sup>†</sup>. Melander. 136.</li> <li>Protodypsocus n. gen. [Psocidae]. Enderlein. 73.</li> <li>Frotodypsocus n. gen. Caberlein. 73.</li> <li>PROSONEUBA [Odonata].</li> <li>cara. Calvert. 48.</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>semoni. Krauss. 107.</li> <li>PROSOPLECTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea]. Melander. 136.</li> <li>pulchripenne<sup>†</sup>. Melander. 136.</li> <li>Protodypsocus n. gen. [Psocidae]. Enderlein. 73.</li> <li>Frotodypsocus n. gen. Caberlein. 73.</li> <li>PROSONEUBA [Odonata].</li> <li>cara. Calvert. 48.</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>camelorum. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>semoni. Krauss. 107.</li> <li>PROSOPLECTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea].</li> <li>Melander. 136.</li> <li>pulchripenne<sup>†</sup>. Melander. 136.</li> <li>Protodypsocus n. gen. [Psocidae]. Enderlein. 73.</li> <li>fissiceps. Enderlein. 73.</li> <li>PROTONEUBA [Odomata].</li> <li>cara. Calvert. 48.</li> <li>rufia. Calvert. 48.</li> </ul>
<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>camelorum. Kirby. 101.</li> <li>limbata. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>semoni. Krauss. 107.</li> <li>PROSOPLECTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroides].</li> <li>Melander. 136.</li> <li>Protodypsocus n. gen. [Psocidae]. Enderlein. 73.</li> <li>fissiceps. Enderlein. 73.</li> <li>FotoNEUBA [Odunata].</li> <li>cupida. Calvert. 48.</li> <li>remissa. Calvert. 48.</li> <li>PBALIS [Forficulidae].</li> </ul>
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<ul> <li>hastifera. Rehn. 160.</li> <li>POLYPHAGA [Blattidae].</li> <li>camelorum. Kirby. 101.</li> <li>POLYZOSTERIA [Blattidae].</li> <li>ceratodi. Krauss. 107.</li> <li>PROMACHUS [Phasmidae].</li> <li>semoni. Krauss. 107.</li> <li>PROSOPLECTA [Blattidae].</li> <li>rufa. Kirby. 101.</li> <li>Protodictyon n. gen. [Neuropteroidea].</li> <li>Melander. 136.</li> <li>pulchripenne†. Melander. 136.</li> <li>Protodypsocus n. gen. [Psocidae]. Enderlein. 73.</li> <li>fissicepe. Enderlein. 73.</li> <li>genar. Calvert. 48.</li> <li>cupida. Calvert. 48.</li> <li>remiesa. Calvert. 48.</li> <li>PSALIS [Forficulidae].</li> <li>pulchra. Rehn. 157.</li> </ul>
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### TITLES.

Alwood, William B. A note on the oviposition of the seventeen-year locust (*Cicada septendeeim*). Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (75-77). [4019 4031]. 1

**Ball**, Elmer D[arwin]. Descriptions of some new tree hoppers [*Telanona*] from the United States. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (177-182, with pl.). Separate. 23.3 cm. [4027 gh 4031]. 2

Banks, Nathan. Additions to the list of New York Pentatomidae. New York, N.Y., J. Ent. Soc., 11, 1203, (227). [4027 gg 4031]. 3 Bergroth, E. Ueber *Haploprocta* pustulifera Stål. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (32). [4031]. 4

**Bioletti**, F. T. The phylloxern of the vine. Agric. Exp. Sta., California, Berkeley, Bull. No. **131**, 1901, (16, with fig.). 23 cm. [Review] Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta.. Rec., **13**, 1901, (372). [4031]. 5

Brandicourt, Virgile. Pucerons et fourmis. Nature, Paris, **30**, (2° semest.), 1902, (202). [4031 4019 4631 4619]. 6

Breddin, G. Neue malavische Homopteren aus der Familie ('ercopidae. Soc. Entomol., Zürich, 17, 1903, (51-52, 58-59). [4027 ia e ej 4031]. 7

Einige Homopteren aus der Verwandtschaft von *Hypsauchenia* Germ. Soc. Entomol., Zurich, **17**, 1903, (90-92). [4027 eg 4031]. 9

Neue tropische Wasserläufer der Gattung Ptilomera. Soc. Entomol., Zurich, 17, 1903, (147 – 148). [4027 e 4031]. 10

 Neue
 Raubwanzen.
 Soc.

 Entomol., Zürich, 17, 1903, (169–171).
 [4027 e 4031].
 11

Neue Hemipterenarten aus Südost-Asien. Soc. Entomol., Zurich, 18, 1903, (33-35). [4027 e 4031]. 12

Ein neuer Hyperoneus aus Java. Soc. Entomol., Zurich, **18**, 1903, (66). [4027 eg 4031]. 15

Zwei neue Chrysocoria-Formen. Soc. Entomol., Zurich, **18**, 1903, (74-75). [4027 e 4031]. 16

Eine termitophile Lygaide. Soc. Entomol., Zürich, 18, 1903, (75). [4019 4031]. 17

Ueber die Hopfenwanze und andere Hopfenschfidlinge aus der Ordnung der Wanzen. Soc. Entomol., Zürich, **18**, 1903, (81-82). [4019 4031]. 8

Eine neue Tctrozia aus Africa. Soc. Entomol., Zurich, **18**, 1903, 82–83). [4027 fe 4031]. 18

Breddin, G. Catadipson n. gen. Acanthosominorum (Hemiptera Heteroptera). Soc. Entomol., Zurich, 18, 1903, (9)-91). [4027 fe 4031]. 19

- Einige neue Homopteren. Soc. Entomol., Zürich, 18, 1903, (91-92, 98-99). [4027 ia ed eq 4031]. 20

Eine neue Reduviinenart aus Westafrika. Soc. Entomo'., Zürich, **18**, 1903, (99-109). [4027 fe 4031]. 21

Daraxa carnifex n. sp. Soc. Entomol., Zürich, 18, 1903, (100). [4027 hg 4031]. 22

Einige Afrikanische Hete-Sov. Entomol., Zürich, 18, ropteren. **1903**, (107–108). [4027 fe 4031]. - 23

Südamerikanische Raub-Soc. Entomol., Zürich, 18, wanzen. 1903, (108, 113-115). [4027 h 4031]. 24

Einige afrikanische Rhynchoten. Soc. Entomol., Zürich, 18, 1903, (115-116). [4027 fe 4031]. 25

Neue Rhynchoten aus den Soc. Entomol., Zürich, 18, Anden. 1903, (122-124). [4027 hm 4031]. 26 Neue Arten der Gattung Colobasiastes Bredd. Soc. Entomol., Zürich, 18, 1903, (131). [4027 hg 27 4031].

Neue Arton der Gattung Edessa. Soc. Entomol., Zürich, 18, **1903**, (131–132). [4027 h 4031]. 28

Neue Rhynchoten Ausbeute aus Süslamerika. Soc. Entomol., Zürich, 18, 1903, (117-149). [4031 4027 h]. 29

Neue Raubwanzen. Soc. Entomol., Zürich, 18, 1903, (177-178). [4027 e fe ib ia 4031]. 30

Neue Gattungen und Arten der Reduviidengruppe Ectrichodiinae. Zool. Anz., Leipzig, 26, 1903, (508-514). [4031] 31

Ad cognitionem gen. Cosmoscartae Stål [Hemipt. homopt.]. D. ent. Zs., Berlin, 1903, (81-100). [4031]. 32

Neue paläotropische Reduviinen. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (111–129). [**4**031]. 33

- Missdeuteto und neue Hemipteren-Arten der indo-austra-(N 2-9053)

lischen Fauna. Berlin, SitzBer. Ges. natf. Freunde 1903, (195-223). [4031]. 34

Breddin, G. Beiträge zur Hemipterenfauna der Anden. Berlin, SitzBer. Ges. 1903, (366 - 383).natf. Freunde, [4027 hm 4031]. 35

Britton, W. E. San José scale insect: Its appearance and spread in Connecticut. Connecticut, (State station), New Haven, Bull. No. 135, 1901, (14, with 5 pls.). 23 cm. [Review] Washington, D.C., U. S. Dept. Agric. with 5 pls.). Off. Exp. Sta. Rec., 13, 1902, (766-767). [4027 gg 4031]. 36

Buckton, G. B. A monograph of the Membracidae. To which is added a paper entitled: Suggestions as to the meaning of the shapes and colours of the Membracidae in the struggle for existence, by E. B. Poulton. London, (xii + 293 pp, 60 pls.) Pp. 181 to 296 were published in 1903. Poulton's contribution is on pp 273-285. [4019 37 4031].

Bueno, J. R. de la Torre. A preliminary list of the Pentatomid ie within fifty miles of New York. New York, N.Y., J. Ent. Soc., 11, 1903, (128-129). [4027 gg 4031]. 38

Brief notes toward the life history of Pelocoria femorata Pal. B. with a few remarks on habits. New York, N.Y., J. Ent. Soc., 11, 1903, (166-173). [4019 4031]. 39

Note on Pentatomidae [Correction to New Jersey list in author's "The Pentatomidae within fifty miles of New York."] New York, N.Y., J. Ent. Soc., 11, 1903, (228). [4027 gg 40 4031].

Buffa, Pietro. Coccidei parassiti della vite. Bollettino di Entomologia agraria, Padova, 9, 1902, (3–11). [4003 4031]. 41

Caudell, A[ndrew] N[elson]. The genus Sinea of Amyot and Serville. New York, N.Y., J. Ent. Soc., 9, 1901, (1-11, with pl.). [4031]. 42

Champion, G. C. An entomological excursion to Bejar, Central Spain. London, Trans. Ent. Soc., 1903, (165-**182**).  $[4027 dg \ 4827 dg]$ . 43

4003

212

**Cholodkovski**, Nikolaj Aleksandrovič. Zweites Verzeichnis der Aphidensammlung des zoologischen Kabinets des St. Petersburger Forst-Instituts. (Russ.) St. Peterburg, Izv. Lešn. Inst., **8**, 1902, (49-59, mit 1 Taf.). [4019 4027 4031]. 44

Aphidologische Mittheilungen. Zool. Anz., Leipzig, **26**, 1903, (258-263, mit 1 Taf.). [4031]. 45

Aphidologische Mitteiluugen. 20: Eine auf Birnbäumen saugende *Phylloxera*-Art. Zool. Anz., Leipzig, **27**, 1903, (118–119). [4031].

**Clément**, A. L. Un parasite des mandarines. Nature, Paris, (ler sem.), **31**, 1903, (243-245, av. fig.). [4031 4019 4015]. 47

[Gockerell, Theodore Dru Alison]. [Additional records of Hemiptera from Beulah, 'New Mexico.] Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (113). [4027 gi 4031]. 49

Aphididae [from Beulah, New Mexico]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (114-116). [4027 gi 4031]. 50

Diaspis piricola. [Nomenclature]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 12, 1901, (27). [4031]. 51

Chrysomphalus agazis as a post [in Mexico]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (15). [4027 ha 4031]. 52

*— Mytilaspis beckii* in California. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (17). [4027 gi 4031]. 53

Aspidiotus sacchari in Java. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (24). [4027 eg 4031]. 54

Aspidiotus hederae in Australia. [Criticism of paper by J. Lidgett; A. hederae same as A. nerii]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (89). [4027 if 4031]. 55

Aleurodes (Trialeurodes) rürinellus Ckll. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **16**, 1903, (241). [4031]. 56 [Cockerell, Theodore Dru Alison]. A new Aphid on thistle [Aphis ochrocentri n. sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (248). [4031]. 57

A new plant-louse [Aphis tetrapteralis n. sp.] from southern California [with note on the ant which attends it, new form of Cremastogaster]. Los Angeles, Bull. So. Cal. Acad. Sci., 1, 1902, (40-41). [4031 4831]. 58 ——— New and little-known

 American Coccidue.
 Ann. Mag. Nat.

 Hist., London, (Ser. 7), 11, 1903, (155-165).
 [4027 g 4031].

North American bees and a new Homopteron. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (442-455). [4031 4627 g 4631]. 60

Five new Coccidae from Mexico. Entomologist, London, **36**, 1903, (45-48). [4027 ha 4031]. 61

A new Coccid of the genus Asterolecanium from Egypt Entomologist, London, **36**, 1903, (112). [4027 fb 4031]. 62

A new Coccid from Madeira, allied to Coccus tuberculatus Bouché. Entomologist, London, **36**, 1903, (261-262). [4027 lb 4031]. 63

Porter.

[Cockerell, Wilmatte Porter, and Cockerell, Theodore Dru Alison.] [A new Coccid from Beulah] [*Phenaroccus ripersioides* n. sp.]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (112-113). [4027 gi 4031]. 48

**Coleman**, George A. Coccidae of the Coniferae, with the description of ten new species from California. New York, N.Y., J. Ent. Soc., **11**, 1903, (61-85, with pl.). [4027 gi 4031]. 64

Conradi, A. F. v. Weed C[larence] M[oores].

Colougeat r. Sabrazès.

**Distant**, W. L. Additions to the Rhynchotal fauna of Central America. London, Trans. Ent. Soc., **1903**, (525– 527). [4027 hb 4031]. 65

On some undescribed Rhynchota. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (72-77). [4031]. 66 Distant, W. L. Rhynchotal notes. XVI. Heteroptera, Family Reduviidae (continued), Apiomerinae, Harpactorinae and Nabinae. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (203-213, 248-258); XVII. Heteroptera, Family Reduviidae, ib., (352-367); XVIII. Heteroptera, 12, 1903, (248-253); XIX. Ib., (469-480). [4027 eb ff 4031]. 67 Undescribed oriental Rhynchota. Entomologist, London, 36, 1903, (1-2). [4027 e 4031]. 68 — Rhynchotal Miscellanea. Parts I, II. Rhynchotal from the Transvaal, Mashonaland and British Nyassa-

land. Cape Town, Ann. S. Afric. Mus., **3**, 1903, pt. II, (43-62). [4027 *ff fg*4031]. 69
—— The fauna of British
India including Ceylon and Burma.
Edited by W. T. Blanford. Rhynchota,

Part I, Heteroptera. Fascic. Malay. Zool. 2, (219-272, pls XV, XVI). [4027 eg 4031]. 71

Dominique, J. Catalogue des Hémiptères (Hétéroptères, Homoptères, Psyllides) de la Loire-Inférieure. Nantes, Bul. soc. sci. nat., (sér. 2), **12**, 1902, (230). [4031 4027 df]. 72

Embleton, Alice L. Cerataphis lataniæ, a peculiar Aphid. London, J. Linn. Soc. Zool., 29, 1903, (90-107, pl. XII). [4019 4031]. 73

Fernald, Mrs. Maria E[lizabeth (Smith)]. A catalogue of the Coccidae of the world. Special bulletin. Hatch experiment station of the Massachusetts agricultural college, Amherst, Mass., Bulletin, No. 88, 1903, (360). 23 cm. [4031]. 75

Fowler, W. W. Rhynchota Homoptera. Biol. Centr.-Amer., London, **1903**, II, (293-316, pls. XX-XX1). [4031]. 76

**Progratt**, Walter W. Australian *Psyllidae*. Part III. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (315-337, with 2 pls.). [4027 ic 4031]. 77

Woolly Aphis or American blight. Agric. Gaz., Sydney, N.S.W., 14, 1903, (18-25, with 1 pl.). [4019 4031]. 78

----- Cicadas (" Locusts ") and their habits. Agric. Gaz., Sydney, N.S.W., 14, 1903, (334–341, 418–425, with 2 pls.). [4019 4031]. 79

Fry, H. Animal sense perceptions. Zoologist, London, (Ser. 4), 6, 1902, (392-393). [4019 4031]. 80

Garber, J. E. Dimorphism in Blissus leucopterus. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (330-335, with text fig.). [4023 4031]. 81

Giard, A. Chlorita flavescens Fab. (Réponse à M. L. Mercier). Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (33). [4031]. 82

Gillette, C[larence] P[reston]. Identification of two of Fitch's species, viz., Deltocephalus melsheimerii and Chlorotettiz unicolor. Psyche, Cambridge, Mass., 9, 1901, (171-173). [4031]. 83

Goding, F. W. A Monograph of the Australian *Membracidae*. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (2-41, with 1 pl.). [4027 ic 4031]. 84

**Gossard**, H. A. Review of the white fly [*Aleurodes citri*] investigation [in Florida] with incidental problems. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (68-74). [4003 4031]. 85.

The cottony cushion scale (Icerya purchasi). Agric. Exp. Sta., Florida, Lake City, Bull., No. 56, 1901, (309-356, with 1 pl., 6 fig.); [review], Washington. D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (472). [4003 4031]. 86

Two peach scales. [Aspidiotus perniciosus and Diaepis pentagona.] Agric. Exp. Sta., Florida, Lake City, Bull., No. 61, 1902, (469-498, with 4 pls.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1903, (469-470). [4003 4031]. 97.

Green, E. E. Description of a new Coccid. Calcutta, Ind. Mus. Notes, 5, 1903, (63). [4031]. 88

Remarks on Indian Scale Insects (Coccidae) with descriptions of new species. Calcutta, Ind. Mus. Notes, 5, 1903, (93-103, with 3 pls.). [4031].

Guillaud, E. La cochenille du Fusain. Toulon, Bul. soc. agricult., 1902, (111-113). [Reproduit par le Réveil agricole]. [4019 4031]. 93 **Hansen**, H. J. The morphology and classification of the auchenorrhynchous Homoptera. Entomologist, London, **36**, 1903, (42-44, 64-67, 93-94). [4007 4031]. 91

Heidemann, O[tto]. Notes on Belonochilus numenius Say. Washington, D.C., Proc. Ent. Soc., 5, 1902, (11-12). [4031]. 92

Remarks on Ligyrocoris constrictus Say and Perigenes fallax, a new species. Washington, D.C., Proc. Ent. Soc., 5, 1903, (155-157). [4031].

Hertzog, Aug[ust]. Die Schildläuse, und deren Bekämpfung. Landw. Ztg, Halberstadt, 13, 1901, (155–156). [4019 4031]. 94

Hofer, J. Beitrag zur Cocciden-Fauna der Schweiz. [nn. spp. von KING.] Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (474–483). [4027 di 4031]. 95

Horváth, Géza. Fauna Hemipterorum Serbiae. (Ungarisch) Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (1-28). [4027 dl 4031]. 96

Conspectus specierum generis Grojhosoma. Budapest, Aun. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (345-354). [4027 d 4031]. 97

*Pentatomidae* novae extraeuropaeae. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (400-409). [4027 e f 4031]. 98

Synopsis generis Doratura Sahlb. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (451–459, Taf.XVII). [4031]. 99

Homoptera quinque nova ex Hungaria. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (472-476). [4027 dk 4031]. 100

Adnotationes synonymicae de Hemipteris palaearcticis. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (555-558). [4031]. 101

**Howard**, L[eland] O[ssian]. On the habits of *Entilia sinuata* [in relation to ants]. Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901;(75-78). [0219 4019 4031 4619 4631]. 102 Hüeber, Th. Deutsche Sing-Cicaden. Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (LII-LIV). [4027 de 4031]. 103

Anhang (Inhaltsverzeichnis, Register, Berichtigung, Nachtrag) zum 1. Bd der Synopsis der deutschen Blindwanzen (Hemiptera Heteroptera. Fam. Capsidae). Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (187-226, mit 1 Taf.). [4031]. 104

Jacobi, A. Nene Homopteren aus Tonking. Berlin, SitzBer. Ges. natf. Freunde, 1902, (20-25). [4027 ed 4031]. 105

darum stridulantium. Berlin, SitzBer. Ges. natf. Freunde, **1902**, (73–76). [4031]. 106

Singcikaden von Ost-Neuguinea. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (10–15). [4027 ia 4031]. 107

Jachontov, A. A. Notice sur l'extension, dans la Russie centrale, de Cicadetta montana Scop. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, **1903**, (313). [4027 db]. 108

Jakovlev, V. E. Nouvelles espèces du genre *Phimodera* Germ. de la faune de la Russie. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (183-191). [4027 db ea 4031]. 109

Les Vachiria Stål de la faune de l'Asie centrale. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (199-203). [4027 ea 4031]. 110 Les Hémiptères Hétéro-

ptères du gouvernement d'Irkutsk. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (317-324). [4027 ea 4031]. 111

Les Neottiglossa Curt. de la faune paléarctique. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (325–331). [4027 db ea 4031]. 112

l.e. (191-195). [4027 db ea 4031]. 115

487

Jakovlev, V. E. Hémiptères-Hétéroptères nouveaux de la faune paléarctique. VII. l.c. (289-293). [4027 db ea 4031]. 116

Hémiptères - Hétéroptères nouveaux de la faune paléarctique. VIII. l.e. (377-380). [4027 db ea 4031]. 117

Jakowleff, B. E. v. Jakovley, V. E.

**Kellogg**, V[ernon] I.[yman]. Notes on California Coccidae, Aleurodidae, and Scolytidae. Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., No. **40**, 1903, (83–84). [4027 gi 4031 4827 gi 4831]. 118

King, Geo. B. On the progress in the description of the *Coccidae*. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (255-258). [4031]. 121

The seventeenth American Kermes (Coccidae). [K. arizonensis n. sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (21–22). [4027 gi 4031]. 122

The Coccidae of Ohio [with bibliography]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (204-206). [4027 gg 4031]. 123

Some new Coccidae [nn. spp. in Ripseria and Phenacoccus]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (41-43). [4031]. 119

The greenhouse Coccidae, II. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (152–156). [4031]. 120

King v. Hofer, J.

**Eirkaldy**, G. W. Miscellanea Rhynchotalia. No. 6. Entomologist, London, **36**, 1903, (44); No. 7, *ib.*, (179-181). [4019 4031]. 124

Upon maternal solicitude in Rhynchots and other non-social insects. Entomologist, London, **36**, 1903, (113-120). [4019]. 125

On the nomenclature of the genera of the Rhynchota, Heteroptera and Auchenorrhynchous Homoptera [continuation]. Entomologist, London, **36**, 1903, (213-216, 230-232). [4031].

126 Hemiptera. Nat. Hist. Sokotra, (381–394, pl. XXIII). [4027 ff 4031]. 127

Koebele, A. Report of Prof. Koebele on Lantana Scale [Orthezia insignis]. Köhler, A. Ueber die Bildung des Choriors bei Pyrrhocoris apterus. (Vorläuf. Mitt.) Zool. Anz., Leipzig, 26, 1903, (633-636). [4015]. 129

Kotinsky, Jacob. The first North American leaf-galliaspine [Cryptophyllaspis liquidambaris n. sp.]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (149– 150). [4031 4027 gh]. 131

Krulikovskij, L. Nouveaux renseignements sur l'extension, dans la Russie d'Europe, de *Cicadetta montana* Scop. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (404). [4027 db]. 132

Kuwana, S. J. A new Coccid from California [Pseudolecanium disticlium n. sp., with list of species and bibliography of Pseudolecanium]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (134–136). [4027 gi 4031]. 133

Lambertie. Notes sur quelques Hémiptères-homoptères nouveaux ou rares de la Gironde. Bordeaux, Actes soc. linn., 57, 1902, (Proc.-verb., CLXXII-CLXXIV). [4031 4027 df]. 134

Note sur des Hémiptèreshomoptères nouveaux et peu connus de la Gironde. Bordeaux, Actes soc. linn., (sér. 6), **57**, 1902, (Procès - verb., LXXVIII-LXXXII, LXXXIV, LXXXV, CLXXII-CLXXIX). [4027 df 4031]. 135

Note sur quelques Hémiptères-homoptères nouveaux ou peu connus de la Gironde. Bordeaux, Actes soc. linn., **58**, 1903, (Proc.-verb., XXI-XXIV). [4031 4027 df]. 136

Note sur quelques Hémiptères nouveaux ou rares pour la Gironde. Bordeaux, Actes soc. linn., **58**, 1903, (Proc.-verb., XCVI-XCVIII). [4031 4027 df]. 137

Lancelevée, l'h. Note sur la capture en Normandie d'une espèce rare d'Hémiptère-homoptère, la *Cicadetta montana* Scop. Elbeuf, Bul. soc. étud. sci. nat., 21, 1902, (43-45). [4031 4027 df]. 138 **Lidgett**, James. Aspidiolus hederae in Australia. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (43–45). [4027 if 4031]. 139

Ludwig, F[riedrich]. Ueber den angeblichen Schaden von Nysius in Australien. Centralbl. Bakt., Jena, Abt. 2, 10, 1903, (184). [4031]. 140

Marlatt, C[harles] I.[ester]. Notes on the periodical *Cicada* in the District of Columbia in 1902. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (124-126). [4027 gh 4031]. 141

An early record of the periodical *Cicada* [by E. A. Andrews, 1666]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (126-129). [4031]. 142

A preliminary report on the San Jose scale [Aepidiotus perniciosus] in Japan [with discussion]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (41-47). [4027 ec 4031]. 143

Marriner, G. R. On a new species of *Psyllidae*. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (305-309). [4031]. 144

**Mason**, J. E. Some Hemiptera from Kenmare. Irish Nat., Dublin, **12**, 1903, (101). [4027 dc]. 14j

Matsumura, S'hönen]. Monographie der Cercopiden Japans. Sapporo, the Journal of the Sapporo Agricultural College, 2, 1903, (15-52). [4027 ec 4031]. 146

 Melichar, L.
 Homopteren-Fauna von

 Ceylon.
 Berlin (F. L. Dames), 1903,

 (IV + 248, mit 6 Taf.).
 24 cm.

 [4027 ef 4031].
 147

Monographie der Acanaloniiden und Flatiden (Homoptera). Wien, Ann. Nat. Hist. Hofmus., **16**, 1901, (178-258); **17**, 1902, (1-253, 9 Taf.). [4007 4031]. 148

Montandon, A. L. Deux nouvelles espèces du genre *Belostoma* Latr. (= *Zaitha* Arn. et Serv. et aurt.), des collections du Muséum de Paris. Bul. Muséum, Paris, **1903**, (21-23). [4031]. 149

Espèces nouvelles ou peu connues du genre *Belostoma* appartenant aux collections du Musée National Hong.ois. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (358-363). [4027 hd hh 4031]. 150 Montgomery, Tho[m1]: H[arrison], jun. A list of the Hemiptera Heteroptera of the vicinity of Wood's Holl, Massachusetts. [nn. spp.? in Macro'ylus and Tuponia]. Philadelphia, Pa.. Ent. News Acad. Nat. Sci., 13, 1902, (12–13). [4027 gg 4031]. 151

Further studies on the c'iromosomes of the Hemiptera Heteroptera. Philadelphia, Pa. Proc. Acad. Nat. Sci., 1901, (261-271, with pl.): [reprint], Philadelphia, Cont. Zool. Lab. Univ. Pa., **1901**, 1902, (261-271, with pl.). [0215 4015 4031]. 152

Müller-Thurgau, H[ermann]. Zum Kampf gegen die Reblaus. Frauenfeld (Huber & Co.), 1901, (II + 15). 8vo. [4019 4031]. 153

Noumann, L. G. Note sur une collection d'ectoparasites recueillis en Abyssinie par M. le baron C. von Erlanger. Arch. parasit, Paris, 6, 1902, (293-294). [3019 4019 4219]. 154

Newstead, R. Kermes quereus Linn. A Coccid new to Britain. Ent. Mag., London, **39**, 1903, (57-58). [1027 de 4031]. 156

Monograph of the Coccidae of the British Isles. Vol. ii. London (Ray Society), 1903, (viii + 16, pls. r and xxxv-lxxv). 8vo. [4027 de 4031]. 155

**Nicéville**, Lionel de (*the late*). Insect pests of forest trees. Calcutta, Iad. Mus. Notes, **5**, 1903, (103–117, with pls.). [4019 4419 4819]. 157

Insect pests of fruit trees. Calcutta, Ind. Mus. Notes, 5, 1903, (117-127, with pls.). [4019 4419 4619 4819].

Insect pests of plants. Calcutta, Ind. Mus. Notes, 5, 1903, (127-130, with pls.). [4019 4419 4819]. 159

Insect pests of cereals and crops. Calcutta, Iud. Mus. Notes, 5, 1903, (134–143, with pls.). [4019 4219 4419 4819]. 160

Insect pests of indigo. Calcutta, Ind. Mus. Notes, 5, 1903, (144-164, with pls.). [4019 4419 4819]. 161

Insect pests of the sugarcane. Calcutta, Ind. Mus. Notes, **5**, 1903, (164–182, with pls.). [4019 4419 4619 4819]. 102 **Nicéville**, Lionel de (*the late*). Insects in Calcutta Municipal water. Calcutta, Ind. Mus. Notes, **5**, 1903, (189–191, with pl.). [4031]. 163

**Osborn,** Herbert. Aradidae of Ohio [Contributions from the Department of Zoology and Entomology, No. 14.] Obio Nat., Columbus, Ohio, 4, 1903, (36-42). [4027 gg 4031]. 164

A subterranean root-infesting Fulgorid (Myndus radicis n. sp.). Ohio Nat., Columbus, Ohio, 4, 1903, (42-44). [4031]. 165

A method for mounting dry Coccidae for permanent preservation. Washington, D.C., Buil. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (35-36). [0060 4031]. 167

Contributions towards a Monograph of the Oriental Aleurodidae. Part I. Calcutta, J. As. Soc. Beng., 72, Pt. II, 1903, (61-95, with 5 pls.). [4031].

Pergande, Theo. The Southern grain louse (*Toxoptera graminum* Rondani). Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (7-19, with pl.). [4019 4031]. 171

Pomerancev, D. V. Beitrag zur Kenntnis der auf der Fichte (*Picca ezcelaa*) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Léan. Inst., **8**, 1902, (3-25, mit 1 Taf.). [4015 4019 4415 4419 4615 4619 4815 4819]. 172

**Beh**, L[udwig]. Zur Naturgeschichte mittel- und nordeuropäischer Schildläuse. Allg. Zs. Ent., Neudamm, **8**, 1903, (301-308, 351-356, 407-419, 457-469); **9**, 1904, (12-36). [4031 4019]. 173

**Bemisch**, Franz. Ryparochromus (Aphanus, Pachymerus) vulgaris Schell, ein neuer Hopfenschädling. Soc. Entomol., Zürich, **16**, 1903, (153-155). [4019 4031]. 174 Benter, O[do] M[orannal]. Capsidae novae mediterraneae. IV. Helsingfors, Ofvers. F. Vet. Soc., 44, 1900-1902, (51-70). [4027 dm 4031]. 175 Miscellanea Hemipterologica. Helsingfors, Ofvers. F. Vet. Soc., 44, 1901-1902, (140-188). [4031]. 176 Capsidae ex Abessinia et

regionibus confinibus enumeratae novaeque species descriptae. Helsingfors, Ófvers. F. Vet. Soc., **45**, [No. 67], 1903, (1-18, cum tab.). [4027 fb 4031]. 177

Capsidae Chinenses et Thibetanae hactenus cognitae enumeratae novaeque species descriptae. Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 16], 1902-1903, (1-23). [4027 eb 4031]. 178

New species, etc., of Capsidae captured by Mr. G. C. Champion in Spain in 1901 and 1902. Ent. Mag., London, **39**, 1903, (119-121). [4027 dg 4031]. 179

The food of Capsids. Ent. Mag., London, **39**, 1903, (121-123). [4019]. 189

Rusiecka, Marie de. Monographie du genre Phantia, Fieb. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1902, (420-427). [4027 d 4031]. 181

**Saakov.** Ueber die künstliche Vermehrung der Parasiten der Eier der Getreidewanze (*Eurygaster integriscps* Orch.) (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg. **IV**, No. 2, 1903, (12). [4019 4615 4619]. 182

Sabrazès et Goulongeat. Cochenille du figuier. Bordeaux, Actes soc. linn., 57, 1902, (Proc.-verb., CLXVII-CLXVIII). [4031]. 183

**Sajó**, Karl. Die Nährpflanzen der San José-Schildlaus. Prometheus, Berlin, **14**, 1903, (716-718). [4019 4031]. 184

**Sanderson,** E[zra] D[wight]. Three orchard pests [Steganoptycha pyricolana, Euzophera semifuneralis, and Cicada septendecim]. Agric. Exp. Sta., Delaware, Newark, Bull. No. 53, 1901, (19 with 11 figs.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (872-873). [4031 4431 2403]. 185

 Delaware, Newark, Rep., **1901**, (127– 199, with 6 pls., 16 figs.); review, Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1902, (268–269). [2403 2427 gh 4031 4431]. 186

Saunders, E. Myrmecoris gracilis Sahlb. An addition to the British Hemiptera. Ent. Mag., London, 39, 1903, (260-271). [4027 de 4031]. 187

Corizus hyalinus Fab., an addition to the British Hemiptera. Ent. Mag., London, **39**, 1903, (294). [4027 de 4031]. 188

Hemiptera in South Kerry. Irish Nat., Dublin, **12**, 1903, (65). [4027 de]. 189

Schouteden, H. Aphidologische Notizen. [4. Myzus rosarum. δ. 5. Pergandeida ononoides n. g. n. sp. (~Cryptosiphum). 6. Neetarosiphon rhinanthi n. sp.] Zool. Anz., Leipzig, 26, 1903, (685-688). [4031]. 190

Eine neue Agonosoma-Art, [A. dohrni n. sp.] Stettiner ent. Ztg. 64, 1903, (362-363). [4031]. 191

Hemiptera africana. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (118–122). [4031]. 192

Hemiptères de Francorchamps. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (265-272). [4027dd]. 193

Les aphides radicicoles de Belgique et les fourmis. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (136– 142). [4019 4031]. 194

La sollicitude maternelle chez les hémiptères. Bruxelles, Rev. Univ., **1902-1903**, (771-777). [4019]. 195

**Scott**, W. M. A preliminary note on a new species of *Aphis* injurious to plums and peaches in Georgia. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (56– 59). [4019 4027 gh 4031]. 196

**Silvestri**, Filippo. Coccidei parassiti della vite. Bollettino di Entomologia agraria, Padova, **9**, 1902, (74-82, 97-104, 121-128, 146-149). [4019 4031]. 197

**Smith**, J. B. Two strawberry pests [*Phoxopteris comptana* and *Aphis forbesi*]. Agric. Exp. Sta., New Jersey, New Brunswick, Bull. No. **149**, 1901, (17, with 2 pls.). 23 cm. [Review],

Washington, D.C., U. S. Dept. Agric. Off. Exp. Sts. Rec., 13, 1901, (161). [4019 4031 4419 4431]. 198

**Smith**, J. B. The rose scale (*Diaspis* rose). Agric. Exp. Sta., New Jersey, New Brunswick, Bull. No. **159**, 1902, (14, with 6 figs.). 23 cm. [Review], Washington, D.C., U.S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1902, (372). [4019 4031]. 199

Treatment for San José scale in orchard and nursery. Pennsylvania, Dept. Agric., Bull., Harrisburg, No. 90, 1902, (33, with pl.). 23.5 cm. [4003 4031]. 200

Treatment for San José scale in orchard and nursery. Pennsylvania, Rep. Dept. Agric., Harrisburg, 8, pt. 1, 1902, 1903, (233-261, with pl.). [4003 4031]. 201

Stauffacher, II[einri]ch. Ueber ein neues Organ bei *Phylloxera vastatrix* Pl. Allg. Zs. Ent., Neudamm, **8**, 1903, (30-35, 57-60, mit 1 Taf.). [4031 4007]. 202

**Stebbing**, E. P. On the acquisition of alar appendages by the spruce form of *Chermes abietis-piceae* Steb. M. S. in the N.-W. Himalayas. Calcutta, J. As. Soc. Beng., **72**, pt. ii, 1903, (57-60). [4015]. 203

Departmental notes on insects that affect forestry, No. 2. Calcutta, 1903, (V-VII + 151-334, with 13 pls.). 25 cm. [2419 4031 4231 4431 4631 4831]. 204

Insect pests of the sugar cane in India. Calcutta, Ind. Mus. Notes, 5, 1903, (64-91). [2419 3819 4019 4419 4619 4819]. 205

**Stedman**, J. M. The chinch bug [Blissus leucopterus]. Agric. Exp. Sta., Missouri, Missouri Station, Bull. No. **51**, 1902, (115-142, with fig.); [review], Washington, D.C., U.S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1902, (270). [4031]. 206

Swerey, Otto H. Observations on Hymenopterous parasites of certain *Fulgoridae*. Columbus, Ohio, Univ. Bull, (Ser. 7), No. 23, 1903, (Cont. Dept. Zool. Ent.). [Reprint from Ohio Nat. Columbus Ohio, 3, 1903, (444-451, with pl.).] Separate, 23 cm. [4019 4031 4631]. 207 Then, Franz. Zwei species der Cicadinen-Gattung Deltocephalus. Graz, Mitt. Natw. Ver. Steierm., 1901, 1902, (186–192). [4031]. 208

**Uhler**, P[hilip] R[heesel]. Enumeration of the *Cicadidae* of Brazil in the collection of Mr. Herbert H. Smith. Baltimore, Trans. Md. Acad. Sci., 2, 1903, (1-17). [4027 hh 4031]. 209

A new Cicada from Hayti. [Psallodia espinii n. gen. et. sp.]. Baltimore, Trans. Md. Acad. Sci., 2, 1903, (18). [4027 he 4031]. 210

Van Dusse, Edward P. Hemiptera of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (107-112). [4027 gi 4031]. 211

Note on Aradus niger Stal [near Buffalo, N. Y.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (23). [4027 gg 4031]. 212

VIsart, Oscar. Sugli afidi delle piante e sui modi di combatterli con particolare reguardo alla *Schizoneura lanigera* Hausm. (Piddocchio sanguigno). Agricolt. Ticinese, Lugano, **35**, 1903, (103-108). [4019 4031]. 213

Voronkov, N. V. Die Art der Nahrungsaufnahme bei der Bettwanze, Acanthia lectularia. (Russ.). Moskva, Trd. kruž. izsl. russ. prir., **1**, 1903, (87– 100, mit 4 Fig.). [4011 4031]. 214

Warloe, H. New Scandinavian Hemiptera Heteroptera. (Norw.). Entomol. Tidskr., Stockholm, 22, 1901, (144). [4027 da 4031]. 215

Washburn, F. L. Distribution of the chinch bug [Blissus] in Minnesota. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (32-34). [4027 gi 4031]. 216

Watkins, C. J. Coccidae in Gloucestershire. Ent. Mag., London, **39**, 1903, (294-296). [4007 de 4031]. 217

Webster, F. M. The Coccidae of Ohio. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (288-200). [4027 gg 4031]. 218

Weed, C[larence] M[oores] and Conradi, A. F. The squash bug [Anasa tristis]. Agric. Exp. Sta., New Hampshire, Durham, Bull. No. 89, 1902, (13-28, with 2 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (270). [4019 4031]. 219

Zehntner, L[eo]. Die Helopeltisplage der Cacaccultur . . . (Holländisch) Salatiga, Bull. Cacao, 7, 1903, (1-22). [4019 4031]. 220

# 4003 COMPREHENSIVE AND GENERAL WORKS.

### ECONOMICS.

Buffa, P. Coccidei parasiti della vite. Bollettino di Entomologia agraria, Padova, 9, 1902, (3-11).

Goesard, H. A. Review of the white fly [Alcurodes citri] investigation [in Florida] with incidental problems. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 31, 1902, (68-74).

(Icerya purchusi). Agric. Exp. Sta., Florida, Lake City, Bull., No. 56, 1901, (309-356, with 1 pl., 6 figs.); [review]. Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 13, 1902, (472).

Two peach scales [Aspidiotus perniciosus, and Diaspis pentagona]. Agric. Exp. Sta., Florida, Lake City, Bull. No. **69**, 1902, (469–498, with 4 pls.); [review], *l.c.* **14**, 1903, (469–470).

**smith**, J. B. Treatment for San José scale in orchard and nursery. Pensylvania, Rep. Dept. Agric, Harrisburg, **8**, pt. 1, **1902**, 1903, (233-261, with pl.); Pennsylvania, Dept. Agric., Bull., Harrisburg, No. **90**, 1902, (33, with pl.).

## 4007 STRUCTURE.

### GENERAL.

**Hansen**, H. J. The morphology and classification of the auchenorrhynchus Homoptera. Entomologist, London, **36**, 1903, (42-44, 64-67, 93-94).

Melichar, L[eopold]. Monographie der Acanaloniiden und Flatiden. Wien, Ann. NatHist. Hofmus, **16**, 1901, (178-258); **17**, 1902, (1-253, mit 9 Taf.).

## SENSE ORGANS.

**Stauffacher**, H[einri]ch. Ueber ein neues Organ bei *Phylloxera vastatrıx* Pl. Allg. Zs. Ent., Neudamm, **8**, 1903, (30-35, 57-60, mit 1 Taf.).

# 4011 PHYSIOLOGY.

FUNCTION OF SPECIAL STRUCTURES.

**Peal**, H[enry] W[oolner]. The function of the nasiform orifice of the Aleurodidae. Calcutta, J. As. Soc. Beng., **72**, Pt. ii, 1903, (6-7).

## ASSIMILATION.

Voronkov, N. V. Die Art der Nahrungsaufnahme bei der Bettwanze, *Acauhia lectularia*. (Russ.) Moskva, Trd. kruž. izsl. russ. prir., **1**, 1903, (87-100, mit **4** Fig.).

# 4015 DEVELOPMENT.

### GENERAL.

**Clément**, A. L. Un parasite des mandarines. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (243-245, av. fig.).

## Spermatogenesis.

Montgomery, Thomas H[arrison], jun. Further studies on the chromosomes of the Hemiptera Heteroptera. Philadelphia, Pa., Proc. Acad. Nat. Sci., 1901, (261-271, with pl.); [reprint], Philadelphia, Cont. Zool. Lab. Univ. Pa., 1901, 1902, (261-271, with pl.).

### EMBRYOLOGY.

**Köhler**, A. Ueber die Bildung des Chorions bei *Pyrrhocoris apterus*. (Vorläuf. Mitt.) Zool. Anz., Leipzig, **26**, 1903, (633–636).

### POSTEMBRYONIC ONTOGENY.

Pomerancev, D[mitrij Vladimirovič]. Beitrag zur Kenntnis der auf der Fichte (Picea excelsa) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Lésn. Inst., 8, 1902, (3-25, mit 1 Taf.).

## CHANGES DURING LIFE.

**Stebbing**, E. P. On the acquisition of alar appendages by the spruce form of *Chermes abietis-piceae* Steb. MS. in the N.-W. Himalayas. Calcutta, J. As. Soc. Beng., **72**, Pt. ii, 1903, (57-60).

# 4019 ETHOLOGY.

## GENERAL.

Brandicourt, Virgile. Pucerons et fourmis. Nature, Paris, 30, (2° semest.), 1902, (202).

Breddin, G. Neue Rhynchotenausbeute aus Südamerika. Soc. Entomol., Zürich, 18, 1903, (147–149).

**Buckton**, G. B. A monograph of the Membracidae. To which is added a paper entitled: Suggestions as to the meaning of the shapes and colours of the Membracidae in the struggle for existence, by E. B. Poulton. London. (XII + 296, 60 pls.). [Pp. 181 to 296 were published in 1902. Poulton's contribution is on pp. 273-285.]

Embleton, Alice L. Cerataphis lataniae, a peculiar Aphid. London, J. Linn. Soc. Zool., 29, 1903, (90-107, pl. XII).

**Kirkaldy**, G. W. Miscellanea Rhynchotalia. No.6. Entomologist, London, **36**, 1903, (44); No. 7, *ib.*, (179–181).

# HABITS.

**Bueno**, J. R. de la Torre. Brief notes toward the life history of *Pelocoris femorata* Pal. B., with a few remarks on habits. New York, N.Y., J. Ent. Soc., **11**, 1903, (166-173).

Cholodkovakij, Nikolaj Aleksandrovič. Zweites Verzeichnis der Aphidensammlung des zoologischen Kabinetsdes St. Petersburger Forst-Instituts. (Russ.) St. Peterburg, Izv. Lésn. Inst., 8, 1902, (49-59, mit 1 Taf.). Froggatt, Walter W. Cicadas ("Locusts") and their habits. Agric. (iaz., Sydney, N.S.W., 14, 1903, (334-341, 418-425, with 2 pls.).

Pergande, Theo. The southern grain louse (*Toxoptera graminum* Rondani). Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (7-19, with pl.).

**Beuter**, O. M. The food of capsids. Ent. Mag., London, **39**, 1903, (121-123).

**Sajo**, Karl. Die Nährpflanzen der San Jose-Schildlaus. Prometheus, Berlin, **14**, 1903, (716–718).

### PARENTAL RELATIONS.

**Kirkaldy**, (J. W. Upon maternal solicitude in Rhynchota and other nonsocial insects. Entomologist, London, **36**, 1903, (113-120).

Schouteden, H. La sollicitude maternelle chez les hémiptères. Bruxelles, Rev. Univ., **1902–1903**, (771–777).

#### OVIPOSITION.

Alwood, William B. A note on the oviposition of the seventeen-year locust (Cicada septendecim.) Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (75-77).

### INSTINCT AND PSYCHOLOGY.

**Pry**, H. Animal sense perceptions. Zoologist, London, (Ser. 4), **6**, 1902, (392-393).

#### SYMBIOSIS.

**Breddin**, G. Eine termitophile Lygäide. Soc. Entomol., Zurich, **18**, 1903, (75).

Howard, L[eland] O[ssian]. On the habits of *Entilia sinuata* [in relation to ants]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 30, 1901, (75-78).

Schouteden, H. Les aphides radicicoles de Belgique et les fourmis. Bruxelles, Ann. Soc. Ent. Belgique, 46, 1902, (136-142).

### PARASITISM.

**Clément**, A. L. Un parasite des mandarines. Nature, Paris, (1<sup>er</sup> εem.), **31**, 1903, (243-245, av. fig.).

Neumann, L. G. Note sur une collection d'ectoparasites recueillis en Abyssinie par M. le baron C. von Erlanger. Arch. parasit., Paris, **6**, 1902, (293-294).

**Beh**, L[udwig]. Zur Naturgeschichte mittel- und nordeuropäischer Schildläuse. Allg. Zs. Ent., Neudamm, **8**, 1903, (301-308, 351-356, 407-419, 457-469); **9**, 1904, (12-36).

**Saakov.** Ueber die künstliche Vermehrung des Parasiten der Eier der Getreidewanze (*Eurygaster integriceps* Orch.) (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, **IV**, No. 2, 1903, (12).

Swezey, Otto H. Observations on Hymenopterous parasites of certain Fulgoridae. Columbus, Ohio, Univ. Bull., (ser. 7), No. 23, 1903, (Cont. Dept. Zool. Ent.). [Reprint from Ohio Nat., Columbus, Ohio, 3, 1903, (444-451, with pl.).] Separate. 23 cm.

Zehntner, L[eo]. Die Helopeltisplage der Cacaocultur. (Holländisch) Salatiga, Bull. Cacao, 7, 1903, (1-22).

#### ENEMIES.

**Peal**, H[enry] W[oolmer]. The "Green Bug" and other Jasside as food for birds. Calcutta, J. As. Soc. Beng, **72**, Pt. ii, 1903, (7-9).

#### UTILITY AND HARMFULNESS.

Die wichtigsten Blattläuse der Obstbäume. Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (1141-1143, mit 9 Fig.).

Ist die Bekämpfung der Reblaus ein Irrtum? Schweiz.-Bauer, Bern, 57, 1903, No. 65, (2).

Die Blutlaus und ihre Vertilgung (Schizoneura lanigera Hausm.) von E. N. Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (914–916). [4031].

Le Phyllozera en 1901. Journ. Agricult. Suisse, Genève, **35**, 1903, (121-122). [4031].

Le Phylloxera en 1002. l.c. (276-280). [4031].

4019

Le Phylloxera en Californic. Naturaliste, Paris, (sér. 2), 25, 1903, (152).

Breddin, G. Ueber die Hopfenwanze und andere Hopfenschädlinge aus der Ordnung der Wanzen. Soc. Entomol., Zurich, 18, 1903, (81-82).

**Proggatt**, W. W. Woolly Aphis or American blight. Agric. Gaz., Sydney, N.S.W., **14**, 1903, (18-25, with 1 pl.).

Guillaud, E. La cochenille du Fusain. Toulon, Bul. soc. agricult., **1902**, (111– 113). [Reproduit par le Réveil agricole].

Hertzog, Aug[us<sup>•</sup>]. Die Schildläuse, ihr Schaden und deren Bekämpfung. Landw. Ztg., Halberstadt, **13**, 1901, (155– 156).

Müller-Thurgau, H[ermann]. Zum Kampf gegen die Reblaus. Frauenfeld (Huber & Cie), 1901, (II + 15). 8vo.

Nicéville, Lionel de (the latr). Insect pests of forest trees. [Monophlebus, Ochrophara montana Dist., Psylla obsoleta, Buckt.] Calcutts, Ind. Mus. Notes, 5, 1903, (103-181, with pls.).

**Pomerancev**, D[mitrij Vladimirović]. Beitrag zur Kenntnis der auf der Fichte (*Picea crcelsa*) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Lésn. Inst., **8**, 1902, (3-25, mit 1 Taf.).

**Remisch**, Franz. Rhyparochromus (Aphanus, Pachymerus) rulgaris Schell, ein neuer Hopfenschädling. Soc. Entomol., Zürich, **16**, 1903, (153–155).

**Scott**, W. M. A preliminary note on a new species of *Aplin* injurious to plums and peaches in Georgia. Washington, D.C., U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (56-59).

**Silvestri**, Filippo. Coccidei parassiti della vite. Bollettino di Entomologia agraria, Padova, **9**, 1902, (74–82, 97– 104, 121–128, 146–149).

Smith, J. B. Two strawberry pests [Phosopteris comptana and Aplia forbeei]. Agric. Exp. Sta., New Jersey, New Brunswick, Bull., No. 149, 1901, (17, with 2 pls.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1901, (161).

The rose scale (Diaspis rosac). Agric. Exp. Sta., New Jersey, New Brunswick, Bull. No. **159**, 1902, (14, with 6 figs.). 23 cm.; [review], *l.e.* **14**, 1902, (372).

**Stebbing**, E. P. Insect pests of the sugar-cane in India [Alcurodes barodensis, Mask.; Blissus gibbus, Fabr.; Dictyophara pallida, Donov; Ripersia sacchari, Gie.]. Calcutta, Ind. Mus. Notes, **5**, 1903, (87-88).

Visart, Oscar. Sugli afidi delle piante e sui modi di combatterli con particolare riguardo allo Schizoneura lanigera Hausm. (Pidocchio sanguigno). Agricolt. Ticinese, Lugano, **35**, 1903, (103-108).

Weed, C[larence] M[oores] and Conradi, A. F. The squash bug [Anasia tristis]. Agric. Exp. Sta., New Hampshire, Durham, Bull. No. 89, 1902, (13-28, with 2 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (270).

## 4023 VARIATION AND .ETIOLOGY.

Garber, J. F. Dimorphism in Bliesus leucopterus. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (330-335, with text fig.).

# 4027 GEOGRAPHICAL DISTRI-BUTION.

Gholodkovakij, Nikolaj Aleksandrović. Zweites Verzeichnis der Aphidensammlung des zcologischen Kabinets des St. Petersburger Forst-Instituts. (Russ.) St. Peterburg, Izv. Lešn. Inst., 8, 1902, (49-59, mit 1 Taf.).

# d EUROPE.

**Horváth**, Géza. Conspectus specierum generis *Graphosoma*. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (345-354).

Rusiecka, Marie de. Monographie du Genre *Phantia*, Fieb. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1902, (420-424).

## da SCANDINAVIA.

Warloe, H. New Scandinavian Hemiptera Heteroptera. (Norw.) Entomol. Tidskr., Stockholm, 22, 1901, (144). db RUSSIA IN EUROPE.

Jachontov, A. A. Notice sur l'extension, dans la Russie centrale, de Cicadetta montana. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (313).

**Jakovlev**, V. E. Hémiptères-hétéroptères nouveaux de la faune paléarctique. IV. *l.c.* (1-4).

------ Hémiptères - hétéroptères nouveaux de la faune paléarctique. V. *l.e.* (81-84).

Hémiptères - hétéroptères nouveaux de la faune paléarctiques VI. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (191-195).

Hémiptères - hétéroptères nouveaux de la faune paléarctique. VII. l.c. (289-293).

Hémiptères - hétéroptères nouveaux de la faune paléarctique. VIII. l.c. (377-380).

Les Neottiglossa Curt. de la faune paléarctique. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (325-331).

Phimodera Germ. de la faune de la Russie. (Russ.) l.c. (183-191).

**Krulikovskij**, L. Nouveaux renseignements sur l'extension, dans la Russie d'Europe, de *Cicadetta nuontana* Scop (Russ.) *l.c.* (404).

de GERMAN EMPIRE.

**Hüeber**, Th. Deutsche Sing-Cicaden. Stuttgart, Jahreshefte Ver. Natk., **59**, 1903, (LII-LIV).

dd BELGIUM.

Schouteden, H. Hémiptères de Francorchamps. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901 (265-272).

de BRITISH ISLANDS.

Mason, J. E. Some Hemiptera from Kenmare. Irish Nat., Dublin, 12, 1903, (101).

Newstead, R. Kermes quercus Linn. A Coccid new to Britain. Ent. Mag., London, **39**, 1903, (57-58).

of the British Isles. Vol. ii. London,

(Ray Society), 1903, (viii + 16, pls. F and xxxv-lxxv). 8vo.

Saunders, E. Hemiptera in South Kerry. Irish Nat., Dublin, 12, 1903, (65).

Myrmecoris gracilis Sahlb. An addition to the British Hemiptera. Ent. Mag., London, **39**, 1903, (269-271).

Corizus hyalinus Fab., an addition to the British Hemiptera. *l.c.* (294).

Watkins, C. J. Coccidae in Gloucestershire. Ent. Mag., London, 39, 1903, (294-296).

### df FRANCE.

**Dominique**, J. Catalogue des Hén.iptères (Hétéroptères, Homoptères, Psyllides) de la Loire-Inférieure. Nantes, Bul. soc. sci. nat, (sér. 2), **12**, 1902, (230).

Lambertie. Note sur les Hémiptères homoptères nouveaux et peu connus de la Gironde. Bordeaux, Actes soc. linn., (sér. 6), 57, 1902, (Procès.-verb., LXXVIII-LXXXII, LXXXIV, LXXXV, CLXXII-CLXXIV).

Notes sur quelques hémiptères-homoptères nouveaux ou rares de la Gironde. *l.e.* 57, 1902, (Proc.verb., CLXXII- CLXXIV).

<u>Note sur quelques Hémi-</u> ptères-homoptères nouveaux ou peu connus de la Gironde. *l.c.* 53, 1903, (Proc.-verb., XXI-XXIV).

------ Note sur quelques Hémiptères nouveaux ou rares pour la Gironde. *l.c.* (Proc.-verb., XCVI-XCVIII).

Lancelevée, Th. Note sur la capture on Normandie d'une espèce rare d'Hémiptère-homoptère, la *Cicadetta montana* Scop. Elbeuf, Bul. soc. étud. sci. nat., 21, 1902, (43-45).

### dg SPAIN.

**Champion**, G. C. An entomological excursion to Bejar, Central Spain. London, Trans. Ent. Soc., **1903**, (165– 182).

**Benter**, O. M. New species, etc., of *Capsidae* captured by Mr. 4. C. Champion in Spain in 1901 and 1902. Ent. Mag., London, **39**, 1903, (119–121).

di Switzerland.

Hofer, J. Beitrag zur Cocciden-Fauna der Schweiz. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1903, (474-483).

## dk AUSTRIA-HUNGARY.

Horváth, Gézn. Homoptera quinque nova ex Hungaria. Budapest. Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (472-476).

# dl BALKAN PENINSULA.

Horváth, Geza. Fauna Hemipterorum Serbiae. (Ungarisch, lateinisch) Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (1-28).

### dm MEDITERRANEAN.

**Beuter**, O[do] M[orannal]. Capsidae novae mediterraneae. IV. Helsingfors Ofvers. F. Vet. Soc., **44**, 1901–1902, (51–70). [4031].

### e Asia.

Breddin, G. Neue malayische Homopteren aus der Familie Cercopidae. Soc. Entomol., Zürich, **17**, 1902, (51– 52, 58–59).

------- Neue tropische Wasserläufer der Gattung *Ptilomera. l.c.* (147-148).

<u>——</u> Neue Raubwanzen. *l.c.* (169–171).

\_\_\_\_\_ Neue Raubwanzen. l.c. (177-178).

Zwei neue Chrysocoris-Formen. (Ch. viriditentris n. sp.). l.c. **18**, 1903, (74-75).

------ Neue Hemipterenarten aus Südost-Asien. *l.c.* (33-35).

Distant, W. L. Undescribed oriental Rhynchota. Entomologist, London, 36, 1903, (1-2).

## ea ABIATIC RUSSIA.

Jakovlev, V. E. Hémiptères -Hétéroptères nouveaux de la faune paléarctique. IV. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (1-4).

------ Hémiptères - Hétéroptères nouveaux de la faune paléarctique. V. l.c. (81-84).

------ Hémiptères-Hétéroptères nouveaux de la faune paléarctique. VI. *l.c.* (191-195).

------ Hémiptères-Hétéroptères nouveaux de la faune paléarctique. VII. *l.e.* (289-203).

------ Hémiptères-Hétéroptères nouveaux de la faune paléarctique. VIII. *l.e.* (377-380).

Nouvelles espèces du genre *Phimodera* Germ. de la faune de la Russie. (Russ.) St. Peterburg, Hcr. Soc. Ent. Ross., **36**, 1903, (183-191).

Les Vachiria Stål (Hem.-Het.) de la faune de l'Asie centrale. (Russ.) *l.c.* (199-203).

------ Les Hémiptères-Hétéroptères du geuvernement d'Irkutsk. (Russ.) l.c. (317-324).

Les Neottiglossa Curt de la faune paléarctique. (Russ.) l.c. (325-331).

### cb CHINA.

Distant, W. L. Rhynchotal notes. XVI. Heteroptera: Family Reduviidae (continued), Apiomerinae, Harpaetorinae, and Nabinae. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (203-213, 245-258); XVII Heteroptera, Family Reduviidae, ib., (352-367); XVIII. Heteroptera, **12**, 1903, (248-253). XIX. Ib., (469-480).

**Beuter**, O. M. Capsidae Chinenses et Thibetanae hactenus cognitae enumeratae novaeque species descriptae. Helsingfors, Ofvers. F. Vet. Soc., **45**, [No. 16], 1902–1903, (1–23).

### cc JAPANESE ISLANDS.

Marlatt, C[harles] L[ester]. A preliminary report on the San José scale [Aspidiotus perniciosus] in Japan [with discussion]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (41-47). Matsumura, S[hönen]. Monographie der Cercopiden Japans. Sapporo, Journ. of the Sapporo Agricultural College, 2, 1903, (5-52).

# el Cochin China.

Breddin, G. Einige neue Homopteren (9 nn. spp. in: Capnodistes n.g. 2, Tetigonia 3, Conogonia n.g. 3, Haeniatoscarta n.g.). Soc. Entomol., Zürich, 18, 1903, (91-92, 98-99).

Jacobi, A. Neue Homopteren aus Tonking. Berlin, SitzBer. Ges. Natf. Freunde, 1902, (20-25).

ef BRITISH INDIA: CEYLON.

Distant, W. L. The fauna of British India including Ceylon and Burma. Edited by W. T. Blanford. Rhynchota Vol. II (Heteroptera), Pt. I, London, 1903, (X + 242).

Horváth, Géza. Pentatomidae novae extraeuropaeae. Budapest, Ann Hist.-Nat. Mus. Nat. Hung., 1, 1903, (400– 409).

Melichar, L. Homopteren-Fauna von Ceylon. Berlin (F. L. Dames), 1903, (IV + 248, mit 6 Taf.). 24 cm. 15 M.

# eg MALAY PENINSULA.

Breddin, G. Neue malayische Homopteren aus der Familie Cercopidae. Soc. Entomol., Zürich, **17**, 1902, (51– 52, 58–59).

Einige Homopteren aus der Verwandtschaft von Hypsauchenia (derm. l.c. (20-92).

Einige neue Homopteren (9 nn. spp. in : Capnodistes n.g. 2, Tetigonia 3, Conogonia n.g. 3, Haeniatoscarta n.g.) l.c. **18**, 1903, (91–92, 98–99).

Ueber einige Tetyriden. *l.c.* (57-59).

Java. (H. complutus n. sp.) l.c. (66).

**Cockerell**, T[heodore] D[ru] A[lison]. Aspidiotus sacchari in Java. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (24).

Distant, W. L. Report on the Rhynchota. Part I. Heteroptera. Fascic. Malay. Zool., 2, (219-272, pls. XV, XVI).

(N 2-9053)

f AFRICA.

fb NORTH EAST AFRICA.

Cockerell, T. D. A. A new Coccid of the genus Asterolecanium from Egypt. Entomologist, London, 36, 1903, (112).

Reuter, O. M. Copsidae ex Abessinia et regionibus continibus enumeratae novaeque species descriptae. Helsingfors, Ofvers. F. Vet. Soc., **45**, [No. 67], 1903, (1-18, cum tab.).

# fc SAHARA AND THE FRENCH SUDAN.

Breddin, G. Eine neue Tetrozia au Afrika (T. blanda n. sp.). Soc. Entomol., Zürich, 18, 1903, (82–83).

fe Congo State and Angola.

Breddin, G. Neue Raubwanzen. Soc. Entomol., Zürich, **17**, 1903, (177– 178).

------ Catadipson n. gen. Acanthosominorum (Hemiptera Heteroptera). *l.e.* 18, 1903, (90-91).

———— Eine neue Reduviinenart aus Westafrika. (*Platymeris elegans*). *l.c.* (99–100).

------ Einige afrikanische Heteropteren. l.c. (107-108).

------ Einige afrikanische Rhynchoten. *l.c.* (115-116).

# ff East Africa.

Distant, W. L. Rhynchotal Miscellanea. Part I. Rhynchota from the Transvaal, Mashonaland and British Nyassaland. Cape Town, Ann. S. Afric. Mus., 3, pt 11, 1903, (43-62).

Rhynchotal notes XVI. Heteroptera: Family *Reduviidae* (continued). Apiomerinae, Harpactorinae, and Nabinae. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (203–213, 245–258); XVII Heteroptera, Family *Reduviidae*, *ib.*, (352–367); XVIII Heteroptera, **12**, 1903, (248–253); XIX, *Ib.*, (469–480).

Kirkaldy, G. W. Hemiptera. Nat. Hist. Sokotra, (381-394, pl. XXIII). g NORTH AMERICA.

**Cockerell**, T. D. A. New and littleknown American Coccidas. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (155-165).

# gg NORTH EASTERN UNITED STATES.

Banks, Nathan. Additions to the list of New York Pentatomidae. New York, N.Y., J. Ent. Soc., 11, 1903, (227).

Britton, W. E. San José scale insect: Its appearance and spread in Connecticut. Connecticut, (State station), New Haven, Bull., No. 135, 1901, (14, with 5 pls.). 23 cm. [Review] Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (766-767).

Bueno, J. R. de la Torre. A preliminary list of the *Pentatomidae* within fifty miles of New York. New York, N.Y., J. Ent. Soc., **11**, 1903, (128-129).

Note on Pentatomidae. [Correction to New Jersey list in author's "The Pentatomidae within fifty miles of New York."]. l.e. (228).

King, George B. The *Coccidae* of Ohio [with bibliography]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (204-206).

Montgomery, Tho[ma]s H[arrison], jun. A list of the Hemiptera Heteroptera of the vicinity of Wood's Holl, Massachusetts. [nn. spp.? in *Macrotylus* and *Tuponia*. *l.c.* **13**, 1902, (12–13).

**Osborn**, Herbert. Aradidae of Ohio [Contributions from the Department of Zoology and Entomology, No. 14]. Ohio Nat., Columbus, Ohio, 4, 1903, (36-42).

goridae. l.c. (44-46).

Van Duzee, E. P. Note on Aradus niger Stal [near Buffalo, N.Y.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (23).

Webster, F. M. The Coccidae of Ohio. *l.c.* 14, 1903, (288–290).

gh South Eastern United States.

**Ball**, Elmer D[arwin]. Descriptions of some new tree hoppers [*Telamona*] from the United States. Washington, D.C., Proc. Biol. Soc., **16**, 1903, (177-182, with pl.) Separate. 23.3 cm. Kotinaky, Jacob. The first North American leaf-galliaspine [Cryptophyllaspis liquidambaris n. sp.]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (149-150).

Marlatt, C[harles] L[ester]. Notes on the periodical *Cicada* in the District of Columbia in 1902. *l.e.* (124-126).

**Scott**, W. M. A preliminary note on a new species of *Aphis* injurious to plums and peaches in Georgia. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (56-59).

# gi WESTERN UNITED STATES.

Le Phylloxéra en Californie. Naturaliste, Paris, (sér. 2), 25, 1903, (152). [4019 4031].

Cockerell, T[heodore] D[ru] A[lison]. Mytilaspis beckii in California. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (17).

[Additional records of Hemiptera from Beulah, New Mexico]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (113).

*Aphididae*. [from Beulah, New Mexico.] *l.c* (114-116).

[Cockerell, Wilmatte Porter and Cockerell, Theodore Dru Alison]. [A new Coccid from Beulah]. [Phenacoccus vipersioides n. sp.]. l.e. (112-113).

**Coleman**, George A. Coreidae of the Coniferae, with the descriptions of tem new species from California. New York, N.Y., J. Ent. Soc., **11**, 1903, (61-85, with pl.).

**Kellogg**, V[ernon] L[yman]. Notes on California *Coccidae*, *Aleurodidae*, and *Scolytidae*. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (83-84).

King, George B. The seventeenth American Kernes (Coccidae). [K. arizonensis n. sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (21-22).

Kuwana, S. J. A new Coccid from California [Pseudolecanium disticlium n. sp. with list of species and bibliography of Pseudolecanium]. *l.e.* 18, 1902, (134–136, with text-fig.).

Van Duzee, Edward P. Hemiptera of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (107-112). Washburn, F. L. Distribution of the chinch bug in Minnesota. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (32-34).

## h CENTBAL AND SOUTH AMERICA.

Breddin, G. Eigine neue südamerikanische Ectrichodiinen. Soc. Entomol., Zürich, **18**, 1903, (65).

wanzen. l.c. (108, 113-115).

------ Neue Arten der Gattung Edeesea. l.c. (131-132).

### ha MEXICO.

Cocherell, T. D. A. Five new Coccidae from Mexico. Entomogist, London, 36, 1903, (45-48).

------ Chrysomphalus agaris as a pest [in Mexico]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (15).

### hb CENTRAL AMERICA.

**Distant**, W. L. Additions to the Rhynchotal fauna of Central America. London, Trans. Ent. Soc., **1903**, (525– 527).

## he WEST INDIES.

**Uhler**, P. R. A new *Cicada* from Hayti. [*Peallodia* n. gen.] Baltimore, Trans. Md. Acad. Sci., **2**, 1903, (18).

### hd TRINIDAD.

Montandon, A. L. Espèces nouvelles ou peu connues du genere *Belostoma* appartenant aux collections du Musée National Hongrois. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (358-363).

## he COLUMBIA : ECUADOR.

Breddin, G. Ueber einige Tetyriden. Soc. Entomol., Zürich, 18, 1903, (57– 59).

hg BOLIVIA.

Breddin, G. Daraza carnifez n. sp. Soc. Entomol., Zürich, 18, 1903, (100).

Colobasiastes Bredd. l.c. (131). (N 2-9053) hh BRAZIL.

Montandon, A. L. Espèces nouvelles ou peu connues du genre *Belostoma*, appartenant aux collections du Musée National Hongrois. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (358-363).

**Uhler**, P[hilip] R[heese]. Enumeration of the *Cicadidae* of Brazil in the collection of Mr. Herbert H. Smith. Baltimore, Trans. Md. Acad. Sci., 2, 1903, (1-17).

## hm THE ANDES.

Breddin, G. Beitrage zur Hemipterenfauns der Anden. Berlin, SitzBer. Ges. Natf. Freunde, 1903, (366-383).

——— Neue Rhynchoten aus den Anden. Soc. Entomol., Zürich, **18**. 1903, (122-124).

i AUSTRALASIA.

# ia New Guinea with Islands prom Wallace's Line.

Breddin, G. Neue malayische Homopteren aus der Familie Cercopidae. Soc. Entomol., Zürich, 17, 1902, (51-52, 58-59).

------ Neue Raubwanzen. l.e. 1903, (177-178).

Einige neue Homopteren (9 nn. spp. in: Capnodistes n. g. 2, Tetigonia 3, Conogonia n. g. 3, Hasniatoscarta n. g.). l.c. 18, 1903, (91-92, 98-99).

Jacobi, A. Singeikaden von Ost-Neuguinea. Berlin, SitzBer. Ges. natf. Freunde, 1903, (10-15).

# ib BISMARCK ARCHIPELAGO.

Breddin, G. Neue Raubwanzen. Soc. Entomol., Zürich, **17**, 1903, (177– 178).

### ic AUSTRALIA.

Breddin, G. Ueber einige Tetyriden. Soc. Entomol., Zürich, 18, 1903, (57-59).

**2 ĸ** 2

**Proggatt**, W. W. Australian *Peyllidae*. Part 111. Sydney, N.S.W., Proc. Linn. Soc. N. S.Wales, **29**, 1903, (315–337, with 2 pls.).

Goding, F. W. A monograph of the Australian *Membracidae*. *l.c.* (2-41, with 1 pl.).

# if VICTORIA.

**Cocksrell**, T[heodore] D[ru] A[lison]. Aspidiotus hederae in Australia. [Criticism of paper by J. Lidgett, A. hederae same as A. nerii]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, .(89).

Lidgett, James. Aspidiotus hederae in Australia. l.c. (43-45).

. l ATLANTIC.

lb MADEIRA.

Cockerell, T. D. A. A new Coccid from Madeira, allied to Coccus tuberculatus Bouché. Entomologist, London, 36, 1903, (261-262).

n PACIFIC.

nd SANDWICH ISLANDS.

Koebele, A. Report of Prof. Koebele on Lantana Scale [Orthezia insignis]. Honolulu, Hawaii, Rep. Com. Agric. Forestry, 1902, 1903, (54-65).

# 4031 TAXONOMY AND SYSTEMATIC.

### GENERAL.

Van Duzee, E. P. Hemiptera of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (107-112).

# HEMIPTERA HETEROPTERA.

# GENERAL.

Breddin, G. Ueber die Hopfenwanze und andere Hopfenschädlinge aus der Ordnung der Wanzen. Soc. Entomol., Zürich, **18**, 1903, (81-82). Montgomery, T. H., jun. A list of the Hemiptera Heteroptera of the vicinity of Wood's Holl, Massachusetts. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (12-13).

Warloe, H. New Scandinavian Hemiptera Heteroptera. Entomol. Tidskr., Stockholm, 22, 1901, (144).

### PENTATOMIDAE.

### GENERAL.

Banks, N. Additions to the list of New York *Pentatomidae*. New York, N.Y., J. Ent. Soc., **11**, 1903, (227).

Breddin, G. Ueber einige Tetyriden. Soc. Entomol., Zürich, 18, 1903, (57-59).

**Bueno**, J. R. de la Torre. A preliminary list of the *Pentatomidae* within fifty miles of New York. New York, N.Y., J. Ent. Soc., **11**, 1903, (128-129).

------ Note on Pentatomidac. [Correction to New Jersey list in suthor's "The Pentatomidae within fifty miles of New York."] l.c. (228).

### SPECIAL.

Acanthosoma vicinia n. sp. Beuter, O. Helsingfors, Ofvers. F. Vet. Soc., 44, 1901–1902, (146).

Adoxoplatys n. gen., A. comis, A. minaz nn. spp. Andes. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (368-369).

Aelia nn. spp. Shamo, Altai Mts. Jakovlev, V. Rev. Russ. Ent., Jaroslavlí, 8, 1903, (1-4).

*syriaca* n. sp. **Horváth**, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (403–405).

Agonosoma dohrni n. sp. Schouteden, H. Stettiner ent. Ztg, 64, 1903, (362-363).

Baracellus n. gen., B. lancrolatus n. sp. **Distant**, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (250– 251).

Brachyaulax majuscula n. sp. Key Island. Distant, W. L. l.c. (249).

Brachynema balfouri n. sp. Sokotra. Distant, W. L. l.c. (479-480). Brachystethus vexillum n. sp. Andes. Breddin, G. Berlin, SitzBer. Ges. Natf. Freunde, **1903**, (371).

Byrsinus pertzovi n. sp. Chinese Turkestan. Jakolev, V. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (377-380).

Calliphara nn. spp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (250).

Catadipson n. gen., C. aper n. sp. Fernando Po. Breddin, G. Soc. Entomol, Zürich, 18, 1903, (90).

Catalampusa n. gen., C. oenope n. sp. Andes. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (369).

Cazira nn. spp. Sumatra. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (33-34).

Chrysocoris auratus var. sanguineirentris n. var. Breddin, G. l.c. (59).

Breddin, G. l.c. (58).

**breddin**, G. *l.c.* (74).

Chrysodarecus n. gen., C. moneta n. sp. Andes. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (367).

Coptosoma josuae n. sp. Horváth, G. Budapest, Ann. Hist-Nat. Mus. Nat. Hung., 1, 1903, (400).

mirabilis n. sp. Halmaheira. Distant, W. I. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (248).

Cyrtomenus vestigiatus n. sp. Costa Rica. Distant, W. L. London, Trans. Ent. Soc., 1903, (525).

Dichobothrium (~ Sastragala) n. gen., D. sastragaloides, D. tenuispinum, D. elasmostethoides nn. spp. Breddin, G. Berlin, Sitz-Ber. Ges. natf. Freunde, 1903, (195-223).

*Ectmetocara virescens* n. sp. **Distant**, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (470–471).

*Edessa* nn. spp. S. America. **Breddin**, G. Soc. Entomol., Zürich, **18**, 1903, (123, 132).

Elasmostethus minax n. sp. Breddin, G. Borlin, SitzBer. Ges. natf. Freunde, 1903, (204).

Erachiteus ventralis n. sp. Usambara. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (115). Eurydema blandum n. sp., E. nigriceps Reut. var. collare n. var. Horváth, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (407-408).

Euschiatus inflatus n. sp. New Mexico. Van Duzee, E. P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (107).

Galasastra (~ Elasmoststhus) n. gen., G. salebrosa n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (205– 206).

Geotomus attar n. sp. Kirkaldy, G. W. Hemiptera. Nat. Hist. Sokotra, (381– 394, pl. XXIII).

Gonopsis recurva n. sp. Tanganyika. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (471).

Graphosoma semipunctatum Fabr., G. lineatum Linn., G. rubrolineatum Wester., G. stdli Horv. Beschreibung et nn. spp. Horváth, G. Budapest, Ann. Hist.-Nat. Mag. Nat. Hung., 1, 1903, (345-354).

Hermolaus amurensis n. sp. Horváth, G. l.c. (405-406).

Holcogaster fibulata Germ. var. exilis n. var. Horváth, G. l.c. (406-407).

Hyperoncus complutus n. sp. Java. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (66).

Lamprocoris smaragdus n. sp. Perak. Breddin, G. lc. (33).

Menaccarus eremita n. sp. Transcaspia. Jakoviev, V. Rev. Russ. Ent., Jaroslavli, 3, 1903, (191–195).

\_\_\_\_\_ jakovleffi n. sp. Beuter, O. Ofvers. F. Vet. Soc., Helsingfors, 44, 1901-1902, (145).

Menida poecila n. sp. Transcaspia. Jakovlev, V. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (377-380).

Microleuterus javanus n. sp. Breddin, G. Berlin, Sitz.Ber. Ges. Natf. Freunde, **1903**, (218).

Neodius nn. spp. Ethiopian region. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, (460-470).

Neottiglossa Curt. 4 nn. spp., de la faune paléarctique. Crimea, Siberia centr., Russia centr. Jakovlev, V. E. St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (325-331). 4031

Neottiglossa calva n. sp. Sibéria centr. (Irkutsk). **Jakovlev**, V. E. *l.c.* (317-324).

Nezara gentilis n. sp. Andes. Breddin, G. Berlin, SitzBer. Ges. Natf. Freunde, 1903, (369).

**——** pulchricornis n. sp. Fernando Po. Breddin, G. Soc. entomol., Zürich, 18, 1903, (115).

caucasia. Jakovlev, V. Rev. Russ. Ent., Jaroslavli, 3, 1903, (191–195).

riridula L. var. hepatica n. var. Horváth, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (406).

Oncacontias (~ Acanthosoma) n. gen., O. brunneipennis n. sp. Breddin, G. Berlin, SitzBer. Ges. Natf. Freunde, 1903, (219-220).

Oncodochilus cruciatulus n. sp. Südamerika. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (147-149).

Pachycoris ruth n. sp. Andes. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (366).

Paterculus conspersus n. sp. Distant, W. L. Fascic. Malay Zool., II, 1, (236).

*Philia* nn. spp. Australia. **Breddin**, G. Soc. Entomol., Zürich, **18**, 1903, (57-58).

*dohertyi* n. sp. Jobie. **Distant**, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (249).

Phimodera nn. spp. N.W. Russie, Transcaucase, Altai. Jakovlev, V. E. St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (183-191).

nn. sop. Turkestan, E. Siberia. Jakovlev, V. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (81-84).

Podops malayensis n. sp. Distant, W. L. Fascic. Malay. Zool., II., 1, (229).

Polytes fenestra n. sp. Peru. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (122).

Proctophantasta (~ Microdeuterus) n. gen., P. colaz, P. satanas, P. diabolus nn. spp. Breddin, G. Berlin, SitzBer. Ges. Natf. Freunde, **1903**, (212-217). Psacasta pallida n. sp. Reuter, O. Ofvers. F. Vet. Soc., Helsingfors, 44, 1901–1902, (140).

Rhacognathus callosus n. sp. Horváth, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (408-409).

Risibia geniculata n. sp. Horváth, G. l.c. (406).

Sastragala guttamellis n. sp. Broddin, G. Berlin, SitzBer. Ges. natl. Freunde, 1903, (203).

Schirus coeruleus n. sp. **Beuter**, O. M. Ofvers. F. Vet. Soc., Helsingfors, **44**, 1901-1902, (140-188).

Sciocoris nn. spp. Horváth, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (400-402).

Jakovley, V. Rev. Russ. Ent., Jaroslavli, 3, 1903, (289-293).

calia. Jakovlev, V. l.c. (81-84).

Schirius coeruleus n. sp. Benter, O. Ofvers. F. Vet. Soc., Helsingfors, 44, 1901-1902, (142).

Sepontia formosa n. sp. Malayan Archipelago. **Distant**, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, (474-475).

Stachyomia luteovaria n. sp. Distant, W. L. Fascic. Malay. zool., II., 1, (233).

Tessaratoma usumbarica n. sp. Africa. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (107).

Tibilis nn. spp. Andes. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (370-371).

Timuria n. gen. verwandt mit Sciocoris. T. melanocera n. sp. Horváth, G. Budapest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (402-403).

Tropidotylus annandalei n. sp. Distant, W. L. Fascic. Malay. Zool., II., 1, (225).

Typhoecoris n. gen. S. America. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (122-124).

## COREIDAE.

### General.

Bergroth, E. Ueber Haploprocta pustulifera Stål. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (32).

#### SPECIAL.

Acestra malayana n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (245).

Alydus scutellatus n. sp. New Mexico. Van Duzee, E. P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (108).

Anasa jucunda n. sp. Südamerika. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (147).

weed, C. M. and Conradi, A. F. Agric. Exp. Sta., New Hampshire, Durham, Bull., No. 89, 1902, (13-28, with 2 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (270).

Bardistus complutus n. sp. Andes. Breddin, G. Berlin, Sitz-Ber. Ges. Natf. Freunde, **1903**, (372).

Bothrostethus rufulus n. sp. Transcaucasia. Jakovlev, V. Rev. Russ Ent., Jaroslavli, 3, 1903, (191-195).

Cochrus subferrugineus n. sp. Andes. Breddin, G. Berlin, Sitz-Ber. Ges. Natf. Freunde, 1903, (381).

Corizus hyalinus Fab., an addition to the British Hemiptera. Saunders, E. Ent. Mag., London, 39, 1903, (294).

**Distant**, W. L. Fascic. Malay. Zool., II, 1, (246).

Ctenomelyn'hus n. gen., C. brunneiventris, C. cozalis nn. spp. Andes. Breddin, G. Berlin, SitzBer. Ges. Natf. Freunde, **1903**, (374–375).

Derepteryx laticornis n. sp. Breddin, G. Berlin, SitzBer. Ges. Natf. Freunde, 1903, (222).

Eubule subdepressa n. sp. Andes. Breddin, G. l.c. (381).

Eudarmistus n. gen., E. bicolor n. sp. Andes. Breddin, G. l.c. (381-382). Holopterna alata, from Johannesburg. Fry, H. Zoologist, London, (Ser. 4), 6, 1902, (392, 393).

Holymenia nn. spp. Südamerika. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (147).

p. reinilis n. sp. Andes. Breddin, G. Berlin, SitzBer. Ges. Natf. Freunde, 1903, (382).

Hyalymenus aterrimus n. sp. Andes. Breddin, G. l.c. (383).

amerika. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (148).

Laminiceps superbus n. sp. Andee. Breddin, G. Berlin, Sitz-Ber. Ges. Natf. Freunde, **1903**, (376).

Leptoscelis matronalis n. sp. Andes. Breddin, G. l.c. (380).

Lycambes and inola n. sp. Andes. Breddin, G. l.c. (372).

Malvana lauta n. sp. Andes. Breddin, G. l.c. (381).

Melucha nn. spp. Andes. Breddin, G. l.c. (379).

Meluchopetalops n. gen., M. banausus n. sp. Andes. Breddin, G. l.c. (378).

Myrmus hirsutus n. sp. Crimea. Jakovisv, V. Rev. Russ. Ent., Jaroslavli, 3, 1903, (289-293).

Nematopus nn. spp. Südamerika. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (147).

Petalops nn. spp. Andes. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (377).

Porta n. gen., P. gracilis n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (245-246).

Prioptychomia (~ Elasmomia) n. gen., P. euryptera n. sp. Breddin, G. Borlin, SitzBer. Ges. Natf. Freunde, 1903, (221).

Stenometapodus n. gen., S. V-luteum n. sp. Andes. Breddin, G. l.c. (366-383).

Stenoscelida nn. spp. Andes. Breddin, (J. l.c. (376).

Trachelium mimeticum n. sp. Südamerika. Breddin. G. Soc. Entomol., Zürich, 18, 1903, (147).

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# BERYTIDAE.

Berytus nigrolineatus n. sp. Transcaucasia. Jakovlev, V. Rev. Russ. Ent., Jaroslavli, 3, 1903, (379).

## LYGAEIDAE.

## GENERAL.

Breddin, G. Ueber die Hopfenwanze und andere Hopfenschädlinge aus der Ordnung der Wanzen. Soc. Entomol., Zürich, 18, 1903, (81-82).

## SPECIAL.

Abdolominus n. gen., A. intaminatus, A. picinus nn. spp. **Distant**, W. L. Fauus of British India. . . Rhynchota, Vol. ii (Hepteroptera). Pt. i. London, 1903, (90-91).

Acroleucus nn. spp. Südamerika. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (148).

Altomarus n. gen., A. greeni n. sp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (72-73).

Aphanus nn. spp. **Distant**, W. L. Fauna of British India. . . . Rhynchota, Vol. ii (Hepteroptera). Pt. i. London, 1903, (81).

*mirabilis* n. sp. West Africa. **Distant**, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (471-472).

Arrianius n. gen., A. excaratus n. sp. Distant, W. L. Fauna of British India. . . Rhynchota, Vol. ii (Hepteroptera). Pt. i. London, 1903, (74).

Artemidorus n. gen., A. pressus n. sp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (73-74).

\_\_\_\_\_ nn. spp. Distant, W. L. l.c. 12, (252).

tant, W. L. Fascic. Malay. Zool., II, 1, (248).

Aulacopeltus minor n. sp. Nyassa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (57).

Belonochilus numenius on Plantanus occidentalis. Heidemann, O. Washington, D.C., Proc. Ent. Soc., 5, 1902, (11-12). Bliesue in Minnesota. Washburn, F. L. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (32-34).

Garber, J. F. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (330-335, with text-fig.).

Agric. Exp. Sts., Missouri, Missouri Station Bull., No. 51, 1902, (115–142, with fig.) [Review] Washington, D.C., U. S. Dept. Agric. Off. Exp. Sts. Rec., 14, 1902, (270).

Boccharis n. gen., B. significatus n. sp. Distant, W. L. Fauna of British India. *Rhynchota*, Vol. ii (Heteroptera), Pt. i. London, 1903, (36).

Bosbequius n. gen., B. latus n. sp. Distant, W. L. l.c. (64, 65).

Budaeus n. gen., B. brevipennis n. sp. Distant, W. L. *l.c.* (76).

Cligenes patricius n. sp. Distant, W. L. l.c. (72).

Colobasiastes nn. spp. Bolivia. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (131).

Critobulus n. gen., C. insignis n. sp. Distant, W. L. Fauna of British India . . Rhynchota, Vol. ii (Hepteroptera), Pt. i. London, 1903, (77).

Dieuches nn. spp. Distant, W. L. l.c. (83-85).

Dinomachus sikhimensis n. sp. Distant, W. L. l.c. (38).

Entisberus n. gen., E. archetypus n. sp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (74-75).

Fontejanus n. gen., F. wasmanni n. sp. Bombay. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (75).

Geocoris nn. spp. Distant, W. L. Fauna of British India . . . Rhymchota, Vol. ii (Heteroptera), Pt. i. London, 1903, (27-31).

Gonatas nn. spp. Distant, W. L. l.c. (90).

costaricensis n. sp. Costa Rica. Distant, W. L. London, Trans. Ent. Soc., 1903, (526).

Gonsalvus n. gen., G. typus n. sp. Distant, W. L. Fauna of British India . . Rhynchota, Vol. ii. (Hepteroptera), Pt. i. (93).

# Hemiptera.

Graptotethus dixoni n. sp. Distant, W. L. l.c. (10).

Iphicrates n. gen. Distant, W. L. l.c. (27).

Lachnophorus nn. spp. Distant, W. L. l.c. (69-70).

Lemnius n. gen., L. ovatus n. sp. Distant, W. L. l.c. (66-67).

Ligyrocoris constrictus. Heidemann, O. Washington, D.C., Proc. Ent. Soc., 5, 1903, (155–157).

Lygaeosoma orientale n. sp. Distant, W. L. Fauna of British India . . . Rhynchota, Vol. ii (Heteroptera), Pt. i. London, 1903, (13).

Lygaeus nn. spp. Distant, W. L. l.c. (7, 8).

Macropes nn. spp. Distant, W. I.. l.c. (26).

Melanocoryphus putoni n. sp. Reuter, O. Ofvers. F. Vet. Soc., Helsingfors, 44, 1901–1902, (149).

Naudarensia n. gen., N. pedata n. sp. Distant, W. L. Fauna of British India . . Rhynchota, Vol. ii (Hepteroptera) Pt. i. London, 1903, (86–87).

Nysius nn. spp. Distant, W. L. l.c. (18).

*minitor* als Schödling in Australien. Ludwig, F. Centralbl. Bakt., Jena, Abt. 2, 10, 1903, (184).

Ostacops occidentalis n. sp. Distant, W. L. Fauna of British India . . . Rhynchota, Vol. ii (Heteroptera) Pt. i. London, 1903, (4).

Oxycarenus heraldus n. sp. Distant, W. L. l.c. (44).

Pachygrontha dizoni n. sp. Distant, W. L. *l.c.* (42).

Perigenes fallax n. sp. Heidemann, O. Washington, D.C., Proc. Ent. Soc., 5, 1903, (155-157).

Peritrechus aeruginosus n. sp. Distant, W. L. Fauna of British India . . . Rhynchota, Vol. ii (Hepteroptera) Pt. i. London, 1903, (76).

Phlegyas burmanus n. sp. Distant, W. L. l.c. (40). Pinkimerus n. gen., P. sesquipedalis n. sp. Distant, W. L. l.c. (22).

Polycrates nexus n. sp. Distant, W. L. l.c. (64).

Rhyparochromus (Aphanus, Pachymerus) vulgaris ein neuer Hopfenschädling. **Remisch**, F. Soc. Entomol., Zürich, **16**, 1903, (153–155).

Sadoletus n. gen., S. validus n. sp. Distant, W. L. Fauna of British India. Rhynchota, Vol. ii (Heteroptera) Pt. i. London, 1903, (37).

Scolopostethus ornandus n. sp. Distant, W. L. *l.c.* (93).

Sinierus cingalensis n. sp. Distant, W. L. l.c. (65).

Suffenus n. gen. Distant, W. L. l.c. (75).

Thebanus n. gen., T. politus n. sp. Distant, W. L. *l.c.* (67).

Tropistethus pallidipes n. sp. Reuter, O. Ofvers, F. Vet. Soc., Helsingfors, 44, 1901-1902, (149).

Udalricus n. gen., U. scutellatus n. sp. Distant, W. L. l.c. (50).

## TINGIDAE.

Acalypta sibirica n. sp. Siberia centr. Jakovlev, V. E. Rev. Russ. Ent., Jaroslavli, 3, 1903, (4).

Ammianus n. gen. Distant, W. L. Fauna of British India . . . Rhynchota, Vol. ii (Hepteroptera) Pt. i. London, 1903, (136).

Ayrerus n. gen. Distant, W. L. *l.e.* (140).

Cantacader infuscatus n. sp. Distant, W. L. l.c. (124).

Celantia n. gen. Distant, W. L. l.c. (137).

Collinutius n. gen. Distant, W. L. l.c. (134).

Dictyonola idonea n. sp. Tauria. Jakovlev, V. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (191-195).

Eteoneus n. gen. for Serenthia dilatata. Distant, W. L. Fauna, Brit. India Rhynchota, Vol. II, pt. 1, (129). (Platychila) taurica n. sp. Crimea. Jakovlev, V. l.c. (289-293).

Penottus n. gen., P. jalorensis n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (254).

Urentius n. gen., U. echinus n. sp. Distant, W. L. Fauna of British India . . Rhynchota, Vol. ii (Hepteropters), Pt. i. London, 1903, (134).

# PYRRHOCORIDAE.

Antilochus pygmaeus n. sp. Distant, W. L. Fanna of British India . . . Rhynchots, Vol. ii (Hepteropters), Pt. i. London, 1903, (102).

Courtesius n. gen., C. illuminatus n. sp. Distant, W. L. l.e. (114).

Delacampius typicus n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (253).

Dermatinue lugubris n. sp. Distant, W. L. Fauna of British Indis . . . Rhynchota, Vol. ii (Hepteropters), Pt. i, London, 1903, (115).

Dysdercus migratorius n. sp. Distant, W. L. l.c. (126).

Euscopus gestroi n. sp. Distant, W. L. l.c. (106).

Iphita grandis n. sp. Distant, W. L. l.c. (97).

Scantius pallens n. sp. **Distant**, W. L. l.o. (117).

Theraneis amabilis n. sp. Bolivia. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (122).

## ARADIDAE.

### GENERAL.

**Onborn**, H. Aradidas of Ohio [Contributions from the Department of Zoology and Entomology, No. 14.] Ohio Nat., Columbus, Ohio, 4, 1903, (36-42).

#### SPECIAL.

Aradus duryi n. sp. Ohio. Osborn, H. Ohio Nat., Columbus, Ohio, 4, 1903, (39). Aradus niger in New York. Van Duzze, E. P. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (23).

*serbicus* Horv., Beechreibung. Horváth, G. Budapest, Ann. Hist.-Nat. Mus. Nat, Hung., 1, 1903, (12-13).

Neuroctenue affinis n. sp. Distant, W. L. Fauna of British India. . . . Rhynchota, Vol. ii (Hepteroptera), Pt. i, London, 1903, (165).

**Osborn**, H. Ohio Nat., Columbus, Ohio, **4**, 1903, (41).

### HEBRIDAE.

Hebrus orientalis n. sp. Distant, W. L. Fauns of British India. Rhynchots, Vol. ii (Hepteropters), Pt. i. London, 1903, (167).

### HYDROMETRIDAE.

Alardus n. gen., A. typicus n. sp. Malay Peninsula. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (475).

Baptista n. gen., B. gestroi n. sp. Distant, W. L. Fauna of British India . . . Rhynchota, Vol. ii (Hepteropters), Pt. i. London, 1903, (173).

Gerris selma n. sp. India. Kirkaldy, G. W. Entomologist, London, **36**, 1903, (181).

Halobates sexualis n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (258).

Metrocoris nn. spp. Nigeria, Natal. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, (472-473).

illustrarius n. sp. Distant, W. L. Fauns of British India. . . Rhynchots, Vol. ii (Hepteropters), Pt. i. London, 1903, (189).

<u>—</u> nigrofasciatus n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (257).

Microzelia repentina n. sp. Distant, W. L. Fauna of British India. . . . Rhynchota, Vol. ii (Hepteroptera), Pt. i. London, 1903, (174).

singalensis n. sp. Ceylon. Kirkaldy, G. W. Entomologist, London, 36, 1903, (180–181).

# Hemiptera.

Perittopus rufus n. sp. Tenasserim. Distant, W. L. Fauna Brit. India. Rhynchota, II, pt. 1, 1903, (175).

Rhagovelia insignis n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (256).

<u>maculata</u> n. sp. Nigeria. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (472).

## HENIOCEPHALIDAE.

Henicocephalus robustus n. sp. Distant, W. L. Fauns of British India. . . Rhynchota, Vol. II (Heteropters), Pt. i. London, 1903, (195).

### PHYMATIDAE.

Carcinochelis determinatus n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (255).

Glossopelta truncata n. sp. Distant, W. L. Fauna of British India. . . . Rhynchota, Vol. ii (Heteroptera), Pt. i. London, 1903, (150).

#### REDUVIIDAE.

### GENERAL.

Breddin, G. Einige neue südamerikanische Ectrichodiinen. Soc. Entomol., Zürich, 18, 1903, (65).

### SPECIAL.

Acanthaspis nn. spp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (354-356).

<u>\_\_\_\_\_</u> nn. spp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (46-52).

Afrocastra n. gen., A. procera n. sp. Usambara. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (116).

Agriolestes melanopterus n. sp. Burmah. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (359). Agyrius othello n. sp. Borneo. Breddin, G. l.c. (170).

Alleocranum maculosum n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (260).

Alleorhynchus marginalis n. sp. Burms. Distant, W. L. Entomologist, London, 36, 1903, (1).

Amauroclopius ornatus n. sp. Brazil. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (205).

Androclus nn. spp. Breddin, G. Soc. Entomol., Zürich, 17, 1903, (177– 178).

Apiomerus lobulatus n. sp. Südamerika. Breddin, G. l.c. 18, (148).

Arcesius annulatus n. sp. New Guines. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (359).

<u>— bicolor</u> n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (265).

Guinea. Breddin, G. Soc. Entomol., Zurich, 17, 1903, (169).

Astinus siamensis n. sp. Siam. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (248-249).

Aulacoclopius n. gen., A. cyaneoniger n. sp. Breddin, G. Soc. Entomol., Zürich, 17, 1903, (177-178).

Biasticus nn. spp. Java. Breddin, G. l.c. (177-178).

horsfeldi n. sp. Java. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (208).

Camelocastra n. gen. (~ Castra) C. javana, C. borneensis nn. spp. Breddin, G. Zool. Anz., Leipzig, 26, 1903, (508– 514).

Caprocethera (~ Carcinomma) n. gen., C. care n. sp. **Breddin**, G Berlin, SitzBer. Ges. natf. Freunde, **1903**, (115-116).

Castolus nigriventris n. sp. Südamerika. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (148). Castruccius n. gen., C. insignis n. sp. N.W. Australis. **Distant**, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (356-357).

Censorinus n. gen., C. ferrugineus n. sp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., 3, 1903, (57).

Centrogonus ducalis n. sp. W. Australia. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (352).

din, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (120).

Cerellius n. gen., C. typicus, C. nigricane nn. spp. Madagascar. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (364-365).

Cerilocus nn. spp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (114-115).

nn. spp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (47-52).

Cethera maculipennis n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, (111-129).

Cleontes genitus n. sp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (53).

Cleptriola n. gen., C. nigrolutea, C. subobscura nn. spp. Africa. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (107-108).

Coranopsis rossi n. sp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (48).

Coranus atricapillus n. sp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903.

Cosmoeleptus rubromarginatus n. sp. Phillipine Islands. **Distant**, W. L. *l.c.* (249-250).

Cosmolestes insignis n. sp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (47).

Cricetopareis n. gen., C. boliviana n. sp. Bolivia. **Breddin**, G. Soc. Entomol., Zürich, **18**, 1903, (65).

Cutocoris fasciativentris n. sp. E. Asis. Breddin, G. l.c. 17, (170).

Cydnocoris tabularis n. sp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (245). Daraxa carnifex n. sp. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (100).

Diplosiacanthia (~ Centrogonus) n. gen., D. monticola n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (121-122).

Domnus coloratus n. sp. British East Africa. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (360-361).

Ectrichodia nn. spp. Sumatra, Assam, Borneo. Breddin, G. Zool. Anz., Leipzig, 26, 1903, (512-513).

Edocla nn. spp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (353-354).

Endochus nn. spp. Distant, W. L. l.c. (76).

**Breddin**, G. Soc. Entomol., Zürich, **17**, 1903, (170).

Migratorius n. sp. Hong Kong. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (246).

Australia. Distant, W. L. l.c. (360).

Epidaus nn. spp. New Guinea. Distant, W. L. *l.c.* (247).

Eugubinus n. gen., E. araneus n. sp. Bombay. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (253).

Eulyes sanguinolentus n. sp. Distant, W. L. l.c. (213).

Forestus n. gen., F. typicus, F. montanus, F. spinosus, F. inermis ni. spp. Sikhim. Distant, W. L. l.c. (251-253).

Gardena bicolor n. sp. Distant, W. L. Fauna of British India. . . . Rhynchota, Vol. ii. (Hepteropters), Pt. i, London, 1903, (214).

Gerbelius confluens n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., 11, 1, (260).

Ghilianella phasma n. sp. Distant, W. L. Fauna of British India. . . . Rhynchota, Vol. ii (Hepteropters) Pt. i. London, 1903, (211).

Gomesius n. gen., G. predatorius n. sp. Distant, W. L. l.c. (212).

Graptoclopius pallescens n. sp. New Guinea. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (207-208). 509

Haematoloecha folkiensis n. sp. China. Distant, W. L. *l.c.* 12, (476).

morosa n. sp. Tonkin. Breddin, G. Zool. Anz., Leipzig, 26, 1903, (511).

Harpactor nn. spp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (75).

Kong. Distant, W. L. *l.c.* (205).

*paludatus* n. sp. S. Africa, **Distant**, W. L. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (55).

Helonotus nn. spp. Malay Archipelago and Sumatra. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (363-364).

Heteropinus (~ Staliastes) n. gen., H. mollis n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (112-113).

Hexamocerus junodi n. sp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., 3, 1903, (59).

Holotrichius insularis n. sp. Sokotra. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (479).

Homalosphodrus abdominalis n. sp. **Distant**, W. L. *l.c.* **11**, (211).

Inara curraz n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1203, (116).

Iphithereuta n. gen., I. longipennis. n. sp. Breddin, G. l.c. (122-123).

Irantha biseratensis n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., 11. 1, (267).

bramarbas n. sp. Sumatra. Breddin, G. Soc. Entomol., Zürich, 17, 1903, (177–178).

W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (366-367).

Ischnonyctes alatus n. sp. Distant, W. L. Fauna of British India. . . . Rhynchota, Vol. ii (Hepteroptera) Pt. i. London, 1903, (217).

Junghuhnidia (~ Crociaeus) n. gen., J. cruenta n. sp. Breddin, G. Berlin. SitzBer. Ges. natf. Freunde, 1903, (124),

Khafra modeeta n. sp. Nyssaland. Distant, W. L. Cape Town, Ann. S. Afric. Mus., 3, 1903, (59). Lenaeus marmoratus n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (113).

W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (356).

Leptomendis n. gen., L. bipartita n. sp. Cameroons. Breddin, G. Zool. Anz., Leipzig, **26**, 1903, (514).

Libyomendis n. gen., L. haematobapha n. sp. Fernando Po. Breddin, G. Soc. Entomol., Zürich, **18**, 1903, (115).

Lisarda nn. spp. Distant, W. L. Fauna of British India . . Rhynchota, Vol. ii (Hepteroptera) Pt. i. London, 1903, (238-239).

*aethiopica* n. sp. British E. Africa. **Distant**, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (352).

Lopodytes mashonae n, sp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., 3, 1903, (53).

Loricerus rufipectus n. sp. Cameroons. Breddin, G. Zool. Anz., Leipzig, 26, 1903, (513).

Lutera feana n. sp. Burma. Distant, W. L. Entomologist, London, **36**, 1903, (1).

**Distant**, W. L. Fascic. Malay. Zool., II, 1, (258).

Margasus nn. spp. E. Africa. Distant, W. L. Care Town, Ann. S. Afric., 3, 1903, (62).

Luridus n. sp. Madagascar. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (361).

Mendis aemula n. sp. Borneo. Breddin, G. Zool. Anz., Leipzig, 26, 1903, (511).

Microsanta n. gen. (~ Santisia), M. aurantiaca, M. sanguinea nn. spp. Breddin, G. l.c. (509).

Mirambulus morio n. sp. Bolivia. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (108).

Myiophanes nn. spp. Distant, W. L. Fauna of British India . . . Rhynchota, Vol. ii (Hepteroptera) Pt. i. London, 1903, (205).

Mylophanes pilipes n. sp. Richmond River. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (253). Nabis telomi n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (268).

Nagusta nn. spp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., 3, 1903, (49, 54).

calamobata n. sp. Java, Breddin, G. Soc. Entomol., Zürich, 17, 1903, (177–178).

Nalata armiventris n. sp. Breddin, O. l.c. (108).

Narsetes n. gen., N. longinus n. sp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (358).

Onococephalus nn. spp. Distant, W. L. Fauna of British India. . . Rhynchota, Vol. ii (Hepteroptera) Pt. i. London, 1903, (228-233).

Opisthoplatys majusculus n. sp. Distant, W. L. Fauna of British India . . Rhynchota, Vol. ii (Hepteroptera), Pt. i, London, 1903, (222).

*Opistoplatys* nn. spp. **Breddin**, G. Soc. Entomol., Zürich, **17**, 1903, (177–178).

Paloptus nn. spp. New Guinea and Malay Archipelago. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (361-362).

Panthous bimaculatus n. sp. S. India. Distant, W. L. *l.c.* (249).

W. L. *l.c.* (76).

Pasiropsis morio n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (117).

Petalochirus nn. spp. Malay. Distant, W> L. Fascic. Malay. Zool., II, 1, (259-260).

Phasmatocoris n. gen., P. spectrum. n. sp. Südamerika. **Breddin**, G. Soc. Entomol., Zürich, **18**, 1903, (148).

Phonergates imperator n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (115).

Phorticus cingalensis n. sp. Ceylon. Distant, W. L. Entomologist, London, 36, 1903, (2).

Physoderus nn. spp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (125-127). Physorhynchus nn spp. Transvaal, Mashonaland, Nyassaland. Distant, W. L. Cape Town, Ann. S. Afric. Mus., 3, 1903, (47, 53, 60, 61).

Pirates nn. spp. Distant, W. L. l.c. (59).

Platerus n. gen. P. pilcheri n. sp. Sikhim. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (247-248).

Platymeris elegans n. sp. Westafrika. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (92-100).

Ploiaria greeni n. sp. Distant, W. L. Fauna of British India . . . Rhynchota, Vol. ii, (Hepteroptera), Pt. i, London, 1903, (207).

Ploiariola contaminata n. sp. Malay. Distant, W. L. Fascic. Malay. Zool., II, 1, (258).

Plynus santosioides n. sp. Fernando Po. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (107).

Polidius australis n. sp. Australia. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (251).

Polytozus nn. spp. Breddin, G. Soc. Entomol., Zürich, 17, 1903, (177).

pallescens n. sp. Ceylon. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (257).

Pothea haematogaster n. sp. Bolivia. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (108).

Pristhesancus nn. spp. Breddin, G. l.c. 17, (177-178).

Queensland. Distant, W. L. *l.c.* (362-363).

Guines. Distant, W. L. l.c. (250).

Ptilomera nn. spp. **Breddin**, G. Soc. Entomol., Zürich, **17**, 1903, (147– 148).

Reduvius mashonas n. sp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., 3, 1903, (52).

Rhinginia haenschi n. sp. Ecuador. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (65).

Ricolla nn. spp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (359-360).

Santosia schultheisei n. sp. Sumatra. Breddin, G. Zool. Anz., Leipzig, 26, 1903, (509).

Scadra rufithorax n. sp. Tsu-sima. Breddin, G. *l.c.* (510).

Schultheissidia (~ Velitra) n. gen., S. mitis n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (114).

Scipinia arenacea n. sp. Queonsland. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (366).

Sindala purpurascens n. sp. Brazil. Distant, W. L. *l.c.* (365–366).

Sinea spp., S. confusa n. sp. Caudell, A. N. New York, N.Y., J. Ent. Soc., 9, 1901, (1-11, with pl.).

Sirthenea africana n. sp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (47).

Sphedanocoris camerunensis n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (128).

Sphedanolestes nn. spp. Breddin, G. Soc. Entomol., Zürich, 17, 1903, (177– 178).

nn. spp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (209-211).

W. L. *l.c.* (75-76).

------ singularis n. sp. Distant, W. L. Cape Town, Ann. S. Afric. Mus., 8, 1903, (61).

Spiniger nn. spp. S. America. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (108–114).

Staliastes melancholicus n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (113).

Stenolaemus nn. spp. India. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (256). Stenolaemus marshallin.sp. S. Africa. Distant, W. L. Cape Town, Ann. S. Afric. Mus., 3, 1903, (51).

Sycanus obtusifurcatus n. sp. Breddin, G. Soc. Entomol., Zürich, 17, 1903, (170).

Tetroxia nn. spp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (117-120).

Tiarodes picturatus n. sp. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (357).

din, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (111).

Tiarodurganda n. gen., T. apicalis n. sp. Breddin, G. l.c. (112).

Timotheus n. gen., T. peringueyi n. sp. S. Africa. **Distant**, W. L. Cape Town, Ann. S. Afric. Mus., **3**, 1903, (58).

Triatoma migrans n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (111).

Tribelocephala oculata n. sp. West Africa. Distant, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (472-474).

**Distant**, W. L. *l.c.* (475–476).

*spurca* n. sp. Fernando Po. **Breddin**, G. Soc. Entomol., Zürich, **17**, 1903, (178).

*tristis* n. sp. Africa. **Breddin**, G. *l.c.* **18**, (115).

Vachiria nn. spp. l'Asie centrale. Jakoviev, V. E. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (129-203).

Velinus nn. spp. Distant, W. L. Ann. Mag. Nat. Hist., Loudon, (Ser. 7), 11, 1903, (357-358).

*foersteri* n. sp. Sumatra. Breddin, G. Soc. Entomol., Zürich, 17, 1903, (177–178).

*parvus* n. sp. Borneo, Sarawak. **Distant**, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (211).

Velitra mazima n. sp. Breddin, G. Berlin, SitzBer. Ges. natf. Freunde, 1903, (114). Vilius monocerus n. sp. Java. Breddin, G. Zool. Anz., Leipzig, 26, 1903, (508).

Vitumnus scenicus Stål. nn. varr. Distant, W. L. Cape Town, Ann. S. Afric. Mus., 3, 1903, (48, 49, 54, 61).

Yolinus nn. spp. **Distant**, W. L. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (212-213).

## CIMICIDAE.

Acanthia (Cimex) lectularia, Art der Nahrungsaufnahme. Voronkov, N. V. Moskva, Trd. kruž. Izsl. Russ. prir., 1, 1903, (87–100, mit 4 Fig.).

# ANTHOCORIDAE.

Triphleps oblongus n. sp. Reuter, O. Helsingfors, Ofvers. F. Vet. Soc., 44, 1901-1902, (154).

## CAPSIDAE.

### GENERAL.

Hüeber, T. Anhang (Inhaltsverzeichnis, Register, Berichtigung, Nachtrag) zum 1. Bd der Synopsis der deutschen Blindwanzen (Hemiptera heteroptera. Fam. *Capsidae*). Stuttgart, Jahreshefte Ver. Natk., **59**, 1903, (187-226, mit 1 Taf.).

**Beuter**, O. M. *Capsidae* Chinenses et Thibetanae hactenus cognitae enumeratae novaeque species descriptae. Helsingfors, Ofvers. F. Vet. Soc., **45**, [No. 16], 1902–1903, (1–23).

Capsidae ex Abessinia et regionibus confinibus enumeratae novaeque species descriptae. l.c. 45, (1-18, cum tab.).

### SPECIAL.

Adelphocoris nn. spp. **Beuter**, O. M. Helsingfors, Ofvers. F. Vet. Soc., **45**, [No. 16], 1902–1903, (1–23).

Aelocoris n. gen., A. alboconspersus n. sp. Abyssinia. **Beuter**, U. M. *l.c.* [No. 6], (1-18).

Alloeotomus chinensis n. sp. Reuter, O. M. l.c. (1-23). Automoscelis Reut. nova descriptio, A. novalhieri n. sp. Router, O. M. l.c. 44, 1901-1902, (51-70).

Calocoris nn. vart. Mediterraneau. Beuter, O. M. *l.c.* (51-70).

Camptobrochis tibialis n. sp. Abyssinia. **Reuter**, O. M. *l.c.* [No. 6], 1903, (1-18).

Camptozygum pumilio n. sp. Reuter, O. l.c. 44, 1901-1902, (166-168).

Campylognathus nigrigenis n. sp. Beuter, O. l.c. (186–187).

Carpocoris lynx F. var., longiceps R. n. var. Beuter, O. M. l.c. (140-188).

Ceratofulvius n. gen. Reuter, O. M. l.c. (140-188).

Charagochilus duplicatus n. sp. Beuter, O. M. 45, [No. 16], 1902–1903, (1-23).

Compsonannus n. gen., C. puncticornis n. sp. Beuter, O. M. l.c. 44, 1901– 1902, (51–70).

Cyphodemidea n. gen., C. variegata n. sp. **Reuter**, O. M. *l.e.* 45, [No. 16], 1902-1903, (1-23).

Cyrtopeltis tenuis n. sp. Reuter, O. M. l.c. (1-23).

Deraeocoris cordiger Hahn var., fallaciosa n. var. Spain. **Reuter**, O. M. Ent. Mag., London, **39**, 1903, (119).

Dichroscytus handlirschi n. sp. Reuter, O. l.c. (165-166).

Dicyptus geniculatus, Fieb., var. dispuncta n. var. Spain. **Beuter**, O. M. Ent. Mag., London, **39**, 1903, (121).

Dimorphocoris lividipennis n. sp. Spain. **Reuter**, O. M. *l.*c. (119).

Eccritotarsus orchidearum n. sp. Bouter, O. l.c. (157).

*Eurycyrtus paroulus* n. sp. Abyssinia. **Beuter**, O. M. *l.c.* **45**, [No. 6], 1903, (1-18).

Fulvius breddini n. sp. Reuter, O. l.c. 44, 1901-1902, (156).

Glaphyrocoris n. gen., G. unifasciatus n. sp. Abyssinia. **Reuter**, O. M. *l.c.* **45**, [No. 6], 1903, (1-18). Globiceps juniperi n. sp., G. fulricollis Jak. **Reuter**, O. l.c. **44**, 1901–1902, (176).

Glossopeltis n. gen., G. contieri n. sp. Abyssinia. **Beuter**, O. M. *l.c.* 45, [No. 6], 1903, (1-18).

Grypocoris costae n. sp. **Beuter**, O. *l.c.* 44, 1901-1902, (164).

Guianerius n. gen., G. typicus n. sp. Malay. **Distant**, W. L. Fascic. Malay. Zool., II, 1, (269).

Halticus Inteicollis Panz. var. vitticeps Reut. n. var. Mediterranean. **Benter**, O. M. Helsingfors, Öfvers. F. Vet. Soc., **44**, 1901–1902, (51–70).

Ilelopeltis, Plage der Cacaocultur. Zehnner, L. Salatiga, Bull. Cacao, 7, 1903, (1-22).

**Distant**, W. L. Fascic. Malay. Zool., II, 1, (270).

Hypsitylus punctipes Rent. Mediterranean. **Beuter**, O. M. Helsingfors, Öfvers. F. Vet. Soc., **44**, 1901–1902, (51– 70).

Laurinia n. gen., L. fugax n. sp. Beuter, O. M. and Ferr. l.c. (149-188).

*Liocoridia* n. gen., *L. mutabilis* n. sp. **Beuter**, O. M. *i.e.* **45**, [No. 16], 1902– 1903, (1–23).

Lygus nn. spp. Distant, W. L. Fascic. Malay. Zool., II, 1, (269).

\_\_\_\_\_ nn. spp. Abyssinia. **Beuter**, O. M. *l.c.* **45**, [No. 6], 1903, (1-18).

Macrotylus n. sp.? Wood's Holl, Mass. Montgomery, T. H., jun. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 13, 1902, (12–13).

Megacoelum persimile n. sp. Abyssinia. **Reuter**, O. M. Helsingfors, Öfvers. F. Vet. Soc., **45**, [No. 6], 1903, (1-18).

Myrmecoris gracilis Sahlb., an addition to the British Hemiptera. Saunders, E. Ent. Mag., London, 39, 1903, (269-271).

Orthotylus lethierryi Reut., O. curvipennis n. sp. Moditerranean. Reuter, O. M. Helsingfors, Ofvers. F. Vet. Soc., 44, 1901–1902, (51–70).

Pantilius gonoceroides n. sp. Reuter, O. M. l.c. 45, [No. 16], 1902 1903, (1-23).

(N 2-9053)

Parapantilius n. gen., P. thibetanus n. sp. Renter, O. M. l.c. (1-23).

Phyllidea n. gen., P. henschi n. sp. Reuter, O. *l.c.* 44, 1901-1902, (180-183).

Phytocris lesnei n. sp. Mediterranean. **Reuter**, O. M. *l.c.* (51-70).

Pilophorus scutellaris n. sp. Mediterranean. Reuter, O. M. l.c. (51-70).

Platycranus metriorrhynchus n. sp. Beuter, O. l.c. (179-180).

Psallus scutellaris n. sp. Mediterranean. Reuter, O. M. l.c. (51-70).

Rhinofulvius n. gen. Beuter, O. M. l.c. (140-188).

Rhopaliceschatus n. gen., R. quadrimaculatus n. sp. **Reuter**, O. M. l.e. **45**, [No. 16], 1902-1903, (1-23).

Systellonotus championi n sp. Spain. Reuter, O. M. Ent. Mag., London, 39, 1903, (120-121).

mutoni Reut. Mediterranean. Reuter, O. M. Helsingfors, Ofvers. F. Vet. Soc., 44, 1901–1902, (51–70).

Tinicephalus pulcher n. sp. Mediterranean. **Beuter**, O. M. *l.c.* (51-70).

Tuponia n. sp. ? Wood's Holl, Mass. Montgomery, T. H., jun. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (12-13).

*lethierryi* Reut. 3 nn. spp. 1 n. var. Mediterranean. **Beuter**, O. M. Helsingfors, Ofvers. F. Vet. Soc., **44**, 1901–1902, (51–70).

*tincta* n. sp. Transcaspia. Jakovlev, V. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (191-195).

## SALDIDAE.

Acanthia (Salda) opacula Zett. var. albipennis n. var. **Beuter**, O. M. Helsingfors, Öfvers. F. Vet. Soc., **44**, 1901–1902, (140–188).

## BELOSTOMIDAE.

Belostoma Latr. (=Zaitha Arn. et Serv. et auct.), nn. spp. Montandon, A. L. Bul. Muséum, Paris, **1903**, (21-23).

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## NAUCORIDAE.

*Pelocoris femorata* Pal. B, habits. **Bueno**, J. R. de la Torre. New York, N.Y., J. Ent. Soc., **11**, 1903, (166-173).

# HEMIPTERA. HOMOPTERA.

## GENERAL.

Hansen, H. J. The morphology and classification of the auchenorrhynchous Homoptera. Entomologist, London, **36**, 1903, (42-44, 64-67, 93-94).

# CICADIDAE.

### GENERAL.

Froggatt, W. W. Cicadas ("Locusts"), and their habits. Agric. Gaz., Sydney, N.S.W., 14, 1903, (334-341, 418-425, with 2 pls.).

Hüeber, T. Deutsche Sing-Cicaden. Stuttgart, Jahreshefte Ver. Natk., 59, 1904, (LII-LIV).

**Uhler**, P. R. Enumeration of the *Cicadidae* of Brazil in the collection of Mr. Herbert H. Smith. Baltimore, Trans. Md. Acad. Sci., **2**, 1903, (1-17).

## SPECIAL.

Acrilla nana n. sp. Ost-Neuguinea. Jacobi, A. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (13).

Chlorita flavescens Fab. Giard, A. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (33).

Cicada nn. spp. Uhler, P. R. Baltimore, Trans. Md. Acad. Sci., 2, 1903, (1-17).

septendecim, oviposition. Alwood, W. B. Washington, D.C., Bull U. S. Dept. Agric. Div. Ent., No. 40, 1903, (75-77).

C. L. Washington, D.C., Proc. Ent. Soc., 5, 1903, (126–129).

of Columbia. Marlatt, C. L. *l.e.* (124-126).

Sanderson, E. D. Agric. Exp. Sta., Delaware, Newark, Bull., No. 53, 1901, (19, with 11 figs.). 23 cm.; review, Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rcc., **13**, 1902, (872-873).

Cicadetta montana Scop, Normandie. Lancelevée, Th. Elbeuf, Bul. soc. étud. sci. nat., 21, 1902, (43-45).

Drepanopsaltria russula n. sp. Ost-Neuguinea. Jacobi, A. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (10).

Fidicina explanata n. sp. Uhler, P. R. Baltimore, Trans. Md. Acad. Sci., 2, 1903, (1-17).

Gaena electa n. sp. Tonking. Jacobi, A. Berlin, SitzBer. Ges. natf. Freunde, 1902, (20-25).

Gymnotympana nenians n. sp. Ost-Neuguinea. Jacobi, A. l.c. 1903, (14).

Heteropsaltria n. gen., H. aliena n. sp. Jacobi, A. l.c. 1902, (73-76).

Mogannia caesar n. sp. Tonking. Jacobi, A. l.c. 1902, (20-25).

Odopoea biolleyi n. sp. Costa Rica. Distant, W. L. London, Trans. Ent. Soc., 1903, (526-527).

Parnisa nn. spp. **Uhler**, P. R. Baltimore, Trans. Md. Acad. Sci., **2**, 1903, (1-17).

Psallodia n. gen., P. espinii n. sp. Hayti. Uhler, P. R. l.c. (18).

Talainga distanti n. sp. Tonking. Jacobi, A. Berlin, SitzBer. Ges. Natf. Freunde, 1902, (20-25).

Terpnosia posidonia n. sp. Tonking. Jacobi, A. l.c. (20-25).

Tibicen reductus n. sp. Tonking. Jacobi, A. l.c. (20-25).

## FULGORIDAE.

#### GENEBAL.

Melichar, L. Monographie der Acanaloniiden und Flatiden. (Homoptera). Wien, Ann. Nat. Hist. Hofmus, 16, 1901, (178-258); 17, 1902, (1-253, 9 Taf.).

**Swerey**, O. H. Observations on hymenopterons parasites of certain Fulgoridae. Columbus, Ohio, Univ. Bull., (Ser. 7), No. 23, 1903, (Cont. Dept. Zool. Ent.); reprint from Ohio Nat., Columbus, Ohio, 3, 1903, (444-451, with pl.). Separate. 23 cm.

### SPECIAL.

Acanalonia nn. spp. Centr. America and W. Indies. Melichar, L. Wien, Ann. NatHist. Hofmus., 16, 1901, (187, 190).

Acrophaea n. gen., A. fasciata n. sp. New Guines. Melichar, L. l.c. 17, 1902, (8).

Adexia n. gen., A. fowleri, A. melanoneura nn. spp. S. America. Melichar, L. l.c. 16, 1901, (229-231).

Aflata n. gen., A. stâli n. sp. Adelaide. Melichar, L. l.e. 17, 1902, (7-8).

Anidora n. gen., A. fusca n. sp. New Pomerania. Melichar, L. l.c. (158-159).

Atracis nn. spp. Melichar, L. l.c. (181-197).

Atracodes n. gen., A. corrugatus, Madagascar, A. indutus, St. Thomas, nn. spp. Melichar, L. l.c. (225).

Batusa n. gen., B. agilis, Porto Rico, B. conata nn. spp. S. America. Melichar, L. l.c. 16, 1901, (191-193).

Bythopsyrna n. gen., B. illocata, Sumatra, B. infiza, Borneo, B. sumatra nn. spp. Melichar, L. l.c. (224-227).

<sup>C</sup>amerunia n. gen., C. integra n. sp. W. Africa. **Melichar**, L. *l.c.* 17, 1902, (63).

Carthaea nn. spp. S. America. Melichar, L. *l.c.* (31-32).

Carthaeomorpha n. gen., C. breviceps, C. rufipes nn. spp. S. America. Meliohar, L. *l.c.* (33-34).

Cathedra n. gen. Kirkaldy, G. W. Entomologist, London, 36, 1903, (179).

Cerynia nn. spp. Sumatra, Celebes and China. Melichar, L. Wien, Ann. NatHist. Hofmus., **16**, 1901, (219, 221).

Cixius pilifer n. sp. Melichar, L. Homopteren-Fauna von Ceylon. Berlin (F. L. Dames), 1903, (30).

Colgar nn. spp. E. Indies. Melichar, L. Wien, Ann. NatHist. Hofmus., 17, 1902, (111-116).

Cromna nn. spp. Melichar, L. l.c. (59-60).

Cryptoflata n. gen., C. demota, C. nigrolimbata, C. parenla, Africa, C. flavoguttata, Ceylon, nn. spp. Melichar, L. I.e. (19-22).

(n 2-9053)

Cyarda angustata n. sp. Madagascar. Melichar, L. l.e. (135).

Dascalia nn. spp. S. America. Melichar, L. l.c. (146-154).

Dascalina n. gen., D. aegrota, D. alternans, D. contorta, D. recersa nn. spp. Australia. Melichar, L. l.c. (154-156).

Dendrophora (~ Dictyophara) n. gen., D. ramosa n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (21-23, pl. I, fig. 5).

Deriea n. gen., D. atratula n. sp. Persia. Melichar, L. Wien, Ann. NatHist. Hofmus., 17, 1902, (157).

Dermoflata n. gen., D. rotundata n. sp. Sumatra. **Melichar**, L. *l.e.* **16**, 1901, (245-246).

Dictyophara nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (23-25).

Dictyopharina n. gen., D. viridissima n. sp. Melichar, L. *l.c.* (25-26).

Doria n. gen. Melichar, L. Wien, Ann. NatHist. Hofmus., 16, 1901, (231).

Egropa (~ Tettigometra) n. gen., E. inueta n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (82, pl. III, fig. 13).

Epirama n. gen., E. conspergata n. sp. Melichar, L. *l.c.* (45).

Eudelphaz n. gen., E. setulosus n. sp. Melichar, L. l.c. (32, pl. I, fig. 6).

Euphanta n. gen., E. acuminata, E. ruficeps nn. spp. Melichar, L. Wien, Ann. NatHist Hofmus., 17, 1902, (38– 39).

Eurima n. gen., E. astuta n. sp. Persia. Melichar, L. l.c. (157).

Euryea maculiceps n. sp. Horváth, G. Budapest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (475–476).

Exoma n. gen., E. viduata n. sp. Haiti. Mellchar, L. Wien, Ann. Nat-Hist. Hofmus., 17, 1902, (158).

Farona n. gen., F. fuscipennis n. sp. Burma. Melichar, L. l.c. (142).

Flata nn. spp. Africa, Cochin China, Borneo and Philippines. Melichar, L. l.c. 16, 1901, (206-211).

Flatida nn. spp. W. Africa. Melichar, L. l.c. (247-248).

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Flatina n. gen., F. binotata, F. chloris, P. circellaris, F. flarescens, F. invinata, F. liciata, F. ochreata nn. spp. W. Africa. **Melichar**, L. l.c. (214-217).

Flatoides nn. spp. Melichar, L. l.e. (200-222).

Flatomorpha n. gen., F. inclusa n. sp. Sarawak. Melichar, L. l.c. (28).

Flatopsis n. gen., F. guttifera n. sp. Madagascar. Melichar, L. l.c. (51).

Flatoptera n. gen., F. depressa n. sp. Borneo. Melichar, L. l.c. 16, 1901, (240-249).

Flatosoma n. gen., F. signoreti n. sp. Java. Melichar, L. l.c. (244).

Flatula n. gen., F. cribrata n. sp. Palembang. Melichar, I. l.c. 17, 1902, (63).

Gordia n. gen., G. oculata n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (43).

Gyarina n. gen. for Flata nigritarsis. Karsch. Melichar, L. Wien, Ann. NatHist. Hofmus., **16**, 1901, (253).

Gyaria cuspidata n. sp. Togo. Melichar, L. l.c. (253).

Hansenia n. gen., H. kirbyi n. sp. Ceylon, and Poeceloptera pulverulenta Gulr. Mellohar, L. l.c. (228-229).

Hemisphaerius secundus n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (75).

Hemisphaeroides (~ Ilemisphaerius) n. gen., H. aeneoniger, H. lineatus nn. spp. Melichar, L. l.e. (75-76).

Hysteropterum nn. spp, Melichar, L. l.c. (77-78, pl. III, fig. 8).

Idume plicata n. sp. Sarawak. Melichar, L. Wien, Ann. NatHist. Hofmus, 17, 1902, (28).

Interamma rubrofasciata n. sp. Melichar, L. Homtopteren-Fauna von Ceylon, Berlin, 1903, (61, pl. II, fig. 8).

Ityraea nn. spp. Africa and Madagascar. Melichar, L. Wien, Ann. Nat-Hist. Hofmus, 16, 1901, (201-203).

Kermesia n. gen., K. albida n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (53-54, pl. I, fig. 14).

Kirbya n. gen., K. pagana n. sp. Melichar, L. l.c. (37-38, pl. II, fig. 1). Lasonia n. gen., L. kirkaldyi n. sp. Melichar, L. l.c. (87-88, pl. II, fig. 9).

Latois nn. spp. Madagascar. Melichar, L. Wien, Ann. NatHist. Hofmus., 16, 1901, (257-258).

Lechaea nn. spp. Celebes. Melichar, L. l.c. (233-234).

Liburnia nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (97–103, pl. II, fig. 6).

Lichena n. gen. for Flatoides dealbatus Dist. Melichar, L. Wien, Ann. Nat-Hist. Hofmus., 17, 1902, (167).

Mesophantia n. gen., M. pallens n. sp. Persia. Melichar, L. l.c. (18).

Mesophylla n. gen., M. correcta, W. Africa. M. inclinata, Philippines, nn. spp. Melichar, L. l.c. (53).

Microflata n. gen., M. stictica n. sp. Australis. Melichar, L. l.c. (9).

Myndus fulrus n. sp. Ohio. Osborn, H. Ohio Nat., Columbus, Ohio, 4, 1903, (44-46).

------ radicis n. sp. Osborn, H. l.c. (42-44).

Neocerus n. gen., N. corniculatus n. sp. S. America. Melichar, L. Wien, Ann. NatHist. Hofmus., **17**, 1902, (132).

Nephesa nn. spp. E. Indies. Melichar, L. l.c. (103-105).

Nisia (~ Kermesia) n. gen. Mellchar, L. Homopteren - Fauna von Ceylon, Berlin, 1903, (53).

Oliarus tabrobanensis n. sp. Melichar, L. l.c. (31).

Orchesma n. gen., O. marginepunctata, O. serendiba nn. spp. Melichar, L. l.e. (94-95, pl. II, fig. 9, pl. 111, fig. 3).

Ormenis nn. spp. Melichar, L. Wien, Ann. NatHist. Hofmus., 17, 1902, (72– 95).

fatua n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (90).

Oryza n. gen. for Fulgora truncata, O. extendens Sumatra, n. sp. Melichar, L. l.c. (50-51).

Paracromna n. gen. for Fulgora punctata and F. rotundior Fowl. Melichar, L. l.c. (57).

Paraflata n. gen. for Phromnia seminigra Stål. Mellchar, L. l.c. 16, 1901, (217). Paranda n. gen., P. globiceps n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (92-93, pl. II, fig. 10).

Paranotus nn. spp. Africa. Melichar, L. Wien, Ann. NatHist. Hofmus., 17, 1902, (24-25).

Paratangia n. gen., P. notata, P. marginata, P. fimbriolata nn. spp. Melichar, I. Homopteren-Fauna von Ceylon, Berlin, 1903, (46-47).

Paratella n. gen., P. discoidalis, P. erudita, P. fumaria, P. fusconigra, P. miniata, P. modesta, P. rosecalba, P. subflava nn. spp. Melichar, L. Wien, Ann. Nat. Hist. Hofmus., 17, 1902, (117-122).

Parathiscia n. gen., P. conjugata n. sp. Africa. Melichar, L. *l.c.* 16, 1901, (194).

Paruzelia n. gen., P. psyllomorpha n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (51, pl. III, fig. 2).

Perkinsiella n. gen., P. saccharicida n. sp. Hawaiian Isles. Kirkaldy, G. W. Entomologist, London, 36, 1903, (179-180).

Phantia, monographie du genre. Rustecka, M. de. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1902, (420-424).

cylindricornis n. sp. Afghanistan. Melichar, L. Wien, Ann. NatHist. Hofmus., 17, 1902, (15).

Phlebopterum nn. spp. Madagascar and Celebes. Melichar, L. l.c. (2-4).

Phyllodinus nn. spp. Ohio. Osborn, H. Ohio Nat., Columbus, Ohio, 4, 1903, (44-46).

Phyma n. gen., P. arguta, Columbia, P. divisa, Borneo, P. exsoleta, Africa, P. imitata, Tonkin, P. optata var. partita n. var., Sumatra. Melichar, L. Wien, Ann. NatHist. Hofmus., 17, 1902, (43-44).

Pleroma (~Temesa) n. gen., P. ceylonica, P. fumata nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (41-42, pl. I, fig. 12).

Poeciloflata n. gen., P. uniformis n. sp. Borneo. **Melichar**, L. Wien, Ann. NatHist. Hofmus., **16**, 1901, (235-236). Porophloeus n. gen., P. fuscus, P. longiceps, P. gibbulus, P. marcidus, P. ignavus nn. spp. Madagascar. Melichar, L. l.c. 17, 1902, (169-173).

Pteryjoma (~Pterilia) n. gen., P. nasuta n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (81, pl. 111, fig, 7).

Putala (~Dictyophara) n. gen., P. rostrata n. sp. Melichar, L. *l.c.* (26, pl. I, fig. 8).

Radha (~Hysteropterum) n. gen., R. acuminata n. sp. Melichar, L. l.c. (76, pl. III, fig. 6).

Rhinophantia n. gen. for Phantia longiceps Put. Melichar, L. Wien, Ann. Nat. Hist. Hofmus., 17, 1902, (17).

Rhotana nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (62).

Ricania distincta n. sp. Melichar, L. l.c. (84, pl. II, fig. 7).

Sanurus n. gen., S. dubius, S. venosus nn. spp. Sumbawa. Melichar, L. Wien, Ann. Nat. Hist. Hofmus., 17, 1902, (29-30).

Sardia n. gen., S. rostrata n. sp. Melichar, I. Homopteren-Fauns von Ceylon, Berlin, 1903, (96, pl. II, fig. 4).

Sarima (~Hysteropt) n. gen., S. illibata, S. elongata nn. spp. Melichar, L. l.c. (78-80).

Sassula similata n. sp. Melichar, L. l.c. (86).

Scarpantina n. gen., S. stigmatia n. sp. Borneo. Melichar, L. Wien, Ann. Nat. Hist. Hofmus., 16, 1901, (243).

Seliza nn. spp. Java, Socotra and India. Melichar, L. *l.c.* 17, 1902, (137-140).

Sephena n. gen., S. conspersa, Solomon Is., S. cyanea, New Pomerania, S. despecta, S. guttifera, Rom, S. interstincta, S. lurida, Celebes, S. pulchra, S. punctula, N. Guinea, S. rubrovenosa, Gazelle Helicus, S. rufomarginata, S. scutellata, N. Guinea nn. spp. Melichar, L. l.c. (1-253, 9 Taf).

Siphanta minuta n. sp. Mellohar, L. l.c. (38).

Tangina n. gen., T. bipunctata n. sp. Melichar, L. l.c. (44, pl. II, fig. 19).

Temesa n. gon., T. tenella, T. punctula nn. spp. Melichar, L. l.c. (40-41, pl. III, fig. 11).

Tettigometra lyncea n. sp. Horváth. G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (26-27).

Thracia egregia n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (58, pl. II, fig. 18).

Udugama n. gen., U. exoleta n. sp. Melichar, L. l.c. (27-28, pl. I, fig. 7).

Urana n. gen., U. paradoxa n. sp., Madagascar. Melichar, L. Wien, Ann. NatHist. Hofmus., 17, 1902, (167).

Uxantis nn. spp., E. Indies. Melichar, L. l.c. (161-165).

Walkeria n. gen. for Flata radiata and F. crassivenosa. Melichar, L. l.e. 16, 1901, (250).

Zarudnya n. gen., Z. fusca, Z. interstitialis nn. spp. Persia. Mellchar, L. Le. 17, 1902, (131-132).

### MEMBRACIDAE.

### GENERAL.

Breddin, G. Einige Homopteren aus der Verwandtschaft von *Hypsauchenia* Germ. Soc. Entomol., Zürich, **17**, 1902, (90-92).

Goding, F. W. A monograph of the Australian *Membracidae*. Sydney, N.S.W., Proc. Linn. Soc. N.S. Wales, 28, 1903, (2-41, with 1 pl.).

## SPECIAL.

Acanthucus kershawi n. sp., Australia. Goding, F. W. Sydney, N.S.W., Proc. Linn. Soc. N.S. Wales, **28**, 1903, (17).

Adippe nn. spp. Buckton, G. B. Monograph of the Membracidae. II, Pt. 5, 1903, (186-188).

Anchon nn. spp. Buckton, G. B. l.c. (215-216).

Antianthe compressa n. sp. Buckton, (4. l.s. (191). Campylocentrus falco n. sp. Buckton, G. B. Pt. 6, (243).

Centrotus nn. spp. Buckton, G. B. l.c. (246-247).

**Melichar**, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (111-112).

Centrotypus nn. spp. Australia. Goding, F. W. Sydney, N.S.W., Proc. Linn. Soc. N.S. Wales, 28, 1903, (27, 28).

G. B. Monograph of the Membracidae, II, Pt. 6, 1903, (238).

Centruchus ferrugineus n. sp. Melichar, L. Homopteren-Fauns von Ceylon, Berlin, 1903, (114).

Ceraon n. gen. Buckton, G. B. Monograph of the Membracidae, II, Pt. 6, 1903, (228).

Daimon n. gen., D. satyrus n. sp. Buckton, G. B. l.c. (240).

Daunus gracilis n. sp. Australia, Goding, F. W. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (33).

Dingkana n. gen., D. borealis n. sp. Australia. Goding, F. W. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (8).

Elaphiceps n. gen., E. cervus n. sp. China. Buckton, G. B. Monograph of the Membracidae, II, Pt. 5, 1903, (217).

Emphusis n. gen., E. tumescens n. sp. Buckton, G. B. l.c. Pt. 6, (256).

Entylia oedipus n. sp. Buckton, G. B. l.c. Pt. 5, (183).

*Eufrenchia* n. gen., *E. leae* n. sp. Australia. **Goding**, F. W. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (25, 26, Pl. 1, fig. 5).

Eufroggattia n. gen., E. tuberculata n. sp. Australis. Goding, F. W. l.c. (37, 38).

Eutryonia n. gen. Goding, F. W. l.e. (34).

Gargara nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (122-124).

Gibbomorpha n. gen., G. aurea, G. parvula nn. spp. Buckton, G. B. Monograph of the Membracidae, II, Pt. 5, 1903, (192-193).

# Hemiptera.

Heliria anoflava n. sp. Buckton, G. B. l.c. (198).

Hypsauchenia nn. spp. Buckton, G. B. l.c. (211-212).

Ibiceps n. gen., I. falcatus, I. ansatus nn. spp. **Buckton**, G. B. *l.c.* Pt. 6, (238-240).

Ischnocentrus inconspicuus n. sp. Buckton, G. B. *l.c.* (255).

Kleidos n. gen., K. comeris n. sp. Buckton, G. B. l.c. Pt. 5, (213-214).

Lamproptera stylata n. sp. Buckton, G. B. l.c. (212).

Leptocentrus, old and new species. Buckton, G. B. l.c. Pt. 6, (234-236).

Lubra n. gen., L. regalis n. sp. Australia. Goding, F. W. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (30, pl. 1, figs. 4, 9).

Lycoderes nn. spp. Buckton, G. B. Monograph of the Membracidae, 11, Pt. 5, 1903, (200-202).

Machaerotypus nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (124–125).

Maerops n. gen., M. mixtus n. sp. Ceylon. Buckton, G. B. Monograph of the Membracidae, II, Pt. 6, 1903, (257).

Maguza n. gen., M. horrida n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (109, pl. II, fig. 21).

Megaloschema laticornis n. sp. Buckton, G. B. Monograph of the Membracidae, II, Pt. 6, 1903, (231).

Metheira nn. spp. Buckton, G. B. l.c. Pt. 5, (184–186).

Oeda frondosa n. sp. Brazil. Buckton, G. B. *l.c.* (206).

Ophicentrus nn. spp. Buckton, G. B. l.c. Pt. 6, 1903, (250).

Otaris n. gen., O. auritus n. sp. Buckton, G. B. *l.c.* (249).

Otinotus n. gen., O. bellus, O. midas nn. spp. Buckton, G. B. l.c. (232– 233).

Oxygonia accuminala n. sp. Buckton, G. B. *l.c.* Pt. 5, (186).

Ozyrachidia (~ Ozyrachis) n. gen. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (118). Oxyrhachis nn. spp. Buckton, G. B. Monograph of the Membracidae, II, Pt. 6, 1903, (224).

L. Homopteren-Fauna von Ceylon, Berlin, 1903, (108).

Pedalion n. gen., P. triste W. Africa, P. ornatum, P. punctipennis nn. spp. Buckton, G. B. Monograph of the Membracidae, II, Pt 6, (251-253).

Phaerotus n. gen., P. stipulipennis n. sp. Borneo. Buckton, G. B. l.e. (255).

Pogon n. gen., P. incurvatum n. sp. Buckton, G. B. *l.e.* (248).

Polocentrus n. gen., P. latipes, P. rufus, P. neuter nn. spp. Buckton, G. B. l.c. (253, 254).

Porcorhinus n. gen., P. mastersi n. sp. Australia. Goding, F. W. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (38, 39).

Pterosticta n. gen., P. interposita n. sp. Buckton, G. B. Monograph of the Membracidae, II, Pt. 6, (229-231).

Publilia grisea n. sp. Buckton, G. B. l.c. Pt. 5, (184).

Pyramba n. gen., P. aurifacies n. sp. Buckton, G. B. *l.c.* Pt. 6, (248).

Rabduchus n. gen., R. gnomon n. sp. W. Africa. Buckton, G. B. *l.e.* (251).

Sertorius nn. spp. Australia. Goding, F. W. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (20-24).

Sextius depressus n. sp. Australia. Goding, F. W. *l.c.* (12).

Schaerocentrus luteus n. sp. Buckton, G. B. Monograph of the Membracidae, II, Pt. 6, 1903, (244).

Sticlocephala nervosa n. sp. Buckton, G. B. l.c. Pt. 5, (195).

Tauriona n. gen., T. obesum n. sp. Ecuador. Buckton, G. B. *l.c.* Pt. 6, (259).

Telamona nn. spp. United States. Ball, E. D. Washington, D.C., Proc. Biol. Soc., 16, 1903, (177-182).

Monograph of the Membracidae, II, Pt. 5, (197-198). Tricoceps n. gen., T. brunneipennis n. sp. Natal. Buckton, G. B. Monograph of the Membracidae, II, Pt. 6, (249).

### CERCOPIDAE.

### GENERAL.

Matsumura, S. Monographie der Cercopiden Japans. Sapporo, the Journal of the Sapporo Agricultural College, 2, 1903, (15-52).

#### SPECIAL.

Aphrophora deserta n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (132).

Caloscarta n. gen., type Calitettiz capitata Stål. Breddin, G. Soc. Eutomol., Zürich, **18**, 1903, (99).

Capuodistes n. gen., C. esox, C. carpio nn. spp. Perak. Breddin, G. l.c. (91).

Cosmocaria nn. spp. Breddin, G. D. ent. Zs., Berlin, 1903, (81-100).

\_\_\_\_\_ nn. spp. New Guinea. Breddin, G. Soc. Entomol., Zürich, 17, 1903, (51).

Eoscarta n. gen., E. cos, E. bicolor, E. liternoides nn. spp. Breddin, G. Soc. Entomol., Zürich, **17**, 1902, (51–52, 58– 59).

Haematoscarta n. gen. for II. jacobyi n. sp. Roon. Breddin, G. l.c. 18, 1903, (99).

Lepyronia picta n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (132).

Locris nn. spp. Schouteden, H. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (119).

Machaeropsis (~Machaerota) n. gen., M. valida n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (137-138, pl. IV, fig. 19).

Mioscarta n. gen. Breddin, G. Soc. Entomol., Zürich, 17, 1902, (123).

Notoscarta n. gen., N. crocconigra, N. ptyeloides nn. spp. New Guinea. Breddin, I.c. (51-52, 58-59). Phymathostetha nn. spp. Tonking. Jacobi, A. Berlin, SitzBer. Ges. natf. Freundo, 1902, (20-25).

Ptyelus nn. spp. Melichar, L. Homoptoren-Fauna von Ceylon, Berlin, 1903, (133-135).

Pyrgophyllum n. gen., P. vallacei, P. kinabalense, P. foersteri nn. spp. Borneo. Breddin, G. Soc. Entomol., Zürich, 17, 1902, (91).

Tettigoscarta n. gen., T. nitidula, T. pulverosula, T. pulverosula var., luteicollis n. var. Malacca. Breddin, G. l.e. (51-52).

Tomaspis nn. spp. E. Africa. Schontedan, H. Bruxelles, Ann. Soc. cnt. Belgique, 45, 1901, (118).

Trichoscarta n. gen., T. ruth n. sp. Sumatra. **Breddin**, G. Soc. Entomol., Zürich, **17**, 1902, (51-52, 58-59).

### JASSIDAE.

Aconura nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (187-188).

Acropona (~ Siva) n. gen. Melichar, L. l.c. (168).

Agallia nn. spp. Melichar, L. l.c. (150-152).

Anoterostemma corrinum n. sp. Horváth, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903 (474-475).

Athysanus pellaz n. sp. Horváth, G. l.c. (473–474).

Chiasmus uzelii n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (164, pl. IV, fig. 7).

Chlorotettiz unicolor. Gillette, C. P. Psyche, Cambridge, Mass., 9, 1901, (171-173).

Cicadula halophilu n. sp. Horváth, (ł. Budapest, Ann. Hist-Nat. Mus. Nat. Hung., 1, 1903, (472-473).

Conogonia n. gen., C. trucidula, C. placidula, C. hebetula nn. spp. Breddin, (J. Soc. Entomol., Zürich, 18, 1903, (99). Deltocephalus nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (202-204, pl. VI, fig. 9).

\_\_\_\_\_\_ nn. spp. **Then**. Graz, Mitt. Natw. Ver. Steierm., **1901**, 1902, (186-192).

*chyzeri* Horv., Beschreibung. Horváth, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (23).

melsheimeri. Gillette, C. P. Psyche, Cambridge, Mass., 9, 1901, (171– 173).

Doratulina n. gen., D. jocosa n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (198–199, pl. VI, fig. 6).

Doratura Sahlb., Synoptische Tabelle, nn. spp. Horváth, G. l.c. (451-459, Taf. XVII).

Empoasca nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (212-214).

Entilia sinuata, symbiosis with ants. Howard, L. O. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 30, 1901, (75-78),

Epiclines godmani n. sp. Central America. Fowler, W. W. Biol. Centr.-Amer., London, 1903, II, (293).

Erythria seculosa n. sp. Horváth, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (19-20).

Eupteryx nn. spp. Melichar, L. Homopteren-Fanna von Ceylon, Berlin, 1903, (210-211).

Eutottiz nn. spp. Melichar, L. l.c. (190-192, pl. VI, fig. 1).

Gnathodus nn. spp. Melichar, L. l.c. (208-209).

Goniognathus nn. spp. Melichar, L. l.c. (180-181).

Gypona, old and new species. Central America. **Fowler**, W. W. Biol. Centr.-Amer., London, **1903**, II, (297-316).

Hecalus nervosus n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (173).

Heliona n. gen., H. bioculata, H. constricta nn. spp. Melichar, L. l.c. (215-216, pl. VI, figs. 5, 8). Idiocerus nn. spp. Melichar, L. *l.c.* (146-150, pl. V, fig. 1).

G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (24).

Jassus nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (179).

G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (474).

Ledromorpha nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (140-141).

Ledropsis nn. spp. Melichar, L. l.c. (142-144, pl. IV, figs. 10, 13-17).

Mesargus n. gen., M. asperatus n. sp. Melichar, I. *l.c.* (175-176, pl. IV, fig. 12).

Neodactus n. gen., N. acocephaloides n. sp. Melichar, L. l.e. (162).

Nirvana nn. spp. Melichar, L. l.e. (166, pl. V, figs. 3-5).

Oncometopia undata : garryae n. subsp. North America. **Cockerell**, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (453–454).

Pachyopsis ch'orophana n. sp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (153).

Parallygus n. gen., P. divaricatus n. sp. Melichar, L. l.c. (179, pl. V, fig. 7).

Platyretus n. gen., P. marginatus n. sp. Melichar, L. l.c (174).

Pythamus n. gen., P. dealbatus n. sp. Melichar, L. l.c. (166, pl. V, fig.).

Scaphoideus nn. spp. Melichar, L. L.c. (196-898, pl. V, figs. 9, 10, 14).

Scienocephalus nn. spp. Melichar, L. l.c. (169-170, pl IV, fig. 20).

Signoretia gratiosa n. sp. Melichar, L. l.c. (160, pl. IV, fig. 8).

Tettigonia nn. spp. Perak. Breddin, G. Soc. Entomol., Zürich, 18, 1903, (91-92).

Homopteren-Fauna von Ceylon, Berlin, 1903, (155–159).

Thagria (~ Jassus) n. gen., T. fasciata n. sp. Melichar, L. l.c. (176, pl. IV, fig. 9). Thamnotettiz n. sp. Lambertie. Bordeaux, Actes soc. linn., (sér. 6), 7, 1902, (Procès-verb. LXXIX, 79).

*fraudulentus* n. sp. **Hor váth**, G. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (20-21).

Typhlocyba nn. spp. Melichar, L. Homopteren-Fauna von Ceylon, Berlin, 1903, (216-218, pl. VI, figs. 3, 10).

Uzelina n. gen., U. laticeps n. sp. Melichar, L. l.e. (181-182, pl. V, fig. 2).

Xestocephalus nn. spp. Melichar, L. l.c. (207).

### PSYLLIDAE.

### GENERAL.

**Proggatt**, W. W. Australia. *Psyllidae* Part III. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (315-337, with 2 pls.).

### SPECIAL.

Aphalura nn. spp. Australia. **Prog**gatt, W. W. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (318– 320).

Cardiaspis rubra n. sp. Australia. Froggatt, W. W. *l.e.* (322).

Geijerolyma n. gen., G. robusta n. sp. Australia. **Proggatt**, W. W. *l.c.* (336).

Psylla nn. spp. Australia. Froggatt, W. W. l.c. (326-328).

Rhinocola nn. spp. Australia. Froggatt, W. W. *l.c.* (316-317).

Spondylaspis nn. spp. Australia. Froggatt, W. W. I.c. (323, 324).

Thea wellingtoniae n. sp. Australia. Froggatt, W. W. l.e. (325).

Trioza nn. spp. Australia. **Proggatt**, W. W. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (329, 331, 332, 334).

*alexina* n. sp. New Zealand. **Marriner**, G. R. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (305-309).

### APHIDAE.

### General.

Die wichtigsten Blattläuse der Obstbäume. Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (1141-1143, mit 9 Fig.).

Brandicourt, V. Pucerons et fourmis. Nature, Paris, **30**, (2° semest.), 1902, (202).

**Cholodkovskij**, N. A. Zweites Verzeichnis der Aphidensammlung d. zool. Kabinets . . Forstinstituts. (Russ.) St. Peterburg, Izv. Lösn. Inst., **8**, 1902, (49-59, mit 1 Taf.).

Aphidologische Mittheilungen. Zool. Anz., Leipzig, **26**, 1903, (258-263, mit 1 Taf.).

**Cockerell**, T. D. A. *Aphididas* [from Beulah, Mexico.] Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (114–116).

Schouteden, H. Les aphides racidicoles de Belgique et les fourmis. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (136-142).

#### SPECIAL.

*Aphis* n. sp. Georgia. **Scott**, W. M. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (56-59).

\_\_\_\_\_ nn. spp. New Mexico. Cockerell, T. D. A. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (114-116).

brevis n. sp. Delaware. Sanderson, E. D. Agric. Exp. Sta., Delaware, Newark, Rep., 1901, (127-199, with 6 pls., 16 figs.) [Review] Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (268-269).

forbesi, strawberry pests. **Smith**, J. B. Agric. Exp. Sta., New Jersey, New Brunswick, Bull. No. **149**, 1901, (17, with 2 pls.). 23 cm. [Review] Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1901, (161).

cockerell, T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (248).

<u>tetrapteralis</u> n. sp. Cockerell, T. D. A. Los Angeles, Bull. So. Cal. Acad. Sci., 1, 1902, (40–41). Cerataphis lataniae, a peculiar Aphid. Embleton, A. L. London, J. Linn. Soc. Zool., 29, 1903, (90–97, pl. XII).

Euzophera semifuneralis, orchard pest. Sanderson, E. D. Agric. Exp. Sta., Delaware, Newark, Bull., No. 53, 1901, (19, with 11 figs.). 23 cm. [Review] Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (172-873).

Microsiphum n. gen., M. ptarmicae n. sp. Crimes. **Cholodkovskij**, N. A. St. Peterburg, Izv. Lösn. Inst., **8**, 1902, (49-59, mit I Taf.).

Myzus phenaz n. sp. New Mexico. Cockerell, T. D. A. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (114-116).

------ rosarum Kalt. J. Schouteden, H. Zool. Anz., Leipzig, 26, 1903, (685–688).

Nectarosiphon rhinanthi n. sp. Schouteden, H. Zool. Anz., Leipzig, 26, 1903, (687).

Pergandeida n. gen., P. ononides n. sp. Schouteden, H. l.c. (686).

Phylloxera en Californie. Naturaliste, Paris, (sér. 2), 25, 1903, (152).

en 1901 Journ. Agricult. Suisse, Genève, **25**, 1903, (121-122).

en 1902. *l.c.* (276–280).

Ist die Bekämpfung der Reblaus ein Irrtum? Schweiz.-Bauer, Bern, 57, 1903, No. 65, (2).

Zum Kampf gegen die Reblaus. **Müller-Thurgau**, H. Frauenfeld Hüber et Cie), 1901, (II + 15). 8vo.

Review] Washington, D.C., U. S. Dept. Agric. 61, 201, (16, with fig.). 23 cm. [Review] Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1901, (372).

\_\_\_\_\_ piri. Cholodkovsky, N. Zool. Anz., Leipzig, 27, 1903, (118-119).

**stauffacher**, H. Allg. Zs. Ent., Neudamm, **8**, 1903, (30-35, 57-60, mit 1 Taf.).

Schizoneura lanigera, ihre Vertilgung. Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (914–916). 4031

Schizoneura lanigera, ethology. Froggatt, W. W. Sydney, N.S.W. Agric. Gaz., 14, 1903, (18-25, with 1 pl.).

combatterle. **Visart**, O. Agricolt. Ticinese, Lugano, **35**, 1903, (103–108).

Toxoptera graminum, habits. Pergande, T. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 38, 1902, (7-19, with pl.).

### ALEURODIDAE.

#### GENERAL.

Kellog, V. L. Aleurodidae ... notes. California. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (83-84).

Peal, H. W. The function of the nasiform orifice of the *Aleurodidae*. Calcutta, J. As. Soc. Beng., **72**, Pt. II, 1903, (67).

#### SPECIAL.

Aleurodes nn. spp. **Peal**, H. W. Calcutta, J. As. Soc. Beng., **72**, Pt. II, 1903, (61-95, with 5 pls.).

citri. Florida. Gossard, H. A. Washington, D.C., Bull. U. S. Dept. Agric. Div., Ent., (N. Ser.), No. 81, 1902, (68-74).

Cockerell, T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (241).

### COCCIDAE.

### GENERAL.

Buffa, P. Coccidei parassiti della vite. Bollettino di Entomologia agraria, Padova, 9, 1902, (3-11).

**Clément**, A. L. Un parasite des mandarines. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (243-245, av. fig.).

Cockerell, T. [Additional records of Hemiptera from Beulah, New Mexico.] Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (113). Distant, W. L. Rhynchotal Miscellanea. Part I. Rhynchota from the Transvaal, Mashonaland and British Nyassaland. Cape Town, Ann. S. Afric. Mus., **3**, Pt. II.

Report on the Rhynchota from the Malay Peninsula. Part I, Heteroptera. Fascic. Malay. Zool., II, 1, (219-272, pls. XV-XVI).

**Dominique**, J. Catalogue des Hémiptères (Hétéroptères, Homoptères, Psyllides) de la Loire-Inférieure. Nantes, Bul. soc. sci. nat., (sér. 2), **12**, 1902, (230).

Fernald, Mrs. M. E. S. A catalogue of the Coccidae of the world. Special bulletin. Hatch experiment station of the Massachusetts agricultural college, Amherst, Mass., Bulletin, No. 38, 1903, (360). 23 cm.

Guillaud, E. La cochenille du Fusain. Toulon, Bul. soc. agricult., 1902, (111-113). [Reproduit par le Réveil agricole.]

Hertzog, A. Die Schildläuse, und deren Bekämpfung. Landw. Ztg, Halberstadt, 13, 1901, (155-156).

Horváth, G. Adnotationes synonymica de Hemipteris palaearcticis. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (555-558).

Jakovlev, V. E. Hemiptera-Heteroptera du gouvernement d'Irkutsk. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (317-324).

Kellog, V. L. Coccidae, notes. California. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (83-84)

King, G. B. The greenhouse Coccidae. 11. l.c. 13, 1902, (152-156).

On the progress in the description of the *Coccidae*. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (255-258).

[With bibliography.] *l.c.* 14, 1903, (204-206).

Kirkaldy, G. W. On the nomenclature of the genera of the Rhynchota Heteroptera and Auchenorrhynchous Homoptera [continuation]. Entomologist, London, **36**, 1903, (213-216, 230-232). Lambertie. Note sur les Hémiptères Homoptères nouveaux et peu connus de la Gironde. Bordeaux, Actes soc. linn., (sér. 6), 7, 1902, (Proc.-verb., LXXVIII-LXXXII, LXXXIV, I.XXXV, CLXXII-CLXXIV).

Notes sur quelques Hémiptères-Homoptères nouveaux ou rares de la Gironde. *l.c.* (Proc.-verb., CLXXII-CLXXIV).

Note sur quelques Hémiptères-Homoptères nouveaux ou peu conuus de la Gironde. *l.e.* 58, 1903, (Proc.-verb., XXI-XXIV).

Note sur quelques Hémiptères nouveaux ou rares pour la Gironde. *l.e.* (Proc.-verb., XCVI-XCVIII).

Melichar, L. Homopteren-Fauna von Ceylon. Berlin (F. L. Dames), 1903, (IV + 248, mit 6 Taf.). 24 cm. 15 M.

Montgomery, T. H. jun. Further studies on the chromosomes of the Hemipters Heteropters. Philadelphia, Pa., Proc. Acad. Nat. Sci., 1901, (261-271, with pl.); [reprint], Philadelphia, Cont. Zool. Lab. Univ. Pa., 1901, 1902, (261-271, with pl.).

Newstead, R. Monograph of the Coccidae of the British Isles. Vol. ii. London (Ray Society), 1903, (viii + 16, pls. F. and XXXV-LXXV).

**Onborn**, H. A method for mounting dry *Coccidae* for permanent preservation. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (35– 36).

**Beh**, L. Zur Naturgeschichte mittelund nordeuropäischer Schildläuse. Allg. Zs. Ent., Neudamm, **8**, 1903, (301-308, 351-356, 407-419, 457-469); **9**, 1904, (12-36).

Sabrards et Coulongeat. Cochenille du figuier. Bordeaux, Actes soc. linn., 57, 1902, (Proc.-verb., CLXVII-CLXVIII).

**Silvestri**, F. Coccidei parassiti della vite. Bollettino di Entomologia agraria, Padova, **9**, 1902, (74-82, 97-104, 121-128, 146-149).

Watkins, C. J. Coccidae in Gloucestershire. Ent. Mag., London, 39, 1903, (294-296).

Webster, F. M. The Coccidae of Ohio. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (288-290).

1903, (43-62).

### SPECIAL.

Aclercla japonica, Newst. from sugarcane. Green, E. E. Calcutta, Ind. Mus. Notes, 5, 1903, (95).

Akermes colimae n. sp. Mexico. Cockerell, T. D. A. Entomologist, London, **36**, 1903, (47).

Aspidiotus nn. spp. California. Coleman, G. A. New York, N.Y., J. Ent. Soc., 11, 1903, (61-85).

(Targionia) glomeratus n. sp. Green, E. E. Calcutta, Ind. Mus. Notes, 5, 1903, (93, pl. xviii, fig. 1).

*hederae* . . . in Victoria. [Criticism of paper by J. Lidgett; A. *hederae* same as A. *nerii*]. **Cocherell**, T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (89).

Lidgett, J. l.c. (43-45).

W. E. Connecticut, (State station), New Haven, Bull. No. 135, 1901, (14with 5 pls.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (766-767).

Gossard, H. A. Agric. Exp. Sta., Florida, Lake City, Bull. No. 61, 1902, (469-498, with 4 pls.) [Review] Washington, D.C., U.S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1903, (469-470).

Marlatt, C. L. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 31, 1902, (41-47).

methcus, Berlin, 14, 1903, (716-718).

enemies. **3mith**, J. B. Pennsylvania, Rep. Dept. Agric., Harrisburg, **8**, pt. 1, **1902**, 1903, (233-261, with pl.); Pennsylvania, Dept. Agric., Bull., Harrisburg, No. **90**, 1902, (33, with pl.). 23.5 cm.

T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (24).

Asterolecanium pustulans (Ckll.) var. sambuci n. var. Egypt. Cockerell, T. D. A. Entomologist, London, 36, 1903, (112-113). Cardiococcus n. gen., C. umbonatus n. sp. Mexico. Cockerell, T. D. A. Ann. Mag. Nut. Hist., London, (Ser. 7), 11, 1903, (155-156).

Ceroplastes, notes on species, with nn. spp. and nn. varr. Mexico. Cockerell, T. D. A. *l.e.* (156-161).

Ceroputo orthezioides n. sp. Mexico. Cockerell, T. D. A. *l.c.* (163).

*yuccas* (Coquillett), var. *ceanothi* n. var. California. **Cockerell**, T. D. A. *l.c.* (163).

Chionaspis decurvata n. sp. on Oryza sativa, Calcutta. Green, E. E. Calcutta, Ind. Mus. Notes, 5, 1903, (63, pl. xviii, fig. 1).

Chrysomphalus agavis in Mexico. Cockerell, T. D. A. Philadelphis, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (15).

Coccus (Lecanium) minimus Newstead new to America. Cockerell, T. D A. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (162).

Crystophyllaspis liquidambaris n. sp. Georgia and District of Columbia. Kotinsky, J. Washington, D.C., Proc. Ent. Soc., 5, 1903, (149–150).

Dactylopius nn. spp. California. Coleman, G. A. New York, N.Y., J. Ent. Soc., 11, 1903, (61–85).

Diaspis pentagona. Gossard, H. A. Agric. Exp. Sta., Florida, Lake City, Bull. No. 61, 1902, (469–498, with 4 pls.). [Review] Washington, D.C., U.S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1903, (469–470).

T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **12**, 1901, (27).

rosac. Smith, J. B. Agric. Exp. Sta., New Jersey, New Brunswick, Bull. No. 159, 1902, (14, with 6 figs.). 23 cm. [Review] Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (372).

Eriochiton cajani, Mask should be Ceroplastodes cajani (Mask). Green, E. E. . . Calcutta, Ind. Mus. Notes 5, 1903, (95).

Icerya purchasi. Gossard, H. A. Agric. Exp. Sta., Florida, Lake City, Bull. No. 56, 1901, (309-356, with 1 pl., 6 fig.). [Review] Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 13, 1902, (472). Inglisia bivalvata n. sp. from Thespesia populnea, S. India. Green, E. E. Calcutta, Ind. Mus. Notes 5, 1903, (95, pl. XVIII, fig. 3).

Kermes arizonensis n. sp. King, G. B. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (21-22).

*quercus* Linn. new to Britain. Newstead, R. Ent. Mag., London, **39**, 1903, (57-58).

Lecanium hoferi n. sp. Switzerland. King in Hofer, J. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (478)

*imbricans* n. sp. from *Ficus mysorensis* and *Aerocarpus frazinifolius* S. India. **Green**, E. E. Calcutta, Ind. Mus. Notes, **5**, 1903, (94, pl. XVIII, fig. 2).

Leucaspis nn. spp. California. Coleman, G. A. New York, N.Y., J. Ent. Soc., 11, 1903, (68, 71).

Lichtensia zapotlana, Ckll., var. townsendi n. var. Mexico. Cookerell, T. D. A. Ann. Mag. Nat. Hist., London, Ser. 7), 11, 1903, (162–163).

Monophlebus stebbingi Green attacking Sal in United Provinces and N.W. Himalayas, description, life history, distribution, relations to the forest. M. stebbingi var. mangiferae Green, attacking mango in the Punjab, description, life history, protection and points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry, No 2, Calcutta, 1903, (318, pl. xix, fig. 4, a-f, 332). 25 cm.

Leach, notes on the genus, 2 nn. spp. on Shorea robusta and Dalbergia sissoo. Green, E. E. Calcutta, Ind. Mus. Notes, 5, 1903, (99–101, pl. xx, figs. 586).

Mytilaspis nn. spp. Mexico. Cockerell, T. D. A. Entomologist, London, 36, 1903, (45-46).

beckii in California. Cockerell, T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (17).

Neolecanium nn. spp. Mexico. Oockerell, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (161– 162).

*leucaenae* n. sp. Mexico. Cockerell, T. D. A. Entomologist, London, **36**, 1903, (46-47). Orthezia insignis. Hawaii. **Koebele** A. Honolulu, Hawaii, Rep. Com. Agric. Forestry, **1902**, 1903, (54-65).

Phenacoccus gossypii, Twns. & Ckll. var. psidiarum n. var. Mexico. **Cockerell**, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (164).

*kuwanae* n. sp. California. **Coleman**, G. A. New York, N.Y., J. Ent. Soc., **11**, 1903, (62).

*simplex* n. sp. **King**, G. B. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (41–43).

———— vipersioides n. sp. New Mexico. Cockerell, W. P. and Cockerell, T. D. A. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (112-113).

Physokermes nn. spp. California. Coleman, G. A. New York, N.Y., J. Ent. Soc., 11, 1903, (72-73).

Pseudococcus (Dactylopius auctt.) culatensis n. sp. Mexico. **Cockerell**, T. D. A. Entomologist, London, **36**, 1903, (45–48).

Pseudolecanium, list of species, P. disticlium n. sp. California. **Kuwana**, S. J. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (134–136, with text fig.).

Pulvinaria grabhami n. sp. Madeira. Cockerell, T. D. A. Entomologist, London, **36**, 1903, (261-262).

simplex n. sp. Switzerland. King in Hofer, J. Schaffhausen, Mitt. Schweiz. Entomol., Ges., 10, 1903, (475).

Ripersia nn. spp. King, G. B. Philadelphia, Pa, Ent. News Acad. Nat. Sci., 13, 1902, (41-43).

Solenophora zapotlana n. sp. Mexico. Cockerell, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (164– 165).

Tachardia, note on the genus, T. fici n. sp. Ficus religiosa and F. bengalensis, Monghyr. Green, E. E. Calcutta, Ind. Mus. Notes, 5, 1903, (96-97, fig. 4, pl. xix).

------ rotundata n. sp. W. P. & T. D. A. Ckll., Mexico. Cockerell, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (165).

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## TITLES.

**Aigner-Abañ**, L. von. Die Kolumbácser Fliege. Allg. Zs. Ent., Neudamm, **8**, 1903, (93-96, 124-127). [4231]. 1

Attken, E. H. Notes of a tour in the North Canara district of India in search of mosquitoes. J. trop. Med., London, 5, 1903, (325, 326, 341, 342). [4227 ef 4231]. 2

Annett, H. E., Dutton, J. E. and Rillott, J. H. Report of the Malaria Expeditions to Nigeria. Liverp. Sch. Trop. Medicine, Mem. 3. London (Longmans, Green & Co.), 1902, (68, 2 pls., besides charts and illustrs.). [0060 0403 0427 fd 4203 4227 fd]. 3

Austen, E. E. [Exhibition of specimens of Gloss na palpalis Rob.-Desb. with pupae.] London, Proc. Zool. Soc., 1903, 2, (316-317). [4215 4231]. 4

Notes on *Hippoboscidae* (Diptera Pupipara) in the collection of the British Museum. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (255-266). [4231]. 5

A monograph of the Tsetse-flies [genus Glossina Westwood] based on the collection in the British Museum. With a chapter on the mouthparts by H. J. Hansen. London, (British Museum), 1003, (ix + 319, 9 pls). [Reviews]. Zoologist, London, 1903; Nature, London, **69**, 1903, (123). [4207 4203 4231]. Balfour, A. Mosquitoes and steamers. J. trop. Med., London, 6, 1903, (253). [0060 4203]. 7

Bandi, Ivo. Gelbfieber und Mosquitos. Eine kritische Studie. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (323-326). [4219]. 8

Yellow fever and mosquitoes. J. trop. Med., London, 6, 1903, (254-256). [0060 4219]. 9

Banks, Nathan. Note on Ceria willistonii Kahl. Washington, D.C., Proc. Ent. Soc., 5, 1903, (310). [4231]. 10 Becker, Th. Die paläarktischen

Formen der Gattung Mulio Latreille. Zs. Hymenopter., Teschendorf, 3, 1903, (17-32, 89-96, 193-198). [4231]. 11

Berichtigung zu Jg. II, H. 5, p. 298 [betr. Notiphila nigripennis Meig.]. Zs. Hymenopter., Teschendorf, 8, 1903, (45-46). [4231]. 12

Die Typen der v. Roser'schen Dipteren-Sammlung in Stuttgart. Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (52-66). [4231]. 13

Aegyptische Dipteren, gesammelt und beschrieben. [*In*: Berlin, Mitt. zool. Mus., **2**, H. 2. 3.] Berlin, 1902-1903, (195, mit 5 Taf.). [4227 fb 4231]. 14

Berlese, Antonio. La questione della mosca olearia. Bollettino di Entomologia agraria, Padova, 9, 1902, (180–184). [4219 4231]. 15

L'accoppiamento della mosca domestica. Riv. patol. veg., Portici, 9, fasc. 2°, 1902, (345-357, con fig.). [4211 4231]. 16

Beutenmüller, W[illia]m. [Breeding Culex restuans from water putrified by dead animal matter.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (269). [4219 4231]. 17

Bischof, Josef. Ueber die Dipterenfaunen mit besonderer Berücksichtigung von Prof. G. Strobl's Dipterenfauna von Bosnien, Hercegovina und Dalmatien. Wien, Verh. ZoolBot. Ges., 51, 1901, (115-119). [4227a]. 18

Bloomfield, E. N. Norfolk Diptera. Norwich, Trans. Nat. Soc., 7, 1903, (541-552). [4227 de]. 19

Börner, Carl. Eine neue im weiblichen Geschlecht flügel- und halteren-

<sup>§</sup> Also described in N. 2, i, No. 10046.

lose Sciaridengattung, nebst Bemerkungen über die Segmentierung des Hinterleibes der Dipteren-Weibchen. (Vorläuf. Mitt.). Zool. Anz., Leipzig, **26**, 1903, (495-504, 505-508). [4231 4207]. 20

Bogdanow, E. A. Zehn Generationen der Fliegen (*Musca domestica*) in veränderten Lebensbedingungen. (Versuche, angestellt von Frl. N. J. Polevaieff.) Allg. Zs. Ent., Neudamm, 8, 1903, (265-267). [4211]. 21

Bordi, A. Contribuzione alla sistematica dei Culicidi, con speciale riguardo alla diffusione della malaria umana. Roma, Rend. Acc. Lincei, (Ser. 5), 11, (2° Sem.), 1902, (318-324). [4231].

Bruce, D., Nabarro, D. and Greig, F. D. W. Can the Uganda Teetse fly (Glossina palpalis) carry the Trypanosoma found in sleeping sickness cases to healthy animals? London (Royal Soc.), Rep. Sleeping-sickness Comm. No. 4, (56-64, map). [0060 4219 4231]. 23

Brues, Charles Thomas. A monograph of the North American *Phoridae* [with bibliography]. Philadelphia, Pa, Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (331-404, with pl.). [4227 g 4231]. 24

Notes on some California myrmecophiles. [*Hetaerius tristriatus* Horn and Syrphid larva.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, [[47-149], with fig. in text). [4231 4831]. 25

A Dexid parasite [Melanophora roralis] of the sow-bug. [Porcellio.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (291). [2631 4219 4231]. 26

- v. Melander, Axel Leonard.

**Celli**, A. La malaria en Italie durant l'année 1902. Recherches épidémiologiques et prophylactiques. Arch. ital. biol., Paris, **37**, 1902, (209-241). [4219]. 27

**Chapman**. Galls of Asphondylia ulicis. Entomologist, London, **36**, 1903, (252). [4219]. 28

Clristophern, S. R. v. Stephens, J. W. W.

**Cogill**, H. The Anopheles of Karwar (North Kanara). Bombay, J. Nat. Hist. Soc., **15**, 1903, (327-336, 1 pl.). [4231]. 29

Conts, A. et Vaney, C. Sur la structure de la cellule trachéale de l'Œstre et l'origine des formations ergastoplasmiques. Paris, C.-R. Acad. sci., 136, 1903, (561-562). [4207 4231]. 30

### - v. Vaney, C.

**Coquillett**, D[aniel] W[illiam]. The genera of the Dipterous family *Empididae* with notes and new species. [With bibliography.] Washington, D.C., Proc. Ent. Soc., **5**, 1903, (245-272). [4231].

Three new species of Diptera. Philadelphia, Pa., Ent. N(w3 Acad. Nat. Sci., 12, 1901, (16–18). [4231]. 32

Three new species of Nemostcerous [Nematocerous] Diptera. [nn. spp. in Ceratopogon, Tanypus, and Corethra]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (84-85). [4231]. 33.

A new Ephydridid [Hydrellia tritici n. sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (324). [4227 io 4231]. 34

Some insects of the Hudsonian zone in New Mexico. Diptera. Psyche, Cambridge, Mass., 9, 1901, (149-150). [4227 gi 4231 2427 gi]. 35

**Czerny**, Leander. Ueber Drosophila costata und fuscimana Ztt. Zs. Hymenopter., Teschendorf, **3**, 1903, (198–201). [4231]. 36

Zwei neue *Homalomyia*-Arten aus Bolivien. Zs. Hymenopter, Teschendorf. **3**, 1903, (239-240). [4231].

Dams, Erich. Sciara (giraudi aff.), ein Schädling junger Kakteenkulturen. Monatschr. Kakteenk., Neudamm, 13, 1903, (20-23). [4219 4231]. 33:

Daubach. Die Bienenlaus. Schweiz. Bienenztg, Aarau, 25, 1902, (447-449). [4219 4231 4619]. 39

Dorr, Emile. Rareté des lépidoptères. Abondance de parasites. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (38). [4419 4619 4219]. 40

Dupree, J. W. v. Morgan, H. A.

Durham, H. E. Notes on collecting mosquitoes. J. trop. Med., London, 6, 1903, (297-298). [4203]. 41

Dutton, J. E. v. Annett, H. E.

Dyar, Harrison G[ray]. Notes on mosquitoes in New Hampshire. Washington, D.C., Proc. Ent. Soc., 5, 1903, (140-148, with pl.). [4227 gg 4231]. 42

Culex restuans Theobald. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (41-42). [4231]. 43

Culex atropalpus, Coquillet. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (180-182). [4231]. 44

**Dy6**, Léon. Notes et observations sur des Culicides. Arch. parasit., Paris. **6**, 1902, (359-376, av. fig.). [4231 4219]. 46

Eckel, Lida S. The resin-gnat Diplosis and three of its parasites. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (279-284, with pl.). [4231 4619 4631]. 47

Elliott, J. H. v. Annett, H. E.

Enderlein, Günther. Micropsocus musas (Kunstler et Chaine), eine vermeintliche Gallmücke (Kiefferia musae n. g. n. sp. Kunstler et Chaine 1902). Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (288-292). [4231 3831]. 48

Die Landarthropoden der von der Tiefsee-Expedition besuchten antarktischen Inseln. I. Die Insekten und Arachnoideen der Kerguelen. II. Die Landarthropoden der antarktischen Inseln St. Paul und Neu-Amsterdam (Wissenschaftliche Ergebuisse der deutschen Tiefsee-Expedition, Bd. 3, Lfg. 7). Jena, 1903, (197-270, mit 10 Taf.). 35 cm. [2427 ocmb 2431 3631 4231 4431].

Escher-Kündig, J. (Fliegen deren Larven im menschlichen Körper beobachtet wurden.) Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (446-448). [4219 6019].

Escherich, K[arl] und Wimmer, E. Ueber eine Galle an der Weisstanne Abies pectinata). Allg. Zs. Ent., Neudemm, 8, 1903, (119-122). [4219]. 50 Evans, W. Diptera in the Edinburgh (Forth) District. Ann. Scot. Nat. Hist., Edinburgh, 1903, (247-249). [4203 4227 de]. 51

Picker, M[artin]. Typhus und Fliegen. Vorläufige Mitteilung. Arch. Hyg., München, 46, 1903, (274-283). [4219 4231]. 52

**Fround**, L. Dermatomyiasis. Verh. Ges. D. Natf., Leipzig, **73**, (1901), 11, 2, 1902, (450-451). [4219]. 53

Preyssinge, L. et Neveu-Lemaire, M. Rôle des moustiques dans la propagation de la filariose et de la fièvre jaune. Bul. sci. pharm., Paris, **3**, 1901, (81–92, av. fig.). [1410 1431 4219 4231]. 54

Galli-Valerio, Bruno. Les nouvelles recherches sur l'action des puces des rats et des souris dans la transmission de la peste bubonique. (Revue critique.) Centralbl. Bakt., Jena, Abt. 1, 33, Referate, 1903, (753-757). [4219 4231]. 55

Notes de parasitologie. Centralbl. Bakt., Jena, Abt. 1, **35**, Originale, 1903, (81-91). [0219 0419 0431 1219 1231 1419 1431 4219]. 56

- et Rochaz de Jongh, Jeanne.

Sur la présence de Mochlonyx relutinus, Ruthe dans le canton de Vaud. Lausanne, Bull. Soc. Sci. Nat., (sér. 4), **39**, 1903, (453-460, av. 1 pl.); Arch. Sci. Phys. Genève, (sér. 4), **15**, 1903, (226-227). [4227 4231]. 57

Geddings, H. D. The fly and mosquito as carriers of disease. Washington, D.C., Treasury Dept., Pub. Hith. Mar. Hosp. Ser. Hyg. Lab. Bull. Rep., 18, (Supplement), 1903, (10). 23 cm. [4231 4219]. 58

Giles, G. M. On prepupal changes in the larvae of the *Culicidae*. J. Trop. Med., London, **6**, 1903, (185–188). [4215]. 59

Gillanders, A. T. Notes on miscellaneous arboreal insects. [The traces of frass of larvæ.] Manchester, Trans. Microsc. Soc., 1902, (72-80, pl. I). [4419 4231]. 60

**Glaser,** E. Der Heerwurm. Aus d. Heimat, Stuttgart, **15**, 1902, (126–129). [4231]. 61

Greig, E. D. v. Bruce, T.

Girard, A. Hypoderma bovis [Réponse à une question de M. H. Giraudeau]. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (102-103). [4219 4231]. 62



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Taylor, T. H. Note on the habits of Chironomus (Orthocladius) sordidellus. London, Trans. Ent. Soc., 1903, (521-523). [4219 4231]. 174

**Theobald**, F. V. British Museum (Natural History). First Report on Economic Zoology. London, 1903, (XXIV + 192). 8vo. Includes a classification of animals from the point of view of Economic Zoology by E. Ray Lankester, (XI + XXIV). [0060 4203]. 174A

Two new Australia Culicids. Entomologist, London, **36**, 1903. (154-157). [4227 ic 4231]. 175

New Culicivlae from the federated Malay States. Eutomologist, London, **36**, 1903, (256-259). [4227 eg 4231]. 176

Two new Januaican Culicidae. Entomologist, London, **36**, 1903, (281-283). [4227 he 4231].

Notes on the genus Stegomyia (Theobald) and its distribution. J. trop. Med., London, 6, 1903, (237-239). [4219 4227 4231]. 179

A monograph of the Culicidas or Mosquitoes. Vol. III. London, 1903, (XVII + 359, xvii pls.). [4219 4231]. 180

Report on a collection of mosquitoes and other flies from equatorial East Africa and the Nile provinces of Uganda. Reports Sleeping Sickness Comm., No. 3. London (Royal Society), 1903, (33-42, with map). [4227 ff 4219]. 181

- v. Ricardo, G.

Thomann, H. Die Entwickelung der Dasselfliege. (Hypoderma bov's). Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (1100-1104). [4215 4231]. 182

Thomson, F. W. Note on the *Culicidae* of Dehra Dun, with a description of a new *Mansonia* which mimics *Anopheles. J.* trop. Med., London, **6**, 1903, (314-315); Notes on this, Giles, *ib.*, (329). [4219 4231]. 183

Underwood, Wm. Lyman. A new mosquito. [Eucorethra underwood Coquillett n. gen. n. sp.] Science, New York, N.Y., (N. Ser.), 18, 1903, (182-184). [4231]. Underwood, Wm. Lyman. Mosquitoes and suggestions for their extermination. Pop. Sci. Mon., New York, N.Y., 63, 1903, (453-466). [0060 4219]. 185

The mosquito nuisance and how to deal with it; prepared for the Board of Health of Belmont, Mass. Boston (W. B. Clarke Co.), 1903, (15 + [1], with illus.). 22.5 cm. [0060 4219]. 186

Van der Walp, F. M. Diptera. II, III. Biol. Centr.-Amer., London, **1903**, (89– 127, 429-489, pls. I-VIII, XIII). 4231]. 187

Vaney, C. et Conte, A. Sur un diptère (Degeeria fumbris Meg.) parasito de l'altise de la vigne (Haltica ampelophaga Guer.). Paris, C.-R. Acad. sci., 136, 1903, (1275-1276). [4219 4231 4819 4831]. 188

--- v. Conte, A.

Vassiljev, I. V. Der Baumweissling (Aporia crataegi L.) und dessen Parasiten. (Russ.) Trd B. entom. Učen. Kom. M. Zeml., St. Peterburg, III, No. 8, 1902, (36, mit 16 Fig.). [4215 4210 4419 4615 4619]. 189

Villeneuve, J. Contribution au Catalogue des Diptères de France. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (113-119, 146-150). [4231 4227 df]. 190

Contribution au Catalogue des Diptères de Belgique. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (192-195). [4231 4227 dd]. 191

Wandelleck, Benno. [Bericht über die wissenschaftl. Leistungen im Gebiet der] Dipters (während d. J. 1899). Arch. Natg., Berlin, **66**, Bd 2, H. 1900, [1903]; D. ent. Zs., Berlin, **1900**, H, 3, 1900, [1903], (821–880). [4203]. 192

Ward, Henry B[aldwin]. Some points in the development of *Dermatobia* hominis. Lincoln, Stud. Zool. Lab., Univ. Neb., No. 58, 1903, (10, with pl.). 23 cm. [4215 423]. 193

Warren, S. H. v. Kennard, N. S.

Wasmann, E[rich]. Die Thorakalanhänge der Termitozeniidae, ihr Bau, ihre imaginale Entwicklung und phylogenetische Bedeutung. Verh. D. zool. Ges., Leipzig, 18, 1903, (113-120, mit 2 Taf.). [4207 4231]. 194 Webster, F. M. Some insects attacking the stems of growing wheat, rye, barley, and oats, with methods of prevention and suppression. [Life histories and descriptions of species of *Isosoma*, *Meromyza* and *Oscinie*]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **42**, 1903, (62). 23 cm. [2419 4231 4631].

Wesché, W. Parasite on the Wallaby. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (384-385, with text-fig.). [4219]. 196

The male organs of the flies Scatophaga lutaria and S. stercoraria. London, J. Quek Microsc. Cl., **18**, 1903, (411-416, pl. XXII). [4207 4231]. 197

Wimmer, E. r. Escherich, K.

Witt, Fritz. Die Stubenfliege. Nach biologischen Gesichtspunkten betrachtet. Aus d. Schule, Leipzig, 14, 1903, (570– 573). [4219 4231]. 198

Wood, J. H. Agathomyia viduella Zett.: a new British fly. Ent. Mag., London, **39**, 1903, (271–272). [4227 de 4231]. 199

# 4203 COMPREHENSIVE AND GENERAL WORKS.

#### GENERAL.

Balfour, A. Mosquitoes and steamers. J. trop. Med., London, 6, 1903, (253).

Evans, W. Diptera in the Edinburgh (Forth) District. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (247-249).

Grimshaw, P. H. Diptera Scotica. 111. The Forth district. *l.c.* (154-166, 212-226).

Wandolleck, Benno. [Bericht über die wissenschaftl. Leistungen im Gebiete der] Diptera (während d. J. 1899]. Arch. Natg., Berlin, **65**, Bd 2, H. 2, 1900, [1903]; D. ent. Zs. Berlin, **1900**, H. 3, 1900, [1903], (821-880).

#### TREATISES.

Austen, E. E. A monograph on the Tsetse-flies (genus *Clossina* Westwood) based on the collection in the British Museum. With a chapter on the mouth parts by H. J. Hansen. London (British Museum), 1903, (IX + 319, 9 pls.). [Reviews], Zoologist, London, **1903**; Nature, London, **69**, 1903, (123).

#### Collections, Technique.

Durham, H. E. Notes on collecting Mosquitoes. J. trop. Med., London, 6, 1903, (297, 298).

#### ECONOMICS.

Annett, H. E., Dutton, J. E. and Elliott, J. H. Report of the Malaria Expedition to Nigeria. Liverp. Sch. Trop. Medicine. Mem. 3. London (Longmans, Green & Co.), 1902, (68, 2 pls., besides charts and illustrs.).

Nuttall, G. H. F. and Shipley, A. E. Studies in relation to malaria. II. (Concl.) The structure and biology of *Anopheles*. J. Hygiene, London, **3**, 1903, (166-215, pls.VI-IX).

**Theobald**, F. V. British Museum (Natural History). First report on Economic Zoology. London, 1903, (XXXIV + 192). 8vo. Includes a classification of animals from the point of view of Economic Zoology by E. Ray Lankester, (XI + XXIV).

#### 4207 STRUCTURE.

#### GENERAL.

Austen, E. E. A monograph on the Tsetse-flies (genus Glossina Westwood) based on the collection in the British Museum. With a chapter on the mouth parts by H. J. Hansen. London (British Museum), 1903, (IX + 319, 9 pls.). [Reviews]. Zoologist, London, **1903**; Nature, London, **69**, 1903, (123).

Imms, A. D. Clunio bicolor Kieff.; a marine Chironomid new to the fauna of Great Britain. Liverpool, Proc. biol. soc., 17, 1903, (81-86).

Nuttall, G. H. F. and Shipley, A. E. Studies in relation to malaria. 11 (Concl.). The structure and biology of *Anopheles*. J. Hygiene, London, **3**, 1903, (166-215, pls. V1-1X).

**Parker**, H. B. The Stegomyia fasciata. Annual report of the Surgeon-general of the public health and marine-hospital wervice of the United States for the fiscal year 1902. Washington, D.C., 1903, (452-454).

# COMPARATIVE ANATOMY.

**Snodgrass**, Robert E. The terminal abdominal segments of female *Tipulidae*. New York, N.Y., J. Ent. Soc., **11**, 1903, (177–183, with 2 pls.).

#### APPENDAGES.

**Börner**, Carl. Eine neue im weiblichen Geschlecht flügel- und halterenlose Sciaridengattung, nebst Bemerkungen über die Segmentierung des Hinterleibes der Dipteren-Weibchen. (Vorläuf. Mitt.). Zool. Anz., Leipzig, **26**, 1903, (495-504, 505-508).

#### DENTITION.

Harris, W. H. The dentition of the Diptera. London, J. Quek. Microsc. Cl., 8, 1903, (389-398, pl. XIX).

### CIECULATORY AND RESPIRATORY ORGANS.

Conte, A. et Vansy, C. Sur la structure de la cellule trachéale de l'Œstre et l'origine des formations ergastoplasmiques. Paris, C.-R. Acad. sci., **136**, 1903, (561-562).

# REPRODUCTIVE ORGANS.

Wesché, W. The male organs of the flies Scatophaga lutaria and S. stercoraria. London, J. Quek. Microsc. Cl., 8, 1903, (411-416, pl. XXII).

#### SPECIAL EXTERNAL CHARACTERS.

Kertész, Kálmán. Eine neue Familie der Acalyptraten Musciden. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (355–358, Taf. XV).

Wasmann, E[rich]. Die Thorakalanhänge der Termitozeniidae, ihr Bau, ihre imagivale Entwicklung und phylogenetische Bedeutung. Verh. D. zool. Ges., Leipzig, 13, 1903, (113-120, mit 2 Taf.).

# PHYSIOLOGY.

#### PARTHENOGENESIS.

Lühe, M[ax]. Zur Frage der Parthenogenese bei Culiciden. Allg. Zs. Ent., Neudamm, 8, 1903, (372-373).

#### FUNCTION OF SPECIAL STRUCTURES.

Berlese, Antonio. L'accoppiamento della mosca domestica. Riv. patol. veg., Portici, 9, fax. 2°, 1902, (345-357, con fig).

#### ENVIRONMENTAL EFFECTS.

Bogdanow, E. A. Zehn Generationen der Fliegen (*Musca domestica*) in veränderten Lebensbedingungen. (Versuche, angestellt von Frl.N.J.Polevaieff.) Allg. Za. Ent., Neudamm, **8**, 1903, (265– 267).

# 4215 DEVELOPMENT.

# GENERAL.

**Eleffer**, J. J. Hypoderma bocis, [à propos de la question de M. IJ. Giraudeau]. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (103).

Manders, N. Notes on the Anopheles in Ceylon and on the life history of Anopheles fuliginosus, Giles. Bombay, J. Nat. Hist. Soc., 15, 1903, (265-278, 2 pls.).

Morgan, H. A. and Dupree, J. W. Development and hibernation of mosquitoes. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (88-92).

Needham, James G. Some new life histories of Diptera. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (279-287, with pl.).

Buotsalainen, A. [Zezefliege- oder Naganakrankheit]. (Finnisch) Luonnon Ystävä, Helsingtors, 1903, 11-12, (282-288).

Thomann, H. Die Entwicklung der Dasselfliege (*Hypoderma bovis*). Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (1100-1104).

4211

#### OVEN.

Harris, H. F. The egg of *Psorophora eiliata*. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (232-235).

#### METAMORPHOSIS AND LARVAL FORMS.

Austen, E. E. [Exhibition of specimens of *Glossina palpalis* Rob. Desv. with pupae]. London, Proc. Zool. Soc., **1903**, 2, (316-317).

**Dyar**, Harrison G[ray]. Illustrations of the larvae of North American *Culicidae*. 3. New York, N.Y., J. Ent. Soc., **11**, 1903, (23-27, with pl.).

Giles, G. M. On prepupal changes in the larvæ of the *Culicidae*. J. trop. Med., London, 6, 1903, (185-188).

**smith**, John B. Characters of some mosquito larvae. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (299-303, with pl.).

#### POSTEMBRYONIC ONTOGENY.

Vassiljev, I. V. Der Baumweissling (Aporia crataegi L.) und dessen Parasiten. (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, III, No. 8, 1902 (36, mit 16 Fig.).

# 4219 ETHOLOGY.

#### GENERAL.

Girard, A. Hypoderma bovis [Réponse à une question de M. H. Giraudeau]. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (102-103).

**Eieffer**, J. J. *Hypoderma bovis*, [à propos de la question de M. H. Giraudeau]. *l.c.* (103).

Koževnikov, G. A. Observations biologiques sur l'Anopheles maculipennis Meig. (claviger Fabr.) (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (360– 371).

**Bonne**. Ilypoderma boris [à propos de la question de M. H. Giraudeau]. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (103).

**Speiser**, P[aul]. Biologische Notizen über Dipteren. Ent. Jahrb., Leipzig, **12**, 1903, (176-181).

Theobald, F. V. A monograph of the *Culicitae* or Mosquitoes. Vol. III. London, 1903, (XVII + 359, xvii pls.).

Report on a collection of mosquitoes and other flies from equatorial East Africa and the Nile provinces of Uganda. Reports Sleeping Sickness Comm. No. 3, London (Royal Society), 1903, (33-42, with map).

Thomson, F. W. Note on the Culicidae of Dehra Dun, with a description of a new Mansonia which mimics Anopheles. J. trop. Med., London, 6, 1903, (314-315). Notes on this, Giles, *ib.*, (329).

Witt, Fritz. Die Stubenfliege. Nach biologischen Gesichtspunkten betrachtet. Aus d. Schule, Leipzig, 14, 1903, (570– 573).

#### HABITS.

Boutenmüller, W[illia]m. [Breeding Culex restuans from water putrified by dead animal matter]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (269).

Girschner, E. Der Dipterensammler im Mai, Juni, Juli, August, September und Oktober. Insektenkörse, Leipzig, 20, 1903, (155-156, 181, 211-212, 251-252, 283-284, 315-316).

Lommel, V. Bericht über eine Reise im Bezirke Kilwa zur Feststellung des Vorkommens und zur Beobachtung der Lebensgewohnheiten der Tsetseflege. Ber. landw. Ostafrika, Heidelberg, 1, 1903, (341-350).

Taylor, T. H. Notes on the habits of Chironomus (Orthoclodia) sordidellus. London, Trans. Ent. Soc., 1908, (375-498).

Vassiljev, I. V. Der Baumweissling (Aporia crataegi L.) und dessen Parasiten. (Russ.) Trd. B. Entom. Učen. Kom. M. Zeml., St. Peterburg, III, No. 8, 1902, (36, mit 16 Fig.). Lucas. Migration of Lympetrum fonscolombii. Entomologist, London, 36, 1903, (79).

**Smith**, John B[ernhardt]. Concerning mosquito migrations. Science, New York, N.Y., (N. Ser.), **18**, 1903, (761-764).

### HIBERNATION.

Morgan, H. A. and Dupree, J. W. Development and hibernation of mosquitoes Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., No. 40, 1903, (88-92).

#### Sound Production.

Harris, W. H. Remarks on the emission of musical notes and on the hovering habit of *Eristalis tenax*. London, J. Quek. Microsc. Cl., 8, 1903, (513-520).

#### PARASITISM.

Brues, C. T. A Dexid parasite [Melanophora roralis] of the sow-bug [Porcellio] Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (291).

**Chapman**. Galls of Asphondylia ulicis. Entomologist, London, **36**, 1903, (252).

Dambach. Die Bienenlaus. Schweiz. Bienenztg, Aarau, 25, 1902, (447-449).

Dorr, Emile. Rareté des lépidoptères. Abondance de parasites. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (38).

Escher-Kündig, J. (Fliegen deren Larven im menschlichen Körper beobachtet wurden). Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (446– 448).

Fround, L. Dermatomyiasis. Verh. Ges. D. Natf., Leipzig, 73, (1901), II, 2, 1902, (450-451).

Galli-Valerio, Bruno. Notes de parasitologie. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (81-91).

**Grünberg**, Karl. Afrikanische Musciden mit parasitisch lebenden Larven. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (400-416, mit 2 Taf.). Guiart, J. Parasitologie pratique. Les parasites de l'intestin et leur recherche dans les matières fécales. Bul. sci. pharm., Paris, 6, 1902, (152-157, 199-208, av. fig.).

Jenkinson, F. J. H. Verrallia aucta and its host. Ent. Mag., London, 39, 1903, (222-223).

Johnson, H. P. A new sporozoan parasite of *Anopheles*. J Med. Res., Boston, Mass., 7, 1902, (213-219, with pl.).

Koch, Th. P. On the gadfly Hypoderma bovis. (Danish) Kjöbenhavn, Mdshf. Dysl., 15, 1903, (129-159).

Landois, H[ermann] Die Kamel-Nasenbreme, *Oestrus maculatus* Wied., im westfäl. zool. Garten zu Münster. Münster, Jahresber. ProvVer. Wiss., **30**, (1901/02), 1902, (64-66).

Lutz, Adolph. Waldmosquitos und Waldmalaria. Centralbl. Bakt., Jena, Abt. 1, 33, Originale, 1903, (282-292).

Neumann, L. G. Note sur une collection d'ectoparasites recueillis en Abyssinie par M. le baron C. von Erlanger. Arch. parasit., Paris, 6, 1902, (293-294).

• Nilsen, J. C. Ueber die Entwicklung von Bombylius pumilus Meig., einer Fliege, welche bei Colletes daviesana Smith schmarotzt. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (647-658, mit 1 Taf.).

**Perroncito**, E Importanza patologica delle larve di estro nello stomaco del cavallo. Torino, Giorn. Acc. Med., **65**, 1902, (374–377).

Schat, P. Weitere Mitteilungen über Surra [eine durch den Stich einer Fliege verursachte Rinderkrankheit]. (Holländisch) Arch. Java Suiker., Soerabaia, 11, 1903, (49-67, mit 2 Taf.).

Tarnani, I. K. Nouvelles observations sur les oestres. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (101– 102).

Vaney, C. et Conte, A. Sur un diptère (Degreria funchris Meg.) parasite de l'altise de la vigne (Haltica ampelophaga Guer.). Paris, C. R. Acad. sci., 136, 1903, (1275-1276).

Wesché, W. Parasite on the wallaby. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (381-385, with text-fig.). UTILITY AND HARMFULNESS.

Bandi, Ivo. Gelbfieber und Mosquitos. Eine kritische Studie. Centralbl. Bakt., Jena, Abt. 1, 35, Originale, 1903, (323-326).

Yellow fever and mos-J. trop. Med., London, 6, 1903, quitoes. (254-256).

Berlese, Antonio. La questione della mosca olearia. Bollettino di Entomologia agraria, Padova, 9, 1902, (180-184)

Bruce, D., Nabarro, D. and Greig, E. D. W. Can the Uganda Tsetse fly (Glossina palpalis) carry the Trypanosoma found in the sleeping-sickness cases to healthy animals? London (Royal Soc.), Rep. Sleeping-sickness Comm., No. 4, (56-64, map).

Celli, A. La malaria en Italie durant l'année 1902. Recherches épidémiologiques et prophylactiques. Arch. ital. biol., Paris, 37, 1902, (209-241).

Daws, Erich. Sciara (giraudi aff.), ein Schädling junger Kakteenkulturen. Monatschr. Kakteenk., Neudamm, 13, 1903, (20-23).

Dyé, Léon. Notes et observations sur les culicides. Arch. parasit., Paris, 6, 1902, (359-376, av. fig.).

Ficker, M[artin]. Typhus und Fliegen. Vorläufige Mitteilung. Arch. Hyg., München, 46, 1903, (274–283).

Freyssinge, L. et Neveu-Lemaire, M. Rôle des moustiques dans la propagation de la filariose et de la fièvre jaune. Bul. sci. pharm., Paris, 3, 1901, (81-92, av. fig.).

Galli-Valerio, Bruno. Les nouvelles recherches sur l'action des puces des rats et des souris dans la transmission de la peste bubonique. (Revue critique.) Centralbl. Bakt., Jens, Abt. 1, 88, Referate, 1903, (753-757).

Geddings, H. D. The fly and mosquito as carriers of disease. Washington, D.C., Treasury Dept., Pub. Hlth. Mar. Hosp. Ser. Hyg. Lab. Bull., 18, (Supplement), 1903, (10). 23 cm.

Herrick, G. W. Some mosquitoes of Mississippi, and how to deal with them. Agric. Exp. Sta., Mississippi, Agricultaral College, Bull., No. 74, 1901, (31, with figs.). 23 cm. [Review], Wash-(N 2-9053)

ington, D.C., U. S. Dept. Agric., Off. Exp. Sta. Rec., 14, 1902, (375).

Howard, L. O. Concerning the geographic distribution of the yellow fever mosquito [Stegomyia fasciata]. Washington, D.C., Treasury Dept., Pub. Hlth. Mar. Hosp. Serv Rep. (Supplement), 18, No. 46, 1903, (7, with map). 23 cm.

The carriage of disease by flies. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 30, 1901, (39–45).

Mosquitoes as transmitters of disease. [Anopheles and Stegomyia fasciata.] The American Monthly Review of Reviews, New York, N.Y., 24, 1901, (192–195).

The warfare against mosquitoes. A record of what has been accomplished the last two years-how to exterminate mosquitoes - a practical work for village improvement societies. Country Life in America, New York, N.Y., 3, 1903, (251-253, with text fig.).

Laveran, A. Sur des culicides de Diégo-Suarez (Madagascar) et du Sénégal. Paris, C.-R. soc. biol., 55, 1903, (149–151).

Sur deux Hippobosques du Transvaal susceptibles de propager Trypanosoma theileri. l.c. (242–243).

Martini, Erich. Ueber die Verhütung eines Malaria-Ausbruches zu Wilhelmshaven. Zs. Hyg., Leipzig, 43, 1903, (206 - 214).

Measham, Miss C. E. C. Malaria and the mosquito. Rochester Nat., 3, 1903, (185–191).

Nicéville, Lionel de (the late). Insect pests of cereals and crops. [Syrphus sp.] Calcutta, Ind. Mus. Notes, 5, 1903, (134).

Plettke. Fr. Ueber das massenhafte Auftreten einer Simulia in Nordwestdeutschland. Aus d. Heimat, Bremerhaven, 1901,02, 1903, (44-47).

Poëy, André. La moustique et la fièvre jaune à la Havane. Gaz. méd., Paris, 73, 1902, (249-251).

Rivas, D. Beitrag zur Bekämpfung der Anopheles. Centralbl. Bakt., Jena, Abt. 1, 88, Originale, 1903, (235-238).

Roberts, I. P., Slingerland, M. V. and Stone, J. L. The Hessian fly [Cecidomyia destructor], its ravages in

20

New York in 1901. Agric. Exp. Sta., New York, (Cornell Station), Ithaca, Bull. No. **194**, 1901, (237-260, with 5 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1902, (572).

**Bobertson**, E. Malaria and mosquitos. [*Culicidae*.] Wellington, Trans. N. Zeal. Inst., **35**, 1903, (225–239).

**Bomanin-Jacur**, <del>Mu</del>seppe. Osservazioni sopra alle Zanzare . . . di Padova . . in rapporto al'a malaria. Roma, Società studi Malaria, **3**, 1902, (256–278, con 1 tav.).

**Buotsalainen**, A. [Zezefliege- oder Naganakrankheit.] (Finnisch) Luonnon Ystävä, Helsingfors, **1903**, 11–12, (282– 288).

Schüffner, Wilhelm. Die Beziehungen der Malariaparasiten zu Mensch und Mücke an der Ostküste Sumatras. Zs. Hyg., Leipzig, 41, 1902, (89-122, mit 4 Taf.).

**Sorgent**, Edmond et **Sorgent**, Etienne. Résumé du Rapport sur la campagne antipaludique organisée en 1902 à la gare de l'Alma (Est-Algérien). Ann. Inst. Pasteur, Paris, **17**, 1903, (68-73).

**Stephens**, J. W. W. and **Christophers**, S. R. Reports to the Malaria Committee. Eighth Series. London (Royal Society), 1903, (77).

**Theobald**, F. V. Notes on the genus Stegomyia ('Theobald) and its distribution. J. Trop. Med., London, **6**, 1903, (!37-239).

**Underwood**, William Lyman. Mosquitoes and suggestions for their extermination. Pop. Sci. Mon., New York, N.Y., **63**, 1903, (453-466).

The mosquito nuisance and how to deal with it; prepared for the Board of Health of Belmont, Mass. Boston (W. B. Clarke Co.), 1903, (15 + [1], with illus.). 22.5 cm.

# 4223 VARIATION AND ÆTIOLOGY.

**Snodgrass**, Robert E. The terminal abdominal segments of female *Tipuliilae*. New York, N.Y., J. Ent. Soc., **11**, 1903, (177-183, with 2 pls.).

# 4227 GEOGRAPHICAL DISTRIBUTION.

a THE EARTH AS A WHOLE.

Bischof, Josef. Ueber die Dipterenfaunen mit besonderer Berücksichtigung von Prof. G. Strobl's Dipterenfauna von Bosnien, Hercegovina und Dalmatien. Wien, Verh. ZoolBot. Ges., 51, 1901, (115-119).

**Theobald**, F. V. Notes on the genus *Stegomyia* (Theobald) and its distribution. J. Trop. Med., London, **6**, 1903, (237-239).

# d EUROPE.

da SCANDINAVIA.

**Strand**, Embr. Norwegian localities for Diptera. (Norw.) Kristiania, Forh. Vid. selsk., **1903**, No. 3, (II).

### db Russia.

Norman, A. M. Notes on the Natural History of East Finmark. [Diptera.] Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (166-173).

# dd Holland and Belgium.

Jacobs, J. C. Diptères de la Belgique. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (324-333); **47**, 1903, (356-357).

Villeneuve, J. Contribution au Catalogue des Diptères de Belgique. Feuille jeunes natural., Paris, (sér. 4), 83, 1903, (192-195).

# de BRITISH ISLANDS.

**Ploomfield**, E. N. Norfolk Diptera. Norwich, Trans. Nat. Soc., 7, 1903, (541-552).

Evans, W. Diptera in the Edinburgh (Forth) District. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (247-249).

Grimshaw, P. H. Diptera Scotica. III. The Forth district. *l.e.* (154–166, 212–226).

Imms, A. D. Clunio bicolor Kieff; a marine chironomid new to the fauna of Great Britain. Liverpool, Proc. biol. Soc., 17, 1903, (81-86). Kennard, A. S. and Warran, S. II. On a section of the Thames Alluvium in Bermondsey. Geol. Mag., London, [4], 10, 1903, (456-460, 525).

**Sharp**, D. Chamacsyrphus Insitanicus Mik., a new British Syrphid fly. Ent. Mag., London, **39**, 1903, (197).

Zett., a Strationyid fly new to Britain, with notes on *P. tarsalis*. *l.c.* (221-222).

*——— Phortica rariegata* Fall., a Drosophilid fly new to Britain. *l.c.* (248-249).

Wood, J. H. Agathomyia rid wella Zett; a new British fly. l.e. (271-272).

# df FRANCE.

Sergent, Edmond et Sergent, Etienne. Observations sur les Anophèles de la baulieue de Paris. Aun. Inst. Pasteur, Paris, 16, 1902, (940-946).

Villeneuve, J. Contribution au Catalogue des Diptères de France. Feuille jennes natural., Paris, (sér. 4), 33, 1903, (113–119, 146–150).

#### di SWITZERLAND.

**Galli-Valerio**, Bruno et Rochaz-de Jongh, Jeanne. Sur la présence de *Moelilonyz relatinus* Ruthe dans le canton de Vaud. Lausanne, Bull. Soc. Sci. Nat., (sér. 4), **39**, 1903, (453-460, av. 1 pl.); Arch. Sci. Phys., Genève, (sér. 4), **15**, 1903, (226-227).

c ASIA.

Marlatt, C[harles] I.[ester]. Collecting notes on mosquitoes in oriental countries. Washington, D.C., Proc. Ent. Soc., 5, 1903, (111-123).

# ed COCHIN CHINA.

Laveran, A. Sur les culicides de Cochin-chine. Paris, C. R. soc. biol., 55, 1903, (414-416).

# ef BRITISH INDIA.

Attken, E. H. Notes of a tour in the North Canara district of India in search of mosquitoes. J. trop. Med., London, 5, 1903, (325, 326, 341, 342).

(N 2-9053)

eg MALAT PE FISULA.

Kertász, Kálmán. Die Pipunculus-Arten S.id-Asiens und Neü-Guineas. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (465-471).

Ludlow, C. S. Some Philippine mosquitoes. New York, N.Y., J. Ent. Soc., 11, 1903, (137-144).

**Speiser**, P. Diptera Pupipara. Fascic. Malay. Zool., 1, (117-126).

**Theobald**, F. V. New *Culicidae* from the federated Malay States. Entomologist, London, **36**, 1903, (256-259).

# f AFRICA.

fa MEDITERRANEAN STATES.

Sergent, Edmond et Sergent, Etienne. ()bservations sur les moustiques des environs d'Alger. Ann. Inst. Pasteur, Paris, **17**, 1903, (60-67, av. fig.).

### 1b NORTH EAST AFRICA.

Becker, Th[eodor]. Aegyptische Dipteren, gesammelt und beschrieben. [In: Berlin, Mitt. zool. Mus., 2, H. 2. 3.] Berlin, 1902-1903, (195, mit 5 Taf.).

fd WEST AFRICA.

Annett, H. E., Dutton, J. E. and Eviott, J. H. Report of the Malaria Expeditions to Nigeria. Liverp. Sch. Trop. Medicine, Mem. 3. London (Longmans, Green & Co.), (2 pls., besides charts and illustrs.).

#### ff EAST AFRICA.

**Ricardo**, Gertrude and **Theobald**, F. V. Diptera. [*Culicidue* by Theobald.] Nat. Hist. Sokotra, (359-378, pl. XXII).

**Theobald**, F. V. Report on a collection of mosquitoes and other flies from equatorial Last Africa and the Nile provinces of Uganda. Reports Sleeping Sickness Comm., No. 3. London (Koyal Society), 19J3, (33-42, with map).

# fg South Africa.

Laveran, A. Sur deux Hippobosques du Transvaal susceptibles de propager *Trypanosoma theileri*. Paris, C. R. soc. biol., **55**, 1903, (242-243).

# fh MADAGASCAR.

Laveran, A. Sur des culicides de Diégo-Suarez (Madagascar) et du Sénégal. Paris, C. R. soc. biol., 55, 1903, (149-151).

# g NORTH AMERICA.

• Brues, Charles Thomas. A monograph of the North American *Phoridae* [with bibliography]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (331-404, with pl.).

**Hine**, James S. *Tabanidae* of Ohio with a catalogue and bibliography of the species from America north of Mexico. Columbus, Ohio, Acad. Sci. Sp. Paprs., No. 5, 1903; [reprint], Columbus, Ohio, Univ. Bull., (Ser. 7), No. **19**, (1-57, with pl.). 23.2 cm.

**Kellogg**, Vernon L[yman]. The netwinged midges (*Blepharoceridae*) of North America [with bibliography]. San Francisco, Proc. Cal. Acad. Sci., (Ser. 3), **3**, 1903, (187-232, with 5 pls.). Separate. 25.5 cm.

(Blepharoceridae) of North America (with bibliography). [Reprint from the Proceedings of the California Academy of Sciences, (Ser. 3), Zoology, 3]. Stanford University, Cal., Leland Stanford jr. Univ. Hopkins Seaside Lab., Cont. Biol., **30**, 1903, (21 + 187-232, with text-fig. and pl.). Separate. 25.5 cm.

gg NORTH EASTERN UNITED STATES.

Dyar, Harrison G[ray]. Notes on mosquitoes in New Hampshire. Washington, D.C., Proc. Ent. Soc., 5, 1903, (140-148, with pl.).

**Hine**, James S. *Tabanidae* of Ohio with a catalogue and bibliography of the species from America north of **Mexico**. Columbus, Ohio, Acad. Sci. Sp. Paprs. No. **5**, 1903; [Reprint], Columbus, Ohio, Univ. Bull., (Ser. 7), No. **19**, (1-57, with pl.). 23.2 cm.

Johannsen, O. A. Notes on some Adirondack Diptera collected by Messrs. MacGillivray and Houghton [n. sp. of *Scioplila*]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (14–17).

Diptera [of New York]. Albany Univ.,

N.Y., Bull. St. Mus., No. **68**, 1903, (328-441, with pl.). Separate, (328-448, with pl.). 22.8 cm.

Jordan, Edwin O. Notes on the occurrence and habitat of Anopheles *punctipennis* and Anopheles maculipennis in the valley of the Androscoggin. J. Med. Res., Boston, Mass., 7, 1902, (1-24, with pl.).

**MacGillivray**, Alex[ander] D[yer] and **Houghton**, C. O. A list of insects taken in the Adirondack mountains, New York -2. [Diptera]. *l.c.* (12-13).

**Smith**, J. B. The salt-marsh mosquito (*Culex sollicitans*). Agric. Exp. Sta., New Jersey, New Brunswick, Spec. Bull. T., 1902, (10, with 2 figs.). 23 cm. [Review], Washington, D.C., U.S. Dept. Agric. Off. Exp. Sta., Rec., **14**, 1902, (273).

# gh South Eastern United States.

Herrick, G. W. Some mosquitoes of Mississippi, and how to deal with them. Agric. Exp. Sta., Mississippi, Agricultural College, Bull., No. 74, 1901, (31, with 15 figs.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1902, (375).

# gi WESTERN UNITED STATES.

Coquillett, D. W. Some insects of the Hudsonian zone in New Mexico. Diptera. Psyche, Cambridge, Mass., 9, 1901, (149-150).

Johnson, C. W. Diptera of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (101-106).

Skinner, Henry. Lepidoptera of Beulah, New Mexico. *l.c.* 1902, (36-38).

#### h CENTRAL AND SOUTU America.

Kertész, Kálmán. Eine neue Familie der Acalyptraten Musciden. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (355-358, Taf. XV).

Neven-Lemaire, M. Einige neue südamerikanische Ceria-Arten. Arch. parasit., Paris, 6, 1902, (433-440).

------ Beitrag zur Kenntniss der Heteroneuriden. *l.c.* (566-573). Theobald, F. V. Two new Jamaican Culicidae. Entomologist, London, 36, 1903, (281-283).

hd GUIANA.

Neven-Lemaire, M. Description de quelques moustiques de la Guyane. Arch. parasit., Paris, 6, 1902, (5-25, av. 15 fig.).

i AUSTRALASIA.

ia NEW GUINEA.

Kertész, Kálmán. Die Pipunculus-Arten Süd-Asiens und Neu-Guineas. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (465-471).

ic AUSTRALIA AS A WHOLE.

**Coquillett**, D[aniel] W[illiam]. A new Ephydridid [*Hydrellia tritici* n. sp.] from Australia. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (324).

Theobald, F. V. Two new Australian Culicids. Entomologist, London, 31, 1903, (154–157).

# 4231 TAXONOMY AND SYSTEMATIC.

#### GENERAL.

Becker, T. Die Typen der v. Roser-'schen Dipteren-Sammlung in Stuttgart. Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (52-66).

Aegyptische Dipteren, gesammelt und beschrieben. [In: Berlin, Mitt. zool. Mus., 2, H. 2. 3.] Berlin, 1902-1903, (195, mit 5 Taf.). [4227 fb].

Coquillett, D. W. Some insects of the Hudsonian zone in New Mexico. Diptera. Psyche, Cambridge, Mass., 9, 1901, (149-150).

Ficker, M. Typhus und Fliegen. Vorläufige Mitteilung. Arch. Hyg., München, 46, 1903, (274–283).

Galli-Valerio, Bruno. Les nouvelles recherches sur l'action des puces des rats et des souris dans la transmission Gillanders, A. T. Notes on miscellaneous arboreal insects. Manchester, Trans. Microsc. Soc., 1902, (72-80, pl. I).

Harris, W. H. The dentition of the Diptera. London, J. Quek. Microsc. Cl., 8, 1903, (389-398, pl. XIX).

Hine, J. S. New or little known Diptera. Ohio Nat., Columbus, Ohio, 2, 1902, (228-230).

Jacobs, J. C. Diptères de la Belgique. Bruxelles, Ann. soc. ent. Belgique, 45, 1901, (324-333); 47, 1903, (356-357).

Johannsen, O. A. Aquatic nematocerus Diptera [of New York]. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (328-441, with pl.). Separate. (328-448, with pl.). 22.8 cm.

Johnson, C. W. Diptera of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (101–106).

Kertész, K. Catalogus Dipterorum hucusque descriptorum. Vol. I: Sciaridae, Mycetophilidae, Bibionidae, Chironomidae, Stenozenidae, Culicidae, Ptychopteridae. Dixidae, Blepharoceridae, Simulidae, Orphnephilidae, Peychodidae, Rhyphidae. Leipzig (W: Engelmann), 1902, (III + 339). 23 cm. 15 M.

Melander, A. L. and Brues, C. T. Guests and parasites of the burrowing bee *Halictus*. [nn. spp. of Diptera and Hymenoptera]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (1-27, with text fig.).

Needham, J. G. Some new life histories of Diptera. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (279-287, with pl.).

Norman, A. M. [Diptera in.] Notes on the Natural History of East Finmark (contd.). Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (171-173).

**Schnabl**, I. Ueber den variablen Werth eines und desselben Characters in verschiedenen systematischen Categorien; auch manche dipterologische "pia desideria". St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (164-175, mit 8 Fig.). Sorgent, F. et Sorgent, E. Observations sur les moustiques des environs d'Alger. Ann. Inst. Pasteur, Paris, 17, 1903, (60-67, av. fig.).

**Stebbing**, E. P. Tachinid larva found in teak in Nilumbur, note on its occurrence. Departmental Notes on Insects that affect Forestry No. 2. Calcutta, 1903, (293). 25 cm.

Villeneuve, J. Contribution au Catalogue des Diptères de France. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (113-119, 146-150).

des Diptères de Belgique. *l.c.* (192-195).

### CECIDOMYIDAE.

Cecidomyia destructor. **Roberts**, I. P., **Slingerland**, M. V. and **Stone**, J. L. Agric. Exp. Sta., New York, (Cornell station), Ithaca, Bull., No. **194**, 1901, (237-260, with 5 figs). [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1902, (572).

Diplosis, parasites. **Eckel**, L. S. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., **14**, 1903, (279– 284).

Kiefferia n. gen., K. musac n. sp. Kunstler, J. et Chaine, J. Arcachon, soc. sci. station zool., 6, 1902, (113-118).

*musae* Kunstler et Chaine, 1902, renamed *Micropsocus musae*. **Enderlein**, G. Zool, Jahrb., Jena, Abt. f. Syst., **19**, 1903, (288-292).

#### MYCETOPHILID.E.

*Ap*<sup>\*</sup>anojyna n. gen. (~ *Sciara*), *A. mikrothorax*, *A. schillei* nn. spp. **Börner**, C. Zool. Anz., Leipzig. **26**, 1903, (505-507).

Dasysciara n. gen., D. pedestvis n. sp. **Kieffer**, J. J. Bruxelles, Ann. Soc. scient., **27**, 1903, (199-200).

Mycosciara n. gen., M. brevipalpis n. sp. Kieffer, J. J. I.c. (203).

Peyerimhoffia n. gen., P. brachyptera, P. aptera nn. spp. **Kieffer**, J. J. l.c. (198-200) Sciara (giraudi aff.), ein Schädling junger Kakteenkulturen. **Dams**, E. Monatschr. Kakteenk., Neudamm, **13**, 1903, (20-23).

kairensis n. sp. Egypt. Becker, T. Berlin, Mitt. 2001. Mus., 2, H.2, (78).

**membranigera** n. sp. **Kieffer**, J. J. Bruxelles, Ann. Soc. scient., **27**, 1903, (201).

*militaris.* **Glaser**, E. Aus d. Heimat, Stuttgart, **15**, 1902, (126– 120).

Sciophila pulchra n. sp. Johannsen, O. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (14-17).

*pulchra* Johannsen nom. nud. New York. **MacGillivray**, A. D. and **Houghton**, C. O. *l.c.* (12–13).

### BLEPHAROCERIDAE.

#### GENERAL.

**Kellogg**, V. L. The net-winged midges (*Bleplaraceridae*) of North America [with bibliography]. [Reprint from the Proceedings of the California Academy of Sciences, S.r. 3, Zoology, 3.] Stanford University, Cal., Leland Stanford jr. Univ. Hopkins Seaside Lab., ('ont. Biol., **30**, 1903, (21 + 187-232, with text fig. and pl.). Separate 25.5 cm.

The net-winged midges (Blepharoceridae) of North America [with bibliography]. San Francisco, Proc. Cal. Acad. Sci., (Ser. 3), **3**, 1903, (187-232, with 5 pls.).

#### SPECIAL.

Bibiocephala comstocki n. sp. N. America. **Kellogg**, V. L. Saa Francisco, Proc. Cal. Acad. Sci., (Ser. 3), **3**, 1903, (187-232).

Blepharocera nn. spp. N. America. Kellogg, V. L. *l.c.* (189–191).

Hapalothriz lugubris H. Lw. Harling, G. Zs. Hymenopter, Teschendorf, 3, 1903, (208).

# CULICIDAE.

### GENEBAL.

Attken, E. H. Notes of a tour in the North Canara District of India in search of mosquitoes. J. trop. Med., London, 5, 1903, (325, 326, 341, 342).

Bordi, C. . . . Culicidae: contribuzione alla [loro] sistematica, con speciale riguardo alla diffusione della malaria umana. Roma, Rend. Acc. Lincei, (Ser. 5), 11, (2' Sem.), 1902, (318-324).

Dyar, H. G. Illustrations of the larvæ of North American Culicidae, 3. New York, N.Y., J. Ent. Soc., 11, 1903, (23-27, with pl.).

Notes on mosquitoes in New Hampshire. Washington, D.C., Proc. Ent. Soc., 5, 1903, (140-148, with pl.).

**Dyé**, L. Notes et observations sur les culicides. Arch. parasit., Paris, 6, 1902, (359-376, av. fig.).

**Preyssinge**, L. et **Neveu-Lemaire**, M. Rôle des moustiques dans la propagation de la filariose et de la fièvre jaune. Bul. sci. pharm., Paris, **3**, 1901, (81-92, **av.** fig.).

Herrick, G. W. Some mosquitoes of Mississippi, and how to deal with them. Agric. Exp. Sta., Mississippi. Agricultural College, Bull., No. 74, 1901, (31, with 15 figs.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1902, (375).

Laveran, A. Sur des culicides de Diégo-Suarez (Madagascar) et du Sénégal. Paris, C. R. soc. biol., **55**, 1903 (149-151).

Cochin-chine. l.c. (414-416).

Ludlow, C. S. Some Philippine mosquitoes. New York, N.Y., J. Ent. Soc., 11, 1903, (137-144).

Marlatt, C. L. Collecting notes on mosquitoes in oriental countries. Washington, D.C., Proc. Ent. Scc., 5, 1903, (111-123).

Martini, E. Ueber die Verhütung eines Malaria-Ausbruches zu Wilhelmshaven. Zs. Hyg., Leipzig, **43**, 1903, (206-214). Neveu-Lemaire, M. Description de quelques moustiques de la Guyane. Arch. parasit., Paris, **6**, 1902, (5-25, av. 15 fig.).

Pošy, A. Le moustique et la fièvre jaune à la Havane. Gaz. med., Paris, 78, 1902, (249-251).

**Bicardo**, G. and **Theobald**, F. V. Diptera. [*Culicidae* by Theobald.] Nat. Hist. Sokotra, (359-378, pl. XXII).

**Bomanin-Jacur**, G. Osservazioni sopra alle zanzare e sopra ad alcune condizioni locali della città di Padova e dei suoi immediati dintorni in rapporto alla malaria. Roma, Atti Società studi malaria, **3**, 1902, (256-278, con 1 tav.).

Sergent, E. et Sergent, E. Observations sur les Anophèles de la banlieue de Paris. Ann. Inst. Pasteur, Paris, 16, 1902, (940-946).

**Smith**, J. B. Characters of some mosquito larvae. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (299-303, with pl.).

Concerning mosquito migrations. Science, New York, N.Y., (N. Ser.), **18**, (761-764).

Theobald, F. V. The classification of the Anophelina. J. trop. Med., 6, London, 1902, (181-183).

**Thomson**, F. W. Note on the Culicidae of Dehra Dun. *l.e.* 1903, (314-315); Notes on this, Giles, *ib.*, (329).

#### SPECIAL.

Acartomyia n. gen., A. zammitii n. sp. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (251-252).

Aedeomyia americana n. sp. Guyane. Neveu Lemaire, M. Arch. parasit, Paris, 6, 1902, (5-25, av. 15 fig.).

Aedimorphus n. gen. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (190).

Aldrichia n. gen, A. error n. sp. Theobald, F. V. *l.c.* Appendix, 1903, (353-354). Anopheles nn. spp. Egypt. Becker, T. Berlin, Mitt. zool. Mus., 2, H 2, (68-69).

habits. Geddings, H. D. Washington, D.C., Treasury Dept., Pub. Hilth. Mar. Hosp. Ser. Hyg. Lab. Bull. Rep., 18, (Supplement), 1903, (10). 23 cm.

habits. Howard, I. O. The American Monthly Review of Reviews, New York, N.Y., 24, 1901, (192-195).

**Nuttall**, G. H. F. J. Hygiene, London, **8**, 1903, (166-215, pls. V1-IX).

------- Bekämpfung. **Rivas**, D. Centralbl. Bakt., Jena, Abt. 1, **33**, Originale, 1903, (235-238).

Beziehungen der Malariaparasiten zu Mensch und Mücke an der Ostküste Sumatras. Schüffner, W. Zs. Hyg., Leipzig, 41, 1902, (89–122, mit 4 Taf.).

*aitkeni*, Theob., larva, pupa and imago described A. barbirostris, van der Wulp, A. culifacies, Giles, and A. fluriatilis, James, notes; A. jamesi Theob., notes; A. karuari, Theob., imago described; A. leucophyrus, Donitz, var. elegans, Theob. and A. nigerrimus Giles, notes; A. punctulatus, Donitz, imago described; A. rossi, Giles, notes, all from Karwar. Cogill, H. The Anopheles of Karwar (North Kanara). Bombay, J. Nat. Hist. Soc., 15, 1903, (327-336, with 1 pl.).

culiciformis n. sp. Karwar. Cogill, H. The Anopheles of Karwar (North Kanara). Bombay, J. Nat. Hist. Soc., 15, 1903, (327-336, 1 pl.).

*fuliginosus*, life history. **Manders**, N. Bombay, J. Nat. Hist. Soc., **15**, 1903, (265-278, 2 pls.).

*punctipennis* and *A. maculipennis*, occurrence and habitat in the valley of the Androscoggin [Maine]. **Jordan**, E. O. J. Med. Res., Boston, Mass., **7**, 1902, (1-24, with pl.).

Arribalzagia n. gen., A. maculipes n. sp. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (13, 81, 83).

Cellia n. gen. **Theobald**, F. V. *l.c.* (107); J. trop. Med., London, **5**, 1903, (181). Christya n. gen., C. implexa n. sp. Equatorial East Africa. **Theobald**, F. V. Rep. Sleeping Sickness Comm. No. 3, London (Royal Society), 1903, (34-35).

Corethra albipes n. sp. New York. Johannsen, O. A. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (398).

brakelcyi n. sp. Coquillett, D. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (84-85).

ceratopogones n. sp. **Theo**bald, F. V. Mon. Culicidae, London, **3**, 1903, (338-339).

Culex nn. spp. Philippines. Ludlow, C. S. New York, N.Y., J. Ent. Soc., 11, 1903, (141-142).

\_\_\_\_\_ nn. spp. **Theobald**, F. V. Mon. Culicidae, London, **3**, 1903, (159– 230).

H. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (180-182).

**Abafi**, L. von. Allg. Zs. Ent., Neudamm, **8**, 1903, (93-96, 124-127).

Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (68).

*mathisi* n. sp. Guyane. Neveu-Lemaire, M. Arch. parasit., Paris, 6, 1902, (5-25, av. 15 fig.).

*pipiens* in Asia, C. singalese n. sp. **Marlatt**, C. L. Washington, D.C., Proc. Ent. Soc., 5, 1903, (111-123).

H. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (41-42).

food habits of larva. Beutenmüller, W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (269).

**serratus**, early stages. **Smith**, J. B. *l.c.*, **14**, 1903, (309-311, with 1 pl.).

smith, J. B. Agric. Exp. Sta., New Jersey. Smith, J. B. Agric. Exp. Sta., New Jersey, New Brunswick, Spec. Bull. T., 1902, (10, with 2 figs.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1902, (273).

tortilis n. sp. Jamaica. Theobald, F. V. Entomologist, London, 36, 1903, (281-282). Cycloleppteron mediopunctatus n. sp. Theobald, F. V. Mon. Culicidae, London, 8, 1903, (60).

Dendromyia n. gen., D. ulocoma n. sp. **Theobold**, F. V. *l.c.* (313-317).

Desvoidea fusca n. sp. Theobald, F. V. l.c. (135).

Eucorethra n. gen., E. underwoodi n. sp. Coquillett in Underwood, W. L. Science, New York, N.Y., (N. Ser.), 18, 1903, (182-184).

Ficalbia n. gen., F. simplex n. sp. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (296-297).

Finlaya n. gen., F. poicilia n. sp. Theobald, F. V. l.c. (281-283).

Gilesia n. gen., G. aculeata n. sp. Theobald, F. V. l.c. (233).

Goeldia n. gen., G. fluviatilis n. sp. Theobald, F. V. l.c. (330-331).

Grabhamia n. gen., G. pygmaea, G. durbansnesis, G. ambiguus, nn. spp. G. spencerii var. idahoensis n. var. Theobald, F. V. l.c. (243-250).

Grassia n. gen. Theobald, F. V. J. Trop. Med., London, 6, 1903, (237-239).

Haemagogus albomaculatus n. sp. Theobald, F. V. Mon. Culicidae, London, 8, 1903, (308).

equinus n. sp. Jamaica. Theobald, F. V. Entomologist, London, 36, 1903, (282-283).

Heptaphlebomyia n. gen., H. simplex n. sp. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (337).

Howardia n. gen. Theobald, F. V. J. Trop. Med., London, 5, 1902, (181).

Howardina n. gen., H. greenii n. sp. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (287-289).

Lasioconops n. gen., L. poicilipes n. sp. Theobald, F. V. l.c. (236-237).

Laverania n. gen. Theobald, F. V. J. Trop. Med., London, 5, 1902, (181).

Lutzia n. gen. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (155).

Macleaya n. gen., M. tremula n. sp. Queensland. Theobald, F. V. Entomologist, London, 36, 1903, (154-156). Mansonia anopheloides n. sp. **Thomson**, F. W. J. Trop. Med., London, **6**, 1903, (314–315).

*major* n. sp. **Theobald**, F. V. Mon. Culicidae, London, **3**, 1903, (270).

Melanoconion n. gen., M. luteopleurus, M. indecorabilis, M. spissipes nn. spp. Theobald, F. V. l.c. (238-242).

Mimomyia n. gen., M. splendens n. sp. Theobald, F. V. *l.c.* (304-306).

Myzomyia, old and new species. Theobald, F. V. *l.c.* (24-51).

Myzorhynchus, old and new species. Theobald, F. V. *l.c.* (87-91).

Mochlonyz relutinus, présence dans le canton de Vaud. **Galli-Valerio**, B. et **Rochas-de Jongh**, J. Lausanne, Bull. Soc. Sci. Nat., (sér. 4), **39**, 1903, (453– 460, 1 pl.); Arch. Sci. Phys., Genève, (sér. 4), **15**, 1903, (226–227).

Nyssorhynchus, old and new species. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (99-107).

nicipes n. sp. Malay. Theobald, F. V. Entomologist, London, 36, 1903, (258-259).

Pelorempis n. gen., P. americana n. sp. New York. Johannsen, O. A. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (402-403).

Phoniomyia n. gen. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (311).

Peorophora ciliata, eggs. Harris, H. F. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (232-233).

Pyretophorus, old and new species. Theobald, F. V. Mon. Culicidae, London, 3,1903, (66-77).

Rossia n. gen. Theobald, F. V. J. Trop. Med., London, 5, 1902, (181).

Runchomyia n. gen., R. frontosa n. sp. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (319).

Sabethes nn. spp. Brazil. Theobald, F. V. *l.c.* (323).

Sabethoides n. gen., S. confusus n. sp. Theobald, F. V. *l.c.* (328-330).

Skusea n. gen., S. funerea. S. multiplex nn. spp. **Theobald**, F. V. l.c. (291-293).

diurna n. sp. Malay. Theobald, F. V. Entomologist, London, 36, 1903, (259). Stegomyia, habits. Geddings, H. D. Washington, D.C., Treasury Dept., Pub. Hith. Mar. Hosp. Ser. Hyg. Lab. Bull. Rep., 18, (Supplement), 1903 (10). 23 cm.

nn. spp. Philippines. Ludlow, C. S. New York, N.Y., J. Ent. Soc., 11, 1903, (139).

(Theobald), notes on the genus and its distribution. **Theobald**, F. V. J. Trop. Med., London, **6**, 1903, (237-239).

Theobald, F. V. Mon. Culicidae, London, 3, 1903, (139-147).

*fasciata*, Gelbfieber. Eine kritische Studie. **Bandi**, I. Centralbl. Bakt., Jena, Abt. 1, **35**, Originale, 1903, (323-326).

L. O. The American Monthly Review of Reviews, New York, N.Y., 24, 1901, (192-195).

distribution. **Howard**, L. O. Washington, D.C., Treasury Dept., Pub. Hith. Mar. Hosp. Serv. Rep. (Supplement), **18**, No. 40, 1903, (7, with map). 23 cm.

general structure. **Parker**, H. B. Annual report of the Surgeon-General of the public health and marine hospital service of the United States for the fiscal year 1002. Washington, D.C., 1903, (452-454).

Queensland. Theobald, F. V. Entomologist, London, 36, 1903, (156-157).

Stethomyia n. gen., S. nimba n. sp. **Theobald**, F. V. Mon. Culicidae, London, **3**, 1903, (13, 62); J. Trop. Med., London, **5**, 1903, (181-183).

*fragilis* n. sp. Malay. **Theobald**, F. V. Entomologist, London, **36**, 1903, (257-258).

Taeniorhynchus nn. spp. Theobald, F. V. Mon. Culicidae, London, 3, 1903, (261-265).

Toxorhynchites marshalli n. sp. Theobald, F. V. l.c. (121).

Uranotaenia nn. spp. Theobald, F. V. l.c. (298-303).

Verrallina n. gen. Theobald, F. V. L.c. (295).

#### CHIRONOMIDAE.

### GENERAL.

Needham, J. G. Food of brook trout (Salmo fontinalis) in Bone pond. [Species of Chironomidæ]. Albany Univ., N.Y., Bull. St. Mus., No. 68, 1903, (204-217, with pl.).

#### SPECIAL,

Ceratopogon nn. spp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus, 2, H. 2, (72-75).

hollensis n. sp. Melander. A. L. and Brues, C. T. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (13).

varicolor n. sp. Coquillett, D. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (84– 85).

Chironomus nn. spp. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (71).

cubiculorum Doleschall, larvæ and adult insect described and notes on habits. 5. **de Nicéville**, L. (the late). Insect in Calcutta municipal water. Calcuta, Ind. Mus. Notes, **5**, 1903, (189-191, with pl.).

halteralis n. sp. Coquillett, D. W. Philadelphis, Pa., Ent. News Acad. Nat. Sci., 12, 1901, (16-18).

(Orthocladius) sordidellus, note on the habits. **Taylor**, T. H. London, Trans. Ent. Soc., **1903**, (521-523).

Clunio bicolor Kieff, a marine Chironomid new to the fauna of Great Britain. Liverpool, Proc. biol. Soc., **17**, 1903, (81– 86).

Macroptilium n. gen., M. nudum n. sp. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (76-77).

Tanypus dyari n. sp. Coquillett, D. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (84-85).

*Thalassomyia obscura* n. sp. **Johann**sen, O. A. New York. Albany Univ., N.Y., Bull. St. Mus., No. **68**, 1903, (436– 439). 22.8 cm.

# DIXIDAE.

Diza clarulus, D. modesta. Johannsen, O. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (302).

*modesta* n. sp. New York. Johannsen, O. A. Albany Univ., N.Y., Bull. St. Mus., No. **68**, 1903, (429-431).

Melanophora roralis, parasitism on Porcellio. Brues, C. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (291).

#### TIPULIDAE.

#### GENERAL.

**Snodgrass**, R. E. The terminal abdominal segments of female *Tipulidae*. New York, N.Y., J. Ent. Soc., **11**, 1903, (177-183, with 2 pls.).

#### SPECIAL.

Idiophlebia n. gen., I. pallida n. sp. Von den Karolinen. Grünberg, K. Zool. Anz., Leipzig, **26**, 1903, (524– 528).

Limnophila costata n. sp. New Mexico. Coquillett, D. W. Psyche, Cambridge, Mass., 9, 1901, (149-150).

Rypholophus cockerellii n. sp. New Mexico. Coquillett, D. W. l.c. (149-150).

Trimicra strasseni n. sp. Enderlein, G. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition, Bd. 3, Lfg. 7, Jena, 1903, (257).

#### BIBIONIDAE.

Dilophus africanus n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (79).

#### SIMULIIDAE.

Simulia sp., massenhaftes Auftreten in Nordwestdeutschland. **Plettke**, Fr. Aus d. Heimat, Bremerhaven, **1901/02**, 1903, (44-47).

------- columbaczensis. Rudow. Insektenbörse, Leipzig, 20, 1903, (270). Simulium dumnosum n. sp. Equatorial East Africa. **Theobald**, F. V. Rep. Sleeping Sickness Comm. No. 3. London (Royal Society), 1903, (40).

*griseicollis* n. sp. **Becker**, T. Berlin, Mitt. Zool. Mus., **2**, H 2, 1903, (78).

#### STRATIOMYIDAE.

#### SPECIAL.

Nemotelus nn. spp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, 2, 1903, (7-9).

Pachygaster maculicornis n. sp. Hine, J. S. Ohio Nat., Columbus, Ohio, 2, 1902, (228-230).

minutissimus Zett., new to Britain and notes on *P. tarsalis.* **sharp**, D. Ent. Mag., London, **39**, 1903, (221-222).

#### LEPTIDAE.

Rhachicerus mitidus n. sp. Johnson, C. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (22-26, with fig. in text).

Symphroromyia cinerca n. sp. Johnson, C. W. l.c. (25).

Xylomyia aterrima n. sp. Johnson, C. W. l.c. (25).

# TABANIDAE.

### GENERAL.

Hine, J. S. Tabanidae of Ohio with a catalogue and bibliography of the species from America north of Mexico. ('olumbus, Ohio, Acad. Sci. Sp. Paprs., No. 5, 1903; [Reprint], Columbus, Ohio, Univ. Bull., (Ser. 7), No. 19, (1-57, with pl.). 23.2 cm.

# SPECIAL.

Chrysops nn. spp. Ohio. **Hine, J.** S. Columbus, Ohio, Acad. Sci. Sp. Paprs. No. 5, 1903; [Reprint], Columbus, Ohio, Univ. Bull., (Ser. 7), No. 19, (34-42).

#### SCENOPINIDAE.

Scenopinus lucidus n. sp. Luxor. Becker, T. Berlin, Mitt. Zool. Mus., 2, 2, 1903, (39).

# THEREVIDAE.

Psilocephala albohirta n. sp. Ricardo, G. and Theobald, F. V. Dipters. Nat. Hist. Sokotrs, (361).

**Becker**, T. Berlin, Mitt. Zool. Mus., 2, H 2, (34).

# BOMBYLIIDAE.

Anthraz nn. spp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, 2, 1903, 23-25).

G. and **Theobald**, F. V. Diptera. Nat. Hist. Sokotra, (367).

Argyromoeba nn. spp. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (29).

fuscipennisn.sp. Ricardo, G. and Theobald, F. V. Diptera. Nat. Hist. Sokotra, (366).

Bombylius pumilus, Parasitismus bei Colletes daviesana. Nilsen, J. C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (647-658, mit 1 Taf.).

Ezoprosopa nn. spp. Ricardo, G. and Theobald, F. V. Diptera. Nat. Hist. Sokotra, (364-365).

Mulio nn. spp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (30-31).

nn. spp. Becker, T. Zs. Hymenopter., Teschendorf, 3, 1903, (17– 32, 89–96, 193–198).

Systoechus retrogradus n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (17).

# ACROCERIDAE.

#### GENEBAL.

Melander, A. L. Notes on the Acroceridae. Contributions from the Zool. Lab., Univ. of Texas, No. 31. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (178-182).

#### SPECIAL.

Opsebius agelenae n. sp. Melander, A. L. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (178-182).

# ASILIDAE.

Antiphrieson trifarius Lw., A. fuligineus Lw., A. augustifrons Lw., A. aberrans Thin., A. adpressus Lw., A. elachipteryz Lw., Beschreibung, 2 nn. spp. Lichtwardt, B. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (102-106).

Dasyllis affinis, validity of the species. Johnson, C. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (77-78).

Hoplistomera nigrescens n. sp. Ricardo, G. and Theobald, F. V. Diptera. Nat. Hist. Sokotra, (362).

Ommatius tibialis n. sp. Ricardo, G. and Theobald, F. V. l.c. (375).

Promaclius sokotras n. sp. **Ricardo**, G. and **Theobald**, F. V. *l.c.* (362).

Stichopogon lucidiventris n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (36).

#### EMPIDAE.

#### GENERAL.

**Coquillett**, D. W. The genera of the Dipterous family *Empilidae* with notes and new species. [With bibliography.] Washington, D.C., Proc. Ent. Soc., 5, 1903, (245-272).

Slosson, A. T. Hunting Empids. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (265-269).

#### SPECIAL.

Anthalia nn. spp. Coquillett, D. W. Washington, D.C., Proc. Ent. Soc., 5, 1903, (268).

Boreodromia n. gen., type Synamphotera bicolor Loew. Coquillett, D. W. l.c. (247, 260).

Coloboneura nana n. sp. Coquillett, D. W. *l.c.* (267).

*Empis* nn. spp. **Coquillett**, D. W. *l.c.* (269-271).

Halsanalotes n. gen., H. amaurus n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (41-42).

Lamprempis setigera n. sp. Coquillett, D. W. Washington, D.C., Proc. Ent. Soc., 5, 1903, (272).

Metachela n. gen., type Hemerodromia collusor. Melander. Coquillett, D. W. l.c. (253, 263).

Microphorus nn. spp. Coquillett, D. W. l.c. (268).

Oedalea pruinosa n. sp. Coquillett, D. W. *l.c.* (267).

Schistostoma n. gen., S. eremiata n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (46-47).

Tachydromia nn. spp. Egypt. Becker, T. l.e. 2, 1903, (44–45).

D. W. Washington, D.C., Proc. Ent. Soc., 5, 1903, (266).

Tachypeza pruinosa n. sp. Coquillett, D. W. *l.c.* (267).

### DOLICHOPIDAE.

Chrysotus philtrum n. sp. Melander, A. L. Austin, Cont. Zool. Lab. Univ. Tex. No. 42 in Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (72-75, with fig. in text).

Dolichopus nn. spp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (65).

Hydrophorus breviventris n. sp. Egypt. Becker, T. l.c. (60).

Meringopherusa n. gen., M. separata, M. conneza nn. spp. Egypt. Becker, T. l.c. (56-57).

Paralleloneurum n. gen., P. cilifemoratum n. sp. Egypt. Becker, T. l.c. (51-53).

Psilopus adumbratus n. sp. Egypt. Becker, T. l.c. (62).

Syntormon nn. spp. Egypt. Becker, T. l.c. (53-54).

Tachytrechus salinarius n. sp. Egypt. Becker, T. l.c. (63).

. Thinophilus nn. spp. Egypt. Becker, T. l.c. (48-50).

Trigonocera n. gen., T. rivosa n. sp. Egypt. Becker, T. l.c. (57-58).

### . PHORIDAE.

#### GENERAL.

Brues, C. T. A monograph of the North American *Phoridae* [with bibliography]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (331-404, with pl.).

#### SPECIAL.

Aphiochaeta nn. spp. Brues, C. T. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (360-362).

Apocephalus wheeleri n. sp. Brues, C. T. l.c. (373).

Conicera atra var., neotropica [neotropica] n. var., C. aldrichii n. sp. Brues, C. T. l.c. (379-380).

Hypocera nn. spp. Brues, C. T. l.c. (352-356).

Melaloncha n. gen., M. pulchella n. sp. Brues, C. T. l.c. (374-375).

Metopina pachycondylae n. sp. Brues, C. T. l.c. (384).

Pachyneurella n. gen. Brues, C. T. l.c. (382).

Phora nn. spp. Brues, C. T. l.c. (341-347).

nn. spp. Melander, A. L. and Brues, C. T. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (14-16).

Stethopathus occidentalis n. sp. Melander, A. L. and Brues, C. T. l.c. (17).

Syneura n. gen. for Phora cocciphila Coq. Brues, C. T. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (383).

Trincura montana n. sp. Brues, C. T. l.c. (378).

# TERMITOXENIDAE.

Wasmann, E. Die Thorakalanhänge der Termitozeniidae, ihr Bau, ihre imaginale Entwicklung und phylogenetische Bedeutung. Verh. D. zool. Ges., Leipzig, 13, 1903, (113–120, mit 2 Taf.).

### PLATYPEZIDAE.

Agathomyia viduella Zett., new to Britain. Wood, T. H. Ent. Mag., London, 39, 1903, (271-272). Nephrocerus daeckei n. sp. Johnson, C. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (107-108).

Pipunculus amboinalis Walk., systematisch; 6 nn. spp. Kertein, K. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (465-471).

*pallipes* n. sp. **Johnson**, C. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (107-108).

Verrallia aucta and its host. Jenkinson, F. J. H. Ent. Mag., London, 39, 1903, (222-223).

#### CONOPIDAE.

Physocephala vittata var. Egypt. Becker, T. Berlin. Mit. Zool. Mus., 2, H 2, (192).

# SYRPHIDAE.

### GENERAL.

Brues, C. T. Notes on some California myrmecophiles. [*Hctacrius tristrodius* Horn and Syrphid larva.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (147-149, with fig. in text).

#### SPECIAL.

Ceria bicolor Kert., Beschreibung. C. sculpii Will. faunistisch. et 5 nn. spp. Kortósz, K. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (433-440).

Banks, N. Washington, D.C., Proc. Ent. Soc., 5, 1903, (310).

Chamaesyrphus lusitanicus Mik., a new British Syrphid fly. Sharp, D. Ent. Mag., London, **39**, 1903, (197).

Chilosia dombressonensis. de Rougemont, F. Arch. Sci. Phys, Genève, [4], 16, 1903, (731-732).

skinneri n. sp. New Mexico. Johnson, C. W. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (101).

Eristalis quinquelineatus n. sp. Egypt. Bocker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (82). Eristalis tenar, habit of hovering and emitting a musical note. Harris, W. H. London, J. Quek. Cl., 8, 1903, (513-520).

Melithreptus calccolatus n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (91).

Pseudodoros n. gen., P. nigricollis n. sp. Egypt. Becker, T. l.c. (92).

Syritta subtilis n. sp. Egypt. Becker, T. l.c. (89).

Syrphus longicornis n. sp. Egypt. Becker, T. I.c. (84).

# MUSCIDAE ACALYPTRATAE.

# GENERAL.

Trachiniscidae nov. Fam. verw. mit Trypelidae. Kertész, K. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1003, (355-358, Taf. XV).

### SPECIAL.

Actocctor n. gen. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (169).

Agromyza nn. spp. Egypt. **Becker**, T. *l.c.* (190).

Amydrosoma n. gen., A. discedens n. sp. Egypt. Becker, T. l.c. (140-141).

Anacamptoneurum n. gen., A. obliquum n. sp. Egypt. **Becker**, T. *l.c.* (155).

Anatalanta formiciformis n. sp. Antarktisches Gebiet. **Enderlein**, G. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition, Bd 3, Lfg 7, Jena, 1903, (226).

Anatrichus erinaceus n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (152).

Aphaniosoma n. gen., A. approximatum n. sp. Egypt. Becker, T. l.c. (186).

Asmeringa n. gen., A. inermis n. sp. Egypt. Becker, T. l.c. (174).

Assuania n. gen., A. glabra n. sp. Egypt. Becker, T. l.c. (149-150).

Atissa nn. spp. Egypt. Becker, T. l.c. (162-163).

Borborus niloticus n. sp. Egypt. Bocker, T. l.e. (124).

Centrophlebomyia n. gen. Hendel, F. Zs. Hymenopter., Teschendorf, 3, 1903, (215-216).

Chamaebosca n. gen., C. microptcr. n. sp. Speiser, P. Berliner ent. Zs., 48, 1903, (65-72).

Chloropisca lucidifrons n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus, 2, H 2, (146).

Chymomyza n. gen. = Drosophila e. p. Czerny, L. Zs. Hymenopter., Tescheudorf, 3, 1903, (198-201).

Clanoncurum n. gen., C. infumatum n. sp. Egypt. Bocker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (165).

Clasiopa nn. spp. Egypt. Becker, T. l.c. (161).

Crasisseta nn. spp. Egypt. Becker, T. l.c. (151-152).

Craspedochaeta atra n. sp. 4 C. basalis Czerny, Beschreibung. Kertisz, K. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (569-570).

Dacus nn. spp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (138-139).

Desmometopa niloticum n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (188).

Discomyza vorticis n. sp. Egypt. Becker, T. l.c. (164).

Drosophila buskii n. sp. Coquillett, D. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 12, 1901, (16-18).

costata, D. fuscimana Ztt. Czerny, L. Zs. Hymenopter., Teschendorf, 3, 1903, (198-201).

Elephantinosoma n. gen., E. chnumi, E. perspiciendum nn. spp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (179–180).

Elgiva, synopsis der paläarktischen Arten, E. turcestanica n. sp. Hendel, F. Zs. Hymenopter., Teschendorf, 3, 1903, (213-215).

Ephygrobia nn. spp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (156-159). Eurina triangularis n. sp. Egypt. Bocker, T. l.c. (150).

Glenanthe fasciventris n. sp. Egypt. Becker, T. l.c. (170).

Hecamede grisecens n. sp. Egypt. Becker, T. l.c. (166).

Ilclicobia quadrisetosa n. sp. Coquillett, D. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 12, 1901, (16-18).

Heteromeringia nn. spp. Kestász, K. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (567-569).

Homalometopus n. gen., II. albiditinetus n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (175).

Hyadina fenestrata n. sp. Egypt. Becker, T. l.c. (173).

*Hydrellia* nn. spp. Egypt. Becker, T. *l.c.* (171-172).

tritici n. sp. Australia. Coquillett, D. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (324).

Lagaroceras n. gen., L. megalops n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (148-149).

Leptometopa n. gen., L. rufifrons n. sp. Egypt. Becker, T. l.c. (188).

Limesina nn. spp. Egypt. Becker, T. l.c. (126-127).

Lonchaea aristella n. sp. Egypt. Becker, T. l.c. (129).

Meriza n. gen. verwandt mit Soberocephala. M. bistriyata n. sp.  $\mathcal{G}$  J. M. dorsata Cz.  $\mathcal{G}$ , Beschreibung. **Ker**tósz, K. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (571-572).

Meromyza, life history and description; economics. Webster, F. M. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 42, 1903, (62). 23 cm.

Metopostigma n. gen. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (146).

Microneurum n. gen., M. maculifrons n. sp. Egypt. **Becker**, T. l.c. (152– 153).

Monorrheza n. gen. verw. mit Sobarocephala Cz. M. pictipennisn. sp. Kertósz, K. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, 572-573). Myopites variofasciata n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (132).

Notiphila nigripennis Meig. Becker, Th. Zs. Hymenopter., Teschendorf, 3, 1903, (45-46).

setigera n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H 2, (167).

Notonaulaz n. gen., N. maculifrons, N. setulosa, N. favillacea nn. spp. Egypt. Bocker, T. l.c. (153-155).

Ochthera nn. spp. Egypt. Becker, T. l.c. (181).

Ochthiphila inconstans n. sp. Egypt. Becker, T. l.c. (187).

Oedenops n. gen., O. isis n. sp. Egypt. Becker, T. l.c. (178-179).

Oscinis, life history and description; economics. Webster, F. M. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 42, 1903, (62). 23 cm.

Oxyna parceguttata n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, 1903, (134).

Paralimna decipiens in Egypt. Becker, T. l.c. (168).

Phortica variegata Fall., new to Britain. Sharp, D. Ent. Mag., London, 39, 1903, (248-249).

Psalidotus n. gen., P. prima n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (191-192).

Rhicnoëssa pictijes n. sp. Egypt. Becker; T. l.c. (185).

Scatella variofemorata n. sp. Egypt. Bocker, T. l.c. (185).

Scatophaga lutaria and S. stercoraria, male organs. Wesché, W. London, J. Quek. Microsc. Cl., 8, 1903, (411-416, pl. XXII).

Scatophila farinae n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (177).

Schistopterum n. gen., S. moebiusi n. sp. Egypt. Becker, T. l.c. (177).

Scoliocephalus n. gen., S. pallidisetis n. sp. Egypt. Becker, T. l.c. (173-174).

Scoliopthalmus n. gen., S. trapezoides p. sp. Egypt. Becker, T. l.c. (147).

Sepsis nn spp. Egypt. Becker, T. l.c. (142-145). Sphyracephala brevicornis Say. Houghton, C. O. Philadelphia, Ps., Ent. News Acad. Nat. Sci., 13, 1902, (160).

Stenophthalmus n. gen., S. ocellatus n. sp. Egypt. Becker, T. l.c. (148).

Tephronota ruficeps, T. canadensis n. sp. Johnson, C. W. l.c. (143-144).

Tetanocera, Synopsis der paläarktischen Arten. T. alpestris n. sp. Hendel, F. Zs. Hymenopter., Teschendorf, 3, 1903, (35-37).

Trachiniscus n. gen., T. cyaneiventris n. sp. Q Kertéss, K. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (355-358, Taf. XV).

*Trypeta* nn. spp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (135–136).

Zonosema ? dubia n. sp. New Mexico. Johnson, C. W. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (101-106).

# MUSCIDAE CALYPTRATAE.

# GENERAL.

Howard, L. O. The carriage of disease by flies. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (39-45).

Lommel, V. Bericht über eine Reise im Bezirke Kilwa zur Feststellung des Vorkommens und zur Beobachtung der Lebensgewohnheiten der Tsetsefliege. Ber. Landw. Ostafrika, Heidelberg, 1, 1903, (341-350).

Schat, P. Weitere Mitteilungen über Surra [eine durch den Stich von Stomoxys calcitrans verursachte Rinderkrankheit auf Java]. (Holländisch) Arch. Java Suiker., Soerabaia, 11, 1903, (49-67, mit 2 Taf.).

#### SPECIAL,

Alloeostylus Schn., Nachtrag zur Gattung. Schnabl, J. Zs. Hymenopter., Teschendorf, 3, 1903, (46, 111).

Anthomyia bifasciata n. sp. **Bicardo**, G. and **Theobald**, F. V. Diptera. Nat. Hist. Sokotra, (367).

Atherigona scuttelaris n. sp. Egypt. Becker, T. Berlin, Mitt. Zool. Mus., 2, H. 2, (110).

Coenosia attenuata n. sp. Egypt. Becker, T. l.c. (121).

Cordylobia n. gen. fcr Ochromyia anthropophaga Blanch. Grünterg, K. Berlin, SitzBer. Ges. natf. Freunde, 1903, (400-416, mit 2 Taf.).

Degecria funchris Meg. parasite sur Haltica ampelophaga Guer. Vaney, C. et Conte, A. Paris, C. R. Aced. sci., 136, 1903, (1275-1276).

Glossina Westwood, monograph of the Tsetse-flies based on a collection in the British Museum. With a chapter on the mouth-parts by II. J. Hansen; G. pallidipes n. sp. F. Africa. Austen, E. E. London (British Museum), 1903, (1X + 319, 9 pls.). [Review], Nature, London, 69, 1903, (123-124).

*palpalis* as agent in transmission of sleeping sickness. **Austen**, E. E. London, Proc. Zool. Soc., **1903**, 2, (316-317).

as agent in sleeping sickness. Bruce, D., Nabarro, D. and Greig, E. D. W. Rep. Sleeping Sickness Comm., No. 4, (56– 64, map).

*Homalomyia* nn. spp. Bolivien. **Cherny**, L. Zs. Hymenopter., Teschendorf, **3**, 1903, (239-240).

Homogenia spp. Van der Wulp, F. M. Biol. Centr.-Amer., London, 1903, 11-III, (437-439).

Ilyalomyia spp. Van der Wulp, F. M. Le. (440-445).

Jurinia spp. Van der Wulp, F. M. *i.e.* (466-469).

*Lispe* nn. spp. Egypt. Becker, T. Berlin, Mit. Zool. Mus., 2, H 2, (113-118).

Musca, habits. Geddings, H. D. Washington, D.C., Treasury Dept., Pub. Hith. Mar. Hosp. Ser. Hyg. Lab. Bull. Rep., 18, (Supplement), 1903, (10). 23 cm.

domestica, accoppiamento. Berlese, A. Riv. ratol. veg., Portici, 9, fasc. 2°, 1902, (345-347, con fig.).

schen Gesichtspunkten betrachtet. Witt, F. Aus d. Schule, Leipzig, 14, 1903, (570-573).

(N 2-9053)

Ocyptera spp. Van der Wulp, F. M. Biol. Centr.-Amer., London, 1903, 11– 111, (450-452).

Pegomyia nitidula n. sp. New Mexico. Coquillett in Johnson, C. W. Philadelphia, Pa., Acad. Nat. Sci., Trans. Arcer. Ent. Scc., 29, 1903, (101-106).

*Phorantha briduell* n. sp. **Hine**, J. S. Ohio Nat., Columbus, Ohio, **2**, 1902, (228-230).

Thryptocera (gymnopareia) pomonellae n. sp. Crimea. Schnabl and Mokräeckij, S. Rev. Russ. Ent., Jarcslavli, 3, 1603, (211-217).

Trochiledes n. gen., T. skinneri n. sp. New Mexico. Ccquilisti in Johnson, C. W. Fhiladelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Scc., 29, 1003, (101-106).

Varichaeta n. nom. – Eurigaster Macq. Speiser, P. Berliner ent. Zs., 48, 1903, (65–72).

Xanthomelana spp. Van der Wulp, F. M. Biol. Centr.-Amer., Londou, 1903, 11–111, (451–455).

#### OESTRIDAE.

#### GENERAL.

Cente, A. et Vaney, C. Sur la structure de la cellule trachéale de l'œstre et l'origine des formations ergastoplasmiques. Paris, C. R. Acad. sci., 136, 1903, (561-562).

Tarnani, I. K. Nouvelles observations sur les oestres. (Russ.) Rev. Russ. Ent., Jaroslavií, **3**, 1903, (101–102).

#### SPECIAL.

Cuterebra similis n. sp. New Mexico. Johnson, C. W. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (101).

Dermatobia hominis, general development. Ward, H. B. Lincoln, Stud. Zool. Lab., Univ. Neb., No. 58, 1903, (10, with pl.). 23 cm.

Gastrophilus; importanza patologica delle larve nello stomaco del cavallo. **Perroncito**, E. Torino, Giorn. Acc. med., **65**, 1902, (374-377). Hypoderma bovis [Réponse à une question de M. H. Giraudeau. Girard, A. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (102-103).

a question de M. H. Giraudeau]. **Kieffer**, J. J. *l.c.* (103).

parasitism. (Danish) Koeh, T. P. Kjöbenhavn, Mdskf. Dyrl., **15**, 1903, (129–159).

[à propos de la question de M. H. Giraudeau]. **Bonne.** Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (103).

Thomann, H. Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (1100–1104).

Oestrus maculatus Wied. im westphäl. zoolog. Garten zu Münster. Landois, H. Zool. Garten, Frankfurt a. M., 44, 1903, (53-55); Münster, Jahresber. ProvVer. Wiss., 30, (1901-02), 1902, (64-66).

# PUPIPARA.

Speiser, P. Diptera Pupipara (from Malay Peninsula. Fasic. Malay Zool., 1, (117-126).

#### HIPPOBOSCIDAE.

#### GENERAL.

Laveran, A. Sur deux Hippobosques du Transvaal susceptibles de propager *Trypanosoma theileri*. Paris, C. R. soc. biol., **55**, 1903, (242-243).

#### SPECIAL.

*Hippobosca*, descriptions of species. **Austen**, E. E. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, (256-260).

tasmanica n. sp. Tasmania. Wesché, W. l.c. 11, 1903, (384-385, with text-fig.).

Lipoptena cerri I. S. Africa. Austen, E. E. l.e. 12, 1903, (260-261).

*gracilis* n. sp. Malay Peninsula. **Speiser**, P. Fascic. Malay. Zool., **1**, (121–123). Lynchia maura Big. ein sicilianischer Taubenparasit. **Speiser**, P. Centralbl. Bakt., Jena, Abt. 1, **33**, Originale, 1903, (609-610).

Olfersia spp. Austen, E. E. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, (264-265).

Ornithoica spp. Austen, E. E. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, (263).

Ornithomyia spp. Austen, E. E. l.c. (261-263).

**wulp**, F. M. Biol. Centr.-Amer., London, **1903**, II and III, (431-432).

Pseudolfersia spp. Austen, E. E. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (265-266).

#### BRÁULIDAE.

Braula coeca, die Bienenlaus. Dambach. Schweiz. Bienenztg, Aarau, 25, 1902, (447-449).

# NYCTERIBIIDAE.

Nycteribia (Aerocholidia) chlamydophora n. sp. Malay Peninsula. **Speiser**, P. Fascic. Malay. Zool., **1**, (123–125).

#### INCERTAE SEDIS.

Ascodipteron siamense n. sp. Malay Peninsula. Speiser, P. Fascic. Malay. Zool., 1, (125-126).

#### LIST OF NEW GENERA AND SPECIES.

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  - ----- zammitii. Theobald. 180.
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<ul> <li>czernyi. Kerteśz. 101.</li> <li>nigrifrons. Kerteśz. 101.</li> <li>HIPPOBOSCA [Hippoboscidae].</li> <li>tasmanica. Wesché. 196.</li> <li>Homalometopus n. gen. [Muscidae Acalyptratae]. Becker. 14.</li> <li>albiditinctus. Becker. 14.</li> </ul>
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<ul> <li>czernyi. Kerteśz. 101.</li> <li>nigrifrons. Kerteśz. 101.</li> <li>HIPPOBOSCA [Hippoboscidae].</li> <li>tasmanica. Wesché. 196.</li> <li>Homalometopus n. gen. [Muscidae Acalyptratae]. Becker. 14.</li> <li>albiditinctus. Becker. 14.</li> <li>HOMALONYIA [Muscidae Calyptratae].</li> </ul>
<ul> <li>czernyi. Kerteśz. 101.</li> <li>nigrifrons. Kerteśz. 101.</li> <li>HIPPOBOSCA [Hippoboscidae].</li> <li>tasmanica. Wesché. 196.</li> <li>Homalometopus n. gen. [Muscidae Acalyptratae]. Becker. 14.</li> <li>albiditinctus. Becker. 14.</li> <li>HOMALOMYIA [Muscidae Calyptratae].</li> <li>hyalinipennis. Czerny. 37.</li> <li>obscuripennis. Czerny. 37.</li> </ul>
<ul> <li>czernyi. Kerteśz. 101.</li> <li>nigrifrons. Kerteśz. 101.</li> <li>HIPPOBOSCA [Hippoboscidae].</li> <li>tasmanica. Wesché. 196.</li> <li>Homalometopus n. gen. [Muscidae Acalyptratae]. Becker. 14.</li> <li>albiditinctus. Becker. 14.</li> <li>HOMALOMYIA [Muscidae Calyptratae].</li> <li>hyalinipennis. Czerny. 37.</li> <li>obscuripennis. Czerny. 37.</li> </ul>
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SYRITTA [Syrphidae]. subtilis. Becker 14. SYRPHUS [Syrphidae]. longicornis. Becker. 14. Systoechus [Bombyliidae]. retrogradus. Becker. 14. TACHYDROMIA [Empidae]. anomalicera. Becker. 14. approximata. Becker. 14. immaculata. Becker. 14. lata. Coquillett. 31. ostiorum. Becker. 14. pictitarsis. Becker. 14. varipennis. Coquillett. 31. TACHYPEZA [Empidae]. pruinosa. Coquillett. 31. TACHYTRECHUS [Dolichopidae]. - salinarius. Becker. 14. TAENIOBHYNCHUS [Culicidae]. - arribalzagae. Theobald. 180. fuscopennatus. Theobald. 180. ochraceus. Theobald. 180. TANYTUS [Chironomidae]. dyari. Coquillett. 33. TEPHRONOTA [Muscidae Acalyptratae]. canadensis. Johnson. 90. TETANOCERA [Muscidae Acalyptratae]. - alpestris. Hendel. 72. THALASSONVIA [Chironomidae]. obscura. Johannsen. 87. THINOPHILUS [Dolichopidae]. - indigenus. Becker. 14. modestus. Becker. 14. quadrimaculatus. Becker. 14. THEYPTOCERA [Muscidae Calyptratae]. pomonellae. Mokržeckij. 127. TOXOBHYNCHITES [Culicidae]. - marshalli. Theobald. 180. Trachiniscus n. gen. \_Muscidae Acalyptratae]. Kertész. 98. cyaneicentris. Kertész. 98. n. gen. [Dolichopidae]. Becker. 14. Trigonocera rivosa. Becker. 14. TRIMICRA [Tipulidae]. strasseni. Enderlein. 49. TRINEURA [Phoridae]. Brues. 24. montana. Trochilodes n. gen. [Muscidae Calyptratae]. Coquillett. 88. skinneri. Coquillett. 88.

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- Varichaeta n. nom. [Muscidae Calyptratae]. Speiser. 169.
- Verrallina n. gen. [Culicidae]. Theobald. 180.

XYLONYIA [Leptidae].

aterrima. Johnson. 91.

Zonosema [Muscidae Acalyptratae]. ————— (?) dubia, Johnson. 88.

# 4403-4431 LEPIDOPTERA.

#### TITLES.

Adkin, R. E. Pyrameis cardui, Plusia gamma and Nemophila noctuella. Entomologist, London, **36**, 1903, (274– 276). [4431].

**Aimé**, A. La noctuelle du frêne. Nature, Paris, **30**, (2° sem.), 1902, (314– 315). [4419 4431]. 2

Attken, E. H. and Comber, E. A list of the butterflies of the Konkan. Bombay, J. Nat. Hist. Soc., 15, 1903, (42-55). [4431 4427 ef]. 3

Aldrich, J. M. Orneodes hexoductyla [at Morcow, Idaho]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (156). [4427 gi 4431]. 4

André, E. Sur le son émis par les chenilles. Feuille jeunes natural., Paris, (sér. 4), 33, (224). [4419]. 5

Andrews. Dark variety of Catocala nupta. Ent. Mag., London, 39, 1903, (66). [4423]. 6

Auberjonois, Maurice. Note sur l'hybride Samia cecropia L. 3 × Samia cecnothi Behr Q. J. natural., Mâcon, 2, 1902, (90-96, av. 2 pls.). [4431]. 7

Aurivillius, Chr[istopher]. Diagnosen neuer Lepidopteren aus Afrika. 6. Entomol. Tidskr., Stockholm, 22, 1901, (113-128, with pl.). [4427 f 4431]. 8 Bachmetjew, P. Ein neu-entdecktes Schutzmittel bei Schmetterlingspuppen gegen Kälte. Soc. Entomol., Zürich, 16, 1902, (161–162). [4419]. 9

Ueber die Anzahl der Augen auf der Unterseite der Hinterflügel von Epinephele jurtina L. Allg. Zs. Ent., Neudamm, 8, 1903, (253-256). [4431 4423]. 10

Zur Variabilität der Flügellänge von Aporia crataegi L. in Sophia (Bulgarien). Allg. Zs. Ent., Neudamn, **8**, 1903, (389–395, 470–494). [4431 4423]. 11

Die Flügellänge von Ersbia euryale Esp. 1903 in Sofia. Insektenbörse, Leipzig, **20**, 1903, (364–365). [4423 4431]. 12

Ball, Fr. Notes sur l'effet de la température sur les chrysalides. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (385-388). [4411]. 13

Bankes. [Sugar trap for Lepidoptera.] Ent. Mag., London, 39, 1903, (171). [4403]. 14

Bankes, E. M. Lithosia deplana, Esp. var. unicolor n. var. Ent. Mag., London, 39, 1903, (56-57). [4431]. 15

Bankes, E. R. Descriptions of the larva and pupa of Mompha conturbatella H. B. Ent. Mag., London, **39**, 1903, (133-136). [4431]. 16

Barrett, C. G. Nephopteryz similella Zinck. A new British Phycid. Ent. Mag., London, **39**, 1903, (1). [4427 de 4431]. 17

Acrobasis verrucella Hb., and rubrotibiella F. R., as British insects. Ent. Mag., London, **39**, 1903, (164-166). [4427 de 4431]. 18

An experience in interbreeding Clostera anachoreta. Ent. Mag., London, **39**, 1903, (215-216). [4423]. 20

The Lepidoptera of the British islands: Pts. 95-106. Being vol. ix, (1-454, pls. 377-424) [carrying the work to the end of the *Pyralidae*]. [4427 de 4403]. 21

Barrett, F. Further notes on South African Lepidoptera. Ent. Mag., London, **39**, 1903, (35–38, 76–83, 138–143). [4427 fg 4431]. \_\_\_\_22

Barrett, O. W. Cheap tropical American butterflies [due to abundance]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (238-240). [4403]. 23

Tropical butterflies. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (90). [4427 h]. 24

Bartel, Max. Lepidopteren des südlichen Urals, gesammelt von Herrn Julius Tief. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (183-230). [4427 db 4431]. 25

Ac der Sammlung des kgl. Museums für Naturkunde in Berlin. D. ent. Zs. Iris, Berlin, 16, 1903, (170-214). [4431]. 26

Zwei neue paläarktische Lepidopteren. D. ent. Zs. Iris, Berlin, **16**, 1903, (215-220). [4431]. 27

Bate, Miss D. M. A. Notés on the resting attitude of Zamacra flabellaria. Entomologist, London, **36**, 1903, (106). [4419 4431]. 28

Battley, A. M. Notes on the lifehistory of Aporia crataegi. Entomologist, London, 36, 1903, (249-251). [4415 4431]. 29

Bell, R. G. v. Kellogg, V. L. 30

Belliard, H. Contribution à l'étude de la formation et de la nature de la matière colorante des ailes de lépidoptères (d'après les travaux récents et spécialement ceux de la comtesse de Linden). Feuille jeunes natural., Paris, (sér. 4), 38, 1903, (141-146, 161-163). [4411].

Bengtason, Simon. Investigations on Lymantria monacha and the scene of its ravages in the provinces Södesmänland and Ostergótland in the year 1900. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (145-157). [4419 4431]. 32

Berlese, Antonio. Contro la Cochylis. Bollettino di Entomologia agraria, Padova, 9, 1902, (82–86, con. fig.). [0(60 4403 4431]. 33

Best, D. Excursion to Wandong [Victoria]. Vict. Nat., Melbourne, 20, 1903, (103-104). [4427 if 4431 4827 if 4831]. 34 Bethune-Baker, G. T. A revision of the Amblopodia group of the butterflies of the family *Lycaenidae*. London, Trans. Ent. Soc., **17**, 1903, (1-164, pls. -V). [4431]. 35

On new species of Lycaenidae from West Africa. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (324-334). [4427 fd 4431]. 36

A new species of Arhopala from British New Guinea and Singapore. Ent. Mag., London, **39**, 1903, (217-218). [4427 *ia eg* 4431]. 37

Boutenmüller, William. Descriptive catalogue of the *Noctuidae* found within fifty miles of New York City. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 14, 1901, (229–312, with 4 pls.). [4427 gg 4431]. 38

Description of a new moth [Olene montana n. sp.] from North Carolina. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (585-586). Separate. 24.5 cm. [4427 gh 4431]. 39

Notes on some species of *Catocala*. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (505-510). Separate. 24.5 cm. [4431]. 40

Billson, James E. [Vanessa milberti in Providence, R. I.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (57). [4427 gg 4431]. 41

**Bloomfield**, E. N. Suffolk Lepidoptera in 1902. Ent. Mag., London, **39**, 1903, (88-89). [4427 *de* 4403]. 42

Boas, J. E. V. Observations on Bombyx pini in Norway 1903. (Norw.) Forstl. Tidssk., Kristiania, 2, 1903, (107-112, 2 pls.). [4427 da]. 43

**Bode.** [Melitaea athalia ab.] Berliner ent. Zs., **48**, 1903, (25). [4431]. 44

Bordas, L. Les glandes mandibulaires des larves de lépidoptères. Paris, C. R. Acad. sci., **136**, 1903, (1273-1275). [4407 4415]. 45

Les glandes salivaires de la nymphe de Sphinz conrolvuli L. Paris, C. R. soc. biol., **55**, 1903, (141-143). [4407 4415 4431]. 46

Brabant, D. Sur le son émis par les chenilles. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (207). [4419]. 47

Brascassat, M. Observations lépidoptérologiques. Epinephele janira. L. Rhodocera cleopatra L. — Chelonia pudica Esp. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (64). [4431 4427 df 4423 4415]. 48

Bray, E. Lépidoptères capturés aux environs de Virton. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (143-146). [4403 4427 df]. 49

Brecher. Beobachtungen über den Frass des Kiefernspanners im Herbet 1900 und Vorbeugung. D. Forstztg, Neudamn, **16**, 1901, (617-620). [4419 4431]. 50

Breddin, G. Zwei neue Morphiden. Soc. Entomol., Zurich, 17, 1903, (153– 154). [4427 hc ed 4431]. 51

Brimley, C. S. and Sherman, Franklin, jun. A morning's collection at Raleigh, N. C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (230-232). [4427 gh]. 52

Britton, W. E. The apple-tree tent . caterpillar. [Clisiocampa americana]. Agric. Exp. Sta., Connecticut, New Haven, Bull., No. 139, 1902; (12, with 3 pls., 3 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (371-372). [4419 4431]. 53

Brown. Eclosion hors saison de Mania typica. Bordeaux, Actes soc. linn., 58, 1903, (Proc.-verb., CLXXXVII-CLXXXVIII). [4423]. 54

Toxocampa pastinum des environs de Bordeaux. Bordeaux, Actes soc. linn., **58**, 1903, (Proc.-verb., CLXXIX). [4427 df 4419]. 55 ——— Note sur quelques Lépidoptères de nos environs [de Bordeaux]. Bordeaux, Actes soc. linn. **58**, 1903, (Proc.-verb., CCLVII-CCLVIII). [4431 4427 df]. 56

Brown, H. H. Callophrys (Thecla) rubi (Linn.) in Fife. Ann. Scot. Nat. Hist., Edinburgh, 1903, (187). [4427 de 4431]. 57

Butterflies and dragonflies in Banffshire. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (247). [3827 de 4427 de]. 58

**Browne**, C. S. A list of the Lepidoptera of the island of Capri, with a few notes. Entomologist, London, **36**, 1903, (254-256, 284-286, 307-309). [4403 4427 dh]. 59

Burkill, J. H. r. Willis, J. C.

Burrows, C. R. N. Notes on Phorodesma (Comibaena) pustulata, Hufn. Ent. Rec., Loudon, 15, 1903, (171-177, 203-205, pl. VII). [4431]. 61

4403

[Busack, E.] Uebersicht der von Herrn E. Busack bei Schwerin und Waren gefangenen Grossschmetterlinge. [Mit Vorwort von M. Gillmer.] Güstrow, Arch. Ver. Natg., 57, Abt. 1, 1903, (105-127). [4427 dc]. 62

**Busck**, August. A revision of the American moths of the family Gelechiidae, with descriptions of new species. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (767-938, with pl.). Separate. 24.5 cm. [4427 gh 4431]. 63

Notes on Brackenridge Clemens types of Tineina [nn. gen. Brackenridgia and Greya and n. sp. in Lithocolletis]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (181-220). [4431].

Notes on the Cerostoma group of Yponomeutidae, with descriptions of new North American species from western United States. New York, N.Y., J. Ent. Soc., 11, 1903, (45-59). [4427 gi 4431]. 65

On the generic name of the Codling moth [*Carpocapsa*]. New York, N.Y., J. Ent. Soc., **11**, 1903, (106– 111). [**4431**]. 66

Caillon, F. Chenilles de Papilio machaon exhalant une odeur de musc. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (38). [4431 4419]. 67

Galand, M[arinus]. Einige Mitteilungon über Bombyz populi L. (Holändisch)'s Gravenhage, Tijdschr. Ent., 46, [1903], (65-70). [4415 4431]. 68

Capper, C. Occurrence of Thalera fimbrialis Scop. in Great Britain. Ent. Mag., London, 39, 1903, (216). [4427 de 4131]. 69

Östverikov, S. S. Pyrrhia exprimens Walker = oszilliger Clor. = aconiti Hoeltzermann dans la region paléarctique. (Russ.) Rev. Russ. Ent., Jaroelavli, 3, 1903, (384-385). [4427 db ea]. 70

**Cisrard**, Léonce. Educations de Bombyciens séricigènes en 1902. Paris, Bal. soc. nat. acclim., **49**, 1902, (382-386). [4419 4431]. 71 **Chapman, T. A.** [Homeochromatism in European butterflies.] London, Proc. Ent. Soc., **1903**, (42–44). [4407]. 72

Variation of Chrysophanus phlusas. London, Proc. Ent. Soc., 1903, (62). [4423]. 73

On winglessness in winter moths. Ent. Rec., London, 15, 1903, (43-46). [4419]. 74

On Orgyia aurolimbata Gn. at Bejar. Ent. Rec., London, 15, 1903, (113-118, pls. IV, V). [4419 4431]. 75

The European Orgyias: their specialisation in habits and structure. Ent. Rec., London, 15, 1903, (169-171, with pls.). [4419 4427 de 4431]. 76

A new Phalacropterygid species and genus from Spain. Pyropsyche moncaunella. Ent. Rec., London, 15, 1903, (324-330). [4427 dg 4131]. 77

Chittenden, F[rank] H[urlbut]. The fall army worm [Laphygma frugiperde] [with bibliography] and the variegated cutworm [Peridroma saucia]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 29, 1901, (64). 23 cm. [4419 4431]. 78

[Plathypena scabra Fab.]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (45–50). [4431 4419]. 79

**Ohrétien**, P. Le Stagmatophora divitella Cst. n'est pas cécidogène. Paris Bull. soc. ent., **1902**, (261-264). [4431 4419]. 80

hila laetana Styr. Naturaliste, Paris, (sér 2), 23, 1903, (11-12). [4431]. 81

Histoire naturelle de l'Eupithecia liguriata Mill. Naturaliste, Paris, (sér. 2), 24, 1902, (239-241). [4415 4419 4431]. 82

La Conchylis austriana, nouvelle Conchylis cécidogène. Naturaliste, Paris, (sér. 2), 24, 1902, (257-258). [4431 4419]. 83

Les Erebia de France. Naturaliste, Paris, (sér. 2), 25, 1903, (71-72). [4431 4427 df]. 84

583

Clarke, W. E. Vanessa cardui and other insects at the Kentish Knock lights'iip. Ent. Mag., London, 39, 1903, (289-290). [4419 4431]. 85

**Clarke**, W. T. The potato worm in **California** (*Gelechia operculella*). Agric. Exp. Sta., California, Berkeley, Bull. No. **135**, 1901, (30, with 10 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric Off. Exp. Sta. Rec., **13**, 1902, (**765**-766). [4419 4427 gi 4431]. 86

**Clément,** A. L. La teigne du crin. Nature, Paris, **30**, (2<sup>e</sup> sem.), 1902, (251– 252). [4419 4431]. 87

**Cockerell**, T[heodoro] D[ru] A[lison]. The blackberry crown-borer [Bembecia marginata] in New Mexico. "Notes from the New Mexico Biological Station 3." Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (100-101). [4427 gi **4431**]. 88

Euhogenia [Euhogena] nebraskae Hy. Edw. [at Las Vegas, N.M.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (303). Correction, Ib., 14, 1903, (29). [4427 gi 4431]. 89

Aellopas fadus var. titan Cram. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (326). [4427 gi 4431]. 90

*Lepidotrama* n. nom. for *Trama* Harvey (not *Trama* Heyd). Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (182). [4431]. 91

Colthrup. [Birds attacking butterflies] Entomologist, London, 36, 1903, (173). [4419 5819]. 92

Comber, E. v. Aitken, E. H.

**Constock**, G. F. A list of Lepidoptera found in the Adriondack Mts. [with list of other insects]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (197-200). [2427 gg 4427 gg]. 93

**Comstock**, John and **Comstock**, Hurd. A trip to lake Josephine, Fla., [with list of Rhopalocera taken]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (75-77). [4427 gh 4431]. 94

Comstock, Hurd v. Comstock, John.

Conte, A. r. Levrat, D.

Cook, John H. Out of due season [Emergence of Lepidoptera]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (142–144). [4423]. 95 La chasse aux papillons dans la région d'Elbeuf. Elbeuf, Bul. soc. sci. nat., **20**, 1901, [1902], (61-67). [4419 4427 df]. 97

Courvoisier, L. G. Ueber Aberrationen der Lycaeniden. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 11, 1903, (18-25, av. 1 pl.). [4423 4431]. 98

Coutagne, G. Recherches expérimentales sur l'hérédité chez les vers à soie. Bul. sci. France Belgique, Paris, 37, 1903, (1-194, av. fig. et 9 pls.). [0223 4423]. 99

**Croft.** [Colour of butterflies wings, diffraction of pigment.] Nature, London, **65**, 1903, (391). [4407]. 100

**Grombrugghe de Picquendasle**, de. Note sur quelques microlépidoptères de la faune belge. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (100–104); **46**, 1902, (451–483). [4431]. 101

Note sur quelques microlépidoptères nouvellement observés en Belgique. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (57-58). [4427 dd]. 102

Note sur quelques lépidoptères de la faune belge et sur leur larves. Namur, Rev. Soc. ent., **1903**, (52-55). [4403].

Curtis. [Bird destroying butterflies.] Entomologist, London, **36**, 1903, (68). [4419 5819]. 104

Dascke, E. The larva of Phiprosopus callitrichoides. New York, N.Y., J. Ent. Soc., 11, 1903, (105). [4431]. 105

**Dale**, C. W. Historical notes on Lycaena arion in Britain. Ent. Mag., London, **33**, 1903, (4-5). [4427 de 4431]. 106

Historical notes on Chryeophanus dispar. Ent. Mag., London, **39**, 1903, (147–148). [4431]. 107

Dammer, Udo. Zur Seidenbaufrage. Tropenpflanzer, Berlin, 7, 1903, (72–79). [4403 4431]. 108

Dankler, M. Schutzfärbung der Schmetterlingspuppen. Natur u. Offenb., Münster, 49, 1903, (698–699). [4419]. 109

Day, G. O. A list of Lepidoptera found in the Counties of Cheshire Flintshire, Denbighshire, Carnarvonshire and Anglesea. Assisted by I. Arkle, Herbert Dobie and Robert Newstend. Chester, Ann. Rep. Soc. Nat. Sci., No. 5, 1903, (viii + 120). [4427 de]. 110

Denton, William D. Tropical butterflies. [Scarcity in South America]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (316-317). [4403]. 111

Dewitz, J. Ueber die Herkunft des Farbstoffes und des Materials der Lepidopterenkokons. Zool. Anz., Leipzig, 27, 1903, (161-168). [4415 4411]. 112

Dietze, Karl. Beiträge zur Kenntnis der Eupithecien. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (251-264, mit 1 Taf.). [4431]. 113

Von der spanischen zur italienischen Mittelmeergrenze. Sammeltage in Südfrankreich; nebst Bericht über die vorgefundenen Eupithecien. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (231-268). [4427 df 4431]. 114

Disqué, H. Verzeichniss der in der Umgegend von Speyer vorkommenden Kleinschmetterlinge. (Forts.) D. ent. Zs. Iris, Berlin, **14**, (1901), 1902, (197– 228). Nachtrag dazu : *Ib.*, **15**, (1902), 1903, (343). [4427 de]. 115

Verzeichniss der in der Pfalz vorkommenden, aber bisher noch nicht bei Speyer aufgefundenen Kleinschmetterlinge. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (229-250). [4427 dc]. 116

Distant, W. L. Animal sense perceptions. Zoologist, London, (Ser. 4), 6, 1902, (161-178). [2419 6019 5819 4419]. 117

Insecta transvaaliensia, Pt. iv, (81-96, pls. VII-VIII). [4427 fg 4431]. 118

**Dixey**, F. A. D. On Lepidoptera from the White Nile, collected by Mr. W. L S. Loat, F.Z.S.; together with further notes on seasonal dimorphism in butierflies. London, Trans. Ent. Soc., **1903**, (141-163, pl. VII). [4423 4427 fb 4431]. 119

Dod, F. H. Wolley. Pests and grease. [Lepidoptera collections]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (50-53). [4403]. 120

Dognin, Paul. Hétérocères nouveaux de l'Amérique du Sud. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (173-189); **46**, 1902, (226-233, 335-350, 473-480). [4427 h 4431]. 121

Doleschall, H. Zygaena ochsenheimeri. [Selbetändige Art. Ferner Ilybrid von Z. minos & und Syntomis phegea 3]. Soc. Entomol., Zürich, 17, 1902, (121). [4423 4431]. 122

Dollman, J. C. Breeding cage for pupse. Ent. Rec., London, 15, 1903, (7, with pl.). [4403]. 123

Notes on the eggs, larva, cocoon and female of Orgyia splendida. Ent. Rec., London, 15, 1903, (283-284). [4415 4431]. 124

Doncaster, L. Mendel's law of heredity in insects. Ent. Rec., London, 15, 1903, (142-144). [4423 0223]. 125 Dorr, Emile. Rareté des lépido-

ptères. Abondance de Parasites. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (38). [4219 4419 4619]. 126

Douglas, J. Some account of the larvae of *Poecilocampa populi*. Entomologist, London, **36**, 1903, (13). [4415 4431]. 127

Druce, Herbert. Descriptions of somenew species of Lepidoptera. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (196-203). [4431]. 128

Descriptions of some new species of Lepidoptera from tropical S. America, and one from North Australia. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (220-222). [4427 k ic 4431]. 129

Druce, H. H. C. J. Descriptions of new species of West African Lycaenidae. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (69-71). [4427 fd 4431]. 130

Description of a new species of African Hesperiinae. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (636). [4427 f 4431]. 131

**Dudgeon**, G. C., **Elwes**, H. J. and **Hampson**, Sir George. A Catalogue of the Heterocera of Sikhim and Bhutan. Bombay, J. Nat. Hist. Soc., **14**, 1903, (761-763); **15**, 1903. (319-326). [4427 ef 4431]. 132

Dufour, J. La Pyrale. Chron. Agric., Lausanne, 15, 1902, (319-328, av. 4 Figs.). [4419 4431]. 133 **Dufour**, J. Pyrale et gribouri. [*Eumolpe*]. Chron. Agric., Lausanne, **15**, 1902, (459-462, 2 Figs.). [4419 4819]. 134

Dupont, L. Insectes du Jardin (Mont-Blanc). Elbeuf, Bul. soc. étud. sci. nat., 20, 1901, [1902], (41). [4427 df di 4431 4827 df di 4831]. 135

Les Argynnides de la Normandie. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (80-81). [4419 4427 df 4431]. 136

Dupuy, G. Rhodocera cleopatra dans les Charentes. Question. Feuille jeunes natural., Paris, (sér. 4), 33, 1902, (9–10). [4427 df 4431]. 137

Les Argynnides de la Charente, des Deux-Sèvres, de la Dordogne et de la Gironde. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (196-198). [4431 4427 df 4419]. 138

Durrant, J. On a new genus of Tineid moths. Calcutta, Ind. Mus. Notes, 5, 1903, (92). [4431]. 139

**Dyar**, Harrison G[ray]. Synoptic table of the North American species of *Chionobas*. Washington, D.C., Proc. Ent. Soc., 5, 1902, (42). [4427 g 4431]. 140

Notes on Arachnis dilecta Boisd. Washington, D.C., Proc. Ent. Soc., 5, 1903, (94). [4431]. 141

Note on a Californian fruit worm [Vitula serratilinella]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (104). [4431]. 142

The life history of a second Epiplemid (Callizzia amorata Pack). Washington, D.C., Proc. Ent. Soc., 5, 1903, (131-133). [4431]. 145

Some recent work in North American Lepidoptera. [Annual address of President.] Washington, D.C., Proc. Ent. Soc., 5, 1903, (167-173). [4403 4427 g]. 146

of Geometridae [Hulstina terlineata].

Washington, D.C., Proc. Ent. Soc., 5, 1903, (178-179). [4431]. 147

**Dyar**, Harrison G[ray]. Note on the North American white-marked species of *Eucosma*. Washington, D.C., Proc. Ent. Soc. **5**, 1903, (179-180). [4427 g 4431]. 148

List of Lepidoptera taken at Williams, Arizona, by Messrs. Schwarz and Barber. 1. Papilionoidea, Sphingoidea, Bombycoidea, Tineioidea (in part). Washington, D.C., Proc. Ent. Soc., 5, 1903, (223-232). [4427 gi 4431]. 149

Note on Crambus offectalis Hulst and allied forms (Evertia neomexicana, n. sp.). Washington, D.C., Proc. Ent. Soc., 5, 1903, (285-286). [4431]. 150

New North American Lepidopters with notes on larvae. Washington, D.C., Proc. Ent. Soc., i 1903, (290-298). [4427 gf 4431]. 151

A note on Pyrausia ochosalis Fitch, M.S. Washington, D.C., Proc. Ent. Soc., 5, 1903, (305). [4431]. 152

Note on a wrongly identified species of Tortricidae (Phthinolophus indentanus n. gen. and sp.). Washington, D.C., Proc. Ent. Soc., 5, 1903, (306-307). [4431].

A review of the North American species of the Lepidopterous family Anthroceridae, [with bibliography]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (322-329). [4427 gf 4431]. 154

The Psychophora mix-up, 1 [referred to Geometridae]. Philadelphia, Pa., Ent. News Acad. Nat. [Sci., 13, 1902, (191-192). [4431]. 155

The Psychophora mixup, 2 [Scinneria n. gen.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (193-196). [4431]. 156

A review of the North American species of Pronuba and Prodoxus. New York, N.Y., J. Ent. Soc., 11, 1903, (102-104). [4427 g 4431]. 157

The real larva of Xanthopastis timais Cramer. New York, N.Y., J. Ent. Soc., 11, 1903, (104). [4431]. 158 Daturzynski, Clemens. Neue Zygaenen-Aberrationen, nebst kleinen Bemerkungen über bereits bekannte Aberrationen. D. ent. Zs. Iria, Berlin, 15, (1902), 1903, (335-338). [4423 4431].

159 *"confluens"* Zygaena angelica O. ab. *"mihi. Wien, JahrBer.* Entom. Ver., **11**, (1900), 1902, (117). [4431].

Egorov, N. M. Die Lepidopteren am nördlichen Abhange des centralen Kaukasus. (Russ.) Tiflis, Izv. Kavk. Otd. Russ. Geogr. Obsč., 16, 1, 1903, (9-24). [4427 db]. 161

Ellsworth, Addison. Notes on butterflies [Colias philodics and Papilio asterias] and description of an aberration [Melitaea streckeri n. sp.]. Philadelphis, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (103-104). [4431]. 162

**Elwes**, H. J. On a collection of Lepidoptera from Arctic America. London, Trans. ent. Soc., **1903**, (239–243, pl. IX). [4423 4427 g 4431]. 163

The butterflies of Chile. London, Trans. Ent. Soc., **1908**, (263– 301, pls. XII-XIV). [4427 hk 4431]. 164

## --- r. Dudgeon, G. C.

Enderlein, Günther. Die Landarthropoden der von der Tiefsee-Expedition besuchten Inseln. I. Die Insekten and Arachnoideen der Kerguelen. II. Die Landarthropoden der antarktischen Inseln St. Paul und Neu-Amsterdam. (Wissenschaftliche Ergebnisse der deutschen Tiefsee Expedition, Bd 3. Lfg 7.). Jena, 1903, (197-270, mit 10 Taf.) 35 cm. [2427 oc mb 2431 3631 4231 4431]. 165

Evans, W. D. v. Leslie, G.

Evers, J. Beitrag zur Biographie von Argynnis paphia L. Insektenbörse, Leipzig, 20, 1903, (109). [4431].

166 **Paes**, H[enri]. Une invasion de chenillee du chou. Lausanne, Bul. Soc. Sci. Nat., **38**, 1902, (XIX); Arch. Sci. Phys. Genère, (sér. 4), **13**, 1902, (602). [4419 4431]. 167

La chenille du chou. Chron. Agric., Lausanne, **15**, 1902, (1-10). [4419 4431]. 168

Faire, E. Supplement à la Faune des Macrolépidoptères du Valais. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 11, 1903, Peilage, (1-39). [4427 di]. 169

Farkas, Kálmán. Untersuchungen über den Energie- und Stoffumsatz bei der Entwicklung von Seidenrauper. (Ungarisch) Math. Termt. Ert., Budapest, 21, 1903, (59-94). [4411 4431]. 170

Fassi, A. H. Die Eiablage der Tagfalter in der Gefangenschaft. Ent. Jahrb., Leipzig, 12, 1903, (139–142). [4419]. 171

Ornithoptera goliath. Insektenbörse, Leipzig, 20, 1903, (100). [4431]. 172

Fawoett, J. Malcolm. Notes on the transformations of some South-African Lepidoptera (continued from vol. xv.). London, Trans. Zool. Soc., 17, 1903, (165-190, pls. VI-VIII). [4415 4431]. 173

**Pinks**, L. Oderia tibiale. Ent. Zs., Guben, **16**, (1902-03), 1902, (2, 10). [4431]. 174

Finn. [Birds capturing butterflies.] Nature, London, **65**, 1903, (415). [5819 4419]. 175

**Pischer**, E. I.epidopterologische Ezperimental-Forschungen. [III.] Allg. Zs. Ent., Neudemm, **8**, 1903, (221-228, 269-284, 316-326, 356-368). [4411 4423]. [76]

Eine Varietät von Vanessa zanthomelas Esp. und Bemerkungen über Eigenschaften und Verwandtschaft der Vanessen. Ent. Zs., Guben, 16, (1902-03), 1902, (57-58, 61, 69-70). [4431]. 177

------ Drei neue Formen aus der Gruppe der Vanessiden. Soc. Entomol., Zürich, 17, 1902, (49-50). [4423 4431]. 178

**Ford.** Gynandrous *Hesperia actaeon.* Entomologist, London, **36**, 1903, (242). [4411 4431]. 179

Foster, F. H. Papiliophilenorin New Hampshire [following food plant, Aristolochia sipho]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (326). [4427 cg 4431]. 180

Fougères, Marquis de. Différence entre le papillon borer des Antilles (Diatraca saccharalis Fbr., obliterallus L.) et le papillon borer (Diatraca striatalis Snell) de Java, de l'ile Maurice et de la Réunion. Paris, Bul. soc. nat. acclim., 50, 1903, (60-62). [4419 4431]. 181

593

**Foulquier**, G. *Euprepia pudica*. Fouille jounes natural., Paris, (sér. 4), **33**, 1903, (51). [4419 4431]. 182

Leucophasia lathyri III. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (151). [4423 4431 4427 df]. 183

Familiarité observée chez les lépidoptères [Réponse à M. de Rocquigny - Adanson]. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (170). [4419]. 184

Freke, P. E. Some British forms of Melitaea aurinia. Entomologist, London, **36**, 1903, (86–89, 108–112). [4423 4431]. 186

Pringe, Carl. Ein Schlusswort zur Verfolgung der Schmetterlinge durch Vögel (ueber die Mimikry-Theorie). Soc. Entomol., Zürich, **17**, 1902, (99–100, 105–108). [5819 4423]. 187

Unregelmässige Entwicklung bei Bombyz quercus. Soc. Entomol., Zürich, **17**, 1903, (185–186). [4423 4431]. 188

Ein Hybride von Parnaesus apollo-delius. Soc. Entomol., Zürich, 18, 1903, (52). [4423 4431]. 189 Frohawk, F. W. Life-history of Vanessa antiopa. Entomologist, London, 36, 1903, (2-5). [4415 4431].

1900 The earlier stages of *Lycaena arion*. Entomologist, London, **36**, 1903, (57-60). [4415 4431]. 191

Life-history of Argynnis lathonia. Entomologist, London, 36, 1903, (300-304). [4415 4431]. 192

Fruhstorfer, H. Verzeichnis der in Tonkin, Annam und Siam gesammelten Papilioniden und Besprechung verwandter Formen. Berliner ent. Zs., 47, 1902, [1903], (167–234). [4427 cd ee 4431]. 193

[Neue Subsp. v. Papilio.] Berliner ent. Zs., **48**, 1903, ((3)-(4)). [4431]. 194

[Aemona lena Atk. Q.] Berliner ent. Zs., 48, 1903, ((18)). [4431]. 195

(19), (20). [4431]. [9053] (19, 20053) **Fruhstorfer**, H. Neue *Hypolimnas* und Uebersicht der bekannten Arten. [Ferner: Neue *Euploca*. Neue Nymphaliden. Neue Pieriden und Uebersicht verwandter Formen. Eine neue *Libythea* aus Afrika.] Berliner ent. Zs., **48**, 1903, (73-112). [4431]. 197

Verzeichnis der in Tonkin, Annam und Siam gesammelten Nemeobinae und Libythaeinae und Besprechung verwandter Formen. Berliner ent. Zs., 48, 1903, (271-296). [4427 ee ed 4431]. 198

Neue und seltene Lepidopteren aus Annam und Tonkin und dem malayischen Archipel. D. ent. Zs. Iris, Berlin, **14**, (1901), 1902, (265-276, mit 1 Taf.). [4427 ed eg 4431]. 199

Eine neue Lokalform der seltenen Ag[rias] amydonius Stdgr. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (327-328). [4431]. 200

Neue Lepidopteren aus dem austromalayischen Gebiet. D. ent. Zs. Iris, Berlin, **14**, (1901), 1902, (329-330). [4431 4427 eg]. 201

Neue indo-australische Lepidoptoren. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (334-350). [4431 4427 i]. 202

<u>— Eine neue Agrias.</u> [A. claudia ab. vesta.] D. ent. Zs. Iris, 14, (1901), 1902, (351–352). [4431]. 203

Noue Papilio-Formen aus dem indo-malayischen Gebiet. D. ent. Zs. Iris, Berlin, **15**, 1902, (161–168). [4427 ef eg 4431]. 204

 Neue
 Lepidopteren
 aus

 dem indo-malayischen
 Gebiet.
 D. ent.

 Zs.
 Iris,
 Berlin,
 15, 1902, (169-178).

 [4431
 4427 ef eg].
 205

Agrias narcissus Stdgr. 3 oder nov. subspec. D. ent. Zs. Iris, Berlin, 15, 1902, (179, mit 1 Taf.) [4431]. 206

Verzeichniss der in Tonkin, Annam und Siam gesammelten Pieriden und Besprechung verwandter Formen. D. ent. Zr. Iris, Berlin, **15**, (1902), 1903, (269-305). [4427 ed ee 4431]. 207

Neue Papilioformen und andere Lepidopteren aus Ost-Asien und dem malayischen Archipel. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (306-315). [4431 4427 eg]. 208

Fruhstorfer, H. Zweineue Pseudacraca aus Afrika. D. ent. Zs. Iris, Berlin, 16, 1903, (9–10). [4431]. 209 Neue Papilioniden aus dem australischen Gebiet. D. ent. Zs. Iris, Berlin, 16, 1903, (11-16). [4427 i 4431]. 210 Formosa. D. ent. Zs. Iris, Berlin, 16, 1903, (17-19). [4427 ec 4431]. 211 Eine neue Satyride von Borneo. D. ent. Zs. lris, Berlin, 16, 1903, (20-21). [4427 eg 4431]. 212 Neue Nymphaliden aus Ostasien. D. ent. Zs. Iris, Berlin, 16, 1903, (22-42). [4431 4427 e]. 213 Neue Parnassier. D. ent. Zs. Iris, Berlin, 16, 1903, (43-46, mit Taf.). [4431]. 214 Neue Pieriden aus Ostund Süd-Asien. D. ent. Zs. Iris, Berlin, **16**, 1903, (47–50). [4431 4427 ed]. Revision der Gattungen Hestia und Nectaria. D. ent. Zs. Iris, Berlin, 16, 1903, (51–65). [4431]. 216 Eine neue Nymphalide aus Neu-Guinea. D. ent. Zs. Iris, Berlin, Neu-Gumen. D. Chu. 201 **16,** 1903, (66–67). [4427 ia 4431]. 217 Beitrag zur Kenntniss der Lepidopteren der Viti-Inseln. Stettiner ent. Ztg, 63, 1902, (350-359). [4427 nf 4431]. 218 - Neue afrikanische Lepidopteren. Stettiner ent. Ztg, 64, 1903, (359-361). [4427 f 4431]. 219 - Zwei neue Sikkim-Falter. Insektenbörse, Leipzig, 20, 1903, (148). [4427 ef 4431]. 220 Neue Falter von der Insel Obi. Insektenbörse, Leipzig, 20, 1903, (349, 357). [4427 eg 4431]. 221 Neue Caligo-Formen. Insektenbörse, Leipzig, 20, 1903, (413). [4431]. 222 Papilio xenocles : kephisos n. subsp. Soc. Entomol., Zürich, 16, 1902, (145–146). [4427 ed 4431]. 223 Elymnias undularis: meridionalis n. subsp., E. undularis: violetta n. subsp., E. lais: apelles n. subsp., Papilio antiphates : antiphonus n. subsp. Soc. Entomol., Zurich, 16, 1902, (169-170). [4427 e 4431]. 224

Fruhstorfer, H. Neue Papilioformen aus dem Indo-Australischen Gebiet. Soc Entomol., Zürich, 17, 1902, [4427 ia e 4431]. (57). 225dineri n. nom. für Troides ruficollis Rothschild. Soc. Entomol., Zurich, 17, 1902, (57). [4431]. 226 Neue Papilioformen aus Ostasien. Soc. Entomol., Zürich, 17. 1902, (73-74). [4427 e 4431]. 227 - Neue ostasiatische Rhopaloceren. Soc. Entomol., Zurich, 17. 1902, (81-82). [4427 e 4431]. 228 – Neue Pieriden aus dem Indo-Australischen Gebiet. Soc. Entomol., Zürich, 18, 1903, (17-18). 229 [4427 cg ia 4431]. Verzeichnis der in Hinter-Indien gesammelten Pieriden. Soc. Entomol., Zürich, 18, 1903, (18-19, 25-230 26). [4427 e 4431]. - Neue Pieriden aus Ost-Asien. Soc. Entomol., Zürich, 18, 1903, (35-36). [4427 e 4431]. 231 Tonkin - Pieriden. Soc. Entomol., Zürich, 18, 1903, (41-42). [4427 ed 4431]. 232 Ornithoptera paradisea ab. auriflua n. subsp. Soc. Entomol., Zürich, 18, 1903, (49). [4427 ia 4431].  $23\bar{3}$ Eine neue Ornithoptera-Soc. Entomol., Zürich, 18, 1903. form. (49). [4423 4431]. 234– Papilio macfarlanei : ce\*tius n. subsp. [Lokalität unbekannt]. Soc. Entomol., Zürich, 18, 1903, (49). 235 [4427 eg 4431]. - Zwei neue Parnassier. Soc. Entomol., Zürich, 18, 1903, (49-50). [4427 e 4431]. 236 Eine neue Ornithopteraform aus Sumatra. Soc. Entomol., Zürich, 18, 1903, (57). [4423 4427 eg 237 4431]. Zwei neue Nymphaliden aus Neu-Guinea. Soc. Entomol., Zürich, 18, 1903, (65). [4427 ia 4431]. 238- Neue Rhopaloceren des malayischen Archipels. Soc. Entomol., Zürich, 18, 1903, (73). [4427 eg 4431]

239

Fruhstorfer, H. Parnassius imperator: augustus n. subsp. Soc. Entomol., Zürich, 18, 1903, (113). [4427 ef 4431]. 240

<u>Saletara panda: eugania</u> n. subsp. Soc. Entomol., Zürich, **18**, 1903, (124–125). [4427 e b 4431]. 241

Neue Caligo-Formen. Soc. Entomol., Zürich, 18, 1903, (145). [4427 h 4431]. 242

Fuchs, A. Neue Kleinfalter des Mittelmeergebiets. Stettiner ent. Ztg, 64, 1903, (3-16). [4427 dm 4431]. 243

Alte und neue Kleinfalter der europäischen Fauna. Stettiner ent. Ztg, 64, 1903, (227-247). [4427 d 4431]. 244

Alte und neue Gross-Schmetterlinge der europäischen Fauna. Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (67-80). [4427 d 4431]. 245

Beiträge zur Kenntniss der Lepidopteren-Fauna von Sumatra. Erste Besprechung: Neue Geometriden. Wiesbaden, Jahrb. Ver. Natk., **55**, 1902, Abt. II, (81-91). [4427 eg 4431]. 246

Drei neue Lepidopteren-Formen der europäischen Fauna. Soc. Entomol., Zurich, **18**, 1903, (3). [4427 d 4423 4431]. 247

Soc. Entomol., Zürich, **18**, 1903, (9–10). [4427 dh 4431]. 248

Bapta bimaculata F. var. et ab. bipunctata Fachs und Gnophos difficilis Alph. n. var. korlata. Soc. Entomol., Zürich, 18, 1903, (43). [4427 d 4431]. 249

Zwei neue Leucanitis-Formen aus Aksu. Soc. Entomol., Zürich, **18**, 1903, (50-51). [4427 ei 4431]. 250

Cucullia linosyridis n. sp. aus der Loreleygegend. Soc. Entomol., Zürich, **18**, 1903, (83-84). [4427 de 4431]. 251

Fuchs, Ferdinand. Zwei neue Schmetterlingsformen der palaearktischen Fauna. Soc. Entomol., Zürich, 18, 1903, (73-74). [4427 d 4431]. 252

Gal, Jules. Sur la ponte de Bombyz mori. Paris, C.-R. Acad. sci., 137, 1903, (932-934). [4419 4431]. 253 (N 2-9053) Gauckler, H. Ein Beitrag zur Eiablage der Schmetterlinge. Ent. Jahrb., Leipzig, 12, 1903, (128–138). [4419]. 254

II. Nachtrag zu dem i. J. 1896 hrsg. Verzeichnisse der Grossschmetterlinge der Umgegend von Karlsruhe, Baden, Bruchsal, Durlach und Ettlingen. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (339-342). [4427 de]. 255

Einige Bemerkungen zu Schreibers Raupenkalender. Insektenbörse, Leipzig, **20**, 1903, (180–181). [4419]. 256

Etwas über Grössenbestimmung der Schmetterlinge. Insektenbörse, Leipzig, **20**, 1903, (292–293). [4423]. 257

Die Jugendstadien von Larentia picata Hb. und Larentia designata Hufn. Insektenbörse, Leipzig, 20, 1903, (331-332). [4431]. 258

Geddes, John M. Citheronia sepulcralis in Pennsylvania. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (284-285). [4427 gg 4431]. 259

**Geest**, W. Neue Schmetterlings-Aberrationen. Allg. Zs. Ent., Neudamm, **8**, 1903, (308-313). [4423 4431]. 260

Geyer v. Hübner, J.

Giard, Alfred. Rhodocera cleopatra, Euprepia pudica et Cleophana anarrhini. Réponse partielle aux questions de M. G. Dupuy. Feuille jeunes natural., Paris. (sér. 4), 33, 1902, (33-34). [4427 df 4431]. 261

Les Argynnides de la France septentrionale. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (43-46). [4431 4427 df 4419]. 262

Apparitions tardives d'Apatura ilia Schiff et Limenites sibylla L. Fouille jeune natural.; Paris, (sér. 4), 33, 1903, (50-51). [4419 4431]. 263

*Rhodocera cleopatra* L. A propos de l'observation de M. Brascassat. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (84). [4419 4431]. 264

L'albinisme partiel des Satyrides [à propos de la Note de M. G. de Rocquigny-Adanson]. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (103-104). [4423 4431]. 265

2 q 2

**Giard**, Alfred. Evolution d'Acherontia atropos. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (124–127). [4415 4431]. 266

Variations du nombre et de la forme des ocelles chez les Satyrides. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (133). [4423 4431]. 267

Connonympha hero L. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (203). [4431 4419 4427] 268

Sons émis par les chenilles. Feuille jeunes natural, Paris, (sér. 4), 33, 1903, (222). [4419]. 269

Gillanders, A. T. Notes on miscellaneous arboreal insects. Manchester, Trans. Microsc. Soc., **1902**, (72–80, pl. I). [4419 4231]. 270

Gillette, C. P. Number of broods of the codling moth [Carpocapsa pomonella) as indicated by published data. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (193-196). [4431 4419]. 271

Life history studies on the codling moth [with discussion]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1302, (1-23). [4431 4419]. 272

**Gillmer**, M. Eine autorisirte deutsche 1. Ausgabe von Tutts British Lepidoptera. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (330-334). [4403]. 273

Amorpha populi ab. pallida Tutt und Amorpha populi ab. subflara Gillmer. Insektenbörse, Leipzig, 20, 1903, (28-29). [4431]. 274

Ueber Hibernia. Insektenbörse, Leipzig, **20**, 1903, (**291–292**, 299–300). [4431]. 275

Die Abbildung von Lycaena corydon, Poda al. cinnus. Soc. Entomol., Zürich, **17**, 1902, (68-69). [4431]. 276

Die Futterpflanze, das Ei und die junge Raupe von Lycaena alcon. F. Soc. Entomol., Zürich, **17**, 1902, (92-93, 98-99). [4419 4431]. 277

Das Ei von Erebia glacialis Esper. Soc. Entomol., Zürich, **18**, 1903, (74). [4419 4431]. 278

Giraudau, H. Familiarité observée chez les lépidoptères. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (223). [4419]. 279 Godman, F. D. Notes on some Central and S. American *Erycinidae*, with descriptions of new species. London, Trans. Ent. Soc., **1903**, (529-548, pls.). [4427 h 4431]. 280

Godon, J. Capture du Saturnia pyri. Feuille jeunes natural., Paris, (sér. 4), 83, 1902, (9). [4431 4427 df]. 281 Goudie, D. Notes on the larvae and

pupae of Birchip [Victoria] Heterocera. Vict. Nat., Melbourne, **19**, 1903, (132, 170-171); **20**, 1903, (42). [4427 if 4431]. 282

Grinnell, Fordyce jun. Three undescribed Lepidoptera from Southern California. [Theela spadix, Pamphila subuleti var. tecumseh n. var., and Anatolmis regulus n. sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (10-11). [4427 gi 4431]. 283

Gross, Heinrich. Beitrag zur Macrolepidopteren-Fauna von Oberösterreich und dem angrenzenden Theile von Steiermark. Wien, JahrBer. Entom. Ver., 41, (1900), 1901, (25-83). [4427 dk]. 284

Grote, Radcliffe A. Nachtrag zu dem Aufsatze: "Geometridengattungs-Namen", Ins-Börse XIX Jg, 1902. Insektenbörse, Leipzig, **20**, 1903, (85). [4403 4431]. 285

Die Flügelbildung von Polycaena. Insektenbörse, Leipzig, 20, 1903, (107–108). [4431]: 286

Grünberg, Karl. Untersuchungen über die Keim- und Nährzellen in den Hoden und Ovarien der Lepidopteren. Ein Beitrag zur Kenntnis der Entwicklung und Ausbildung der Keimdrüsen bei den Insekten. Zs. wiss. Zool., Leipzig. 74, 1903, (327-395, mit 3 Taf.). [4415]. 287

Grunack, A. Das Aufsuchen der Sesien-Raupen. Ent. Zs., Guben, 16, (1902-03), 1902, (37-38). [4403 4431]. 288

**Gruss**, Friedrich *jun*. Die Häutungen der Raupen von *Caligula japonica* Butler. Insektenbörse, Leipzig, **20**, 1903, (388-389). [4415 4431]. 289

Guerico (Del), Giacomo. Mezzi chimici di lotta contro la cavolaia. Bollettino di Entomologia agraria, Padova, 9, 1902, (63-65). [4403 4431]. 290 Guignon. Familiarité des lépidoptères [Réponse à une question de M. de Rocquigny-Adanson]. Feuille jeunes natural., Paris, (sér. 4), 1903, (171). [4419]. 291

Haberhauer, Jos. Porthesia rebeli n. sp. Soc. Entomol., Zürich 17, 1902, (82). [4427 dl 4431]. 292

Haberland, J. Ein Beitrag zur Lebensweise von *Bombyx rubi*. Insektenbörse, Leipzig, **20**, 1903, (115). [4431 4419]. 293

**Haensch**, Rich[ard]. Die Ithomiien (Neotropiden) meiner Ecuador-Reise. Mit Beschreibungen neuer Formen und biologischen Notizen. Berliner ent. Zs., **48**, 1903, (157-214, mit 1 Taf.). [4431 4427 he]. 294

Halliday. [Dark varieties of Hetcrocera]. Halifax Nat., 8, 1903, (81-83). [4423]. 295

Hamm and Others. [Birds capturing butterflies]. Nature, London, **65**, 1903, (366). [5819 4419]. 296

Hampson, Sir G. F. A remarkable new Lepidopterous Insect from Zululand. London, Trans. Ent. Soc., 1903, (137-139). [4427 fg 4431]. 207

New forms of Pyralidac from Spain. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (58). [4427 dg 4431]. 208

Descriptions of new Syntomidae and Arctiadae. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (337-351). [4431]. 299

Catalogue of the Noctuidae in the collection of the British Museum. London, 1903, (pp. xx + 689). Atlas of 23 pls., (lv-lxxvii). 8vo. This forms Vol. IV of the Cat. Lep. Phalaenae, and is devoted to the subfam. Agroting. [4431]. 300

Lepidoptera II. Phalænæ. Nat. Hist. Sokotra, (321-338, pl. XX). [4127 ff 4431]. 301

The moths of India, supplementary paper to the volumes in the Fauna of British India. Series II. Parts VIII-X. Bombay, J. Nat. Hist. Soc., 14, 1903, (639-659); 15, 1903, (19-37, 206-225, with pl.). [4427 cf 4431]. 302

in the British Museum. Philadelphia,

Pa., Ent. News Acad. Nat. Sci., 14, 1903, (287). [4403 4431]. 303

Hampson, Sir G. F. v. Dudgeon, G. C.

## --- v. Heron, F. A.

Haneld, [Oencis jutta Hb. im Zehlau-Bruch, Ostpreussen.] Berliner ent. Zs., 48, 1903, (12). [4431]. 304

[Zygaena ephialtcs u. a.] Berliner eut. Zs., **48**, 1903, ((25)–(26), (28)). [4431]. 305

[Argynnis paphia ab.] Berliner ent. Zs., **48**, 1903, ((29)). [4431]. 306

Heckel. Halbierter Zwitter Platisamia cecropia. Ent. Zs., (Juben, 16, (1902-03), 1902, (31). [4411 4431]. 307

Heink, Chas. L. [Lepidoptera of Meramec Highlands, Mo.] Philadelphia, Pa., Ent. News. Acad. Nat. Sci., 14, 1903, (334–335). [4427 gi]. 308

**Heller, K. M.** Ueber *Terinos* und eine neue *Abisara*-Art aus Neu-Guinea. D. ent. Zs. Iris, Berlin, **15**, 1902, (127–132 mit 1 Taf.). [4431]. 309

**Hering,** Ed. Uebersicht der Sumatra-*Pyralidae*. III. (Forts.) Stettiner ent. Ztg, **64**, 1903, (38–97, mit 1 Taf.). [4427 cg 4431]. 310

Heron, F. A. and Hampson, Sir G. F. On the Lepidoptera collected at Chapada, Matto Grosso, by Mr. A. Roberts (Percy Sladen Expedition to Central Brazil). London, Proc. Zool. Soc., **1903**, 2, (258– 200). [4427 hh 4431]. 312

Herz, Otto. Beitrag zur Kenntniss der Lepidopterenfauna der Tschuktschen-Halbinsel. St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (14-16). [4427 ea]. 313

Verzeichniss der auf der Mammuth Expedition gesammelten Lepidopteren. St. Peterburg, Ann. Mus. Zool. Ac. Sc., **8**, 1903, (61-87). [4427 ca 4431]. 314

Lepidopteron - Ausbeute der Lena-Expedition von B. Poppius im Jahre 1901. Helsingfors, Öfvers. F. Vet. Soc., 45, [No. 15], 1902-1903, (1-22, mit 1 pl.). [4431 4427 ea]. 315 Heylaerts, F. J. M. Description d'une psychide inédite de la République Argentine. Chalia kunckelii n. sp. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (97). [4431 4427 hi]. 316

Hirschie, Hansis. Eine neue Local-Form der *Melitaea maturna* Hb. var. *urbani* mihi. Wien, JahrBer. Entom. Ver., **11**, (1900), 1901, (85, mit 1 Taf.). [4431]. 317

Hirschler, Jan. Studien über Regenerationsvorgänge bei Lepidopteren-Puppen. Anat. Anz., Jena, 23, 1903, (612–627). [4411 4415]. 318

Recherches sur l'anatomie comparée de la corde de Leydig chez les lépidoptères. (Polish) Kosmos, Lwów, 28, 1903, (137-153, av. 1 pl.). [4407]. 319

Höfner, G. Die Schmetterlinge des Lavanttalles und der beiden Alpen Korund Saualpe. XVI Nachtrag. Carinthia II, Klagenfurt, 93, 1903, (177-180). [4427 dk]. 321

**Hoffmann**, C. Nochmals die Zucht von *Plcretes* (*Pericallia*) matronula. Ent. Zs., Guben, **16**, (1902–03), 1902, (30–31). [4431 4403]. 322

Hofgren, Gottfried. Pyralids new for the Swedish fauna. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (241-248). [4427 da 4431]. 323

**Holland**, W[illiam] J. Description of an apparently new species of *Palindia*. Philadelphia, Pa., Ent News Acad. Nat. Sci., **13**, 1902, (172-173). [4431]. 324

The moth book; a popular guide to the knowledge of the moths of North America. New York (Doubleday, Page & Co.), 1903, (XXIV + 479, with illustr., XLVIII pl.). 26.5 cm. [4403 4427 g].

**Hormusaki**, Constantin Freiherr von. Ueber die in den Karpathen einheimischen Arten der Gattung Erebia Dalm. und deren Beziehungen zur pleistocänen Fauna Mitteleuropas. D. ent. Zs. Iris, Berlin, **14**. (1901), 1902, (353-380). [4427 dk 4431]. 326

Ueber einige merkwürdige Zygaena-Formen aus der Bukowina. Soc. Entomol., Zurich, **17**, 1902, (137-139). [4427 dk 4423 4431]. 327 Hornig, Herman. Cocoons of Gamia . cynthia. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (132-134, with pl.). [4431]. 328

The feeding habits of the larva of Anthocharis genutia. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (252). [4419 4431]. 329

Honghton, C. O. Orneodes hexadactyla Linn. [at Ithaca, N.Y.]. Fhiladelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (89). [4427 gg 4131]. 330

Houghton, J. T. Contributions to the life-history of *Gelechia (Recurvaria)* nanella Hb., from an economic point of view. Ent. Mag., London, **39**, 1903, (219-221). [4419 4431]. 331

**Hudson**, G. V. On some new species of Macrolepidoptera. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (243-245). [4431]. 332

Hübner, J. et Geyer. Lépidoptères exotiques (1806-1837). Nouvelle edition, revue, corigée et augmentée, publiée par W. F. Kirby et P. Wytsman, Livraisons 48-54. Bruxelles (P. Wytsman), 1901-1903, (17-172, pls. 381-437). Le livraison 10 fr. [4403]. 333

**Eulme**, F. E. Butterflies and moths of the country side. The Woburn Library. London, 1903, (xx + 300, xxxv pls.). [4403]. 334

Iches, Lucien. Le ver des pommes. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (145-147, av. fig.). [4431 4419]. 335

Jachontov, A. A. Une aberration de Pieris brassicae L. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (38). [4431]. 336

Sur le trimorphisme, suivant les saisons, de quelques Piérides. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (157–160). [4423]. 337

Un specimen hermaphrodite de Smerinthus populi L. (Russ.) Rev. Russ. Ent., Jaroslavli, **3**, 1903, (217-218). [4411]. 338

Jacobi, Arnold. Die Mehlmotte (Ephentia kuchniella Zell) Borlin, Flughl. Gesundhtsamt, Nr. 16, 1902, (4). [4431]. 339

Jäger, J. Ophiusa stolida Fab. a Noctuid new to Britain. Ent. Mag., London, **39**, 1903, (269). [4427 de 4431]. 340 Jammerath, H. Systematisches Verzeichnis der in der Umgegend von Osnabrück bisher beobachteten Grossschmetterlinge (Macrolepidoptera). Osnabrück, Jahresber. natw. Ver., **15**, (1901/1902), 1903, (1-4, 67-100). [4427 dc]. 341

and **Wytsman**, P. Lepidoptera heterocera fam. *Lepicopiidae*. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (5 pp, 1 pl. noire et l pl. coloriée hors texte). fr. 5.35. [4431]. 343

Johnson, W. G. New location for Mediterranean Flour Moth. [Ephestia kuehniella from White co., Indiana.] Philadelphia, Pa. Ent. News Acad. Nat. Sci., 13, 1902, (159). [4427 gg 4431]. 344

Jones, A. H. Lepidoptera in Southern Spain during the last half of October, 1902. Ent. Mag., London, **39**, 1903, (54-56). [4427 dg]. 345

Jordan, K. Some new species of moths. Nov. Zool., Tring, 10, 1903, (315, 316). [4431]. 346

- v. Rothschild, Hon. W. 347

Jullien, J. Notes sur la Catocala puerpera. Soc. Entomol., Zürich, 17, 1902, (97-98). [4419 4427 di 4431]. 348

Neue Apparate zur Aufzucht von Raupen. Insektenbörse, Leipzig, **20**, 1903, (300–301). [4403].

**Kabis**. Argynnis paphia L. Zwitter. Ent. Zs., Guben, **16**, (1902–03), 1902, (42). [4411 4431]. 350

**Kaye**, W. J. Lepidoptera in South Kerry. Irish Nat., Dublin, **12**, 1903, (66-67). [4427 de]. 351

Some considerations concerning minicry. Ent. Rec., London, **15**, 1903, (177–179). [4419]. 352

Kearfoot, W. D. Notes on an Eriocranid larva. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (129–132). [4431]. 353

Descriptions of new Tineoidea. New York, N.Y., J. Ent. Soc., 11, 1903, (145-165, with pl.). [4431]. 354

**Kellogg**, V[ernon] L[yman] and Bell, R. G. Variations induced in larval, pupal and imaginal stages of Bombyz mori by controlled varying food supply. Science, New York, N.Y., (N. Ser.), **18**, 1903, (741-718). [0223 4423 4431]. 355

**Elefer**, Hans. Fangergebnisse bei elektrischem Lichte. Insektenbörse, Leipzig, **20**, 1903, (163–164). [4403]. 3 G

**Kirby**, W[illiam] F[orsell]. The butterflies and moths of Europe. London, Paris, New York and Melbourne (Cassell & co. ltd), 1903, (lxxii + 432, with illustr., pl.). 27.5 cm. [4403 4427 d]. 357

**Klooss.** [Reise nach Lappland zum Qvikkjokk-Gebirge.] Berliner ent. Zs., **48**, 1903, ((7)-(9)). [4427 da]. 358

Klos, Rudolf. Zur Lebensgeschichte von Tephroclystia virgaureata Dbld. Wien, Verh. ZoolBot. Ges., 51, 1901, (785). [4131 4419]. 359

Kolbe, K. Ueber vorschnelle Entwickelung von Puppen- und Imago-Organen bei Raupen von Lepidopteren (Dendrolimus pini L.). Berlin, SitzBer. Ges. natf. Freunde, **1902**, (158-166). [4415]. 360

Korb, Max. Eine neue Zygaena [Z. rosinae n. sp.]. D. ent. Zs. Iris, Berlin, 15. (1902), 1903, (326-327). [4431]. 361

Kossonogoff, J. Ueber optische Resonanz. 2. vorläufige Mitteilung. Optische Resonanz als Ursache der Färbung der Schmetterlingsflügel. Physik. Zs., Leipzig, 4, 1903, (258– 261). 3 vorl. Mitt. Antwort an die Hrn. R. W. Wood und A. Garbasse. Einige Resultate der quantitaviten Unterschungen. *l.e.* (518–520). [4423]. 363

Krulikovskij, L. Petites notices lépidoptérologiques VI, VII. (Russ.) Rev. Ruse. Ent., Jaroslavlí, **3**, 1903, (30– 32, 177–182). [4431]. 366

Notice sur la chasse des lépidoptères durant l'été 1902 dans le district Uržum, gouv. VIatka. (Russ) Rev. Russ. Ent., Jaroslavli, **3**, 1903, (110-114). [4423 4427 db]. 367

des lépidoptères de la Sibérie occidentale

et du Semirečje. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (300-303). [4427 ea]. 369

Kusnesov, N. I. v. Kuznecov, N. I.

**Kusnecov**, N. I. Excursions d'été, en 1902, sur la côte sud de la Crimée. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (5-7). [4427 db 3827 db]. 370

Catocala Schrank in the Catalogue of Lepidoptera by Staudinger and Rebel, 1901 (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (71-75); Eng. Res. (75-76). [4431].

A new nearctic species of the genus Catocala Schrank. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (166–168, with **3** figs). [4431]. 372

Labonnefon, C. de. Almanach du chasseur de chenilles. Interméd. bombycult., Paris, **2**, 1902, (336-341, 361-369); **3**, 1903, (6-15). [4419 44131]. 373

Lambillion, L. J. L. Histoire naturelle et mœurs de tous les papillons de Belge. Description complète de chaque espèce ; insecte parfait, œuf, chenille, chrysalide, plantes nourricières, époque d'éclosion, localités, distribution géographique, etc., etc. Ouvrage précédé de renseignements anatomiques et biologiques et d'une liste de papillons fossiles. Vol. I. Namur (V. Delvaux), 1902, (CXXIV+ 329, av. figs.). [4403]. 374

Catalogue des lépidoptères de Belgique donnant les noms de tous les papillons pris en Belgique jusqu' à ce jour avec leurs variétès, leurs synonymes, les époques d'apparition, les localités, les époques des chenilles, leur nourriture, etc. et une liste de papillons paléarctiques après chaque groupe indigène. 2<sup>me</sup> Ed. considérablement augmentée. Namur (V. Delvaux), 1903, Fasc. V. (65-80). 8vo. Le Fasc. fr. 0.50. 4427 dd]. [4403 375

Lampa, Sven. Two of our moths harmful to cereals. *Iladena tritici* Lin., *H. secalis* Lin. (Swedish) Entomol. Tidskr., Stockholm, **22**, 1901, (129-136, with pl.). [4427 da 4431]. 376

Nephopteryz similella Zick., a Pyralid new for the Swedish fauna. (Swedish) Entomol. Tidskr., Stockholm, **22**, 1901, (248). [4427 da 4431]. 377 Lathy, P. L. An account of a collection of Rhopalocera made on the Anambara Creek in Nigeria, West Africa. London, Trans. Ent. Soc., 1903, (183– 206, pl. VIII). [4427 fd 4431]. 378

A new subspecies of Isodema adelma Feld. Entomologist, London, 36, 1903, (12). [4431]. 379

A new species of Callithea from Peru. Entomologist, London, **36**, 1903, (105, pl. II). [4427 hf 4431]. 380

Latter. [Birds capturing butterflies]. Nature, London, 65, 1903, (273). [5819 4419]. 381

Laurent, Philip. The moths (Heterocera) of eastern Pennsylvania. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (43-45; 60-72, 111-113, 139-140, 169-171). [4427 gg 4431]. 382

Notes on the butterflies of Miami, Florida. Philadelphia, Pa., Ent. News, Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (297-297). [4427 gh 4431]. 383

Leigh, G. F. Protective resemblance and other modes of defence adopted by the larvæ and pupe of Natal Lepidoptera. London, Proc. Ent. Soc., **1903**, (xxixxv). [4419]. 384

Lenert, A. Erfahrungen in der Bekämpfung des Heu- und Sauerwurms. Trier (J. Lintz), 1903, (36, mit 1 Taf.). 22 cm. 0,80 M. [4403 4431]. 385

Leonhardt, Wilhelm. Aberrationen von Lycaena coridon Poda. Ent. Zs., Guben, 16, (1902–03), 1902, (50). [4431]. 386

Leslie, G. A. and Evans, W. H. The butterflies of Chitral. Bombay, J. Nat. Hist. Soc., 14, 1903, (666-678). [4427 ef 4431]. 387

Letacq, A. I. Observations sur l'Acherontia atropos. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (150-151). [4415 4419 4431]. 389

Letcher, Beverly. Phryganidia californica Packard. New York, N.Y., J. Ent. Soc., 11, 1903, (125-127). [4431] 389A

Leverkühn, Paul. Ueber eine pseudoornithologische Mitteilung aus dem Jahre 1720 [betr. Sphinx atro vor] Ornith. Monatschr., Gera, 28, 1903, (294-297). [4431]. 390 Levrat, D. et Conte, A. Sur l'origine de la coloration naturelle des soies de lépidoptères. Naturaliste, Paris, 24, 1902, (260-261). [4407]. 391

Lewis, R. T. Note on some insects sent from Queensland by Mr. C. J. Pound, F.R.M.S. (London). London, J. Quek. Microsc. Cl., 8, 1903, (553-554). [4427 id 4431]. 392

Linden, M[aria] Gräfin von. Das rote Pigment der Vanessen, seine Entstehung und seine Bedeutung für den Stoffwechsel. Verh. D. zool. Ges., Leipzig, **18**, 1903, (53-65, mit 1 Taf.). [4415 4411]. 393

Die Farben der Schmetterlinge und ihre Ursachen. Halle, Leopoldina, **38**, 1902, (124–133). [4411 4407]. 394

Weue Untersuchungen über die Farben der Schmetterlinge. Halle, Leopoldina, **39**, 1903, (110–112, 116–120). [4411]. 395

Loiselle, A. A propos de l'évolution d'Acherontia atropos. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (127). [4415 4431]. 306

Longstaff, G. B. [Sugar trap for Lepidoptera.] Ent. Mag., London, 39, 1903, (124). [4403]. 397

Further notes on Lepidoptera observed at Mortehoe, North Devon. Ent. Mag., London, **39**, 1903, (194-197). [4427 de 4403]. 398

Lower, Oswald B. Descriptions of new Australian Noctuina, etc. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (27-74). [4427 ic 4431]. 399 ——— Descriptions of new genera

and species of Australian Lepidoptera. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183-201). [4427 ic 4431]. 400

Descriptions of new species of xyomatodoma, etc. [*i.e.* of Lepidoptera]. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (216-239). [4427 ic 4431]. 401

Lucas, Ed. Winterquartier der Apfelbaumgespinstmotte. Pomol. Monatshefte, Stuttgart, 49, 1903, (77-78). [4419 4431]. 402

Lüstner, Gustav. Kurze Mitteilung über zwei hinsichtlich ihrer Eiablage interessante Obstbaumschädlinge. Geisenheimer Mitt. Obstbau, **18**, 1903, (77-78). [4419]. 403

Lutz, Adolph und Splendore, Alfonso. Ueber Pebrine und verwandte Mikrosporidien. Ein Beitrag zur Kenntnis der brasilianischen Sporozoen. Erste Mitteilung. Centralbl. Bakt., Jena, Abt. 1, **38**, Originale, 1903, (150–157). [0431 4419]. 404

Lutzau, C. von. Hadena adusta var. bathensis m. Soc. Entomol., Zurich, 18, 1903, (129–131). [4427 db 4431]. 405 Mabille, P. Lepidopters rhopalocera fam. Hesperidae. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (78).

 15 fr.
 [4431].
 406

 McKay.
 [Birds capturing butterflies].

 Nature,
 London, 65, 1903, (247, 486).

 [5819
 4419].
 407

**Mährlen.** Die Bekämpfung des Springwurmwicklers. Mitt. Weinbau, Geisenheim, **15**, 1903, (50-54, 72-76). [4403 4431]. 408

Maignon, F. La production du glucose, sous l'influence de la vie asphyxique, par les tissus du Bombyz mori, aux diverses phases de son évolution. Paris, C.-R. Acad. sci., **137**, 1903, (93-95). [4411 4431] 408A

Mallock, J. R. Further notes on the Tortricidae of Dumbartonshire. Ent. Mag., London, **39**, 1903, (2-3). [4431]. 409

Mally, C. W. Fruit seriously injured by moths [Cape Town, South Africa]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (50-93). [4419 4427 fg]. 410

Manders, N. Notes on Ceylon butterflies. Bombay, J. Nat. Hist. Soc., 14, 1903, (716-718). [4431]. 411

Markov, M. Matériaux pour servir à la faune des Macrolépidoptères du gouvernement de Poltava. (Russ.) Charikov, Trd. obšč. ispyt. prir., **37**, 1902, [1903], (257-272). [4427 db 4431]. 412

Marlatt, C[harles] L[ester]. The peach-tree borer. (Sannina exitiosa Say). Washington, D.C., Cir. U. S. Dept. Agric. Div. Ent., No. 54, 1903, (6). [4419 4431]. 413

Martin, Ludwig Das Genus Cyrestis, eine Revision der bekannten Arten unter Berücksichtigung der neuen Formen. D. ent. Zs. Iris, Berlin, **16**, 1903, (71– 169). [4431]. 414

Mengel, Levi W. Four new species of butterflies from South America. [Peru and Paraguay.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (176– 178, with 1 pl.). [4427 hf hi 4431]. 415 Mengel, Levi W. On Cystincura floridana Strecker [synonym of C. cana]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (159–160). [4431]. 416

A new species of Hypolimnas from New Hebrides. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (167-168, with pl.). [4427 nh 4431]. 417

Merrick, H. W. Variation in *Haploa*. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (1-2, with pl.). [4423 4431]. 418

Metalnikoff, S. J. Beiträge zur Kenntnis der Anatomie der Raupe von Gallerin melonella. (Vorläuf. Mitt.) Zool. Anz., Leipzig, **26**, 1903, (619-623). [4407 4431]. 419

Metzger, C. Der Nonnenfrass in Mittelschweden von 1899 bis 1902. Berlin, Mitt. D. LandwGes., **18**, 1903, Beilage, (39-48, mit 1 Karte). [4431]. 420

Meyrick, E. An Alpine form (Holotoxa, Meyr.) of Choreutis myllerana, Fbr. Ent. Mag., London, 39, 1903, (5-6). [4431], 421

A new Australian genus of *Gelechiidae*. Ent. Mag., London, **39**, 1903, (291). [4427 ic. 4431]. 422

Minot, George R. Chrysalis of Melitaeu gabbi. Egg of Euchloe sara var. reakirti. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (158). [4431]. 423

Mittis, Heinrich Ritter von. Ueber einige Rhopaloceren - Aberrationen. Wien, JahrBer. Entom. Ver., 11, (1900), 1901, (113-115). [4423 4431]. 424

Miyake, Tsunekata. On Japanese Heterocera, figured and annotated. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (311-316). [4427 ec 4431]. 425

Japanese Heterocera described and figured. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (354–356, 384–390). [4427 ec 4431]. 426

Moore, F. Lepidoptera indica. Parts LXI-LXVI. Vol. VI. London, 1903, (1-104, pls. 467-512). [4427 ef 4431]. 427

Mory, Claude E. Revision der bis jetzt bekannten von hybr. epilobii B. abgeleiteten Bastarde. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (460–469). [4423–4431]. 428 Murillo, Luis. The Eumaeus debora. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (35–48). [4431].

Naufook, Albert. Verzeichnis der Lepidopteren des Kronlandes Nieder-Oesterreichs. Wien, JahrBer. Entom. Ver., 12, (1901), 1902, (21-104). [4427 dk]. 430

Neave, S. A. A new species of Lyczenid from Uganda and Lake Victoria Nyanza. Ent. Mag., London, **39**, 1903. (136-138). [4427 ff 4431]. 431

**Nerville**, F. de. A propos de la géonémie de *Podalirius*. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (205). [4427 4431]. 432

Neuburger, Wilhelm. Drei neue Thais-Aberrationen aus Digne und Budapest. Soc. Entomol., Zürich, **17**, 1903, (154-155). [4427 d 4431]. 433

Japan. Soc. Entomol., Zürich, **18**, 1903, (42–43). [4427 ec 4431]. 435

Chrysophanus achimus H. S. var. hyrcana Neubgr. Soc. Entomol, Zürich, 18, 1903, (59). [4427 ch 4431]. 436

Neureuter, Franz. Schmetterlinge im Winter. Natur u. Offenb., Münster, 49, 1903, (110-112). [4419]. 437

Neustetter, Heinrich. Ein lepidopterologischer Ausflug in die Euganaeen u. nach Battaglia in Ober-Italien. Wien, JahrBer. Entom. Ver., **11**, (1900), 1901, (87-102). [4427 *dh*]. 438

Ney, Felix. Eine neue Troides-Form von Obi. Insektenbörse, Leipzig, 20, 1903, (36). 439

**Nicéville**, Lionel de *(the late)*. Insect pests of forest trees. Calcutta, Ind. Mus. Notes, **5**, 1903, (103–117, with pls.). [4019 4419 4819]. 440

Insect pests of fruit trees. Calcutta, Ind. Mus. Notes, 5, 1903, (117-127, with pls.). [4019 4419 4619 4819]. 441

\_\_\_\_\_\_ Insect pests of plants. Calcutta, Ind. Mus. Notes, **5**, 1903, (127-130, with pls.). [4019 4419 44819]. 442 Nicéville, Lionel de (*the late*). Insect pests of vegetables. Calcutta, Ind. Mus. Notes, 5, 1903, (131-134, with pls.). [4419 4819]. 443

Insect pests of cereals and crops. Calcutta, Ind. Mus. Notes, **5**, 1903, (134–143, with pls.). [4019 4219 4119 4819]. 444

\_\_\_\_\_ Insect pests of indigo. Calcutta, Ind. Mus. Notes, **5**, 1303, (144-164, with pls.). [4019 4419 4819]. 445

Insect pests of the sugarcane. Calcutta, Ind. Mus. Notes, 5, 1903, (164–182, with pls.). [4019 4419 4619 4819]. 446

Insect pests of cotton. Calcutta, Ind. Mus. Notes, 5, 1903, (182-184, with pl.). [4419]. 447

\_\_\_\_\_ Insect pests of opium. Calcutta, Ind. Mus. Notes, 5, 1903, (184– 185, with pl.). [4419]. 448

Insect pests of tea. Calcutta, Ind. Mus. Notes, 5, 1903, (185– 189, with pls.). [4419 4819]. 449

Nodier. Familiarité observée chez les lépidoptères. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (203–204). [4419]. 450

Norman, A. M. Notes on the Natural History of East Finmark. Including "Notes on some copepoda from the Arctic Seas collected in 1890 by the Rev. Canon A. M. Norman, F.R.S. By. Thomas Scott, F.L.S." Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (1-32, pls. I-IV); Insecta, *Ib.*, (166-173). [4227 db 4231 4427 db 4431 4627 db 4631 4827 db 4831]. 451

**Oberthür**, C. The Hesperiides of Brittany. Ent. Rec., London, **15**, 1903, (179–180). [4427 df 4431]. 452

Oglivie-Grant, W. R. Lepidoptera. I. Rhopalocera. Nat. Hist. Sokotra, (295-318, pls. XVIII-XIX). [4427 ff 4431]. 453

Ottolengui, Rodrigues. A new Saturnia from North America. [Arizona]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (311-314). [4427 gi 4431]. 454 Oudemans, J[ohannes] Th[eodorus]. Etude sur la position de repos chez les lépidoptères. Amsterdam, Verh. K. Akad. Wet. 2e Sect., 10, 1, [1903], (1-90, av. 11 pls.). [4419]. 455

Pabst. Die Sphingidae B., Zygaenidae B. und Syntomidae HS. der Umgegend von Chemnitz und ihre Entwickelungsgeschichte. Ent. Jahrb., Leipzig, **12**, 1903, (144–159). [4427 de 4415]. 456

Packard, Alpheus S[pring]. New generic types of Bombycine moths. New York, N.Y., J. Ent. Soc., 11, 1903, (244– 249). [4431]. 457

Pack-Beresford. Scotch pine injured by Retinia buoliana. Irish Nat., Dublin, 12, 1903, (299). [4419 4431]. 458

Pagenstecher, Arnold. Tagfalter. (Wissenschaftl. Resultate der Reise Carlo Frhrn. v. Erlanger's durch Süd-Schoa, Galla u. Somaliländer). Wiesbaden, Jahrb. Ver. Natk., **55**, 1902, Abt. II, (113-204, mit 1 Taf.). [4431 4427 ff].

Perrier, Edmond. Rapport pour le prix Da Gama Machado (Comtesse Maria von Linden): "La généalogie des Papillons est inscrite sur leurs ailes." Paris, C.-R. Acad. sci., **137**, 1903, (1128–1130). [4423]. 460

Peters, H. T. Die Heteroceren-Raupen (und -Puppen) des H. T. Peters'schen Manuskriptwerkes: Biologische Beiträge zur brasilianischen Schmetterlings-Fauna. Neudamm (J. Neumaun), (1898-) 1901, (12, mit 10 Taf.). 25 cm. Kart. 5 M. [4427 hk]. 461

Petersdorf. [Eine Lycaena-Form]. Berliner ent. Zs, 48, 1903, ((16)-(17)). [4431]. 462

Petersen, W. Agrotis rubi View. florida Schm. Ent. Zs., Guben, **16**, (1902-03), 1902, (2). [4431]. 463

Philpott, A. On some new species of Lepidoptera from Southland. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (246-249). [4431 4427 ik]. 464

Pickett, C. D. Varieties of *Dilina tiliae*. London, Proc. Ent. Soc., **1903**, (14). [4423]. 465

Notes on breeding Angeronia prunaria. Ent. Rec., London, 15, 1903, (144–149). [4415 4423 4431]. 466 Pictet, Arnold. L'influence des changements de nourriture des chenilles sur le développement de leurs papillons. Aarau, Verh. Schweiz. Natf. Ges., **85**, 1902, (78); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (537-540). [4411].

468

L'influence des changements de nourriture sur les chenilles et sur la formation du sexe de leurs papillons. Arch. Sci. Phys., Genève, (sér. 4), **15**, 1903, (98-101). [4411]. 469

Variations des papillons provenant des changements d'alimentation de leurs chenillos and de l' humidité. Aarau, Verh. Schweiz. Natf. Ges., **86**, 1903, (45-46); Arch. Sci. Phys., Genève, (sér. 4), **16**, 1903, (585-588). [4411 4423]. 470

Piepers, [Marinus Cornelis] et Snellen, [Pieter Cornelis Tobias]. Enumération des lépidoptères hétérocères de Java. III. Zygaenidae. 's Gravenhage, Tijdschr Ent., 45, 1903, (151-242, av. 3 pls.). [4427 eg 4431]. 471

Pierce, F. N. Specific differences in Lithusidae as determined by structure of genitalia. Entomologist, London, 36, 1903, (81-86). [4407 4431]. 472

Pierre, Abbé. Mœurs de Grapholitha conterminata H. S. (fin). Echange, Lyon, **17**, 1902, (28-29). [4419 4431]. 473

**Pocock**, R. I. Notes on the commensalism subsisting between a gregarious spider Stegodyphus sp., and the moth Batrachedra stegodyphobius Wlsm. Ent. Mag., London, **39**, 1903, (167-170). [3019 4419]. 474

**Poling**, Otho C. A new Megathymus from Arizona. Philadelphia, Pa., Ent. News. Acad. Nat. Sci., **13**, 1902, [[97]– 98, with pl.). [4427 gi 4431]. 475

**Pomerancev**, D. V. Beitrag zur Kenntnis der auf der Fichte (*Picca excelsa*) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Lösn. Inst., **8**, 1902, (3-25, mit I Taf.). [4015 4019 4415 4419 4615 4619 4815 4819]. 476

Poujade, G. A. Description d'une nouvelle espèce de lépidoptère de Madagascar. Bul. Muséum, Paris, **1903**, (57). [4431 4427 *fh*]. 477 
 Poulton, E. B.
 Variation of Precis

 actia.
 London, Proc. Ent. Soc., 1903.

 (32).
 [4423].

Mullerian group, Rhopalocera from British Guiana.] London, Proc. Ent. Soc., **1903**, (54-56). [4427 hd 4419]. 479

Experiments in 1893, 1894 and 1896 upon the colour-relation between Lepidopterous larvæ and their surroundings, and especially the effect of lichen-covered bark upon Odontopera bidentata, Gastropacha quereifolia etc. London, Trans. Ent. Soc., **1903**, (311– 374, pls. XVI-XVIII). [4411 4431].

480 [Birds capturing butterflies]. Nature, London, **65**, 1903, (343– 465). [5819 4419]. 481

Prinz, Johann. Die Zucht und die ersten Stände von *Sceia annellata* Z. Wien, JahrBer. Entom. Ver., **11**, (1900), 1901, (109–112). [4419 4431]. 482

Prout, L. B. Some Geometrides collected by Paymaster-in-chief Gervase F. Mathew, R.N., on the Mediterranean, etc. Entomologist, London, **36**, 1903, (204-206). [4427 dm 4431]. 483

Notes on Spanish Geometrides collected by Dr. Chapman in 1902. Ent. Rec., London, **15**, 1903, (96-98). [4427 dg 4431]. **48**4

Varieties of Angerona prunaria. Ent. Rec., London, 15, 1903, (144-150). [4423]. 485

On two variable broods of Triphacna comes, H. B. (Melanozonias, (4mel.) from Forres. Ent. Rec., London, 15, 1903, (217-222). [4423 4131]. 487

**Püngeler**, Rudolf. Deilephila siehe: n. sp. Berliner ent. Zs., **47**, 1902, [1903], (235-238, mit 1 Taf.). [4431]. **488** 

Zur Naturgeschichte der Lygris peloponnesiaca Rbl. Berliner ent. Zs., 48, 1903, (321-322). [4419 4431]. 489 Neue Macrolepidopteren aus Palaestina. D. ent. Zs. Iris,

Berlin, 14, (1901), 1902, (331–333). [4431].

**Püngeler**, Rudolf. Nola tigranula n. sp. D. ent. Zs. Iris, Berlin, **15**, 1902, (141– 142, mit 1 Taf.). [4431]. 492

Neue Macrolepidopteren aus Palaestina. D. ent. Zs. Iris, Berlin, 15, 1902, (143-146, mit 1 Taf.). [4427 ei 4431]. 493

Neue Macrolepidopteren aus Centralasien. [Forts.] D. ent. Ze. Iris, Berlin, 15, 1902, (147-160, mit 2 Taf.). [4427 e 4431]. 494

Caradrina wullschlegeli n. sp. Soc. Entomol., Zürich, 17, 1903, (145–147). [4427 di 4431]. 495

Quall, A. On the antennæ of Hepialidae. London, Trans. Eut Soc., 1903, (499-507, pl. xix). [4407]. 496 On Charagia virescens Dbld. Wellington, Trans. N. Zeal. Inst.,

**35**, 1903, (249-255). [4415 4431]. 497

Quaintance, A[ltus] L[acy]. The pickle worm (Margaronia nitidalis). Agric. Exp. Sta., Georgia, Experiment, Bull., No. 54, 1901, (71-94, with 3 pls.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (871-872). [4431]. 498

**Beading**, J. H. A collecting trip south. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (116-118). [4427 gh]. 499

**Bebel**, H. Neue Pyraliden, Pterophoriden und Tineen des palaearctischen Faunengebietes. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126, mit 1 Taf.). [4431]. 500

Meue Pyraliden aus Algerien und Westasien. D. ent. Zs. Iris, Berlin, **16**, 1903, (1-8). [4431]. 501

Eine neue Noctuide von der Sinai-Halbinsel. D. ent. Zs. Iris, Berlin, **16**, 1903, (68–70, mit 1 Taf.). [4431]. 502

Lepidopteren aus Morea. Nachtrag. Berliner ent. Zs., **48**, 1903, (243-249). [4431 4427 dl]. 503 ———— Neue Lepidopteren aus Bosnien und der Hercegovina. Wien, Verh. ZoolBot. Ges., **51**, 1901, (708-806). [4427 dk 4131]. 504

Benton, W. A list of the Lepidoptera of RoxLurghshire. Entomologist, London, **36**, 1903, (130-135). [4427 de 4403]. 505 **Bey**. [Umgürtungsfaden der Puppen von Gonopteryx rhamni L. u. die Flügelbildung.] Berliner ent. Zs., **48**, 1903, ((3)). [4431]. 506

[Precis octavia u. amestris.] Berliner ent. Zs., **48**, 1903, ((4)). [4431]. 507

[Zur Mimikry - Theorie.] Berliner ent. Zs., **48**, 1903, ((5)-(6)). [4419]. 508

**Bøy**, Eugène. Einiges über Schreckoder Warnfarben bei Schmetterlingen. Insektenbörse, Leipzig, **20**, 1903, (131– 132). [4419]. 509

**Riesen**, A. Zum Heimaths-Nachweis von Ag. *v* is fugax Tr. Stettiner ent. Ztg, 64, 1903, (37-38). [4431]. 510

Zum Heimaths-Nachweis der Agrotis cursoria-Varietäten obscura Stgr. und sagitta Stgr. Stettiner ent. Ztg, 64, 1903, (358). [4431]. 511

Riffarth, H. Nochmals Ch. Oberthür's Etudes d'entomologie, vol. 21 [betr. *Heliconius*]. Berliner ent. Zs., 47, 1902, [1903], (157-166). [4431]. 512

Ritsema Bos, J[an]. Ueber das schädliche Auftreten von *Retinia turionana* nebst allgemeinen Bemerkungen über die Lebensweise der Retinien überhaupt. Centralbl. Bakt., Jena, Abt. 2, **10**, 1903, (241–250). [4419 4431]. 513

**Rivers**, J. J. Discovery of another food plant of Uranotes (Theckla) melinus, Hub. Los Angeles, Bull. So. Cal. Acad. Sci., **1**, 1902, (41-42). [4419 4431]. 514

Butterfly emigrants. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, (90). [4427 gi]. 515

**Bobinson**, Wirt. A trip after *Papilio* homerus [in Jamaica]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (17-21). [4431]. 516

**Bocquigny-Adanson**, G. de. Aire de Papilio podalirius. Feuille jeunes natural., Paris, (sér. 4), **31**, 1903, (19). [4431 4427 df]. 517

*——— Rhodocera cleopatra* L. Feuille jeunes ratural., Paris, (sér. 4), **33**, 1902, (33). [4427 df 4431]. 518

*Epinephele janira* L. Feuille jeunes natural., Paris, (sér. 4), **33**, 1902, (33); 1903, (84-85, 205). [4423 4431]. 519 **Bocquigny-Adanson**, G. de. *Rhodocera cleopatra*. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (52). [4427 df 4431]. 520

*Epinephele hyperanthus* L. Feuille jeunes natural., Paris, (sér. 4), **83**, 1903, (108). [4423 4431]. 521

Les Argynnides du contre de la France. Feuilles jeunes natural., Paris, (sér. 4), **33**, 1903, (119-123). [4431 4427 df 4419]. 522

Vanessa antiopa. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (151). [4431 4423]. 523

Géonémie de Papilio podalirius L. Limite septentrionale de son extension en France et en Belgique. Feuille jeunes natural., Paris, (sér. 4). **33**, 1903, (163). [4427 df 4431]. 524

('oenonympha hero L. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (169). [4423 4427 df 4431]. 525

Argynnis pandora Schiff. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (169–170). [4427 df 4431]. 526

A propos de la géonémie du *Podalirius.* Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (205). [4427 df 4431]. 527

Papilio machaon. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (205). [4415 4431]. 528

*Lasiocampa quercus* L. Feuille jeunes natural., (sér. 4), **34**, 1903, (19-20). [4431 4419]. 529

**Bodzianko**, Vladimir Nikolajevič. Einige Beobachtungen über Pammene rediella Clerck. (Tortricina, Lepidoptera.) (Russ.) Moskva, Dnev. Zool. Otd. Imp. Obšč. liub., jest. III, 5, 1903, (28-41). 35 cm. [4419 4431]. 530

**Röber, J.** Lepidopterologisches. Stettiner ent. Ztg, **64**, 1903, (337–358). [4431]. 531

Zwei neue Mophiden. Soc. Entomol., Zürich, 17, 1903, (153-154). [4427 he ed 4431]. 531a

Neue Caligo-Arten. Soc. Entomol., Zürich, **18**, 1903, (145-147). [4431]. 532 **Rondon**, P. ('atalogue des lépidoptères des Pyrénées. Bordeaux, Actes soc. linn., (sér. 6, 7), 57, 1902, (177-355). [4419 4427 df 4431]. 533

Note sur les chenilles de Daphnis nerti L. trouvées dans la Gironde. Bordeaux, Actes soc. linn.. 58, 1903, (Proc.-verb., CCLXX). [4431 4415]. 534

**Bothke**, Max. Ueber einige Zuchtund Akklimatisationsversuche mit dem chinesischen Eichenseidenspinner (*Antheraca pernyi* Guér.) im nordwestlichen Deutschland. Ent. Jahrb., Leipzig, **12**, 1903, (160-164). [4431 4419]. 535

Einige kurze Bemerkungen über Limenitis ursula F. und arthemis Drur. Insektenbörse, Leipzig, 20, 1903, (116). [4431]. 536

**Bothschild**, *Hon.* W. Some new Cossidae from Queensland, bred by Mr. F. P. Dodd. Nov. Zool., Tring, **10**, 1903. (306-308). [4427 id 4431]. 538

Some new butterflies and moths. Nov. Zool., Tring, 10, 1903, (309-312). [4431]. 539

and Jordan, K. A revision of the Lepidopterous family Sphingidae. Nov. Zool., Tring, 9, 1903, Supplement, (CXXXV + 972,64 pls.). [4431 0070]. 539A Monograph of Charazes and the allied Prionopterous

genera (conclusion). Nov. Zool., Tring, 10, 1903, (326–342). [4431]. 540

<u>unfigured</u> Lepidoptera. Nov. Zool., Tring, **10**, 1903, (481–487). [4431].

541

 Some new African

 Papilios.
 Nov.
 Zool.,
 Tring, 10, 1903.

 (488, 489).
 [4427 f 4431].
 542

Lepidoptera collected by Oscar Neumann in Northeast Africa. Nov. Zool., Tring, **10**, 1903. (491-542). [4427 fb 4431]. 543

Rothschild, N. C. v. Warren, W.

Rougemont, F. de. Observations entomologiques. Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (731-732). [4231 4431]. 544

Les pluies de chenilles. Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (735-736). [4419]. 545 Rowland-Brown, H. An aberration of Melitaea didyma. Entomologist, London, **36**, 1903, (153-154, with fig.). [4423 4431]. 546

**Rudow.** Die Schmarotzer unserer einheimischen Schwärmer (Sphingiden). Insektenbörse, Leipzig, **20**, 1903, (196). [4419 4431]. 547

Schmarotzer der einheimischen Spinner. Insektenbörse, Leipzig, 20, 1903, (196–197). [4419 4431]. 548

Ruhe, H. Eine albinotische Form von Vanessa polychloros? Insektenbörse, Leipzig, 20, 1903, (205). [4431]. 549

**Russell**, G. M. Notes on Geometra vernaria. Entomologist, London, **36**, 1903, (227–228). [4415 4431]. 550

Sahlberg, John. Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien in den Jahren 1895–1896 und 1898–1899. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1902–1903, (1-34); [No. 17], (1-38). [4427 4627 4827 dl dm ei fa fb]. 551

Sajó, Karl. Das grosse Nachtpfauenauge (Saturnia pyri). Natur u. Schule, Leipzig, 2, 1903, (229-232). [4431]. 552

**Sanderson**, E[zra] D[wight]. Three orchard pests [Steganoptycha pyricolana, Euzophera semifunerealis and Cicada septendecim]. Agric. Exp. Sta., Delaware, Newark Bull., No. 53, 1901, (19, with 11 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (872–873). [2403 4031 4419 4431]. 553

Some destructive caterpillars [Hyphantria cunca; Hemerocampa leucostigma; and Clisiccampa americana]. Agric. Exp. Sta., Delaware, Newark, Bull., No. 56, 1902, (28, with 14 figs). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1902, (372). [4419 4431].

Report of the entomologist. [Including notes on Aphis and Euzophera semifuneralis.] Agric. Exp. Sta., Delaware, Newark, Rep., **1901**, (127-199, with 6 pls., 16 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1002, (268-269). [2403 2427 gh 4031 4419 4431]. 555

**Sasaki**, ('[hūjirō]. Notes on the leafminers of the fruit-trees. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (381-383). [4419 4431]. 556

**Schaus**, William. New Noctuidae from tropical America. New York, N.Y., J. Ent. Soc., **11**, 1903, (230–236). [4427 h]. 557

Schenk, Otto. Die antennalen Hautsinnesorgane einiger Lepidopteren und Hymenopteren mit besonderer Berücksichtigung der sexuellen Unterschiede. Zool. Jahrb., Jena, Abt. f. Anat., 17, 1903, (573-618, mit 2 Taf.). [4407 4607]. 558

**Schille**, Fr. Ein Beitrag zur Schmetterlingsbiologie. Soc. Entomol., Zürich, **16**, 1902, (146); **17**, 1903, (186). [4419]. 559

**Schimpf**, Gustav. Schmetterlingsbiologieen aus Süd-Amerika. Naturfreund, Witten, **1**, 1902, (73-76). [4419]-561

**Schmidt**, J. Abart von *Pararge hiera* F. Ent. Zs., Guben, **16**, (1902-03), 1903, (89-90). [4431]. 562

Schreiber, Carl. Raupen-Kalender. [Nach den Futterpflanzen geordnet für das mitteleuropäische Faunengebiet.] (Forts.) D. ent. Zs. Iris, Berlin, **14**, (1901), [1902], (277-326). [4419 4427 *d*]. 563

Schröder, Chr. Die Zeichnungs-Variabilität von Abraxas grossulariata L. gleichzeitig ein Beitrag zur Descendenz-Theorie. Allg. Zs. Ent., Neudamm, 8, 1903, (105-119, 145-157, 177-194, 228-234). [4431 4423].

564 Kritik der von Herrn Dr. E. Fischer (Zürich) aus seinen "Lepidopterologischen Experimentalforschungen" gezogenen Schlüsse auf Grund einer neuen Erklärung des Wesens derselben. Allg. Zs. Ent., Neudamm, 8, 1903, (437-447). [4423 4411]. 565

Schrottky, C. Beitrag zur Kenntniss der Syntomiden Argentiniens. D. ent. Zs. 1ris, Berlin, 15, 1902, (133–136). [4427 hi 4431]. 566

Schütze, K. T Die Kleinschmetterlinge der sächsischen Oberlausitz. [Tl 3: Tineina, Micropterygina.] D. ent. Zs. Iris, Berlin, 15, 1902, (1-49). [4427 de]. 567

Ein neuer Kleinschmetterling. [Anacampsis biformella n. sp.] Ent. Zs., Guben, **16**, (1902-03), 1902, (13). [4431]. 568

Schultz, Osker. Melanismus bei Acronycta rumicis L. Soc. Entomol., Zürich, 16, 1902, (170). [4423 4431]. 569

Ueber eine bemerkenswerte Form von Apatura iris L. Soc. Entomol., Zürich, 17, 1903, (161). [4427 de 4423 4431]. 570

Ueber einige aberrative Formen von Aglia tau L. darunter ab. caecata Schultz. Soc. Entomol., Zürich, 17, 1903, (178-179). [4427 de 4423 4431]. 571

Chrysophanus HB. Nyt. Mag. Naturv., Kristiania, **41**, 1903, (23–26). [4423]. 572

Pamphila palaemon Pall. ab. melicertes m. und Pamph. silvius Knoch. ab. catella m. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (321-323). [4431]. 573

Vanessa 1-album Esp. aberr. nov. chelone. D. ent. Zs. Jris, Berlin, 15, (1902), 1903, (324-325). [4431]. 574

Ueber eine interessante Form von Smerinthus populi L. (ab. decorata m.). Berliner ent. Zs., 47, 1902, [1903], (288). [4431]. 575

Varietäten und Aberrationen von Lycaena eumedon Esp. Uebersicht über die Variabilität dieser Species. Berliner ent. Zs., **48**, 1903, (263–269). [4431 4423]. 576

dromorphen Exemplare aus der Familie der Pieriden und Nymphaliden. Berliner ent. Zs., **48**, 1903, (270–273). [4411]. 577

Einige interessante Abnormitäten und Aberrationen aus der Lepidopteren-Sammlung des Herrn A. Pilz (Heinrichau). Berliner ent. Zs., **48**, 1903, (297-300). [4423]. 578

Ueber Kreuzungsprodukte von Lasiocampa quercus L. var. sicula Stdgr. 3 × var. alpina Frey Q und deren Rückkreuzung mit Las. quercus var. sicula Stdgr. Ent. Zs., Guben, **16**, 1902–03), 1903, (94). [4423 4431]. 579

Schulz, Gustav Leo. Eine neue Varietät von Arctia maculosa Gerning. D. ent. Zs. 1ris, Berlin, **15**, (1902), 1903, (328-329). [4431]. 580

Serebrianikov, A. V. Ueber den grossen Kiefernspinner (*Gastropacha pini* Ochsh.) (Russ.) St. Peterburg, Izv. Lešn. Inst., 7, 1901, (29-102, mit 1 Taf.). [4403 4431 4419]. 581

**Seufferheld**, C. Die Bekämpfung des Heu- und Sauerwurmes in den Weinbergen der Lehranstalt im Jahre 1902. Mitt. Weinbau, Geisenheim, **15**, 1903, (65-69). [4403]. 582

Sharp, Miss E. M. B. Description of a new species of the family Lemoniidae. Entomologist, London, **36**, 1903, (310). [4431]. 583

A monograph of the genus Teracolus, pts. 9, 10 [1901], pt. 11 [1902]. London, (101-156, pls. xxxiixliii). 4to. [4431]. 584

**sharpe**, E. M. The butterflies collected in Equatorial Africa by Captain Clement Sykes. Entomologist, London, **36**, 1903, (5-8, 36-40). [4431]. 585

**Sheldon**, W. G. Lepidoptera at Pontdu-Gard and Digne. Ent. Rec., London, **15**, 1903, (193-196). [4427 df 4431]. 586

**Shelford**, R. A curious protective device in a Lepidopterous larva. Zoologist, London, (Ser. 4), 7, 1903, (161–163, pl. iv). [4419]. 587

Sherman, Franklin, jun. r. Brimley, C. S. 588

**Shufeldt**, R[obert] W[ilson]. Beautiful moths [Heterocera]. Amer. Inv., Washington, D.C., **10**, 1903, (93–95). [4431]. 589

**Stépt**, P. Apparition tardive de Libythea celtis. Feuille jeunes natural., Paris, (sér. 4), **33**, 1902, (34). [4423 4431]. 590

Encore Euprepia pudica. Feuille jeunes natural., l'aris, (sér. 4), **33**, 1903, (51). [4419 4431]. 591

Contribution à l'histoire naturelle de Charaxes jasius. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (56-64, av. 1 pl.). [4431 4419]. 592

Un lépidoptère nouveau pour la Provence (*Plusia aurifera*). Feuille jeunes natural., Paris, (sér. 4), **33**, 1003, (101-102). [4427 df 4431]. 513 **Riépi**, P. Evolution d'Acherontia atropos. Fouille jeunes natural., Paris, (sér. 4), **33**, 1903, (104–105). [4415 4431]. 594

Satyrides atteints d'albinisme. (Liste supplémentaire). Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (134). [4423 4431]. 595

**Silfventus,** A[ntti] J[ohannes]. Über im Wasser lebende Schmetterlinge und auf Land lebende Trichoptereu. (Finnisch) Luonnon Ystävä, Helsingfors, **1903**, 6-8, (125-128). [4419 3819]. 596

**Simpson**, C. B. Report upon an investigation of the codling moth [*Carpocapsa pomonella*] in Idaho in 1900. Washington, D.C., Bull. U. S. Dept. Agric., Div. Ent., (N. Ser.), No. **30**, 1901, (51-75). [4419 4427 gi 4431]. 597

Observations upon the life history of the codling moth. [Carpocapea pomonella.] Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (63-65). [4415 4431]. 598

The codling moth. [Carpocapsa pomonella.] With bibliography. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **41**, 1903, (105, with map and pl.). [4419 4431]. 599

**Skinner**, Henry. A new species of *Nyctalemon* [*N. curvuta* n. sp.]. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, **1903**, (298). [4431]. 600

Lepidoptera of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Eut. Soc., 29, 1902, (36-38). [4427 gi 4431]. 601

New species of Rhopalocera[nn. spp. in Lycena]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (15). [4431]. 602

A new moth [Psychophora fasciata n. sp.] from Alaska. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (141-143). [1427 ga 4431]. (03

[Hesperidae from the United States]. Philadelphia, Pa, Ent. News Acad. Nat. Sci., 13, 1902, (183). [4427 gf 4431]. 604

A new Papilio. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (183). [4431]. 605 (N 2-9053) Skinner, Henry. [Criticism of Dyar's classification of *Psychophora*]. Philadelphia, Pat., Ent. News Acad. Nat. Sci., 13, 1902, (192). [4431]. 606

A new Hesperid [Pamphila vierecki n. sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (213-214). [4431]. 607

A new species of *Melitasa*. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (304–305). [4431]. 608

A butterfly new to the United States. [Myscelia skinneri in Dry cañon, Alamogordo, New Mexico]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (321). [4427 gi 4431]. 609

A hesperid new to our fauna. [Nisoniades brunnea Herr Schaef from Florida]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (110). [4427 gh 4431]. 610

A new Sesiid [Albuna beutenmülleri n. sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (126). [4431]. 611

Sci., 14, 1903, (200). [4431]. 613

slevogt, B. Die Raupe von Stauropus fagi. Soc. Entomol., Zürich, 16, 1902, (185-186). [4419 4431]. 613a
Ueber, namentlich bei Noctuen, zunehmenden Melanismus. Soc. Entomol., Zürich, 17, 1902, (43). [4423].

lst Hadena adusta Esp. var. nova bathennis Lutzau nur die schon bekannte var. rirgata Tutt oder nicht? Soc. Entomol., Zürich, **17**, 1902, (89). [4431]. 615

**Slingerland**, M. V. The palmer worm. [Ypsolophus pometellus]. Agric. Exp. Sta., New York, (Cornell station), Ithaca, Bull., No. **187**, 1901, (77-101, with 9 figs.).; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1901, (68). [4431]. 616

Three unusual strawberry pests. [Cacoecia obsoletana, Harpalus caliginosus and H. pennsylvanica]. Agric. Exp. Sta., New York (Cornell Station), Ithaca, Bull., No. **190**, 1001, (143–164, with 15 figs.); [review], Washington, D.C., U. S. Dept. Agric., Off. Exp. Sta. Rec., **13**, 1901, (371–372). [4419 4431 4831]. 617

**Smith**, E. J. Lantern trapping [of moths]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (207-207). [4403]. 618

Pests and Grease. [Criticism of paper by F. W. Dod.] Philadelphia, Pa., Ent News Acad. Nat. Sci., **13**, 1902, (244–246). [0060 4403].

**Smith**, G. The temperature of insects. Zoologist, London, (Ser. 4), 6, 1902, (287-293). [2411 4411]. 620

**smith**, John B[ernhardt]. New noctuids for 1903, No. 4, with notes on certain described species. Philadelphia, Pa., Acad. Nat. Sci. Trans. Ent. Soc., 29, 1903, (191-224, with pl.). [4431]. 621

A revision of the boreal American species of Nonagria Ochs. Washington, D.C., Proc. Ent. Soc., 5, 1903, (311-321, with pl.). [4427 g 4431]. 622

[Notice of preliminary revision of the species of Nonagria. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (56). [4431]. 623

New noctuids for 1903, No. 2, with notes on *Mameetra* and *Scotogramma*. New York, N.Y., J. Ent. Soc., **11**, 1903, (1-23, with pl.). [4431]. 624

New noctuids for 1903. No. 5. New York, N.Y.. J. Ent. Soc., **11**, 1903, (188–193). [4431]. 625

Two strawberly pests [Phoxopteris comptana and Aphis forbesi]. Agric. Exp. Sta., New Jersey, New Brunswick, Bull., No. **149**, 1901, (17, with 2 pls.). 23 cm.; [review], Washington, D.C., U.S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1901, (161). [4031 4419 4431]. 626

**Smits**, Alb. Colonie de Boletobia fuliginosa. Feuille jeunes natural., l'arie, (scr. 4), **33**, 1903, (224). [4419 4421]. 627

Sur le son émis par les chenilles. Feuille jeunes natural., Paris, (sér. 4), 38, 1903, (224). [4419]. 628 **Smyth**, Ellison A., jun. Identity of *Hemaris tenuis* and *H. diffinis*. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (82). [4431]. 629

Morpho thoosa (sp. nov.). Description of a new variety of Morpho polyphemus Dby. Hew. from Mexico. Philadelphia, Pa, Ent. News Acad. Nat. Sci., 14, 1903, (85-87, with pl.). [4427 ha 4431].

[Nisoniades naevius in South Carolins]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (333). [4427 gh 4431]. 631

**Snellen**, P[ieter] C[ornelis] T[obias]. Beschreibungen neuer exotischer Tortricinen, Tineinen und Pterophorinen], (Holländisch) 's Gravenhage, Tijdschr. Ent., **46**, [1903], (25-57, 2 Taf.). [4431]. 632

Cornelis].

**Snow**, F[rancis] H[untington]. List of Coleoptera and Lepidoptera collected in Hamilton, Morton and Clark counties, Kansas 1902 and 1903. Lawrence, Kan. Univ. Sci. Bull., **2**, 1903, (191-208). Separate 27.8 cm. [4427 gi 4827 gi]. 633

**Snyder**, A. J. A day's experiences [collecting butterflies in Colorado]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (50–54). [4427 gi 4431]. 634

**South**, R. Catalogue of the collection of palæarctic butterflies formed by the late John Henry Leech and presented to the Trustees of the British Museum by his mother Mrs. Eliza Leech. London, 1902, (vi + 228, 2 pls.). 4to. [Review], Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (526). [4403 4427 4431]. 635

**Speiser**, P[aul]. Die Schmetterlingsfauna der Provinzen Ost- und Westpreussens. (Beiträge z. Naturkunde Preussens, hrsg. v. d. physik-ökon. Gesellsch. Königsberg. N. 9.) Königsberg i. Pr. (W. Koch in Komm.), 1903, (111 + 148). 30 cm. [4427 dc]. 636

Spengel, [Joh. Wilh.] Ueber Alerrationen des Schwalbenschwanzes. Giessen, Ber. Ges. Natk., **33**, 1899– 1902, (206-207). [4431]. 637

Splendore, Alfonso v. Lutz, A.

**Stebbing**, F. P. Insect pests of the sugar cane in India. Calcutta, Ind. Mus. Notes, **5**, 1903, (64-91). [2419 3819 4019 4419 4619 4819]. 638

Departmental notes on insects that affect forestry No. 2. Calcutta, 1903, (V-VII + 151-334, with 13 pls.), 25 cm. [2419 4031 4231 4431 4631 4831]. 639

Form von Polia dubia Dnp. aus den Hautes Pyrénées. D. ent. Zs. Iris, Berlin, 15, 1902, (180–181). [4431]. 641

**Stichel**, H. Synonymisches Verzeichnis bekannter *Eueides*-Formen mit erläuternden Bemerkungen und Neubeschreibungen. Berliner ent. Zs., **48**, 1903, (1-34, mit 1 Taf.). [4431]. 642

[Discophora muscina Stich. n. sp.]. Berliner ent. Zs., **48**, 1903, ((4)-(5)). [4431]. 643

[Ueber *Heliconius*-Formen]. Berliner ent. Zs., **48**, 1903, ((14)). [4431]. 644

[Zwitter v. Smerinthus]. Berliner ent. Zs., 48, 1903, ((18)). [4411]. 645

über die Artberechtigung der Schmetterlinge. II. D. ent. Zs. Iris, Berlin, **15**, 1902, (50–95, mit 2 Taf.). [4407 4431]. 640

Brassolidarum novarum descriptio ad tempus proposita. Insektenbörse, Leipzig, **20**, 1903, (389). [4431]. 647

**Stitz**, H. Zum Genitalapparat der Lepidopteren. Zool. Anz., Leipzig, 27, 1903, (135–137). [4407]. 648

**Strand, Embr.** Neue norwegische Schmetterlingsformen Arch. Math. Naturv., Kristiania, **25**, 1903, (24). [4423 4427 da]. 649

Eine neue arktische Gelechia-Art. Berliner ent. Zs., 47, 1902, [1903], (155–156). [4431]. 650

Eine neue norwegische (delechide (Gelechia (Lita) nordlandicolella Strand n. sp.). Ent. Zs., Guben, 15, (1902-03), 1902, (21). [4431]. 651 (N 2-9053) Swinhoe, C. On the genus Deilemera, Hubner. London, Trans. Ent. Soc.,
1903, (53-84, pls. III, IV). [4431]. 653
A revision of the Old World Lymantriidae in the national collection. London, Trans. Ent. Soc.,
1903, (375-498). [4427 d 4431]. 654
New species of Eastern and African Lepidoptera. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (499-511). [4427 e f 4431]. 655
Descriptions of new Eastern moths. Ann. Mag. Nat. Hist., London,

moths. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (193-200). [4427 eg 4431]. 656

Reports on the Heterocera. Fascic. Malay. Zool., 1, (51–109). [4419 4427 eg 4431]. 657

Theinert, B. Protoparce convoluti. Ent. Zs., Guben, 16, (1902–03), 1903, (86–87). [4431]. 658

**Thiele.** [Arctia caja L. ab.]. Berliner ent. Zs., **48**, 1903, ((29)). [4431]. 659<sup>.</sup>

Thieme, Otto. Zwei neue Satyriden. aus der Cordillere von Südamerica. Berliner ent. Zs., 47, 1902, [1903], (281-282). [4427 hm 4431]. 660 Eine neue Tithorea vom Perliner ent. Zs., 47, Chanchamayo. 1902, [1903], (282). [4431]. 661 Selenophanes supremus var. ditatus Thieme. Berliner ent. Zs., 48, 1903, ((12)-(13)). · [4431]. 662 — [Melitaeu maturna var. wolfensbergeri]. Berliner ent. Zs., 49, 1903, ((20)-(22)). [4431].663 - [Südafrikan. Satyriden].

Berliner ent. Zs., **48**, 1903, ((31)). [4431]. 664

**Thurau**, [F.]. [Colias nastes Bsd. abb.]. Berliner ent. Zs., **48**, 1903, ((30)). [1431]. 665

Colias nastes Bsd. varwerdandi Zett und ihre Aberrationen. Berliner eut. Zs., 48, 1903, (113-116). [4431]. 666

Neue Lepidopteren aus Ost- und Central-Afrika im Königl. zoologischen Museum zu Berlin. Berliner ent. Ze., **48**, 1903, (301-314). [4427 ff 4431]. 667 668 Thurnall. Dianthoecia, mimicry and concealment. Ent. Mag., London, 39, 1903, (201). [4419]. 669

**Tiedemann**, von. Die Zucht von Arctia flava in zwei Generationen. Ent. Zs., Guben, **16**, (1902–03), 1902, (9–10, 25–26, 29–30). [4403–4431]. 670

**Tomola**, F. Sesia empiformis Esp. var. hungarica mihi n. var. Wien, JahrBer. Entom. Ver., **12**, (1901), 1902, (13-16). [4431]. 671

Trautmann, W. Zwei neue Macro-Lepidopterenformen. [Epichnopteryz pulla var. völkeri, Xylomiges conspicillaris var grisea.] Ent. Zs., Guben, 16, (1902-03), 1903, (78-79). [4431]. 672

Trimen. [Resemblances, Planema pseudacraea, Papilio]. London, Proc. Ent. Soc., 1903, (38–41). [4419]. 673

Trost, Alois. Beitrag zur Lepidopteren-Fauna der Steiermark. Graz, Mitt. Natw. Ver. Steierm., 1902, 1903, (328-340). [4427 dk 4431]. 674

**Trost**, C. Erfahrungszahlen zum Gebrauche bei der Bekämpfung des Kiefernspinners (*Gastropacha pini*). Tharander forstl. Jahrb., **53**, 1903, (92–119). [**4403** 4431]. 675

**Techetwarikoff**, S. Dendrolimus laricis Tschwr. n. sp. und schädlicher Spinner der paläarktischen Region. Soc. Entomol., Zürich, **18**, 1903, (89-90). [4427 d 4419 4431]. 676

Turner, A. Jefferis. New Australian Lepidoptera, with synonomic and other notes. Adelaide, S. Anst., Trans. R. Soc., 27, 1903, (1-26). [4403 4427 ic 4431]. 677

Revision of Australian Lepidopteta. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (42-92). [4427 ic 4431]. 678

 Turner.
 H. J.
 Notes
 on
 various

 Colcophorids.
 Ent. Rec., London, 15,
 1903, (88-92).
 [4431].
 679

Tutt, T. W. A Natural History of the British Lepidoptera. Vol. III. London and Berlin. July 1902, (XI + 558); [review], Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (130–131). [4403]. 680

Tutt, T. W. Some genera of the Amorphid and Hemarid Sphingids. Ent. Rec., London, 15, 1903, (42–43). [4431]. 681

Some genera of the Eumorphid Sphinges. Ent. Rec., London, 15, 1903, (75-76). [4431]. 682

Genera of the Eumorphid and Daphnid Sphinges. Ent. Rec., London, 15, 1903, (100–101). [4431]. 683

Revision of the European Alucitides. Ent. Rec., London, **15**, 1903, (251-254). [4427 d]. 684

**Uffein.** Zur Kenntniss einiger Eulen-Arten. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (316-320). [4431]. 685

Vassiljev, I. V. Der Baumweissling (Aporia crataegi, L.) und dessen Parasiten. (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, III, No. 8, 1902, (36, mit 16 Fig.) [4215 4219 4419 4615 4619]. 686

Vaucher, A. Notes sur les Argynnis du Maroc. Feuille jeunes natural., Paris, (sér. 4), 33, 1902, (34). [4427 fa 4431]. 687

Veley. [Birds capturing butterflies]. Nature, London, 65, 1903, (273, 392). [5819 4419]. 688

**Völker**, Ulrich. Ein Beitrag zur Naturgeschichte von Valeria oleagina. Ent. Zs., Guben, **16**, (1902–03), 1902, (38–39). [4419 4431]. 689

Voroncov, Alexander. Grapholitha nigricana H. S. in den Fichtenwäldern des Gouv. Kelce während der Jahre 1890–1895. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (CL111– CLV1). [4419]. 690

Wagner, F. Pharepis (recte Theropis) cronymaria Schiff-nov. ab. Soc. entomol., Zürich, 18, 1903, (92-93). [4427 dk 4431]. 691

*Zyjaena* carniolica Sc. Insektenbörse, Leipzig, **20**, 1903, (29). [4431]. 692

Walsingham, Lord. Description of a new species of Batrachedra associated with spiders in S. Africa. Ent. Mag., London, **39**, 1903, (166–167). [4419 4427 fg 4431]. 693 Walsingham, Lord. Spanish and Moorish Microlepidoptera [continued]. Ent. Mag., London, **39**, 1903, (179–187, 203–214, 262–268, 292, 293). [4427 dg fa 4431]. 694

Review [of Dyar's list of N. American Lepidoptera]. Ent. Mag., London, **39**, 1903, (257-261). [4427 g]. (895

Lepidoptera. III. Pterophoridae and Tineina. Nat. Hist. Sokotra, (343-356, pl. XXI). [4427 ff 4431]. 696

Warnecke, Georg. Beitrag zur Lepidopterenfauna Göttingens. Insektenbörse, Leipzig, 20, 1903, (59-60). [4427 dc]. 697

Beiträge zur Lepidopterenfauna Schleswig - Holsteins. Heimat, Kiel, **13**, 1903, (180-183). [4427 dc]. 698

Warren, W. New moths from British New Guinea. Nov. Zool., Tring, 10, 1903, (120–126). [4427 ia 4431]. 699

New Drepanulidae, Thyrididae, Uraniidae and Geometridae from the Oriental region. Nov. Zool., Tring, **10**, 1903, (255-270). [4427 eg 4431]. 700

New African Thyrididae and Geometridae in the Tring Museum. Nov. Zool., Tring, **10**, 1903, (271-278). [4427 f 4431]. 701

New Uraniidae, Drepanulidae and Geometridae from British New Guinea. Nov. Zool., Tring, **10**, 1903, (343-413). [4427 ia 4431]. 702

and Rothschild, N. C. Two new species of Lepidoptera from the Wady el Natron, Egypt. Entomologist, London, **36**, 1903, (225, 226, pl. IV). [4427 fb 4431]. 703

Waterhouse, G. A. Descriptions and notes of Australian *Hesperidae*, chiefly Victorian. Vict. Nat., Melbourne, 20, 1903, (52-57). [4419 4427 ic 4431]. 704

Weed, C[larence] M[oores]. Remedies for the cankerworm. Agric. Exp. Sta., New Hampshire, Durhan, Bull., No. 85, 1901, (69-76, with 5 figs.); [review], Washington, D.C. U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (873). [4403 4431]. 705 Bolivian Lepidoptera. [Progress of work]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (317). [4427 hg]. 707

New species of butterflies from Bolivia. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (104– 108). [4427 hg 4431]. 708

Weeks, Archibald C. Theory as to evolution of secondaries of moths of the genus *Catocala*. New York, N.Y., J. Ent. Soc., **11**, 1903, (221-226). [4419 4423, 4431]. 709

Wendlandt, P. Die mittelrheinische Agrotis candelisequa Hb. Agrotis candelisequa var. defasciata, m. Ent. Zs., Guben, 16, (1902–03), 1902, (61–62). [4431]. 710

Werner, Aug. Aglia tau L. ab. melaina Gross und Aglia tau L. var. cupreola m. Soc. Entomol., Zürich, 17, 1902, (129–130). [4419 4431]. 711

Ueber Aglia tau L. ab. melaina Gross und Aglia tau L. var. cupreola m. Ent. Zs., Guben, **16**, (1902-03), 1902, (65-66). [4431]. 712

Weymer, Gustav. Einige afrikanische Lepidopteren. D. ent. Zs. Iris, Berlin, 16, 1903, (221–235, mit 1 Taf.). [4427 f 4431]. 713

Zwei neue Tagfalter aus Neuguinea. Ent. Zs., Guben, **16**, (1902– 03), 1902, (5–6). [4427 *ia* 4431]. 714

——— Die Lepidopteren der Kunene - Sambesi - Expedition. [In: Kunene-Sambesi - Expedition, hrsg. v. O. Warburg.] Berlin, 1903, (513-559). [4427 fe 4431]. 715

Wheeler, G. The butterflies of Switzerland and the Alps of ('entral Europe. London, 1903, (vi+162). 8vo. Review by Steck, Mt. Schweiz. ent. Ges. 11, (58). Also Entomologist 36, (327) and Ent. Rec. 15, (345-347). [4427 di], 716

Wilbrand. Ein neuer Feind der Eichenkulturen. [Pseudophia lunaris.] Allg. Forstztg, Frankfurt a. M., 79, 1903, (11-13). [4419 4431]. 717 Wileman, A. E. On a new variety of *Papilio mikado*, Leech. Entomologist, London, **36**, 1903, (3)0). [4431] 718

Willis, J. C. and Burkill, J. H. Notes on the anthophilous insect fauna of the Clova mountains. Ann. Scot. Nat. Hist., Edinburgh, **1903**. (29-37, 99-102). [2419 4419 4427 de 4627 de 4631]. 719

Winn, A. F. A hermaphrodite Lycaena. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 18, 1902, (78). [4411 4431]. 720

Witchell, C. A. Some instances of intelligence in animals. Gloucester, Proc. Cotteswold Nat. F. Cl., 14, 1903, (119-125). [0219 4419]. 721

Woodworth, C. W. The California peach-tree borer [Sanninoidea opalescens]. Agric. Exp. Sta., California, Berkeley, Bull., No. 143, 1902, (15, with 7 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1903, (468–469). [4419–4431]. 722

Wormsbacher, Henry. Records of Lepidoptera in New Jersey. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (201-203). [4427 gg]. 723

Wünscher. Die Aufzucht einiger hervorragender Schwärmer aus dem Ei. Ent. Jahrb., Leipzig, **12**, 1903, (118– 127). [4403]. 724

Wytsman, P. Fascicule 4. Lepidoptera. Rhopalocera fam. Papilionidue, Subfam. Leptocircinae. In: Genera insectorum. Bruxelles, 1902, (3, av. 1 pl.). fr. 2.50. [4431]. 725

Young, L. C. H. The classification of the Lepidoptera Papilionina. Bombay, J. Nat. Hist. Soc., 15, 1903, (294-311). [4431]. 726

Zander, Enoch. Beiträge zur Morphologie der männlichen Geschlechtsanhänge der Lepidopteren. Zs. wiss. Zool., Leipzig, 74, 1903, (557–615, mit 1 Taf.). [4407 4415]. 727

Zdobnicky, W. Das Ei und die ersten Raupenstadien von *Thais polyzena*. Soc. Entomol., Zürich, **18**, 1903, (36). [4419 4431]. 728

**Zehntner**, I [eo]. . . Neue Futterpflanze der Cacaomotte. (Holländisch) Salatiga, Bull. Cacao, **4**, 1902, (53-56). [4419 4431]. 729

Bericht über Mottenbekämpfung. (Hollandisch) Salatiga, Bull. Caeao. 5, 1903, (1-53, mit 1 Taf.). [4403–4431]. 730

# 4403 COMPREHENSIVE AND GENERAL WORKS.

GENERAL.

**Barrett.** (<sup>4</sup>, G. The Lepidoptera of the British Islands: Pts. 95-106. Being vol. IX, (1-454, pls. 377-424) [carrying the work to the end of the *Pyralidae*.]

Bloomfield, E. N. Suffolk Lepidoptera in 1902. Ent. Mag., London, 39, 1903, (88-89).

Bray, E. Lépidoptères capturés aux environs de Virton. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (143-146).

Browne, C. S. A list of the Lepidoptera of the island of Capri, with a few notes. Entomologist, London, **36**, 1903, (254-256, 284-286, 307-309).

**Crombrugghe de Picquendaele, de.** Note sur quelques lépidoptères de la faune belge et sur leurs larves. Nanur, Itev. Soc. ent., **1903**, (52-55).

**Dyar**, Harrison G. Some recent work in North American Lepidoptera. [Annual address of President.] Washington, D.C., Proc. Ent. Soc., **5**, 1903, (167– 173).

**Giumer**, M. Eine autorisirte deutsche 1. Ausgabe von Tutt's British Lepido ptera. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (330-334).

Grete, Radcliffe A. Nachtrag zu dem Aufsatze : "Geometridengattungs-Namen", Ins.-Börse XIX Jg, 1902. Insektenbörse, Leipzig, **20**, 1903, (85).

**Holland**, W[illiam] J[acob]. The moth book; a popular guide to a knowledge of the moths of North America. New York (Doubleday Page & Co.), 1903, (XXIV + 479), with illustr., 48 pls.). 26.5 cm.

Hübner, J. et Geyer. Lépidoptères exotiques (1806–1837) Nouvelle édition revue, corrigée et augmentée, publice par W. F. Kirby et P. Wytsman, Livraisons 48-54. Bruxelles (P. Wytsman), 1901–1903, (17-172, pls. 381-437). La livraison 10 fr.

**Hulme,** F. E. Butterflies and moths of the country side. The Woburn Library. London, 1903, (XX + 300, 35 pls.).

Janet, A. Les papillons. Caus. sci., Paris, **1**, 1902, (309-350, av. 1 pl. et 10 fig.). **Etrby**, W[illiam] F(orsell]. The butterflies and moths of Europe. London, Paris, New York and Melbourne (Cassell & co. ltd.), 1903, (lxxii + 432, with illustr., pl.). 27.5 cm.

Lambillion, L. J. Catalogue des lépidoptères de Belgique, donnant les noms de tous les papillons pris en Belgique jusqu'à ce jour avec les variétés, leurs synonymes, les époques d'apparition, les localités, les époques des chenilles, leur nourriture, etc. et une liste de papillons paléarctiques après chaque groupe indigène. Deuxième édition considérablement augmentée. Fasc. V. Namur (V. Delvaux), 1003, (65-80). 8vo. Le Fasc. fr. 0.50.

Histoire naturelle et moeurs de tous les papillons de Belgique. Description complète de chaque espèce ; insecte parfait, oeuf, chenille, chrysalide, plantes nourricières, époque d'éclosion, localités, distribution géographique, etc. etc. Ouvrage précédé de renseignements anatomiques et biologiques et d'une liste de papillons fossiles. Vol. 1. Namur (V. Delvaux), 1902, (cxxiv + 329, av. figs.). 6 fr.

Longstaff, G. B. Further notes on Lepidoptera observed at Mortehoe, North Devon. Ent. Mag., London, **39**, 1903, (194–197).

Renton, W. A list of the Lepidoptera of Roxburghshire. Entomologiat, London, 36, 1903, (130-135).

**Serebrianikov**, A. V. Ueber den grossen Kiefernspinner (*lastropacha* pini Ochsh.). (Russ.) St. Peterburg, Izv. Lěsn. Inst., **7**, 1901, (29-102, mit 1 Taf.).

**Turner**, A. Jefferis. New Australian Lepidoptera, with synonomic and other notes. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (1-26).

**Tutt**, J. W. A Natural History of the British Lepidoptera. Vol. 111. London and Berlin : July, 1902. (XI + 558); [review], Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (130–131).

#### MUSEUMS.

Hampson, George F. List of types of *Catocala* in the British Museum. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (287).

#### COLLECTIONS AND TECHNIQUE.

Bankes. [Sugar trap for Lepidoptera.] Ent. Mag., London, 39, 1903, (171).

Barrett, O. W. Cheap tropical American butterflies [due to abundance]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (238-240).

**Denton**, William D. Tropical butterflies. [Scarcity in South America.] *l.c.* (316-317).

**Dod**, F. H. Wolley. Pests and grease. [Lepidoptera collections.] *l.c.* (50-53).

Dollman. Breeding cage for pupae. Ent. Rec., London, 15, 1903, (7, with pl.).

Grunsch, A. Das Aufsuchen der Sesien-Raupen. Ent. Zs., Guben, 16, (1902-03), 1902, (37-38).

Hoffmann, C. Nochmals die Zucht von Pleretes (Pericallia) matronula. l.e. (30-31).

Jullien, John. Neue Apparate zur Aufzucht von Raupen. Insektenbörse, Leipzig, 20, 1903, (300-301).

Kiefer, Hans. Fangergebnisse bei elektrischem Lichte. *l.c.* (163-164).

Longstaff. [Sugar trap for Lepidoptera.] Ent. Mag., London, **39**, 1903, (124).

**smith**, E. J. Lantern trapping [of moths]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (207-209).

Pests and grease. [Criticism of paper by F. W. Dod.] *l.c.* (244-246).

**South**, R. Catalogue of the collection of palaearctic butterflies formed by the late John Henry Leech and presented to the Trustees of the British Museum by his mother, Mrs. Eliza Leech. London, 1902, (VI+228, 2 pls.); [review], Anu. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (526).

**Tiedeman**, von. Die Zucht von Arctia flaza in zwei Generationen. Ent. Zs., Guben, **16**, (1902–03), 1902, (9–10, 25–26, 29–30).

Wünscher. Die Aufzucht einiger hervorragender Schwärmer aus dem Ei. Ent. Jahrb., Leipzig, **12**, 1903, (118– 127).

## ECONOMICS.

Berlese, Antonio. Contro la Cochylis. Bollettino di Entomologia agraria, Padova, 9, 1902, (82-86, con. fig.).

Dammer, Udo. Zur Seidenbaufrage. Tropenpflanzer, Berlin, 7, 1903, (72-79).

**Guerico** (Del), Giacomo. Mezzi chimici di lotta contro la cavolaia. Bollettino di Entomologia agraria, Padova, 9, 1902, (63-65).

Lenert, A. Erfahrungen in der Bekämpfung des Heu- und Sauerwurms. Trier (J. Lintz), 1903, (36, mit 1 Taf.). 22 cm. 0,80 M.

Mährlen. Die Bekämpfung des Springwurmwicklers. Mitt. Weinbau, Geisenheim, 15, 1903, (50-54, 72-76).

**Seufferheld**, C. Die Bekämpfung des Heu- und Sauerwurmes in den Weinbergen der Lehranstalt im Jahre 1902, *l.e.* (65-69).

**Trost**, C. Erfahrungszahlen zum Gebrauche bei der Bekämpfung des Kiefernspinners (*Gastropacha pini*). Tharander forstl. Jahrb., **53**, 1903, (92– 119).

Weed, C[larence] M[oores]. Remedies for the cankerworms. Agric. Exp. Sta., New Hampshire, Durham, Bull., No. 85, 1901, (69-76, with 5 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (863).

Zehntner, L[eo]. Mottenbekämpfung auf der Pflanzung Banaran. (Holländisch) Salatiga, Bull. Cacao, 5, 1903, (1-53, 1 Taf.).

4407 STRUCTURE.

#### GENERAL.

**Metalnikoff**, S. J. Beiträge zur Kenntnis der Anatomie der Raupe von Galleria melonella. (Vorläuf. Mitt.) Zool. Anz., Leipzig, **26**, 1903, (619–623).

# COMPARATIVE ANATOMY.

**Hirschler**, Jan. Recherches sur l'anatomie comparée de la corde de Leydig chez les lépidoptères. (Polish) Kosmos, Lwów, **28**, 1903, (137-153, av. 1 pl.). Stitz, H. Zum Genitalapparat der Lepidopteren. Zool. Anz., Leipzig, 27, 1903, (135-137).

Zander, Enoch. Beiträge zur Morphologie der männlichen Geschlechtsanhänge der Lepidopteren. Zs. wiss. Zool., Leipzig. 74, 1903, (557-615, mit 1 Taf.).

NERVOUS SYSTEM AND ORGANS OF SENSE.

Quail, A. On the antennae of *Hepialidae*. London, Trans. Ent. Soc., 1903, (499-507, pl. XIX).

schenk, Otto. Die antennalen Hautsinnesorgane einiger Lepidopteren und Hymenopteren mit besonderer Berücksichtigung der sexuellen Unterschiede. Zool. Jahrb., Jena, Abt. f. Anat., 17, 1903, (573-618, mit 2 Taf.).

#### SPECIAL GLANDS.

Bordas, L. Les glandes mandibulaires des larves de lépidoptères. Paris, C.-R. Acad. sci., **136**, 1903, (1273-1275).

Les glandes salivaires de la nymphe de Sphinz convolvuli L. Paris, C.-R. soc. biol., **55**, 1903, (141-143).

#### REPRODUCTIVE ORGANS.

**Pierce**, F. N. Specific differences in *Lithosidae*, as determined by structure of Genitalia. Entomologist, London, **36**, 1903, (81-86).

**Stichel**, H. Kritische Bemerkungen über die Artberechtigung der Schmetterlinge. II. D. ent. Zs. Iris, Berlin, **15**, 1902, (50-95, mit 2 Taf.).

**Stitz**, H. Zum Genitalapparat der Lepidopteren. Zool. Anz., Leipzig, **27**, 1903, (135–137).

#### SPECIAL EXTERNAL CHARACTERS.

Chapman. [Homeochromatism in European butterflies.] London, Proc. Ent. Soc., 1903, (42-44).

**Croft.** [Colour of butterflies' wings: diffraction of pigment.] Nature, London, **65**, 1903, (391).

# Lepidoptera.

Levrat, D. et Conte, A. Sur l'origine de la coloration naturelle des soies de lépidoptères. Naturaliste, Paris, 24, 1902, (260-261).

Linden, M[aria] Gräfin von. Die Farben der Schmetterlinge und ihre Ursachen. Halle, Leopoldina, **38**, 1902, (124-133).

# 4411 PHYSIOLOGY.

#### GENERAL.

**smith**, G. The temperature of insects. Zoologist, London, (Ser. 4), 6, 1902, (287-293).

# FUNCTION OF SPECIAL STRUCTURES.

Dewitz, J. Ueber die Herkunft des Farbstoffes und des Materials der Lepidopterenkokons. Zool. Anz., Leipzig, 27, 1903, (161-168).

#### HERMAPHRODITISM.

Ford. Gynandrous Hesperia actaeon. Entomologist, London, 36, 1903, (242).

**Heckel.** Halbierter Zwitter Platisamia cecropia. Ent. Zs., Guben, **16**, (1902– 1903), 1902, (31).

Jachontov, A. A. Un spécimen hermaphrodite de *Smerinthus populi* L. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (217-218).

**Kabis.** Argynnis paphia L. Zwitter. Ent. Zs., Guben, **16**, (1902–1903), 1902, (42).

Schults, Oskar. Beschreibung einiger gynandromorphen Exemplare aus der Familie der Pieriden und Nymphaliden. Berliner ent. Zs., **48**, 1903, (270-273).

**Stichel**, [H.]. [Zwitter v. Smerinthus.] *l.c.* (18).

Winn, A. F. A hermaphrodite Lycaena. [L. pseudargiolus f. neglecta.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (78).

# ENVIRONMENTAL EFFECTS.

**Ball**, Fr. Notes sur l'effet de la température sur les chrysalides. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (385-388). **Fischer**, E. Lepidopterologische Experimental-Forschungen. [III.] Allg. Zs. Ent., Neudamm, **8**, 1903, (221-228, 269-284, 316-326, 356-368). [4423].

Pictet, Arnold. L'influence des changements de nourriture sur les chenilles et sur la formation du sexe de leurs papillons. Arch. Sci. Phys., Genève, (ser. 4), 15, 1903, (91-101).

L'influence des changements de nourriture dos chenilles sur le développement de leurs papillons. Aarau, Verh. Schweiz. Natf. Ges., **85**, 1902, (78); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (537-540).

Variations des papillons provenant des changements d'alimentation de leurs chenilles et de l'humidité. Aarau, Verh. Schweiz. Natf. Ges., **86**, 1903, (45-46); Arch. Sci. Phys., Genève, (Ser. 4), **16**, 1903, (585-588).

**Poulton**, E. B. Experiments in 1893, 1894, and 1896 upon the colour relation between Lepidopterous larvae and their surroundings, and especially the effect of lichen covered bark upon Odontopera bidentata. Gastropacha quercifolia, etc. London, Trans. Ent. Soc., **1903**, (311–374, pls. XVI-XVIII).

**Schröder**, Chr. Kritik der von Herrn Dr. E. Fischer (Zürich) aus seinen "Lepidopterologischen Experimentalforschungen" gezogenen Schlüsse auf Grund einer neuen Erklärung des Wesens derselben. Allg. Zs. Ent., Neudamm, **8**, 1903, (437-447).

#### REGENERATION.

Hirschler, Jan. Studien über Regenerationsvorgänge bei Lepidopteren-Puppen. Anat. Anz., Jena, 23, 1903, (612-627).

#### CHEMICAL PHYSIOLOGY.

Belliard, H. Contribution à l'étude de la formation et de la nature de la matière colorante des ailes de lépidoptères (d'après les travaux récents et spécialement ceux de la comtesse de Linden). Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (141-146, 161-163).

Farkas, Kálmán. Untersuchungen über den Energie- und Stoffumsatz bei der Entwicklung von Seidenraupen. (Ungarisch) Math. Termt. Ért., Budapest, 21, 1903, (59–94). **13**, 1903, (53-65, mit 1 Tuf.). ————— Die Farben der Schmetterlinge und ihre Ursachen. Halle, Leopoldina, **38**, 1902, (124-133).

Meue Untersuchungen über die Farben der Schmetterlinge. *l.c.* 39, 1903, (110-112, 116-120).

Maignon, F. La production du glucose, sous l'influence de la vie asphyxique, par les tissus du Bombyz mori, aux diverses phases de son évolution. Paris, C.-R. Acad. sci., 137, 1903, (93-95).

# EXPERIMENTAL PHYSIOLOGY.

Some experiments with a chrysalis. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (286-287). [0211].

# **4415** DEVELOPMENT.

## GENERAL.

Les plantes de France, leurs papillons et leurs chenilles (suite). Naturaliste, Paris, (sér. 2), 24, 1902, (95). [4119 4431].

Battley, A. M. Notes on the lifehistory of Aporia crataegi. Entomologist, London, 36, 1903, (249-251).

Brascassat, M. Observations lépidoptérologiques. Epinephele janira L. Rhodocera cleopatra L. — ('helonia pudica Esp. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (64).

Chrétien, P. Histoire naturelle de l'Eupithecia liguriata Mill. Naturaliste, Paris, (sér. 2), 24, 1902, (239-241).

Frohawk, F. W. Life-history of Argynnis lathonia. Entomologist, London, 36, 1903, (300-304).

Letacq, A. L. Observations sur l'Acherontia atropos. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (150-151).

**Pabst.** Die Sphingidae B., Zyjaenidae B. und Syntomidae H S. der Umgegend von Chemnitz und ihre Entwickelungsgeschichte. Ent. Jahrb., Leipzig, **12**, **1903**, (144-159). Pickett, C. P. Notes on breeding Angeronia prunaria. Ent. Rec., London, 15, 1903, (144-149).

Quail, A. On Charagia rirescens Dbld (*Hepalidae*). Wellington, Trans. N. Zeal. Inst., **35**, 1903, (249-255).

**Bocquigny-Adanson**, G. de. Papilio machaon. Feuille jeunes natural., Pariz, (sér. 4), **33**, 1903, (205).

**Bussell**, (J. M. Notes on Geometra vernaria. Entomologist, London, **36**, 1903, (227-228).

#### OOGENESIS AND SPERMATOGENESIS.

Grünberg, Karl. Untersuchungen über die Keim- und Nährzellen in den Hoden und Ovarien der Lepidopteren. Ein Beitrag zur Kenntnis der Entwicklung und Ausbildung der Keimdrüsen bei den Insekten. Zs. wiss. Zool., Leipzig, 74, 1903, (327-395 mit. 3 Taf.).

METAMORPHOSIS AND LARVAL FORMS.

Bordas, L. Les glandes mandibulaires des larves de lépidoptères. Paris, C.-R. Acad. sci., **136**, 1903, (1273-1275).

Les glandes salivaires de la nymphe de Sphinx convoluuli L. Paris, C.-R. soc. biol., 55, 1903, (141-143).

Caland, M[arinus]. Einigie Mitteilungen über [Raupe und Puppe von] Bombyz populi I. (Holländisch) 's Gravenhage, Tijdschr. Ent., 46, [1903], (65-70).

Dewitz, J. Ueber die Herkunft des Farbstoffes und des Materials der Lepidopterenkokons. Zool. Anz., Leipzig, 27, 1903, (161–168).

**Dollman**, J. C. Notes on the eggs, larva, cocoon and female of Orgyia splendida. Ent. Rec., London, **15**, 1903, (283-284).

**Douglas**, J. Some account of the larvae of *Poccilocampa populi*. Entomologist, London. **36**, 1903, (13-14).

**Pawcett**, J. Malcolm. Notes on the transformations of some South African Lepidoptera (continued from vol. XV). London, Trans. Zool. Soc., **17**, 1903, (165–190, pls. VI–VIII).

Frohawk, F. W. Life history of Vanessa antiopa. Entomologist, London, **33**, 1903, (2-5).

Lycaena arion. I.e. (57-60).

Glard, A. Evolution d'Acherontia atropos. Fenille jeunes natural, Paris, (sér. 4), 83, 1903, (124-127).

Gruss, Friedrich, *jun*. Die Haütungen der Raupen von *Caligula japonica* Butler. Insektenbörse, Leipzig, **20**, 1903, (388–389).

**Hirschler**, Jan. Studien über. Regenerationsvorgänge bei Lepidopteren-Puppen. Anat. Anz., Jena, **23**, 1903, (612–627).

Linden, M[aria] Gräfin von. Das rote Pigment der Vanessen, seine Entstehung und seine Bedeutung für den Stoffwechsel. Verh. D. zool. Ges., Leipzig, **13**, 1903, (53-65, mit 1 Taf.).

Loiselle, A. A propos de l'évolution d'Acherontia atropos. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (127).

**Pomerancev**, D. V. Beitrag zur Kenntnis der auf der Fichto (*Picea excelsa*) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Leén. Inst., **8**, 1902, (3-25, mit 1 Taf.).

**Bondou**, P. Note sur les cheuilles de Daphnis nerti, L. trouvées dans la Gironde. Bordeaux, Actes soc. linn., **58**, 1903, (Proc.-verb., CCLXX).

**stépi**, P. Evolution d'*Acherontia atropos*. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (104-105).

## POSTEMBRYONIC ONTOGENY.

Kolbe, K. Ueber vorschnelle Entwickelung von Puppen- und Imago-Organen bei Raupen von Lepidopteren (Dendrolimus pini 1.). Berlin, SitzBer. Ges. natf. Freunde, **1902**, (158-166).

Zander, Enoch. Beiträge zur Morphologie der männlichen Geschlechtsanhänge der Lepidopteren. Zs. wiss. Zool., Leipzig, 74, 1903, (557-615, mit 1 Taf.).

#### CYCLES OF GENERATIONS.

**Simpson**, C. B. Observations upon the life history of the codling moth. [*Carpocapsa pomonella*.] Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (63-65).

# ETHOLOGY.

## GENERAL.

Acherontia atropos. Questions de M. J. du Doré, par A. G. Feuille jeunes natural., Paris, (sér. 4), **33**, 1902, (34).

Der Apfelwickler (Carpocapea pomonana). Schweiz. Landw. Zeitschr., Aarnu, **30**, 1902, (934-935, 1 Fig.). [4431].

Les plantes de France, leurs papillons et leurs chenilles (suite). Naturaliste, Paris, (sér. 2), **24**, 1902, (95). [4415 4431].

**Aim6**, A. La noctuelle du frêne. Nature, Paris, **30**, (2° sem.), 1902, (314-315).

Brown. Tozocampa pastinum des environs de Bordeaux. Bordeaux, Actes soc. linn., 58, 1903, (Proc.-verb., CLXXXIX).

**Catllon**, F. ('henilles de *Papilio* machaon exhalant une odeur de musc. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (38).

Chapman, T. A. On Orgyia aurolimlata Gn. at Bejar. Ent. Rec., London, 15, 1903, (113-118, pls. IV, V).

**Chrétien**, P. Histoire naturelle de l'Eupithecia liguriata Mill. Naturaliste, Paris, (sér. 2), **24**, 1902, (239–241).

**Clarke**, W. E. Vancssa cardui and other insects at the Kentish Knock lightship. Ent. Mag., London, **39**, 1903, (289-290).

**Clément**, A. L. La teigne du crin. Nature, Paris, **30**, (2° sem.), 1902, (251-252).

Coulon, L. La chasse aux papillons dans la région d'Elbeuf. Elbeuf, Bul. soc. sci., nat., 20, 1901, [1902], (61-76).

<u>Saturnia</u> pyri. Feuille jeunes natural., Paris, (sér. 4), **35**, 1903, (38).

Dufour, J. I.a Pyrale. Chron. Agric., Lausanne, 15, 1902, (319-328, av. 4 fig.).

(Eumolyc). l.c. (459-462, 2 fig.).

Dupont, L. Les Argynnides de la Normandie. Feuille jeunes natural., Paris, (-ćr. 4), 33, 1903, (80-81).

4419

**44**19

Dupuy, G. Les Argynnides de la Charente, des Deux-Sèvres, de la Dordogne et de la Gironde. *l.c.* (196-198).

Fougères, Marquis de. Différence entre le papillon borer des Antilles (Diatraca saccharalis Fbr., obliterallus L.) et le papillon borer (Diatraca striatalis Snell) de Java, de l'ile Maurice et de la Réun.on. Paris, Bul. soc. nat. acclim., 50, 1903, (60-62).

Foulquier, G. Euprepia pudica. Feuille jounes natural., Paris, (sér. 4), 33, 1903, (51).

Giard, Alfred. Les Argynnides de la France septentrionale. *l.c.* (43-46).

(203). Coenonympha hero L. l.c.

**Gillette**, C. P. Life history studies on the codling moth [with discussion]. Washington, D.C., Bull. U.S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (1-23).

Iches, Lucien. Le ver des pommes. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (145– 147, av. fig.).

Jullien, J. Notes sur la Catocala puerpera. Soc. Entomol., Zürich, 17, 1902, (97-98),

**Klos**, Rudolf. Zur Lebensgeschichte von *Tephroclystia virgaureata* Dbld. Wien, Verh. ZoolBot. Ges., **51**, 1901, (785).

Letacq, A. L. Observations sur l'Acheronvia atropos. Feuille jeunes natural., Paris, (ser. 4), 33, 1903, (150–151).

Marlatt, C[harles] L[ester]. The peach-tree borer (Sannina exitiona Say.). Washington, D.C., Cir. U.S. Dept. Agric. Div. Ent., No. 54, 1903, (6). 23.5 cm.

Ptingeler, Rudolf. Zur Naturgeschichte der Lygris peloponnesiaca Rbl. Berliner ent. Zs., 48, 1903, (321-322).

**Bocquigny - Adanson**, G. de. Les Argynnides du centre de la France. Feuilles jeunes natural., Paris, (sér. 4), 33, 1903, (119-123).

Lasiocampa quercus, L. l.c. 34, 1903, (19-20).

**Bodrianko**, Vladimir Nikolajevič. Einige Beobachtungen über *Pammenes rediella* Clerck. (Tortricina, Lepidoptera). (Russ.) Moskva, Dnevn. Zool. (td. Imp. Obšč. Ifub. jest., **III**, 5, 1903, (28-41). 35 cm.

Rondou, P. Catalogue des lépidoptères des Pyrénées. Bordeaux, Actes soc. linn., (sér. 6), 57, 1902, (177-355).

**Bothke**, Max. Ueber einige Zuchtund Akklimatisationsversuche mit dem chinesischen Eichenseidenspinner (*Antherea pernyi* (iuér.) im nordwestlichen Deutschland. Ent. Jahrb., Leipzig, **12**, 1903, (160–164).

Rougemont, F. de. Les pluies de chenilles. Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (735-736).

schille, Fr. Ein Beitrag zur Schmetterlingsbiologie. Soc. Entomol., Zürich, 16, 1902, (146); 17, 1903, (186).

Schimpf, Gustav. Schmetterlingsbiologieen aus Süd-Amerika. Naturfreund, Witten, 1, 1902, (73-76).

**Stépi**, P. Encore *Euprepia pudica*. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (51).

Contribution à l'histoire naturelle de *Charazes jasius. l.e.* (56-64, av. 1 pl.).

**Simpson**, C. B. The codling moth [*Carpocapsa pomonella*. With bibliography.] Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **41**, 1903, (105, with map and pl.). 23 cm.

Swinhoe, C. Report on the Heterocera. Fascic. Malay. Zool., 1, (51-109).

**Völker**, Ulrich. Ein Beitrag zur Naturgeschichte von Valeria oleagina. Ent. Zs., Guben, **16**, (1902–03), 1902, (38-39).

Waterhouse, G. A. Descriptions and notes of Australian *Hesperidae*, chiefly Victoria. Vict. Nat., Melbourne, 20, 1903, (52-57).

Werner, Aug. Aglia tau L. aber. melaina (iross and Aglia tau L. var. cupreola m. Soc. Entomol., Zurich, 17, 1902, (129-130).

Willis, J. E. and Burkill, J. H. Notes on the Anthophilous insect fauna of the Clova mountains. Ann. Scot. Nat. Hist., Edinburgh, 1903, (29-37, 99-102).

## HABITS.

Bate, Miss D. M. A. Notes on the resting attitude of Zamacra flabellaria. Entomologist, London, 36, 1903, (106).

**Chapman**, T. A. On winglessness in winter moths. Ent. Rec., London, **15**, 1903, (43-46).

their specialisation in habits and structure. *l.e.* (169-171, with pls.).

**Chittenden**, F[rank] H[urlbut]. The fall army worm [Saphygma frugiperde]. With bibliography and the variegated cutworm [Peridroma saucia]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **29**, 1901, (64). **23** cm.

Gillanders, A. T. Notes on miscellaneous arboreal insects. [The traces of frass of larvae]. Manchester, Trans. Microsc. Soc., **1902**, (72-80, pl. 1).

**Gillette**, C. P. Number of broods of the codling moth [Carpocapsa pomonella] as indicated by published data. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, 1903, (193-196).

Haberland, T. Ein Beitrag zur Lebensweise von *Bombyx rubi*. Insektenbörse, Leipzig, **20**, 1903, (115).

Hornig, Herman. The feeding habits of the larva of Anthocharis genutia. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (252).

Labonnefon, C. de. Almanach du chasseur de chenilles. Interméd. bombycult., Paris, 2, 1902, (336-341, 361-369); 3, 1903, (6-15).

Lucas, Ed. Winterquartier der Apfelbaumgespinstmotte. Pomol. Monatshefte, Stuttgart, **49**, 1903, (77-78).

Mally, C. W. Fruit seriously injured by moths. [Cape Town, South Africa]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Sec.), No. **31**, 1902, (90-93).

**Oudemans**, J[ohannes] Th[eodorus]. La position de repos chez les lépidoptères. Amsterdam, Verh. K. Akad. Wet., 2e Sect., **10**, 1, [1903], (1-90, av. 11 pls.).

Pierre, Abbé. Mœurs de Grapholitha conterminata. H. S. (fin). Echange, Lyon, 17, 1902, (28-29). **Rivers**, J. J. Discovery of another food plant of Uranotes (Theckla) melinus, Hub. Los Angeles, Bull. So. Cal. Acad. Sci., **1**, 1902, (41-42).

Schreiber, Carl. Raupen-Kalender. [Nach den Futterpflanzen georduet für das mitteleuropäische Faunengebiet.] (Forts.) D. ent. Zs. Iris, Berlin, 14, (1901), [1902], (277-326).

**Simpson**, C. B. Report upon an investigation of the codling moth [*Carpocapsa pomonella*] in Idaho in 1900. Washington, D.C., Bull. U. S. Dept. Agric., Div. Ent., (N. Ser.), No. **30**, 1901, (51-75).

**Slevogt**, B. Die Raupe von *Stauropus fagi*. Soc. Entomol., Zürich, **16**, 1902, (185–186).

**Zdobnicky**, W. Das Ei und die ersten Raupenstadien von *Thais* polyzena. l.c. **18**, 1903, (36).

#### PHENOLOGY.

Gauckler, H. Einige Bemerkungen zu Schreibers Raupenkalender. Insektenbörse, Leipzig, 20, 1903, (180–181).

**Giard**, Alfred. Apparitions tardives d'Apatura ilia Schiff et Limenites sibylla L. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (50 51).

#### HIBERNATION.

Neureuter, Franz. Schmetterlinge im Winter. Natur u. Offenb., Münster, 49, 1903, (110-112).

#### Oviposition.

Fassi, A. H. Die Eiablage der Tagfalter in der Gefangenschaft. Ent. Jahrb., Leipzig, **12**, 1903, (139–142).

**Gal**, Jules. Sur la ponte de *Bombyz*. mori. Paris, C.-R. Acad. sci., **137**, 1903, (932-934).

Gauckler, H. Ein Beitrag zur Eiablage der Schmetterlinge. Ent. Jahrb., Leipzig, 12, 1903, (128-138).

Gillmer, M. Die Futterpflanze das Ei und die junge Raupe von Lycaena aleon F. Soc. Entomol., Zürich, 17, 1902, (92-93, 98-99).

\_\_\_\_\_ Das Ei von Erebia glacialis Esper. *I.e.* 18, 1903, (74).

# Sound Production.

André, E. Sur le son émis par les chenilles. Feuille jeunes natural., Paris, (sér. 4), **33**, (224).

Brabant, D. Sur le son émis par les chenilles (207).

Giard, A. Sons émis par les chenilles. l.e. (222).

**Smits**, Alb. Sur le son émis par les chenilles. *l.e.* (224).

#### INSTINCT AND PSYCHOLOGY.

Distant, W. L. Animal sense perceptions. Zoologist, London, (ser. 4), 7, 1902, (161-178).

Witchell, C. A. Instances of intelligence. Gloucester, Proc. Cotteswold Nat. F. Cl., 14, 1903, (119-125).

## SOCIAL RELATIONS.

Foulquier, G. Familiarité observée chez les lépidoptères [Réponse à M. de Rocquigny-Adanson]. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (170).

Giraudau, H. Familiarité observée chez les lépidoptères. *l.c.* (223).

**Guignon.** Familiarité des lépidoptères [Réponse à une question de M. de Rocquigny-Adanson]. *l.e.* 1903, (171).

Nodier. Familiarité observée chez les lépidoptères. *l.c.* (203-204).

# HABITAT.

**Silfvenius**, A[ntti] J[ohannes]. [Üher im Wasser lebende Schmetterlinge und auf Land lebende Trichopteren]. (Finnisch) Luonnon Ystävä, Helsingfors, **1903**, 6-8, (125-128).

#### GREGARIOUSNESS.

Smits, Alb. Colonie de Bolctobia fuliginosa. Feuille jeunes natural., l'aris, (sér. 4), 33, 1903, (224).

## SYMBIOSIS.

**Pocock**, R. I. Notes on the commentalism subsisting between a gregarious spider *Stegodyphus* sp., and the moth *Latrachedra* stegodyphobius Wism. Ent Mag., Loudon, **39**, 1103, (167-170). **Walsingham**, Lord. Description of a new species of *Batrachedra* associated with spiders in S. Africa. *l.c.* (166-167).

# PARASITISM.

Parasitisme des Triangulins dans les nids de Mellifères. Feuille jennes natural., Paris, (sér. 4), **33**, 1902, (13-14), [d'après Green, Ern. On some Parasites of *Xylocopa tenuiscapa*. Ent. Mag., London, **1902**, (232-233)]. [4819 4431].

Chrétien, P. La Conchylis austriana, nouvelle Conchylis cécidogène. Naturaliste, Paris, (sér. 2), 24, 1902, (257-258).

Dorr. Emile. Rareté des lépidoptères. Abondance de parasites. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (38).

Lutz, Adolph und **Spiendore**, Alfonso. Ueber Pebrine und verwandte Mikrosporidien. Ein Beitrag zur Kenntnis der brasilianischen Sporozoen. Erste Mitteilung. Centralbl. Bakt., Jena, Abt. 1, **33**, Originale, 1903, (150-157).

**Budow.** Die Schmarotzer unserer einheimischen Schwärmer (Sphingiden). Iusektenbörse, Leipzig, **20**, 1903, (196).

schen Spinner. *l.c.* (196-197).

Vastijev, I. V. Der Baumweissling (Aporia erataegi L.) und dessen Parasiten. (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg. III, No. 8, 1902 (36, mit 16 Fig.).

Zohntner, I.[eo]. . . Neue Futterpflanze der Cacaomotte. (Holländisch) Salatiga, Bull. Cacao, 4, 1902, (53-56).

Bericht über Mottenbekämpfung. (Holländisch) *l.c.* 5, 1903, (1-53, mit 1 Taf.).

# ENEMIES.

Colthrup. [Birds attacking butterflies]. Entomologist, London, 36, 1903, (173).

**Curtis.** [Bird destroying butterflies]. *l.e.* (68).

Finn. [Birds capturing butterflies]. Nature, London, 65, 1903, (415).

Hamm and others. [Birds capturing butterflies]. *l.e.* (366).

Letter. [Birds capturing butterflies]. *l.c.* (273).

**McKay**. [Birds capturing butterflies]. *l.c.* (247, 486).

**Poulton**. [Birds capturing butter-flies]. *l.e.* (343-465).

**Veley.** [Birds capturing butterflies]. *l.c.* (273, 392).

# DEFENSIVE PROCESSES.

Bachmetjev, P. Ein neu-entdecktes Schutzmittel bei Schmetterlingspuppen gegen Kälte. Soc. Entomol., Zürich, 16, 1902, (161-162).

Dankler, M. Schutzfärbung der Schmetterlingspuppen. Natur u. Offenb., Münster, **49**, 1903, (698-699).

**Kaye**, W. J. Some considerations concerning mimicry. Ent. Rec., London, **15**, 1903, (177–179).

Leigh, G. L. Protective resemblance and other modes of defence adopted by the larvae and pupae of Natal Lepidoptera. London, Proc. Eut. Soc., **1903**, (xxi-xxv).

**Oudemans**, J. T. La position de repos chez les lépidoptères. Amsterdam, Verh. K. Akad. Wet., 2<sup>e</sup> sect., **10**, 1, [1903], (1-90, av. 11 pls.).

**Poulton**. [Mullerian group, Rhopalocera from British Guiana.] London, Proc. Ent. Soc., **1908**, (54–56).

**Rey.** [Zur Mimikry-Theorie.] Perliner ent. Zs., **48**, 1903, ((5)-(6)).

Bey, Eugène. Einiges über Schreckoder Warnfarben bei Schnietterlingen. Insektenbörse, Leipzig, 20, 1903, (131– 132).

Shelford, R. A curious protective device in a Lepidopterous larva. Zoologist, London, (Ser. 4), 7, 1903, (161-163, pl. 4).

Thurnall. Dianthoecia, mimicry and concealment. Ent. Mag., London, **39**, 1903, (201).

Trimen. [Resemblances, Planema, Pseudacraea, Papilio.] London, Proc. Ent. Soc., 1903, (38-41).

Weeks, Archibald C. Theory as to evolution of secondaries of moths of the genus Catocala. New York, N.Y., J. Ent. Soc., 11, 1903, (221-226).

#### UTILITY AND HARMFULNESS.

**Bengtsson**, Simon. Investigations on Lynantria monacha and the scene of its ravages in the provinces Södermanland and Östergötland in the year 1900. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (145-157).

Brecher. Beobachtungen über den Frass des Kiefernspinners im Herbst 1900 und Vorbeugung. D. Forstztg, Neudamm, **16**, 1901, (617-620).

Britton, W. E. The apple-tree tent caterpillar [Clisiocampa americana], Agric. Exp. Sta., Connecticut, New Haven, Bull. No. 139, 1902, (12, with 3 pls, 3 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (371-372).

**Chittenden**, F. H. The green clover worm [*Plathypena scabra* Fab.] Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (45– 50).

**Chrétien**, P. La Stagmatophora divitella Cst. n'est pas cécidogène. Paris, Bull. soc. ent., **1902**, (201-204).

**Clarke**, W. T. The potato worm in California (*Gelechia operculella*). Agric. Exp. Sta., California, Berkeley, Bull., No. **135**, 1901, (30, with 10 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1902, (765-766).

**Faes**, H. La chenille du chou. Chron. Agric., Lausanne, **15**, 1902, (1-10).

Une invasion de chenilles du chou. Lausanne, Bul. Soc. Sci. Nat., **38**, 1902, (XIX); Arch. Sci. Phys., Genève, (sér. 4), **13**, 1902, (602).

**Houghton**, J. T. Contributions to the life history of *Gelechia (Recurvaria)* nanella Hb., from an economic point of view. Ent. Mag., London, **39**, 1903, (219-221).

Lüstner, Gustav. Kurze Mitteilung über zwei hinsichtlich ihrer Eiablage interessante Obstbaumschädlinge. Geisenheimer Mitt. Obstbau, **18**, 1903, (77– 78).

Nicéville, Lionel de [*the late*]. Insect pests of forest trees. Calcutta, Ind. Mus. Notes, 5, 1903, (103–107, with pls.).

Insect pests of fruit trees. *l.c.* (117-127, with pls.).

Nicéville, Lionel de (the late). Insect pests of plants. l.c. (129-130, with pls.).

Insect pests of vegetables. *l.c.* (131-132, with pls.).

Insect pests of cereals and crops. *l.c.* (134-143, with pls.).

Insect pests of indigo. I.c. (144-161, with pls.).

cane. *l.c.* (169-182, with pls.).

L.c. (182-184, with pl.).

Insect pests of opium. I.e. (184-185, with pl.).

Insect pests of tea. *l.e.* (185-189, with pls.).

Pack-Beresford. Scotch pine injured by Retinia buoliana. Irish Nat., Dublin, 12, 1903, (299).

**Pomerancev**, D. V. Beitrag zur **Kennt**niss der auf der Fichte (*Picea ezcelsa*) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Lešn. Inst., **8**, 1902, (3-25 mit 1 **Taf.**).

**Bitzema Bes**, J<sub>[an]</sub>. Ueber das schädliche Auftreten von *Retinia turio*nana nebst allgemeinen Bemerkungen über die Lebensweise der Retinien überhaupt. Centralbl. Bakt., Jena, Abt. 2, **10**, 1903, (241-250).

Sanderson, F[zra] D wight. Three orchard posts [Steganoptycha pyricolana, *Buzophera semifuneralis* and Cicada septendecim.] Agric. Exp. Sta., Delaware, Newark, Bull., No. 53, 1901, (19, with 11 figs). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (872–873).

Some destructive caterpillars [Hyphaniria cunca; Hemerocampa leucostigma and Clisiocampa americana]. Agric. Exp. Sta, Delaware, Newark, Bull., No. 56, 1902, (28, with 14 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (372).

Report of the Entomologist. [Including notes on Aphis and Euzophera semifuncralis.] Agric. Exp. Sta., Delaware, Newark, Rep., **1901**, (127-199, with 6 pls., 16 figs.); (review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **14**, 1902, (268-269). Sasaki, C[hújirō]. Notes on the leafminers of the fruit trees. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (381-383).

Serebríanikov, A. V. Ueber den grossen Kiefernspinner (*Gastropacha pini*). (Russ.) St. Peterburg, Izv. Lešn. Inst., 7, 1901, (29-102, mit 1 Taf.).

**Slingerland**, M[ark] V[ernon<sup>1</sup>. Three unusual strawberry pests. [Cacoccia obsoletana, Harpalus caliginosus and H. pennsylvania]. Agric. Exp. Sts., New York (Cornell station), Ithaca, Bull., No. **190**, 1901, (143–164, with 15 figs.); [review], Washington, D.C., U. S. Dept. Agric., Off. Exp. Sta. Rec., **13**, 1901, (371–372).

**Smith**, J. B. Two strawberry pests [*Pho.copteris comptana* and *Aphis forbesi*]. Agric. Exp. Sta., New Jersey, New Brunswick, Bull., No. **149**, 1901, (17, with 2 pls). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1901, (161).

**Stebbing**, E. P. Insect pests of the sugar-cane in India. Calcutta, Ind. Mus. Notes, **5**, 1903, (64-91).

Tschetwerikoff, S. Dendrolimus larizis Tschtwr. nov. sp. Ein neuer und schädlicher Spinner der psläarktischen Region. Soc. Entomol., Zürich, 18, 1903, (89-90).

Voroncov, A. Grapholitha nigricana II. S. in den Fichtenwäldern des Gouv. Kölce während der Jahre 1890–1895. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (CLII–CLVI)

Wilbrand. Ein neuer Feind der Eichenkulturen. [Pseudophia lunaris]. Allg. Forstztg, Frankfurt a. M., 79, 1903, (11-13).

Woodworth, C. W. The California peach-tree bcrer [Sanninoidea opalescens]. Agric. Exp. Sta., California, Berkeley, Bull., No. 143, 1902, (15, with 7 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1903, (468-469).

#### BREEDING.

Cézard, Léonce. Educations de Bombyciens séricigènes en 1902. Paris, Bul. soc. nat. acclim., 49, 1902, (382-386). Prins, Johann. Die Zucht und die ersten Stände von *Sesia annellata Z.* Wien, JahrBer. Entom. Ver., **11**, (1900), 1901, (109–112).

# 4423 VARIATION AND ÆTIO-LOGY.

Brascassat, M. Observations lépidoptérologiques. Epinephele janira L. Rhodocera cleopatra L.—Chelonia pudica Esp. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (64).

Chapman. Variation of Chrysophanus phlacas. London, Proc. Ent. Soc., 1903, (62).

Dataraynaki, Clemens. Neue Zygaeanen-Aberrationen, nebet kleinen Bemerkungen über bereits bekannte Aberrationen. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (335-338).

Elwes, H. J. On a collection of Lepidoptera from Arctic America. London, Trans. Ent. Soc., **1903**, (239– 243, pl. IX).

**Fischer**, E. Lepidopterologische Experimental-Forschungen. [III.] Allg. Zs. Ent., Neudamm, **8**, 1903, (221-228, 269-284, 316-326, 356-368).

**Fischer**, E[nne]. Drei neue Formen aus der Gruppe der Vanessiden. Soc. Entomol., Zürich, **17**, 1902, (49–50).

Foulquier, G. Leucophasia lathyri III. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (151).

Freke. Variation in Britain of Melitaea aurinia. Entomologist, London, 36, 1903, (86).

Frings, Carl. Unregelmässige Entwicklung bei Bombyz quercus. Soc. Entomol., Zürich, 17, 1903, (185–186).

Fruhstorfer, H. Eine neue Ornithoptera-Form. l.c. 18, 1903, (49).

form aus Sumatra. l.c. (57).

Fuchs, A. Drei neue Lepidopteren-Formen der europäischen Fauna (3 nn. abb. in Orthosia, Sterrha 2). l.c. (3).

Hormusaki, C. von. Ueber einige merkwürdige Zygaena-Formen aus der Bukowina. *l.e.* 17, 1902, (137-139).

(N 2-9053)

Kossonogoff, J: Ueber optische Resonanz. 2. vorläufige Mitteilung. Optische Resonanz als Ursache der Färbung der Schmetterlingsflügel. Physik. Zs., Leipzig, 4, 1903, (258-261); 3. vorl. Mitt. Antwort an die Hrn R. W. Wood und A. Garbasso. Einige Resultate der quantitativen Untersuchungen. *l.c.* (518-520).

Merrick, H. W. Variation in *Haploa*. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (1-2, with pl.).

Pictet, Arnold. Variations des papillons provenant des changements d'alimentation de leurs chenilles et de l'humidité. Aarau, Verh. Schweiz. Natf. Ges., **86**, 1903, (45–46); Arch. Sci. Phys., Genève, (sér. 4), **16**, 1903, (585– 588).

**Pront**, L. B. On two variable broods of *Trophaena comes*, Hb. (*Melanozonias*, Gmel.) from Forres. Ent. Rec., London, **15**, 1903, (217-222).

**Bocquigny-Adanson**, G. de. *Epinophele janira* I. Feuille jounes natural., Paris, (sér. 4), **33**, 1902, (33); 1903, (84-85, 205).

Epinephele hyperanthus. L. l.c. 1903, (108).

(151). Vanessa antiopa. l.c.

Schröder, Chr. Kritik der von Herrn Dr. E. Fischer (Zürich) aus seinen "Lepidopterologischen Experimentalforschungen" gezogenen Schlüsse auf Grund einer neuen Erklärung des Wesens derselben. Allg. Zs. Ent., Neudamm, 8, 1903, (437-447).

Schultz, Oscar. Einige interessante Abnormitäten und Aberrationen aus der Lepidopteren-Sammlung des Herrn A. Pilz (Heinrichau). Berliner ent. Zs., 48, 1903, (297-300).

# SUBSTANTIVE VARIATION.

Andrews. Dark variety of *Catocala* nupta. Ent. Mag., London, **39**, 1903, (66).

.

Zur Variabilität der Flügellänge von Aporia crataegi L. in Sophia (Bulgarien). *l.c.* (389–395, 470– 494).

——— Die Flügellänge von Erebia euryale Esp. 1903 in Sofia. Insektenbörse, Leipzig, **20**, 1903, (364– 365).

Barrett. Tephrosia consonaria, melanism. Ent. Mag., London, 39, 1903, (200).

Courveisier, L.G. Ueber Aberrationen der Lycaeniden. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 11, 1903, (18– 25, av. 1 pl.).

**Frings**, Carl. Ein Schlusswort zur Verfolgung der Schmetterlinge durch Vögel (Ueber die Mimikry-Theorie). Soc. Entomol., Zürich, **17**, 1902, (99–100, 105–108).

Gauckler, H. Etwas über Grössenbestimmung der Schmetterlinge. Insektenbörse, Leipzig, 20, 1903, (292–293).

Geest, W. Neue Schmetterlings-Aberrationen. Allg. Zs. Ent., Neudamm, 8, 1903, (308-313).

Giard, A. L'albinisme partiel des Satyrides. [à propos de la Note de M. G. de Rocquigny-Adanson]. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (103-104).

Halliday. [Dark varieties of Heterocera]. Halifax Nat., 8, 1903, (81-83).

Kellogg, V[ernon] L[yman] and Bell, R. G. Variations induced in larval, pupal and imaginal stages of *Bombyz* mori by controlled varying food supply. Science, New York, N.Y., (N. Ser.), 18, 1903, (741-748).

Mittis, Heinrich Ritter v[on]. Ueber einigo Rhopaloceren - Aberrationen. Wien, JahrBer. Entom. Ver., **11**, (1900), 1901, (113-115, mit 1 Taf.).

**Perrier**, Edmond. Rapport pour le prix Da Gama Machado (*Comtesse* Maria von Linden): "La généalogie des Papillons est inscrite sur leurs ailes." Paris, C. R. Acad. sci., **137**, 1903, (1128– 1130).

Pickett. Varieties of Dilina tiliae. London, Proc. Ent. Soc., 1903, (14). **Poulton.** Variation of *Precis actiu. l.e.* (32).

**Prout**. Varieties of Angerona prunaria. Ent. Rec., London, **15**, 1903, (144–150).

Rowland-Brown, H. An aberration of Melitaea didyma. Entomologist, London, 36, 1903, (153-154, with fig.).

Schröder, Chr. Die Zeichnungs-Variabilität von Abrazas grossulariata L. gleichzeitig ein Beitrag zur Descendeuz-Theorie. Allg. Ze. Ent., Neudamm, 8, 1903, (105–119, 145–157, 177– 194, 228–234).

Schultz, Oskar. Melanismus bei Acronycta rumicis L. Soc. Entomol., Zürich, 16, 1902, (170).

Ueber einige aberrative Formen von Aglia tau L. darunter ab. caecata Schultz. l.c. 17, 1903, (178-179).

Varietäten und Aberrationen von Lycaena eumedon Esp. Uebersicht über die Variabilität dieser Species. Berliner ent. Zs., **48**, 1903, (263-269).

Nyt Mag. Naturv., Kristiania, 41, 1903, (23-26).

**Stépt**, P. Satyrides atteints d'albinisme. (Liste supplémentaire). Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (134).

**Slevogt**, B. Ueber, namentlich bei Noctuen, zunehmenden Melanismus. Soc. Entomol., Zürich, **17**, 1902, (43).

**Strand**, Embr. Neue Norwegische Schmetterlingsformen. Arch. Math. Naturv., Kristiania, **25**, 1903, (24).

# MERISTIC VARIATION.

Giard, A. Variations du nombre et de la forme des ocelles chez les Satyrides. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (133).

Krulikovskij, L. Notice sur la chasse des lépidoptères durant l'été 1902 dans le district Uržum, gouv. Viatka. (Russ.) Rev. Russ. Ent., Jaroslavli, **3**, 1903, (110-114).

# BIONOMIC VARIATION.

Brown. Eclosion hors saison de Mania typica. Bordeaux, Actes soc. linn., 58, 1903, (Proc.-verb. CLXXXVII-CLXXXVIII).

Cook, John H. Out of due season [Emergence of Lepidoptera]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (142-144).

Dixey, F. A. D. On Lepidoptera from the White Nile collected by Mr. W. L. S. Loat, F.Z.S.; together with further notes on seasonal dimorphism in butterflies. London, Trans. Ent. Soc., **1903**, (141– 163, pl. VII.).

Jachontov, A. A. Sur le trimorphisme, suivant les saisons, de quelques Piérides. (Russ.) Rev. Russ. Ent., Jaroslavlí, 3, 1903, (157-160).

**Stépi**, P. Apparition tardive de *Liby-thea celtis*. Fouille jeunes natural., Paris, (sér. 4), **38**, 1902, (34).

# CROSSES AND HYBRIDS.

**Doleschall**, H. Zygaena ochsenheimeri (Selbständige Art, Ferner Hybrid von Z. minos 9 and Syntomis phegea 3). Soc. Entomol., Zürich, **17**, 1902, (121).

Prings, Carl. Ein Hybride von Parnassus apollo-delius. l.c. 18, 1903, (52).

Mory, Claude E. Revision der bis jetzt bekannten von hybr. epilobii B abgeleiteten Bastarde. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1903, (460-469).

Pickett. Results of crossing varieties of Angerona. Ent. Rec., London, 15, 1903, (144-149).

Schults, Oskar. Ueber Kreuzungsprodukte von Lasiocampa quercus L. var. sieula Stdgr.  $\mathcal{J} \times \text{var. alpina Frey}$  $\mathcal{Q}$  und deren Rückkreuzung mit Las. quercus var. sieula Stdgr. Ent. Zs., Guben, 16, (1902/03), 1903, (94).

# HEREDITY.

Coutagne, G. Recherches expérimentales sur l'hérédité chez les vers à soie. Bul. sci. France Belgique, Paris, **37**, 1903, (1-194, av. fig. et 9 pls.).

Doncester, L. Mendel's law of heredity in insects. Ent. Rec., London, 15, 1903, (142-144).

(n 2-9053)

# INBREEDING.

Barrett, C. G. An experience in interbreeding *Clostera anachoreta*. Ent. Mag., London, **39**, 1903, (215-216).

## Evolution.

Weeks, Archibald C. Theory as to evolution of secondaries of moths of the genus *Catocala*. New York, N.Y., J. Ent. Soc., **11**, 1903, (221-226).

# 4427 GEOGRAPHICAL DISTRIBUTION.

# b LAND AS A WHOLE.

Notes de géographie zoologique. Les lépidoptères du genre Argymnis. par R. Feuille jeunes natural., Paris, (sér. 4), **38**, 1902, (9).

Giard, A. Coenonympha hero L. l.c. 1903, (203).

Nerville, F. de. A propos de la géonémie de Podalirius. l.c. (205).

**South**, R. Catalogue of the collection of palaearctic butterflies formed by the late John Henry Leech, and presented to the Trustees of the British Museum by his mother, Mrs. Eliza Leech. London, 1902, (vi + 228, 2 pls.). 4to.; [review], Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (526).

#### d EUROPE.

Fuchs, A. Drei neue Lepidopteren-Formen der europäischen Fauna. Soc. Entomol., Zürich, **18**, 1903, (3).

------ Bapta bimaculata F. var. et ab. bipunctata Fuchs und Gnophos difficilis Alph. n. var. korlata. l.c. (43).

der europäischen Fauna. Stettiner ent. Ztg. 64, 1903, (227-247).

Alte und neue Gross-Schmetterlinge der europäischen Fauna. Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. 11, (67-80).

Fuchs, Ferdinand. Zwei neue Schmetterlingsformen der palaearktischen Fauna. Soc. Entomol., Zürich, **18**, 1903, (73-74). **Eirby**, W[illiam] F[orsell]. The butterflies and moths of Europe. London, Paris, New York and Melbourne (Cassell & co., ltd.), 1903, (lxxii + 432, with illustr., pl.). 27.5 cm.

Neuburger, Wilhelm. Drei neue Thais-Aberrationen aus Digne und Budapest. Soc. Entomol., Zürich, 17, 1903, (154–155).

Schreiber, Carl. Raupen-Kalender. [Nach den Futterpflanzen geordnet für das mitteleuropäische Faunengebiet]. (Forts.) D. ent. Zs. Iris, Berlin, 14, 1901), [1902], (277-326).

**Swinhoe**, C. A revision of the Old World Lymantriidae in the national collection. London, Trans. Ent. Soc., **1903**, (375-497).

Tschstwarikoff, S. Dendrolimus larieis Tschtwr. nov. sp. Ein neuer und schädlicher Spinner der paläarktischen Region. Soc. Entomol., Zürich, 18, 1903, (89-90).

Tutt, J. W. Revision of the European Alucitides. Ent. Rec., London, 15, 1903, (251-254).

da SCANDINAVIA.

Boas, J. E. V. . . . Bombyx pini in Norway 1903. (Danish) Forstl. Tidssk., Kristiania, 2, 1903, (107–112, 2 pls.).

Hofgren, Gottfried. Pyralids new for the Swedish fauna. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (241-248).

Klooss. [Reise nach Lappland zum Qvikkjokk-Gebirge]. Berliner ent. Zs., 48, 1903, ((7) (9)).

Lampa, Sven. Two of our moths harmful to cereals. Hadena tritici Lin., H. secalis Lin. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (129–136, with pl.).

Zmk., a Pyralid new for the Swedish fauna. (Swedish) *l.c.* (248).

Strand, Embr. Neue norwegische Schmetterlingsformen. Arch. Math. Naturv., Kristiania, 25, 1903, (24).

# db RUSSIA IN EUROPE.

Bartel, Max. Lepidopteren des südlichen Urals, gesammelt von Herrn Julius Tief. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (183-230). Östverikov, S. S. Pyrrhia exprimens Walker = vexiliger Clor. aconiti Haeltzermann dans la region paléarctique. (Russ.) Rev. Russ. Ent., Jaroslavli, **3**, 1903, (384-385).

Egorov, N. M. Die Lepidopteren am nördlichen Abhange des centralen Kaukasus. (Russ.) Tiflis, Izv. Kavk. Otd. Russ. Geogr. Obšč., 16, 1, 1903, (9-24).

Krulikovakij, L. Notice sur la chasse des lépidoptères durant l'été 1902 dans le district Uržum, gouv. Viatka. (Russ.) Rev. Russ. Ent., Jaroslavli, **3**, 1903, (110-114).

**Eusnecov**, N. J. Excursions d'été, en 1902, sur la côte sud de la Crimée. (Russ.) *l.e.* (5-7).

Lutrau, C. von. Hadena adusta var. bathensis m. Soc. Entomol., Zürich, 18, 1903, (129–131).

Markov, M. Matériaux pour servir à la faune des macrolépidoptères du gouvernement de Poltava. (Russ.) Charikov, Trd. obšč. ispyt. prir., **37**, 1902, [1903], (257-272).

Norman, A. M. Notes on the Natural History of East Finmark. [Lepidoptera] Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (166-173).

# de German Empire.

[Busack, E.] Uebersicht der von Herrn E. Busack bei Schwerin und Waren gefangenen Grossschmetterlinge. [Mit Vorwort von M. Gillmer.] Güstrow, Arch. Ver. Natg., 57, Abt. 1, 1903, (105– 127).

Disqué, H. Verzeichniss der in der Umgegend von Speyer vorkommenden Kleinschmetterlinge. (Forts.) D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (197– 228). Nachtrag dazu: *Ib.*, 15, (1902), 1903, (343).

Verzeichniss der in der Pfalz vorkommenden, aber bisher noch nicht bei Speyer aufgefundenen Kleinschmetterlinge. *l.e.* (229-250).

Fuchs, A. Cucullia linosyridis n. sp. aus der Loreley-Gegend. Soc. Entomol., Zürich, **18**, 1903, (83-84).

Gauckler, H. II. Nachtrag zu dem i. J. 1896 hrsg. Verzeichnisse der Grossschmetterlinge der Umgegend von Karlsruhe, Baden, Bruchsal, Durlach und Ettlingen. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (339-342).

Jammerath, H. Systematisches Verzeichnis der in der Umgegend von Osnabrück bisher beobachteten Grossschmetterlinge (Macrolepidoptera). Osnabrück, Jahresber. natw. Ver., **15**, (1901/ 1902), 1903, (1-4, 67-100).

Pabet. Die Sphingidas B., Zygaenidae B. und Syntomidae HS. der Umgegend von Chemnitz und ihre Entwickelungsgeschichte. Ent. Jahrb., Leipzig, **12**, **1903**, (144-159).

Schultz, Oskar. Ueber eine bemerkenswerte Form von Apatura iris L. Soc. Entomol., Zürich, 17, 1903, (161).

Schütze, K. T. Die Kleinschmetterlinge der sächsischen Oberlausitz. [TI3: Tineina, Micropterygina.] D. ent. Zs. Iris, Berlin, 15, 1902, (1-49).

**Speiser,** P[aul]. Die Schmetterlingsfauna der Provinzen Ost- und Westpreussen. (Beiträge z. Naturkunde Preussens, hrsg. v. d. physik.-ökon. Gesellsch. Königsberg. N. 9.) Königsberg i. Pr. (W. Koch in Komm.), 1903, (III + 148). 30 cm.

Warnecke, Georg. Beitrag zur Lepidopterenfauna Göttingens. Insektenbörse, Leipzig, **20**, 1903, (59-60).

**Beiträge zur Lepidopteren**fauna Schleswig-Holsteins. Heimat, Kiel, **13**, 1903, (180–183).

# dd BELGIUM.

**Grombrugghe de Pioquendaele**, de. Note sur quelques microlépidoptères nouvellement observés en Belgique. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (57-58).

Lambillion, L. J. Catalogue des lépidoptères de Belgique donnant les noms de tous les papillons pris en Belgique jusqu'á ce jour avec leurs variétés, leurs synonymes, les époques d'apparition, les localités, les époques des chenilles, leur nourriture, etc. et une liste de papillons paléarctiques après chaque groupe indigène. 2<sup>me</sup> Ed. considérablement augmentée Fasc. V. Namur (V. Delvaux), 1903, (65-80). 8vo. Le Fasc. fr. 0.50. de British Islands.

Barrett, C. G. Nephopteryz similella Zinck. A new British Phycid. Ent. Mag., London, 39, 1903, (1).

Acrobasis vertucella H.b. and rubrotibiella F.R., as British insects. *l.c.* (164-166).

The Lepidoptera of the British Islands: Pts. 95-106. Being vol. IX, (1-454, pls. 377-424) [carrying the work to the end of the *Pyralidae*].

**Eloomfield**, E. N. Suffolk Lepidoptera in 1902. Ent. Mag., London, **39**, 1903, (88-89).

Brown, H. H. Callophrys (Theela) rubi (Linn.) in Fife. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (187).

in Banffshire. *l.c.* (247).

**Capper,** C. Occurrence of *Thalera fimbrialis* Scop. in Great Britain. Ent. Mag., London, **39**, 1903 (216).

**Chapman**, T. A. The European Orgyias: their specialization in habits and structure. Ent. Rec., London, **15**, 1903, (169–171, with pls.).

Dale, C. W. Historical notes on Lycaena arion in Britain. Ent. Mag., London, 39, 1903, (4-5).

Day, G. O. A list of Lepidoptera found in the counties of Cheshire, Flintshire, Denbighshire, Carnarvonshire, and Anglesea. Assisted by I. Arkle, Herbert Dobie and Robert Newstead. Chester, Ann. Rep. Soc. Nat Sci., No. 5, 1903, (viii + 120).

Jäger, J. Ophiusa stolida Fab. A. Noctuid new to Britain. Ent. Mag., London, **39**, 1903, (269).

Kaye, W. J. Lepidoptera in South Kerry. Irish Nat., Dublin, 12, 1903, (66-67).

Longstaff, G. B. Further notes on Lepidoptera observed at Mortehoe, North Devon. Ent. Mag., London, **39**, 1903, (194-197).

Renton, W. A list of the Lepidoptera of Roxburghshire. Entomologist, London, **36**, 1903, (130-135).

Willis, J. C. and Burkill, J. H. Notes on the anthophilous insect fauna of the Clova mountains. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (29-37, 99-102). df FRANCE.

Brascassat, M. Observations lépidoptérologiques. Epinephele janira L. Rhodocera cleopatra L.—Chelonia pudica Esp. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (64).

Bray, E. Lépidoptères capturés aux environs de Virton. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (143-146).

Brown. Tozocampa pastinum des environs de Bordeaux. Bordeaux, Actes soc. linn., 58, 1903, (Proc.-verb., CLXXXIX).

**Chrétien**, P. Les *Erebia* de France. Naturaliste, Paris, (sér. 2), **25**, 1903, (71-72).

**Coulon**, L. La chasse aux papillons dans la région d'Elbeuf. Elbeuf, Bul. soc. sci. nat., **20**, 1901, [1902], (61-76).

Dietze, Karl. Von der spanischen zur italienischen Mittelmeergrenze. Sammeltage in Südfrankreich; nebst Bericht über die vorgefundenen Eupithecien. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (231-268).

Dupont, L. Insectes du Jardin (Mont-Blanc). Elbeuf, Bul. soc. étud. sci. nat., 20, 1901, [1902], (41).

Les Argynnides de la Normandie. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (80-81).

**Dupuy**, G. *Rhodocera cleopatra* dans les Charentes. Question. *l.c.* 1902, (9-10).

Les Argynnides de la Charente, des Deux-Sèvres, de la Dordogne et de la Gironde. *l.e.* 1903, (196-198).

Foulquier, G. Leucophasia lathyri III. l.c. (151).

Glard, Alfred. Rhodocera cleopatra, Euprepia pudica et Cleophana anarrhini. Réponse partielle aux questions de M.G. Dupuy. l.c. 1902, (33-34).

Les Argynnides de la France septentrionale. *l.c.* 1903, (43-46).

Godon, J. Capture du Saturnia pyri. l.c. 1902, (9). **Oberthür**, C. The Hesperiides of Brittany. Ent. Rec., London, **15**, 1903, (179–180).

Rocquigny-Adanson, G. de. Aire de Papilio podalirius. Feuille jeunes natural., Paris, (sér. 4), 31, 1903, (19).

**Rhodocer**a cleopatra. l.c. 1903, (52).

de la France. *l.c.* (119-123).

Géonémie de Papilio podalirius L. Limite septentrionale de son extension en France et en Belgique. *l.c.* (163).

(169). Coenonympha hero L. l.e.

du Podalirius. I.c. (205).

**Bondon**, P. Catalogue des lépidoptères des Pyrénées. Bordeaux, Actes soc. linn., (sér. 6, 7), 57, 1902, (177-355).

Sheldon, W. G. Lepidoptera at Pontdu-Gard and Digne. Ent. Rec., London, 15, 1903, (193-196).

**Siépi**, Un lépidoptère nouveau pour la Provence (*Plusia aurifera*). Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (101-102).

dg Spain.

**Chapman**, T. A. A new Phalacropterygid species and genus from Spain. *Pyropsyche moncaunella*. Ent. Rec., London, **15**, 1903, (324–330).

Hampson, Sir G. F. New forms of *Pyralidae* from Spain. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (58).

Jones, A. H. Lepidoptera in Southern Spain during the last half of October, 1902. Ent. Mag., London, **39**, 1903, (54-56).

Prout, L. B. Notes on Spanish Geometrides collected by Dr. Chapman in 1902. Ent. Rec., London, 15, 1903, (96-98).

Walsingham, Lord. Spanish and Moorish Micro- Lepidoptera [continued.] Ent. Mag., London, **39**, 1903, (179-187, 209-214, 262-268, 292-293). dh ITALY.

Browns, C. S. A list of the Lepidoptera of the island of Capri, with a few notes. Entomologist, London, 36, 1903, (254-256, 284-286, 307-309).

Fuchs, A. Stilbia insularis n. sp. Soc. Entomol., Zürich, 18, 1903, (9–10).

Neustetter, Heinrich. Ein lepidopterologischer Ausflug in die Euganaeen u. nach Battaglia in Ober-Italien. Wien, JahrBer. Entom. Ver., **11**, (1900), 1901, (87-102).

#### di SWITZEBLAND.

Captures' intéressantes de lépidoptères en Suisse. Feuille jeunes natural., Paris, (sér. 4), **33**, 1902, (13). [D'après J. Jullien, Notes sur les *Catocala puerpera*, Soc. ent. Zürich, 1902, No. 13, et de Rougemont, Rameau de sapin, Oct., 1902].

Dupont, L. Insectes du Jardin (Mont-Blanc). Elbeuf, Bul. soc. étud. sci. nat., 20, 1901, [1902], (41).

Favre, E. Supplément à la Faune des Macrolépidoptères du Valais. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 11, 1903, Beilage, (1-39).

Jullien, J. Notes sur la Catocala puerpera. Soc. Entomol., Zürich, 17, 1902, (97–98).

**Püngeler**, Rudolf. Caradrina nullschlegelin, sp. l.c. 1903, (145–147).

Wheeler, G. The butterflies of Switzerland and the Alps of Central Europe. London, 1903, (vi + 162). 8vo. [Review], Entomologist, London, **36**, 1903, (327); Ent. Rec., London, **15**, 1903, (345-347).

# dk AUSTRIA-HUNGARY.

Gross, Heinrich. Beitrag zur Macrolepidopteren-Fauna von Oberösterreich. ... Wien, JahrBer. Entom. Ver., 11, (1900), 1901, (25-83).

**Höfner**, G. Die Schmetterlinge des Lavanttales und der beiden Alpen Korund Saualpe. Carinthia II, Klagenfurt, **93**, 1903, (177-180). Hormusalti, Constantin Freiherr von. Ueber die in den Karpathen einheimischen Arten der Gattung Erebia Dahn. und deren Beziehungen zur pleistocänen Fauna Mitteleuropas. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (353-380).

Ueber einige merkwürdige Zygaena-Formen aus der Bukowina. Soc. Entomol., Zürich, 17, 1902, (137-139).

Naufock, Albert. Verzeichnis der Lepidopteren des Kronlandes Nieder-Oesterreich. Wien, JahrBer. Entom. Ver., 12, (1901), 1902, (21-104).

**Bebel**, H[ans]. Neue Lepidopteren aus Bosnien und der Hercegovina. Wien, Verh. ZoolBot. Ges., **51**, 1901, (798-804).

Trost, Alois. . . Steiermark . . Beitrag zur Lepidopteren-Fauna . . Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (326–340).

Wagner, Fritz. Pharepis (recte Therapis) evonymaria Schiff nov. ab. Soc. Entomol., Zürich, 18, 1903, (92-93).

# dl BALKAN PENINSULA.

Haberhauer, Jos. Porthesia rebeli n. sp. Soc. Entomol., Zürich, 17, 1902, (82).

Neuburger, Wilhelm. Gnophria rubricollis L. aber. floricollis Neubr. l.c. 1903, (155).

**Bebel**, H[ans]. Lepidopteren aus Morea. Nachtrag. Berliner ent. Zs.. **48**, 1903, (243-249).

Sahlberg, John. [Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien]. (Schwedisch) Helsingfors., Ofvers. F. Vet. Soc., 45, [No. 9], 1902–1903, (1-34); [No. 17], (1-38).

# dm MEDITERBANEAN AND ISLANDS.

Fuchs, A. Neue Kleinfalter des Mittelmeergebiets. Stettiner ent. Ztg, 64, 1903, (3-16).

**Prout**, L. B. Some Geometrides collected by Paymaster-in-Chief Gervase F. Mathew, R.N., on the Mediterranean etc. Entomologist, London, **36**, 1903 (204-206). **Sahlberg**, J. Entomologische Forschungsreisen in den Mittelmeergeganden und Central-Asien. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., **45**, [No. 9] 1902–1903, (1-34); [No. 17], (1-38).

# e Abia.

**Prubstorfer**, H. Elymnias nn. subepp. Papilio antiphates : antiphonus nn. subspp. Soc. Entomol., Zürich, **16**, 1902, (169-170).

——— Neue Papilioformen aus dem Indo-Australischen Gebiet. *l.e.* 17, 1902, (57).

Ostasien. l.c. (73-74).

paloceren. *l.e.* (81-82).

asien. l.c. (35-36).

n. subsp. l.c. (124–125).

Ostasien. D. ent. Zs. Iris., Berlin, 16, 1903, (22-42).

Pingeler, Rudolf. Neue Macrolepidopteren aus Centralasien. (Forts.) *l.c.* **15**, 1902, (147-160, mit 2 Taf.).

Swinhoe, C. Descriptions of new Eastern moths. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (193-200).

and African Lepidoptera. l.c. (499-511).

# ea ASIATIC RUSSIA.

Četverikov, S. S. Pyrrhia exprimens Walker = vexilliger Chr. = aconiti Haeltzermann dans la region paléarotique. (Russ.) Rev. Russ. Ent., Jaroslavli, 3, 1903, (384-385).

Herr, O. Beitrag zur Kenntniss der Lepidopterenfauna der Tschuktschen-Halbinsel. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (14–16).

Herr. O. Lepidopteren-Ausbeute des Lena-Expedition von B. Poppius im Jahre 1901. Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 15], 1902-1903, (1-22, mit 1 pl.).

**Erulikovskij**, L. Notes pour servir à l'étude des lépidoptères de la Siberie occidentale et du Semirečje. (Russ.) Rev. Russ. Ent., Jaroslavli, **3**, 1903. (300-303).

# eb CHINA AND DEPENDENCIES.

Fruhstorfer, H. Saletara panda: eugania n. subsp. Soc. Entomol., Zürich, 18, 1903, (124-125).

#### ec JAPAN.

Fruhstorfer, H. Eine neue Elymnias von Formosa. D. ent. Zs. Iris, Berlin, 16, 1903, (17–19).

Miyake, Tsunekata. [Heterocers of Japan, figured and annotated]. (Japanese) Dobuts. Z., Tokyo, 15, 1903, (311-316).

Japanese Heterocera described and figured. (Japanese) *l.e.* (354-356, 384-390).

Neuburger, Wilhelm. Papilio machaon L. in Japan (2 nn. varr.). Soc. Entomol., Zürich, 18, 1903, (42-43).

#### ed COCHIN CHINA.

Fruhstorfer, H. Papilio zenocles: kephisos n. subsp. Soc. Entomol., Zürich, 16, 1902, (145–146).

Tonkin-Pieriden (nn ab. in : Nepheronia). Soc. Entomol., Zürich, 18, 1903, (41-42).

Verzeichnis der in Tonkin, Annam und Siam gesammelten Papilioniden und Besprechung verwandter Formen. Berliner ent. Zs., 47, 1902, [1903], (167-234). [4427 ee 4431].

Verzeichnis der in Tonkin, Annam und Siam gesammelten Nemeobiinae und Libythaeinae und Besprechung verwandter Formen. *l.e.* 48, 1903, (274-296).

———— Neue und seltene Lepidopteren aus Annam und Tonkin und dem malayischen Archipel. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (265-276, mit 1 Taf.). ------ Neue Pieriden aus Ostund Süd-Asien. *l.e.* 16, 1903, (47-50).

Roeber, J. Zwei neue Morphiden. Soc. Entomol., Zürich, 17, 1903, (153-154).

# ee Sian.

Fruhstorfer, H. Verzeichnis der in Tonkin, Annam und Siam gesammelten Papilioniden und Besprechung verwandter Formen. Berliner ent. Zs., 47, 1902, [1903], (167-234).

Verzeichnis der in Tonkin, Annam und Siam gesammelten Nemeobiinae und Libythaeinae und Besprechung verwandter Formen. *l.c.* **48**, 1903, (274–296).

Verzeichniss der in Tonkin, Annam und Siam gesammelten Pieriden und Besprechung verwandter Formen. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (269-305).

ef BRITISH INDIA.

Attken, E. H. and Comber, E. D. A list of the butterflies of the Konkan. Bombay, J. Nat. Hist. Soc., 15, 1903, (42-55).

Dudgeon, G. C., Elwes, H. J. and Hampson, Sir G. A catalogue of the Heterocera of Sikhim and Bhutan. *l.c.* 14, 1903, (761-763); 15, 1903, (319-326).

Fruhstorfer, H. Parnassius imperator: augustus n. subsp. Soc. Entomol., Zürich, 18, 1903, (113).

——— Neue Papilio-Formen aus dem indo-malayischen Gebiet. D. ent. Zs. Iris, Berlin, **15**, 1902, (161–168).

**Hampson**, Sir G[eorge] F. The moths of India, supplementary paper to the volumes in the Fauna of British India, Lealie, G. A. and Evans, W. H. The butterflies of Chitral. Bombay, J. Nat. Hist. Soc., 14, 1903, (666-678).

Moore, F. Lepidopters indica. Parts LXI-LXVI. Vol. VI. London, 1903, (1-104, pls. 467-512).

# eg MALAY PENINSULA.

Bethune-Baker, G. T. A new species of *Arhopala* from Singapore and British New Guines. Ent. Mag., London, 39, 1903, (217-218).

Frahstorfer, H. Neue Pieriden aus dem indo-australischen Gebiet. Soc. Entomol., Zürich, **18**, 1903, (17–18).

------ Papilio macfarlanei : cestius n. subsp. (Lokalität unbenannt.) l.c. (49).

form aus Sumatra. *l.c.* (57).

malayischen Archipels. *l.c.* (73).

Neue und seltene Lepidopteren aus Annam und Tonkin und dem malayischen Archipel. D. ent. Zs. Iris, Berlin, **14**, (1901), 1902, (265-276, mit 1 Taf.).

------ Neue Lepidopteren ans dem austromalayischen Gebiet. *l.c.* (329-330).

Meue Papilio-Formen aus dem indo-malayischen Gebiet. *l.c.* 15, 1902, (161-168).

dem indo-malayischen Gebiet. *l.c.* (169--178).

Neue Papilioformen und andere Lepidopteren aus Ost-Asien und dem malayischen Archipel. *l.c.* (1902), 1903, (306-315).

Borneo. *l.c.* 16, 1903, (20-21).

Fuchs, August. Beiträge zur Kenntniss der Lepidopteren-Fauna von Sumatra. Erste Besprechung: Neue Geometriden. Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (81-91). Hering, Ed. Uebersicht der Sumatra-Pyralidae. III. (Forts.) Stettiner ent. Ztg, 64, 1903, (38–97, mit 1 Taf.).

Piepers, [Marinus Cornelius] et Snellen, [Pieter Cornelis Tobias]. . . . Enumération . . . des Lépidoptères hétérocères (Zygaenidae) de Java. 's Gravenhage, Tijdschr. Ent., **45**, 1903, (151-242, av. 3 pls.).

Sahlberg, J. Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asiens. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1902–1903, (1-34); [No. 17], (1-38).

Swinhoe, C. Descriptions of new Eastern moths. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (193-200).

**Report on the Heterocera.** Fascic. Malay. Zool., 1, (51–109).

Warren, W. New Drepanalidae, Thyrididae, Uraniidae, and Geometridae, from the Oriental region. Nov. Zool., Tring, 10, 1903, (255-270).

## eh PERSIA : AFGHANISTAN : BALUCHISTAN.

Neuburger, Wilhelm. Chrysophanus ochimus H. S. var. hyrcana Neubgr. Soc. Entomol., Zürich, 18, 1903, (59).

# ei ASIATIO TURKEY.

Fuchs, A. Zwei neue Lcucanitis-Formen aus Aksu. Soc. Entomol., Zürich, 18, 1903, (50-51).

**Ptingeler**, Rudolf. Neue Macrolepidopteren aus Palaestina. D. ent. Zs. Iris, Berlin, **15**, 1902, (143-146, mit 1 Taf.).

# f AFRICA.

Aurivillius, Chr[istofer]. Diagno-en neuer Lepidopteren aus Afrika. 6. Entomol. Tidskr., Stockholm, 22, 1901, (113-128, with pl.).

**Druce**, H. H. C. J. Description of a new species of African *Hesperlinae*. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (636).

Fruhstorfer, H. Neue afrikanische Lepidopteren. Stettiner ent. Ztg. 64, 1903, (359-361). **Bothschild**, Hon. W. and Jordan, K. Some new African Papilios. Nov. Zool., Tring, **10**, 1903, (488–489).

**Sharpe**, E. M. The butterflies collected in Equatorial Africa by Captain Clement Sykes. Entomologist, London, **36**, 1903, (5-8, 36-40).

Swinhoe, C. New species of Eastern and African Lepidoptera. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (499-511).

Warren, W. New African Thyrididae and Geometridae in the Tring Museum Nov. Zool., Tring, 10, 1903, (271-278).

Weymer, Gustav. Einige afrikanische Lepidopteren. D. ent. Zs. Iris, Berlin, 16, 1903, (221-225, mit 1 Taf.).

# fa MEDITERBANEAN STATES.

Sahlberg, J. Entomologische Forschungsreisen in den Mittelmeergegenden und Ceutral - Asien. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1902–1903, (1-34); [No. 17], (1-38).

Vaucher, A. Notes sur les Argynnis du Maroc. Feuille jeunes natural., Paris, (sér. 4), **33**, 1902, (34).

**Walsingham**, Lord. Spanish and Moorish Micro-Lepidoptera [continued]. Ent. Mag., London, **39**, 1903, (179–187, 209–214, 262–268, 292–293).

# fb N.E. AFRICA.

Dixey, F. A. D. On Lepidoptera from the White Nile, collected by Mr. W. L. S. Loat, F.Z.S.; together with further notes on seasonal dimorphism in butterflies. London, Trans. Ent. Soc., **1903**, (141– 163, pl. VII).

Lathy, P. L. An account of a collection of Rhopalocera made on the Anambara Creek in Nigeria, West Africa. *l.c.* (83-206, pl. VIII).

**Bothschild**, *Hon.* W. and Jordan, K. Lepidoptera collected by Oscar Neumann in North-east Africa. Nov. Zool., Tring, **10**, 1903, (491-542).

Sahlberg, B. Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1902-1903, (1-34); [No. 17]. (1-38). Warren, W. and Bethschild, N. C. Two new species of Lepidopters from the Wady el Natron, Egypt. Entumologrist, London, **36**, 1903. (225, 226, pl. IV).

# fd WEST AFRICA.

Bethune-Baker, G. T. On new species of Lycaenidae from West Africa. Ann. Mag. Nat. Hist., London, (Ner. 7), 12, 1903, (324-334).

Druce, H. H. C. J. Descriptions of four new species of West-African Laycaenidae. l.e. 11, 1903, (69-71).

# fe ANGOLA.

Weymer, Gustav. Die Lepidopteren der Kunene-Sambesi-Expedition. [In: Kunene-Sambesi-Expedition, hrsg. v. O. Warburg.] Berlin, 1903. (543– 559).

# ff EAST AFRICA.

Hampson, Sir G. F. Lepidoptera II. Phalaenae. Nat. Hist. Sokotra, (321– 338, pl. XX).

Neave, S. A. A new species of Lycaenid from Uganda and Lake Victoria Nyanza. Ent. Mag., London, 39, 1903, (136-138).

**Oglivie-Grant**, W. R. Lepidoptera. I. Rhopalocera. Nat. Hist. Sokotra, (295-318, pls. XVIII, XIX).

Pagenstecher, Arnold. Tagfalter. (Wissenschaftl. Resultate der Reise Carlo Frhrn. v. Erlanger's durch Süd-Schoa, Galla u. Somaliländer.) Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (113-204, mit 1 Taf.).

**Thurau**, F. Neuer Lepidopteren aus Ost- und Central-Afrika im Königl. zoologischen Museum zu Berlin. Berliner ent. Zs., **48**, 1903, (301-314).

Walsingham, Lord. Lepidoptera. III. Pterophoridae and Tineina. Nat. Hist. Sokotra, (343-356, pl. XXI.

# fg South Africa.

**Barrett**, F. Further notes on South African Lepidoptera. Ent. Mag., London, **39**, 1903, (35-38, 76.83, 138-143). Distant, W. L. Insecta transvaaliensia, Pt. IV, (81-96, pls. VII-VIII).

**Hampson**, Sir G. F. A remarkable new Lepidopterous insect from Zululand. London, Trans. Ent. Soc., **1903**, (137– 139).

Mally, C. W. Fruit seriously injured by moths. [Cape Town, South Africa.] Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (90-93).

**Walsingham**, Lord. Description of a new species of Batrachedra associated with spiders in S. Africa. Ent. Mag., London, **39**, 1903, (166–167).

# fh MADAGASCAR.

Poujade, G. A. Description d'une nouvelle espèce de lépidoptère de Madagascar. Bul. Muséum, Paris, **1903**, (57).

# g 👘 North America.

**Busch**, August. A revision of the American moths of the family *Gelechiidae*, with descriptions of new species. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **25**, 1903, (767-938, with pl.). Separate. 24.5 cm.

**Dyar**, Harrison G[ray]. A review of the North American species of *Pronuba* and *Prodozus*. New York, N.Y., J. Ent. Soc., **11**, 1903, (102-104).

Synoptic table of the North American species of *Chionobas*. Washton, D.C., Proc. Ent. Soc., 5, 1902, (42).

American Lepidoptera. [Annual address of the President]. *l.e.* (167-173).

**Elwes**, H. J. On a collection of Lepidoptera from Arctic America. London, Trans. Ent. Soc., **1903**, (239-243, pl. IX). **Holland**, W[illiam]J[acob]. The moth book; a popular guide to a knowledge of the moths of North America. New York (Doubleday, Page & Co.), 1903, (xxiv + 479, with illustr., XLVIII pl.). 26.5 cm.

**Smith**, John B[ernhardt]. A revision of the boreal American species of Nonagria Ochs. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (311–321, with pl.).

Walsingham, Lord. Review [of Dyar's list of N. American Lepidoptera]. Ent. Mag., London, **39**, 1903, (257-261).

# ga ALASKA.

**Skinner**, Henry. A new moth [*Psychophora fasciata* n. sp.] from Alaska. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (141-143).

# gf UNITED STATES.

Dyar, Harrison G[ray]. New North American Lepidoptera with notes on larvae, [with bibliography]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (290-298).

A review of the North American species of the Lepidopterous family Anthroceridae, [With bibliography]. l.e. (322-329).

**Stringer**, Henry. [*Hesperidae* from the United States]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (183).

# gg North Eastern United States.

Beutenmüller, William. Descriptive catalogue of the Noctuidae found within fifty miles of New York City. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 14, 1901, (229–312, with 4 pls.).

Billson, James E. [Vancesa milberti in Providence, R.I.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (57).

**Comstock**, G. F. A list of Lepidopters found in the Adirondack Mts. [with list of other insects]. *l.c.* (197-200).

**Foster**, F. H. Papilio philenor in New Hampshire [following food plant, Aristolochia sipho]. l.e. **13**, 1902, (326).

Geddes, John M. Citheronia sepulcralis in Pennsylvania. *l.c.* 14, 1903, (284-285).

**Houghton**, C. O. Orneodes hexadactyla Linn. [at Ithaca, N.Y.]. *l.e.* **13**, 1902, (89).

Johnson W. (7. New location for Mediterranean flour moth [Ephestia kuchniella from White Co. Indiana]. l.c. (159).

Laurent, Philip. The moths (Heterocera) of Eastern Pennsylvania. *l.c.* 14, 1903, (43-45, 69-72, 111-113, 139-140, 169-171).

Wormsbacher, Henry. Records of Lepidoptera in New Jersey. *l.c.* (201–203).

# gh South Eastern United States.

Beutenmüller, W[illia]m. Description of a new moth [Olene montana n. sp.] from North Carolina. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (585-586). Separate. 24.5 cm.

Brimley, C. S. and Bherman, Franklin, *jr.* A morning's collection at Raleigh, N. C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (230-232).

Comstock, John and Comstock, Hurd. A trip to Lake Josephine, Fla., [with list of Rhopalocera taken]. *l.c.* 13, 1902, (75-77).

Laurent, Philip. Notes on the butterflies of Miami, Florida. *l.c.* 14, 1903, (296-297).

**Reading,** J. H. A collecting trip south. *l.c.* (116–118).

Skinner, Henry. A hesperid new to our fauna. [Nisoniades brunnea Herr Schaef from Florida]. *l.e.* (110).

Smyth, Ellison A., jun. [Nisoniades naevius in South Carolina]. I.e. (333).

# gi WESTERN UNITED STATES.

Aldrich, J. M. Orneodes hexadactyla [at Moscow, Idaho]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (156).

Busck, August. Notes on the Cerostoma group of Ypomeutidae, with descriptions of new North American species [from Western United States]. New York, N.Y., J. Ent. Soc., 11, 1903, (45-59).

**Clarke,** W. T. The potato worm in California (*Gelechia operculella*). Agric., Exp. Sta., California, Berkeley, Bull., No. **135**, 1901, (30, with 10 fig.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1902, 765-766).

**Cockerell**, T[heodore] D[ru] A[lison]. The blackberry crown borer [Bemberia marginata] in New Mexico. "Notes from the New Mexico Biological Station 3." Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (100–101).

*Euhagenia* [*Euhagena*] *nibraskae*, Hy. Edw. [at Los Vegas, N. M.]. *l.e.* (303); correction, *Ib.*, **14**, 1903, (29).

<u>Aellopes fadus var. titan</u> Cram. l.e. 13, 1902, (326).

**Dyar**, Harrison G[ray]. List of Lepidoptera taken at Williams, Arizona, by Messrs. Schwarz and Barber. I. Papilionoidea, Sphingoidea, Bombycoidea, Tineioidea (in part). Washington, D.C., Proc. Ent. Soc., 5, 1903, (223-232).

Grinnell, Fordyce, jun. Three undescribed Lepidoptera from southern California. [Theela spadix, Pamphila sabuleti, var. tecumsch n. var., and Anatolmis regulus n. sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (10-11).

Hoink, C. L. [Lepidoptera of Meramec Highlands, Mo.]. *l.e.* (334-335).

**Ottolengui**, Rodrigues. A new Saturnia from North America. [Arizona]. *l.c.* (311-314).

**Poling**, Otho C. A new *Megathymus* from Arizona. *l.c.* **13**, 1902, ([97]–98, with pl.).

**Bivers**, J. J. Butterfly emigrants. Los Angelos, Bull., No. Cal. Acad. Sci., **1**, 1902, (90).

**Simpson**, C. B. Report upon an investigation of the codling moth [Carpocapsa pomonella] in Idaho in 1900. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (51-75).

**Skinner**, H[enry]. A butterfly new to the United States. [Myscelia skinneri in Dry cañon, Alamogordo, New Mexico]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (321).

**Snow**, F[rancis] H[untington]. List of Coleopters and Lepidopters collected in Hamilton, Morton and Clark counties, Kansas, 1902 and 1903. Laurence, Kan. Univ. Sci. Bull., **2**, 1903, (191– 208). Separate. 27.8 cm.

**Snyder,** A. J. A day's experiences. [Collecting butterflies in Colorado.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (50-54).

CENTRAL AND SOUTH AMERICA AND WEST INDIES.

Barrett, O. W. Tropical butterflies. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (90).

Busck, August. A revision of the American moths of the family Gelechiidae, with descriptions of new species. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (767-938, with I.I.). Separate. 24.5 cm.

**Dognin**, P. Hétérocères nouveaux de l'Amérique du Sud. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (173–189); **46**, 1903, (226–233, 335–350, 473–480).

**Druce**, Herbert. Descriptions of some new species of Lepidoptera. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (196-203).

Descriptions of some new species of Lepidoptera from tropical S. America, and one from N. Australia. *l.e.* **12**, 1903, (220-222).

Fruhstorfer, H. Neue Caligo-Formen (3 nn. subspp.). Soc. Entomol., Zürich, 18, 1903, (145).

Godman, F. D. Notes on some Central and S. American *Erycinidae*, with descriptions of new species. London, Trans. Ent. Soc., **1903**, (529– 548, pls. XX-XXII).

Roeber, J. Neue Caligo-Arten. Soc. Entomol., Zürich, 18, 1903, (145-147).

Schaus, William. New Noctuidae from tropical America. New York, N.Y., J. Ent. Soc., 11, 1903, (230–236).

h

# ha MEXICO.

**Smyth**, Ellison A., *jun. Morphothoosa* (sp. nov.). Description of a new variety of *Morpho polyphenus* Dby. Hew. from Mexico. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (85-87, with pl.).

# hd GUIANA.

Poulton. [Mullerian group, Rhopalocera from British Guiana]. London, Proc. Ent. Soc., 1903, (54-56).

# he COLOMBIA; ECUADOR.

Haonson, Rich[ard]. Die Ithomiien (Neotropiden) meiner Ecuador-Reise. Mit Beschreibungen neuer Formen und biologischen Notizen. Berliner ent. Zs., 18, 1903, (157-214, mit 1 Taf.).

**Roeber**, J. Zwei neue Morphiden. Soc. Entomol., Zürich, **17**, 1903, (153–154).

# hf PERU.

Lathy, P. L. A new species of *Callithea* from Peru. Entomologist, London, **36**, 1903, (105, pl. II).

# hg BOLIVIA.

Weeks, A. G., *jun.* New species of butterflies from Bolivia. Philadelphia, **Pa.**, Ent. News Acad. Nat. Sci., **13**, 1902, (104–108).

\_\_\_\_\_ Bolivian Lepidopters. [Progress of work]. *l.c.* (317).

Description of nine new Bolivian butterflies. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 27, 1901, (353-360).

# hh BRAZIL.

Heron, F. A. and Hampson, Sir G. F. On the Lepidoptera collected at Chapada, Matto Grosso, by Mr. A. Robert (Percy Sladen expedition to Central Brazil). London, Proc. Zool. Soc., **1903**, 2, (258– 260). [Peters, H. T.] Die Heteroceren-Raupen (und -Puppen) des H. T. Peters'schen Manuskriptwerkes: Biologische Beiträge zur brasilianischen Schmetterlings-Fauna. Neudamm (J. Neumann), (1898-) 1901, (12, mit 10 Taf.). 25 cm. Kart. 5 M.

# hi ARGENTINA.

Heylaerts, F. J. M. Description d'une psychide inédite de la République Argentine. *Chalia kuncklii* n. sp. Bruxelles, Ann. Soc. ent. Belgique, **48**, 1903, (97).

Schrottky, C. Beitrag zur Kenntniss der Syntomiden Argentiniens. D. ent. Zs. Iris., Berlin, 15, 1902, (133-136).

# hl: Cuill.

Elwes, H. J. The butterflies of Chile. London, Trans. Ent. Soc., **1903**, (263–301, pls. XII-XV).

# her. The ANDES.

Thieme, Otto. Zwei neue Satyriden aus der Cordillere von Südamerica. Berliner ent. Zs., 47, 1902, [1903], (281– 282).

#### AUSTRALASIA.

Fruhstorfer, H. Neue indo-australische Lepidopteren. D. ent. Zs. Iris., Berlin, 14, (1901), 1902, (334-350).

australischen Gebiet. *l.c.* 1903, (11-16).

# a NEW GUINEA WITH ISLANDS FROM WALLACE'S LINE.

Bethune-Baker, G. T. A new species of Arhopala from British New Guinea and Singapore. Ent. Mag., London, 39, 1903, (217-218).

Fruhstorfer, H. Neue Papilioformen aus dem indo-australischen Gebiet. Sov. Entomol., Zürich, **17**, 1902, (57).

Neue Pieriden aus dem Indo-Australischen Gebiet. *l.c.* 18, 1:303, (17-18). Fruhstorfer, H. Ornithoptera paradisea ab. auriflua n. subsp. l.c. (49).

aus Neu-Guines. *l.c.* (65).

Eine neue Nymphalide aus Neu-Guinea. D. ent. Zs. Iris, Berlin, **16**, 1903, (66–67).

Warren, W. New moths from British New Guinea. Nov. Zool., Tring, 10, 1903, (120-126).

------ New Uraniidae, Drepanulidae and Geometridae from British New Guinea. l.c. (343-413).

Weymer, G. Zwei neue Tagfalter aus Neuguinea. Ent. Zs., Guben, **16**, (1902/ 03), 1902, (5-6).

# ic Australia.

**Druce**, H. Descriptions of some new species of Lepidoptera from tropical S. America, and one from North Australia. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (220-222).

Lower, Oswald B. Descriptions of new Australian Noctuina, &c. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (27-74).

Australian lepidoptera. *l.c.* (183-201).

lepidoptera]. l.c. (216-239).

Meyrick, E. A new Australian genus of *Gelechiidae*. Ent. Mag., London, **39**, 1903, (291).

Turner, A. Jefferis. New Australian lepidoptera, with synonomic and other notes. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (1-26).

Lepidoptera. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (42– 92).

Waterhouse, G. A. . . . Australian *Hesperidae*. Vict. Nat., Melbourne, **20**, 1903, (52-57).

# id QUEENSLAND.

Lewis, R. T. Note on some insects sent from Queensland by Mr. C. J. Pound, F.R.M.S. London, J. Quek. Microsc. Cl., 8, 1903, (553-554). Rothschild, Hon. W. Some new Cossidae from Queensland, bred by Mr. F. P. Dodd. Nov. Zool., Tring, 10, 1903, (306-308).

if VICTORIA.

Best, D. Excursion to Wandong [Victoria]. [Lepidoptera 5 species.] Vict. Nat., Melbourne, 20, 1903, (103-104).

#### ik NEW ZRALAND.

Philpott, A. On some new species of Lepidoptera from Southland. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (246-249).

# PACIFIC.

n

nf FIJI ISLANDS.

Fruhstorfer, H. Beitrag zur Kenntniss der Lepidopteren der Viti-Inseln. Stettiner ent. Ztg, 63, 1902, (350-359).

nh Society Islands, Etc., Etc.

Mengel, Levi W. A new species of *Hypolimnas* from New Hebrides. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (167–168, with pl.).

# 4431 TAXONOMY AND SYS-TEMATIC.

#### GENERAL.

Barrett, F. Further notes on South African Lepidoptera. Ent. Mag., London, 39, 1903, (35-38, 76-83, 138-145).

Bartel, M. Lepidopteren des südlichen Urals, gesammelt von Herrn Julius Tief. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (183-230).

Best, D. Lepidoptera 5 species from Wandong, Victoria. Vict. Nat., Melbourne, 20, 1903, (103-104).

Brecher. Beobachtungen über den Frass des Kiefernspinners im Herbst 1900 and Vorbeugung. D. Forstztg, Neudamm, **16**, 1901, (617–620). Brown. Note sur quelques lépidoptères de nos environs [de Bordeaux]. Bordeaux, Actes soc. linn., 58, 1903, (Proc.-verb., CCLVII-CCLVIII).

**Dixey**, F. A. D. On Lepidoptera from the White Nile, collected by Mr. W. L. S. Loat, F.Z.S., together with further notes on seasonal dimorphism in butterflies. London, Trans. Ent. Soc., **1903**, (141-163, pl. VII).

Dupont, L. Insectes du Jardin (Mont-Blanc). Elbeuf, Bul. soc. étud. sci. nat., 20, 1901, [1902], (41).

Dyar, H. G. List of Lepidoptera taken at Williams, Arizona, by Messrs. Schwarz and Barber.—1. Papilionoidea, Sphingoidea, Bombycoidea, Tineioidea (in part). Washington, D.C., Proc. Ent. Soc., 5, 1903, (223-232).

Elwes, H. J. On a collection of Lepidoptera from Arctic America. London, Trans. Ent. Soc., **1903**, (239–243, pl. IX).

Fawcett, J. M. Notes on the transformations of some South African Lepidopters (continued from Vol. XV). London, Trans. Zool. Soc., 17, 1903, (165-190, pls. VI-VIII).

Fruhstorfer, H. Beitrag zur Kenntniss der Lepidopteren der Viti-Inseln. Stettiner ent. Ztg, 63, 1902, (350-359).

Geest, W. Neue Schmetterlings-Aberrationen. Allg. Zs. Fnt., Neudamm, 8, 1903, (301-313).

Hampson, Sir G. F. Lepidoptera II. Phalaenae. Nat. Hist. Sokotra, (321– 338, pl. XX).

Heron, F. A. and Hampson, Sir G. F. On the Lepidoptera collected at Chapada, Matto Grosso, by Mr. A. Robert (Percy Sladen expedition to Central Brazil). London, Proc. Zool. Soc., **1903**, 2, (258-260).

Hers, O. Lepidopteren-Ausbeute der Lena-Expedition von B. Poppius im Jahre, 1901. Helsingfors, Ofvers. F. Vet. Soc., **45**, [No. 15], 1902-1903, (1-22, mit 1 pl).

Krulikovskij, L. Petites notices lépidoptérologiques VI. VII. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (30–32, 177–182).

Norman, A. M. [Lepidoptera in :]. Notes on the Natural History of East Finmark (continued). Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (167– 171). Philpott, A. On some new species of Lepidoptera. Wellington, Trans. N. Zeal. Inst., 35, 1903, (246-249).

Poulton, E. S. Experiments in 1893, 1894, and 1896 upon the colour relations between Lepidopterous larvae and their surroundings, and especially the effect of lichen covered bark upon Odontopera bidentata, Gastropacha quercifolia, etc. London, Trans. Ent. Soc., **1903**, (311– 374, pls. XVI-XVIII).

Rebel, H. Lepidopteren aus Morea. Nachtrag. Berliner ent. Zs., 48, 1903, (243-249).

**Böber**, J. Lepidopterologisches. Stettiner ent. Ztg, 64, 1903, (337-358).

Rondon, P. Catalogue des lépidoptères des Pyrénées. Bordeaux, Actes soc. linn., (sér. 6, 7), 57, 1902, (177-355).

**Bothschild**, Hon. W. and Jordan, K. Lepidoptera collected by Oscar Neumann in North-east Africa. Nov. Zool., Tring, **10**, 1903, (491-542).

**Sasaki**, C. Life-history of two leafminers of the fruit-trees. (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (381-383).

**Sheldon**, W. G. Lepidoptera at Pontdu-Gard and Digne. Ent. Rec., London, **15**, 1903, (193-196).

Skinner, H. Lepidoptera of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902, (36-38).

Stichel, H. Kritische Bemerkungen über die Artberechtigung der Schmetterlinge. II. D. ent. Zs. Iris, Berlin, 15, 1902, (50-95, mit 2 Taf.).

Trost, A. . . Lepidopteren Fauna von Steiermark. . . Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (328– 340).

Weymer, G. Die Lepidopteren der Kunene-Sambesi-Expedition. [In: Kunene-Sambesi-Expedition, hrsg. v. O. Warburg.] Berlin, 1903, (543-559).

# RHOPALOCERA.

# GENERAL.

Les plantes de France, leurs papillons et leurs chenilles (suite). Naturaliste, Paris, (sér. 2), 24, 1902, (95). **Comstock**, J. and **Comstock**, H. A. trip to Lake Josephine, Fla., [with list of Rhopalocera taken]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (75-77).

Elwes, H. J. The butterflies of Chile. Jondon, Trans. Ent. Soc., **1903**, (263–301, pls. XII-XV).

Lathy, P. L. An account of a collection of Rhopelocera made on the Anambara creek in Nigeria, West Africa. *l.c.* (83-206, pl. V111).

Laurent, P. Notes on the butterflies of Miami, Florida. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (296-297).

Lealie, G. A. and Evans, W. H. Notes on the butterflies of the families of Nymphalidae Lemoniidae and Papilionidae found in Chitral.] Bombay, J. Nat. Hist. Soc., 14, 1903, (666-678).

**Ogilvis-Grant**, W. R. Lepidoptera. I. Rhopalocera. Nat. Hist. Sokotra, 295–318, pls. XVIII, XIX).

Pagenstecher, A. Tagfalter. (Wissenschaftl. Resultate der Reise Carlo Frhrn. v. Erlanger's durch Süd-Schoa, Galla u. Somaliländer.) Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (113-204, mit 1 Taf.).

**sharpe**, E. M. The butterflies collected in Equatorial Africa by Captain Clement Sykes. Entomologist, London, **36**, 1903, (5-8, 36-40).

**Snyder**, A. J. A day's experiences. [Collecting butterflies in Colorado]. Philadelphia, Pa., Ent News. Acad. Nat. Sci., **14**, 1903, (50-54).

# NYMPHALIDAE.

#### GENERAL.

Aitken, E. H. and Comber, E. List of butterflies of family Nymphalidae from Konkan. Bombay, J. Nat. Hist. Soc., 15, 1903, (43-46).

Dupont, L. Les Argynnides de la Normandie. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (80-81).

Dupuy, G. Les Argynnides de la Charente, des Deux-Sèvres, de la Dordogne et de la Gironde. *l.c.* (196-198). (N 2-9053) Giard, A. Les Argynnides de la France septentrionale. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (43-46).

L'albinisme partiel des Satyrides. [à propos de la Note de M. G. de Rocquigny-Adanson]. l.c. (103-104).

Haensch, R. Die Ithomiien (Neotropiden) meiner Ecuador-Reise. Mit Beschreibungen neuer Formen und biologischen Notizen. Berliner ent. Ze., 48, 1903, (157-214, mit 1 Taf.).

**Bocquigny-Adanson**, G. de. Les Argynnides du centre de la France. Feuilles jeunes natural., Paris, (sér. 4), **33**, 1903, (119-123).

**Biépi**, P. Satyrides atteints d'albinisme. (Liste supplémentaire.) *l.c.* (134).

Thieme. [Südafrikan Satyriden.] Berliner ent. Zs., 48, 1903, (31).

#### SPECIAL.

Acraea nn. spp. Ostafrika. **Thurau**, F. Berliner ent. Zs., **48**, 1903, (132– 133).

Africa. Thurau, F. *l.c.* (303-306).

igola: leonina n. subsp. West Africa. Bethune-Baker, G. T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (325).

Actinote nn. spp. South America. Druce, H. l.c. (220).

Adclpha nn. spp. Bolivia. Weeks, A. G., jun. Philadelphis, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 27, 1901, (353-360).

Aemona lena Atk. 2. Fruhstorfer. Berliner ent. Zs., 48, 1903, (18). Agrias amydonius Stdgr., eine neue Lokalform. Fruhstorfer, H. D. ent. Za. Iris, Berlin, 14, (1901), 1902, (327-328).

claudia nn. subspp. Fruhstorfer, H. Soc. Entomol., Zürich, 17, 1902, (81).

storfer, H. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (351-352).

n. subsp. **Prunstorfer**, H. *l.c.* 15, 1902, (129, mit 1 Taf.).

Amauris nn. subspp. North-east Africa. **Bothschild**, *Hon.* W. and **Jordan**, K. Nov. Zool., Tring, **10**, 1903, (503-504).

ver. Uganda. Thurau, F. Berliner ent. Zs., 48, 1903, (301-302).

hecatoides n. sp. Congo. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113-128, with pl.).

Antanartia n. gen., A. schaeneia: diluta n. subsp. North-east Africa. **Rothschild**, Hon W. and Jordan, K. Nov. Zool., Tring, **10**, 1903, (508-509).

Apatura ilia Schiff., apparition tardive. **Giard.** A. Feuille jeune natural., Paris, (sér. 4), **33**, 1903, (50-51).

*ir.'s*, eine bemerkenswerte Form. **Schultz**, O. Soc. Entomol., Zürich, **17**, 1903, (161).

.1rgymnis, notes de géographie zoologiqne. **B**. Feuille jeunes natural., Paris, (sér. 4), **33**, 1902, (9).

(34). Maroc. Vaucher, A. l.c.

Inthonia, life - history. Frohawk, F. W. Entomologist, London, 36, 1903, (300-304).

**Adanson**, G. de. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (169-170).

*paphia*, Biographie. Evers, J. Insektenbörse, Leipzig, **20**, 1903, (109).

liner ent. Zs., 48, 1903, ((29)).

maphroditismus. **Kabis**. Ent. Zs., Guben, **16**, (1902/03), 1902, (42). Asterope nn. spp. Africa. **Bothschild**, Hon. W. and **Jordan**, K. Nov. Zool., Tring, **10**, 1903, (529–535).

Atella nn. subspp. North-east Africa. **Bothschild**, Hon. W. and Jordan, K. *l.e* (505-507).

manders, N. Bombay, J. Nat. Hist. Soc., 14, 1903, (716).

Aterica galena : incisa n. subsp. North-east Africa. **Bothschild**, *Hon.* W. and **Jordan**, K. Nov. Zool., Tring, **10**, 1903, (537-538).

Athyma perins : perinus n. subsp. Fruhstorfer, H. Berliner ent. Zs., 48, 1903, (95).

*Azania* n. subgen. (*Cyrestis*). **Martin**, L. D. ent. Zs. Iris, Berlin, **16**, 1903, (71-169).

Brenthis, synopsis of North American species. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (130-131).

Byblia ilithyia, larva, pupa. Fawcett, J. M. London, Trans. Zool. Soc., 17, 1903, (166, pl. VI, figs. 5-8).

Caerois respertilio n. sp. Südamerika. Thiome, O. Berliner ent. Zs., 47, 1902, [1903], (281-282).

Caligo nn. spp. Stichel, H. Insektenbörse, Le.pzig, 20, 1903, (389).

nn. subspp. Fruhstorfer,
 H. Soc. Entomol., Zurich, 18, 1903.
 (145); Insektenbörse, Leipzig, 26, 1903,
 (413).

\_\_\_\_\_ nn. subspp. **Roeber**, J. Soc. Entomol., Zürich, **18**, 1903, (145– 147).

Calliploca adyte: naturensis n. subsp. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (336).

Callithea adamsi n. sp. Peru. Lathy, P. J. Entomologist, Londou, 36, 1903, (105, pl. II).

H. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (221).

Calloleria radiosa n. sp. Ecuador. Haensch, R. Berliner ent. Zs., 48, 1903, (187).

Catacroptera cloanthe, wet and dry phases. Rothschild, W. and Jordan, K. Nov. Zool., Tring, 10, 1903, (520). Cethosia cydippe un. subspp. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (329-330, 339).

Obi. **Pruhstorfer**, H. Insektenbörse, Leipzig, **20**, 1903, (349–357).

Charaxes nn. subspp. Comoro Is. and Borneo. Rothschild, Hon. W. Nov. Zool., Tring, 10, 1903, (310).

\_\_\_\_\_ nn. subspp. North-east Africa. **Bothschild**, Hon. W. and Jordan, K. l.c. (539-540).

acuminatus n. sp. Ostafrika. Thurau, F. Berliner eut. Zs., 48, 1903, (117-144).

jasius, histoire naturelle. **Stépt**, P. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (56-64, av. 1 pl.).

------ orilus : kissericus n. subsp. Fruhstorfer, H. Berliner ent. Zs., 48, 1902, (95).

*varanes*, larva and pupa. **Fawcett**, J. M. London, Trans. Zool. Soc., **17**, 1903, (168, pl. VI, figs. 16, 16a).

Chionoba, North American species. Dyar, H. G. Washington, D C., Proc. Ent. Soc., 5, 1902, (42).

Coelites nothis : sylvarum n. subsp. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (275).

Coenonympha hero L. Giard, A. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (203).

Adanson, (ł. de. Feuille jeunes natural., Paris, (sér. 4), 83, 1903, (169).

Cosmosatyrus nilesi n. sp. Bolivia. Weeks, A. G., jun. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (104-108).

Crastia nn. spp. Tonkin. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (499).

Crenis natalensis, C. boisdurali, larva and pupe. **Fawcett**, J. M. London, Trans. Zool. Soc., **17**, 1903, (167, pl. VI, figs. 9-15).

Cupha erymanthis : kangeana n. subsp. Fruhstorfer, H. Berliner ent. Zs., 48, 1903, (96).

(N 2-9053)

Cymothoë lurida : sublurida n. subsp. Afrika. Fruhstorfer, H. Stettiner ent: Ztg, **64**, 1903, (359).

Cynthia arsinos nn. subspp. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (329-330); 16, 1903, (22-44).

Cyrestis, Revision der bekannten Arten unter Berücksichtigung der neuen Formen. Martin, L. l.c. 16, 1903, (71-169).

Cystineura caua (C. floridana Strecker). **Mangel**, L. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (159–160).

Daedalma bronza n. sp. Bolivia. Weeks, A. G., jun. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 27, 1901, (353-360).

Dichorragia nesimachus nn. subspp. Ostasien. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 16, 1903, (24).

Diestogyna nn. spp. Conge. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113-128).

Dircenna nn. spp Ecuador. Haensch, R. Berliner ent. Zs., 48, 1903, (178-179).

Discophora bangkaiensis n. subsp. Fruhstorfer, H. Soc. Entomol., Zürich, 17, 1903, (82).

<u>muscina</u> n. sp. **Stichel**, [H.]. Berliner ent. Zs., 48, 1903, ((4)-(5)).

Dismenetis (Uypoleria) n. gen., D. hewitsoni, D. hermana nn. spp. Ecuador. Haensch, R. l.c. (157-214).

Doleschallia nn. subspp. Fruhstorfer, H. Soc. Entomol., Zürich, 18, 1903, (65).

*bisallidae* nn. subspp. Ostasien. **Fruhstorfer**, H. D. ent. Zs. Iris, Berlin, **16**, 1903, (29-42).

Elina calvertii n. sp. Chile. Elwes, H. J. London, Trans. Ent. Soc., 1903, (275, pl. XIV).

*Elymnias* nn. subspp. **Fruhstorfer**, H. Soc. Entomol., Zürich, **16**, 1902, (169–170).

nn. subspp. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (271-273); 15, (1902), 1903, (306 -315); 16, 1903, (17-15).

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Elymnias oberthureri n. eubsp. Fruhstorfer, H. Soc. Entomol., Zürich, 17, 1902, (82).

Epinephele hyperanthus L. Rooquigny-Adanson, G. de. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (108).

janira L. Braccassat, M. l.c. (64).

Adanson, G. de. *l.c.* 1902, (84–85, 205).

jurtina, Anzahl der Augen auf der Unterseite der Hinterflügel. Bachmetjew, P. Allg. Zs. Ent., Neudamm, 8, 1903, (253-256).

Episcada praetigiosa n. sp. Ecundor. Haensch, R. Berliner ent. Zs., 48, 1903, (157-214).

Erebia, France. Chrétien, P. Naturaliste, Paris, (sér. 2), 25, 1903, (71-72).

Synopsis of North American species. **Dyar**, H. G. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (129–130).

Die in den Karpathen einheimischen Arten und deren Beziehungen zur pleistocänen Fauna Mitteleuropas. Hormusaki, C. Freiherr von. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (353– 380).

*euryale*, Flügellänge. **Bachmetjew**, P. Insektenbörse, Leipzig, **20**, 1903. (364-365).

glacialis Esper., Ei. Gillimer, M. Soc. Entomol., Zürich, 18, 1903, (74).

Ergolis phemonos n. sp., E. celebensis : dongalae n. subsp. Ostasien. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 16, 1903, (22-42).

Erites madura : ines n. subsp. Borneo. Pruhstorfer, H. l.c. (20-21).

*Eucidcs* nn. varr. et nn. subspp. **Stichel**, H. Berliner ent. Zs., **48**, 1903, (1-34).

Eulep's hebe : kargeanus n. subsp. Fruhstorfer, H. l.c. (94).

storfer, H. lc. (93-94).

subsp. **Bothschild**, Hon. W. Nov. Zool., Tring, **10**, 1903, (311).

Euphaedra nn. spp. West Africa, Lathy, P. L. London, Trans. Ent. Soc., 1903, (190-191, pl. VIII). Euphaedra ellenbecki n. sp. Africa. Pagenstecher, A. Wiesbaden, Ver. Natk., 55, 1902, Abt. II, (113-204).

losinga var. inaequabilis n. var. Thurau, F. Berliner ent. Zs., 48, 1903, (310).

<u>— medon nn. varr.</u> Thurau, F. *l.c.* (307-310).

Euptychia luttela u. sp. Bolivia. Weeks, A. G., jun. Philadelphia, Pa, Acad. Nat. Sci., Trans. Amer. Ent. Soc., 27, 1901, (353-360).

Euripus consimilis: eurinus n. subsp. ab. amala ab. sunta ab. dioelstiana ab. gudila ab. triguilla; E. halitherses: mastor n. subsp. **Fruhstorfer**, H. Ostasien. D. ent. Zs. Iris, Berlin, **16**, 1903, (26-28).

Euryphene ikelemba n. sp. Congo. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113-128).

Eurytela hiarbas nn. subspp. Northeast Africa. **Bothschild**, *Hon.* W. and **Jordan**, K. Nov. Zool., Tring, **10**, 1903, (525).

**Fawcett**, J. M. London, Trans. Zool. Soc., **17**, 1903, (166, pl. VI, figs. 1-4).

Euxanthe ansorgei n. sp. Uganda. Rothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, **10**, 1903, (312).

Helcyra hemina: masinia n. subsp. Ostasien. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 16, 1903, (37).

Ileliconius. Biffarth, H. Berliner ent. Zs., 47, 1902, [1903], (157-166).

rirgata n. sp. Stichel, [H.]. l.c. 48, 1903, (14).

Henotesia ubenica n. sp. Ostafrika. Thurau, F. I.c. (121).

*Hestia*, Revision der Gattung. **Fruhstorfer**, H. D. ent. Zs. Iris, Berlin, **16**, 1903, (51–65).

Heterosais pallidula n. sp. Ecuador. Haensch, R. Berliner ent. Zs., 48, 1903, (212).

Hyantis hageni n. sp. **Röber, J.** Stettiner ent. Ztg., **64**, 1903, (337-358).

*Hymenitis* nn. spp. Ecuador. **Haensch**, R. Berliner ent. Zs., **48**, 1903, (210-211). Hypanartia splendida n. sp. Peru. Rothschild, Hon. W. Nov. Zool., Tring, 10, 1903, (309-310).

Hypocysta leucomelas n. sp. British New Guinea. **Bothschild**, Hon. W. l.c. (309).

Hypoleria nn. spp. Ecuador. Haensch, R. Berliner ent. Zs., 48, 1903, (204).

Hypolimnas antilope: mela n. subsp. Fruhstorfer, H. l.c. (75).

*alimena* nn. subspp. Fruhstorfer, H. Berliner eut. Zs., **48**, 1903, (73-112).

*aurifascia* n. sp. New Hebrides. **Mengel**, L. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (167–168, with pl.).

deois: divina n. subsp. Neu-Guinea. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 16, 1903, (66-67).

n. subsp. North-east Africa. **Both** schild, Hon. W. and Jordan, K. Nov. Zool., Tring, **10**, 1903, (524-525).

Hyposcada ida n. sp. Ecuador. Haensch, R. Berliner ent. Zs., 48, 1903, (188).

Ideopsis chloris: obiana n. subsp. Obi. Fruhstorfer, H. Insektenbörse, Leipzig, 20, 1903, (349, 357).

*Isamia* nn. subspp. **Fruhstorfer**, H. Berliner ent. Zs., **48**, 1903, (87, 91).

Isodema adelma var. latifasciata n. var. China and Thibet. Lathy, P.I. Entomologist, London, 36, 1903, (12).

fer, H. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (267).

Ithomia nn. spp. Ecuador. Haensch, R. Berliner ent. Zs., 48, 1903, (182-184).

*Gardneri* n. sp. Bolivia. Weeks, A. G., *jun.* Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 17, 1901, (353-360).

Lasiophila piscina n. sp. Südamerika. Thieme, O. Berliner ent. Zs., 47, 1902, [1903], (281-282).

Lebadea martha nn. subspp. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (337-338).

Lethe baucis : philemon n. subsp. Fruhstorfer, H. l.c. (275). Leucosticha n. nom. North-east Africa. Bothschild, *Hon.* W. and Jordan, K. Nov. Zool., Tring, **10**, 1903, (538).

*Leucothyris* nn. spp. Ecuador. **Haensch**, R. Berliner ent. Zs., **48**, 1903, (190-195).

Limenitis. Mittls. Wien, JahrBer. Entom. Ver., 11, (1900), 1901, (113–115, mit 1 Taf.).

daraxa : theoda n. subsp. Ostasien. Frahstorfer, H. D. ent. Zs. Iris, Berlin, 16, 1903, (22-23).

*sibylla* L., apparition tardive. **Giard**, A. Feuille jeune natural., Paris, (sér. 4), **33**, 1903, (50– 51).

Macroploea phaenarcla : irma n. subsp. Obi. **Fruhstorfer**, H. *l.c.* (319-357).

Melitaea. Mittis. Wien, JahrBer. Entom. Ver., **11**, (1900), 1901, (113-115, mit 1 'Taf.).

athalia ab. Bode. Berliner ent. Zs., 48, 1903, (25).

*aurinia*, some British forms. **Freke**, P. E. Entomologist, London, **36**, 1903, (86-89, 108-112).

*dumoetas* n. sp. **Skinner**, H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (304–305).

didyma, aberration. **Row**land-Brown, H. Entomologist, London, **36**, 1903, (153-154, with fig.).

G. R. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (158).

*maturna* IIb. var. *urbani*. **Hirschke**, H. Wien, JahrBer. Entom. Ver., **11**, (1900), 1901, (85, mit 1 Taf.).

**Thieme.** Berliner ent. Zs., **48**, 1903, ((20-22)).

A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (103-104).

Miraleria (~ Ilypoleria) n. gen. Ecuador. Haensch, R. Berliner ent. Zs., 48, 1903, (211).

Morphindra n. gen. Röber, J. Stettiner ent. Ztg., 64, 1903, (337). Morpho nn. spp. Böber, J. l.c. (348-355).

*fruhstorfi* n. sp. Ecuador. **Böber**, J. Soc. Entomol., Zürich, 17, 1903, (154).

thoosa n. sp. Mexico. **Smyth**, E. A., jun. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (85-87, with pl.).

Mycalesis nn. spp. Congo, Mashuna Land. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113-128).

*vicaria* n. sp. Ostafrika. **Thurau**, F. Berliner ent. Zs., **48**, 1903, (117-144, mit 1 Taf.).

Myscelia skinneri in New Mexico. Skinner, H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (321).

*Napeojenes* nn. spp. Ecuador. **Haensch**, R. Berliner ent. Zs., **48**, 1903, (174-176).

Nectaria, Revison der Gattung. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 16, 1903, (51-65).

*idea : vosseleri* nn. subsp. **Fruhstorfer**, H. Soc. Entomol., Zürich, **18**, 1903, (73).

Neocoenyra nn. spp. Ostafrika. Thurau, F. Berliner ent. Zs., 48, 1903, (126-128).

Neomoenas inornata n. sp. Chili. Elwes, H. J. London, Trans. Ent. Soc., 1903, (278-279, pl. XIV).

Neptidopsis fulgurata: platyptera n. subsp. German East Africa. **Boths**child, Hon. W. and Jordan, K. Nov. Zool., Tring, **10**, 1903, (526).

Neptis nemetes: obtusa n. subsp. North-East Africa. **Bothschild**, Hon. W. and **Jordan**, R. *l.c.* (536).

Nora ramada: suluana n. subsp. Fruhstorfer, H. Soc. Entomol., Zurich, 17, 1902, (82).

Oeneis jutta Hb. im Zehlau-Bruch, Ostpreussen. **Haneld**. Berliner ent. Zs., **48**, 1903, (12).

Parantica cleona: eucleona n. subsp. Obi. Franstorfer, H. Insektenbörse, Leipzig, 20, 1903, (349-357).

Pararge heira, Abart. Schmidt, J. Ent. Zs., Guben, 16, (1902/03), 1903, (89-90). Parhestina mena: subdecorata n. subsp. Ostasien. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 16, 1903, (25).

Penthema binghami : annamitica n. subsp **Fruhstorfer**, H. l.e. **14**, (1901), 1902, (265-267).

Phyciodes nortbrundii n. sp. Bolivia. Weeks, A. G., jun. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 27, 1901, (353-360).

Plusia gamma. Adkin, R. E. Entomologist, London, **36**, 1903, (274–276).

Precis nn. subspp. North-East Africa. Bothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, **10**, 1903, (513, 515, 518-519).

*adulatrix* n. subsp. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (306-315).

nobilitata n. sp. Ostafrika. Thurau, F. Berliner ent. Zs., 48, 1903, (117-144).

Boy. l.c. ((4)).

Prothoë francki : vilma n. subsp. Franstorfer, H. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (340).

Peeudacraea karschi n. sp. Afrika. Fruhstorfer, H. l.c. 16, 1903, (9-10).

künowi Dwtz, ab. neumanni n. Uganda. Thurau, F. Berliner ent. Zs., 48, 1903, (306).

Pseudoscada subtilis n. sp. Ecuador. Haensch, R. l.c. (203).

Pteronymia nn. spp. Ecuador. Haensch, R. l.e. (197-201).

Pyrameis cardui. Adkin, R. E. Entomologist, London, **36**, 1903, (274-276).

Saletara panda: engania n. subsp. **Pruhstorfer**, H. Soc. Entomol., Zürich, **18**, 1903, (124–125).

Salpinz miraculosa n. sp., S. leucostictos n. subspp. **Pruhstorfer**, H. D. ent. Zs. Iris, Berlin, **14**, (1901), 1902, (334-336).

Selenophanes supremus var. ditatus Thieme. Thieme. Berliner ent. Zs., 48, 1903, ((12-13)).

Stichophthalma fruhstorferi n. sp. Roeber, J. Soc. Entomol., Zürich, 17, 1903, (153).

Stictoploea rogeri nn. subspp. Fruhstorfer, H. l.c. 1902, (81). Sykophages n. subgen. (Cyrestis). Martin, L. D. ent. Zs. Iris, Berlin, 16, 1903, (81).

Symbrent'lia florida n. sp. Amboina. Swinhoe, C. Ann. Mag. Nat. Hist., Londou, (Ser. 7), **11**, 1903, (500).

*Tenaris* nn. subspp. **Fruhstorfer**, H. D. ent. Zs. Iris, Berlin, **14**, (1901), 1902, (329-330).

diana : diadema n. subsp. Obi. **Fruhstorfer**, H. Insektenbörse, Leipzig, **20**, 1903, (349–357).

*domitilla : agrippa* n. subsp. **Fruhstorfer**, H. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (306-315).

Terinos uchnesi n. sp. New Guines. Heller, K. M. l.c. (127-132, mit 1 Taf.).

Tithorea anachoreta n. sp Chanchamayo. **Thieme**, O. Berliner ent. Zs., 47, 1902, (1903), (282).

Vancesea 1-album Esp. ab. chelone n. ab. **Schultz**, O. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (324-325).

Adanson, G. de. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (151).

**Fischer**, E. Soc. Entomol., Zürich, **17**, 1902, (49–50).

Frohawk, F. W. Entomologist, London, 36, 1903 (2-5).

cardui and other insects at the Kentish Knock lightship. Clarke, W. E. Ent. Mag., London, 39, 1903, (289-290).

milberti. Rhode Island. Billson, J. E. Philadelphia, Pa, Ent. News Acad. Nat. Sci., 14, 1903, (57).

polychloros (?), eine albinotische Form. **Ruhe**, H. Insektenbörse, Leipzig, **20**, 1903, (205).

*anthomelas*, eine Varietät, und Bemerkungen über Eigenschaften und Verwandtschaft der Vanessen. **Fischer**, E. Ent. Zs., Guben, **16**, (1902) 03), 1902, (57-58, 61, 69-70).

#### ERYCINIDAE.

#### GENERAL.

Attken, E. H. and Comber, E. List of butterflies of family *Lemoniidae*, from Konkan. Bombay, J. Nat. Hist. Soc., **15**, 1903, (47-50).

# SPECIAL.

Abisara nn. spp. Indochine. **Frub**storfer, H. Berliner ent. Zs., **48**, 1903, (285-286).

dbuna n. sp. Neu-Guinea. Heller, K. M. D. ent. Zs. Iris, Berlin, 15, 1902, (127-132).

*huntei* n. sp. British New Guinea. **Sharp**, D. Entomologist, London, **36**, 1903, (310).

Ana'ole modesta n. sp. Paraguay. Mangel, L. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (176– 178, with 1 pl.).

Anteros carus n. sp. S. America. Godman, F. D. London, Trans. Ent. Soc., 1903, (535–536, pl. XXI).

Apodemia ochracea n. sp. Paraguay. Mongel, I. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (176– 178, with 1 pl.).

Aricoris nn. spp. America. Godman, F. D. London, Trans. Ent. Soc., 1903, (546-548, pl. XXIII).

Bacotis bifasciata n. sp. Paraguay. **Mengel**, L. W. Philadelphia, Pa., Eut. News Acad. Nat. Sci., **13**, 1902, (176– 178, with 1 pl.).

Caria nn. spp. S. America. Godman, F. D. London, Trans. Ent. Soc., 1903, (538-539, pl. XXI).

Chamaelimnas pansa n. sp. Brazil. Godman, F. D. *l.e.* (534, pl. XX).

Charis arcuata n. sp. Colombia. Godman, F. D. *l.c.* (539, pl. XXII).

Cremna malis n. sp. Godman, F. D. l.c. (530-531, pl. XX).

Cricosoma irroratum n. sp. British Guinea. Godman, F. D. *l.c.* (540).

Ematurgina n. gen., E. mabildei n. sp. **Röber,** J. Stettiner ent. Ztg., **64**, 1903, (337-358).

Emesis eurydice n. sp. Ecuador. Godman, F. D. London, Trans. Ent. Soc., 1903, (536, pl. XXI). Esthemopheles n. gen., E. lamprolenis n. sp. **Röber**, J. Stettiner cnt. Ztg., **64**, 1903, (344).

Eunica mabildei n. sp. **Röber J.** l.c. (346).

*Eurygona* nn. spp. America. **God**man, F. D. London, Trans. Ent. Soc., **1903**, (531-533).

Ilyphilaria orsedice n. sp. South America. Godman, F. D. I.e. (531, pl. XX).

Hyporion n. gen. **Böber**, J Stettiner eut. Ztg., **64**, 1903, (357).

Lasaia nn. 8,7p. Bolivia and Paraguay. Godman, F. D. London, Trans. Ent. Soc., 1903, (541, pl. XXII).

Lemonia nn. spp. Palestine. Püngeler, R. D. ent. Zs. Iris, Berlin, 15, 1902, (143-146).

Iemonias nn. spp. S. America. Godman, F. D. London, Trans. Ent. Soc., 1903, (542-545, pls. XXII-XXIII).

Libythea celtis, apparition tardive. **816p1**, P. Feuille jeunes natural., Paris, (sér. 4), **33**, 1902, (34).

*werneri* n. subsp. Fruhstorfer, H. Berliner ent. Zs., **48**, 1903, (112).

Mesene nn. spp. America. Godman, F. D. London, Trans. Ent. Soc., 1903, (540-541, pl. XXII).

Mesenopsis pulchella n. sp. Amazons. Godman, F. D. l.c. (533-534, pl. XX).

Mesosemia nn spp. **Godman**, F. D. l.c. (529-530, pl. XX).

J. Stettiner ent. Ztg., **64**, 1903, (356).

Metacharis indissimilis n. sp. Bolivia. Weeks, A. G. jun. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 27, 1901, (353-380).

Monethe molione n. sp. Peru. Godman, F. D. London, Trans. Ent. Soc., 1903, (539, pl. XXII).

Necyria gerhardi n. sp. Peru. **Men**gel, L. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (176-178, with 1 pl.).

Nymphidium grande n. sp. Colombia. Godman, F. D. London, Trans. Ent. Soc., 1903, (546, pl. XXIII). Polycaena, Flügelbildung. Grote, A. Insektenbörse, Leipzig, 20, 1903, (107– 108).

Riodina (?) nn. spp. S. America. Godman, F. D. London, Trans. Ent. Soc., 1903, (535, pl. XXI).

Siseme pedias n. sp. Godman, F. D. l.c. (534, pl. XX1).

Symmachia nn. spp. S. Americo. Godman, F. D. *l.c.* (537–538, pl. XXI).

Tazila dora n. sp. Indochine. Pruhstorfer, H. Berliner ent. Zs., 48, 1903. (274–296).

# LYCAENIDAE.

# GENERAL.

Bethune Baker, C. T. A revision of the Amblopodia group of butterflies of the family Lycaenidae. London, Trans. Zool. Soc., 18, 1903, (1-164, pls. I-V).

**Courvoisier**, L. G. Ueber Aberrationen der Lycaeniden. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **11**, 1903, (18-25, av. 1 pl.).

# Special.

Amblypodia anne: ta : anettina n. subsp. Obi. Fruhstorfer, H. Insektenbörse, Leipzig, 20, 1903, (349-357).

Aphnaeus brahami n. sp. Nigeria. Lathy. I.ondon, Trans. Ent. Soc, 1903. (199, pl. VIII, fig. 10).

Arhopala nn. spp. **Bethune-Baker**, G. T. London, Trans. Zool. Soc., **17**, 1903, (38-148).

nn. spp. Singapore and British New Guinea. Bethune-Baker, G. T. Ent. Mag., London, **39**, 1903, (217-218).

Axiocernes argentio-maculata n. sp. Africa. **Pagenstecher**, A. Wiesbaden, Jahrb. Vor. Natk., **55**, 1902, Abt. II, (113-204).

baumi n. sp. Weymer, G. Die Lepidopteren der Kuene-Sambesi-Expedition. Berlin, 1903, (543-559).

Callophrys (Theela) rubi (Linn.) in Fife. Brown, H. H. Ann. Nat. Hist., Edinburgh, **1903**, (187). Chrysophanus dispar., historical notes. Dale, C. W. Ent. Mag., London, 39, 1903, (147-148).

ochimus H. S. var hyreana. Neuburger, W. Soc. Entomol., Zürich, 18, 1903, (59).

Deudoriz caliginosa n. sp. West Africa. Lathy, P. L. London, Trans. Ent. Soc., 1903, (197, pl. VIII).

*catori* n. sp. West Africa. **Bethune-Baker**, G. T. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (331).

Epamera mirabilis n. sp. West Africa. Druce, H. H. C. J. l.c. 11, (71).

Epitola nn. spp. West Africa. Bethune-Baker, G. T. l.c. 12, (329-331).

\_\_\_\_\_ gordoni n. sp. West Africa. Druce, H. H. C. J. l.c. 11, (70-71).

Eumaeus debora. Murillo, L. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (35–38).

Jolaus adamsi n. sp. West Africa. Lathy, P. L. London, Trans. Ent. Soc., 1903, (199, pl. VIII).

Larinopoda brenda n. sp. West Africa. Druce, H. H. C. J. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (69-70).

Liptena submacula n. sp. West Africa. Lathy, P. L. London, Trans. Ent. Soc., 1903, (196, pl. VIII).

Lycaena. **Petersdorf**. Berliner ent. Zs., **48**, 1903, ((16)–(17)).

nn. spp. **Skinner**, H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (15).

das Ei und die junge Raupe. Gillmer, M. Soc. Eutomol., Zürich, 17, 1902, (92-93, 98-99).

arion in Britain, historical notes. Dale, C. W. Ent. Mag., London, 39, 1903, (4-5).

Frohawk, F. W. Entomologist, London, 36, 1903, (57-60).

babhru n. sp. Bolivia. Weeks, A. G., jun. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. S ~c., 27, 1901, (353-360). Lycaena corydon, Poda ab. cinnus, Abbildung. Gillmer, M. Soc. Entomol., Zürich, 17, 1902, (68-69).

------ corydon, Varietäten. Krüger. Berliner ent. Zs., 48, 1903, ((22)-(23)).

Aberrationen. Leonhardt, W. Ent. Zs., Guben, 16, (1902-1903), 1902, (50).

Aberrationen. Schultz, O. l.c. (263-269).

pseudargiolus f. neglecta, hermaphroditism. Winn, A. F. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (78).

Lycaenesthes nn. spp. West Africa. Bethune-Baker, G. T. Ann. Mag. Hist., London, (Ser. 7), **12**, 1903, (332-334).

nn. spp. Africa. Pagenstecher, A. Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (113-204).

Mahathala hainani n. sp. Bethune-Baker, G. T. London, Trans. Zool. Soc., 17, 1903, (23).

Micropentila dorothea n. sp. West Africa. Bethune-Baker, G. T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (327-328).

Myrina subornata n. sp. West Africa. Lathy, P. L. London, Trans. Ent. Soc., 1903, (198, pl. VIII).

Pentila nn. spp. West Africa. Lethy, P. L. *l.e.* (195-196, pl. VIII).

septistrigata n. sp. West Africa. Bethune-Baker, G. T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (325-326).

Phytala leonina n. sp., P. elais: catori n. subsp. West Africa. Bethune-Baker, G. T. l.c. (328-329).

Pseuderesia gordoni n. sp. West Africa. Druce, H. H. C. J. *l.c.* 11, (69).

**Aurivillius**, C. Entomol. Tidskr., Stockholm, **22**, 1901, (113-128).

Telipna actinotina n. sp. West Africa. Lathy, P. L. London, Trans. Ent. Soc., 1903, (194–195, pl. VIII). 4431

Thecla spadix n. sp. Grinnell, F., jun. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (10-11).

*uernickei* n. sp. **Böber**, J. Stettiner ent. Ztg., **64**, 1903, (337-358).

Thysonitis schaeffera : annamensis n. subsp. Fruhstorfer, H. Berliner ent. Zs., 48, 1903, (110).

Uranotes (Theckla) melinus IIub, habits. **Rivers**, J. J. Los Angelos, Bull. So. Cal. Acad. Sci., 1, 1902, (41– 42).

Zephyrus taxila. Bremer, life history. (Japanese) Nawa, Y. Konch. Sek., Gifu, 7, 1903, (317-319).

# PIERIDAE.

#### GENERAL.

Fruhstorfer, H. Verzeichniss der in Tonkin, Annam und Siam gesammelten Pieriden und Besprechung verwandter Formen. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (269-305).

Verzeichuis der in Hinter-Indien gesammelten Pieriden. Soc. Entomol., Zürich, **18**, 1903, (18-19, 25-26).

------ Tonkin-Pieriden. *l.c.* (41-42).

#### SPECIAL.

Anthocharis genutia, habits. Hornig, H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (252).

Aporia crataegi, Variabilität der Flügellänge. **Bachmetjew**, P. Allg. Zs. Ent., Neudamm, **8**, 1903, (382–395, 470–494).

life-history. **Battley**, A. U. Entomologist, London, **36**, 1903, (249–251).

Baltia sikkima n. sp. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 16, 1903, (48-50).

Belenois teutonia: anita n. subsp. Fruhstorfer, H. Berliner ent. Zs., 43, 1903, (107).

Calophaga melania nn. subspp. Fruhstorfer, H. Scc. Entomol., Zurich, 18, 1903, (17).

Captosilia scylla : bangkejana n. subsp. Fruhstorfer, H. l.c. (73). Colias eogene : miranda n. subsp. Sikkim. **Fruhstorter**, H. Insektenbörse, Leipzig, **20**, 1903, (148).

There are a set and a set

F. *l.c.* ((30)).

palaeno; asias n. subsp. China and Japan. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 16, 1903, (48-50).

*phicomone : phila* n. subsp. Kashmir. **Fruhstorfer**, H. *l.c.* (47).

*philodice*, notes. **Ells**. worth, A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (103-104).

Euchloe sara var. reakirti, egg. Minot, G. R. l.c. (158).

Gonopteryz rhamni, Umgürtungsfaden der Puppen u. die Flügelbildung, Bey. Berliner ent. Zs., **48**, 1903, ((3)).

Ilebomoia glaucippe: aurantiaca n. subsp. Obi. Fruhstorfer, H. Insektenbörse, Leipzig, 20, 1903, (349, 357).

Пирhina nama: eunama n. subsp. **Pruhstorfer**, H. *l.e.* (110).

torfer, H. l.c. (102-106).

subsp. Fruhstorfer, H. Soc. Entomol., Zürich, 18, 1903, (18).

Ixias yunnanensis n. subsp. Yunnan. Fruhstorfer, H. l.c. 17, (81).

Leptosia xiphia nn. subspp. Fruhstorfer, H. l.e. 18, (18).

Leucophasia lathyri III. Poulquier, G. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (151).

Mylothris erlangeri n. sp. Africa. Pagenstecher, A. Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (113-204)

Nepheronia nn. subspp. Fruhstorfer, H. Berliner ent. Zs., 48, 1903, (97-99).

jobaea : obiana n. subsp. Obi. **Fruhstorfer**, H. Insektenbörse, Leipzig, **20**, 1903, (349–357).

Pieris brassicae, la chenille du chou. Taes, H. Chron. Agric., Lausanne, 15, 1902, (1-10).

de chenilles du chou. **Taes**, H. Lausanne, Bul. Soc. Sci., Nat., **38**, 1902, (XIX); Arch. Sci. Phys., Genève, (sér. 4), **13**, 1902, (602).

de. (Russ) Jachantov, A. A. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (38).

mezzi chimici di lotta contro [di essa]. **Guarcio** (Del), G. Bollettino di Entomologia agraria, Padova, 9, 1902, (63-65).

*hospitis* n. sp. Afrika. **Weymer**, G. D. ent. Zs. Iris, Berlin, **16**, 1903, (221-235).

*gidica*, larva, pupa. **Fawcett**, J. M. London, Trans. Zool. Soc., **17**, 1903, (168, pl. VI, figs. 17-20).

. Pinacopteryz venatus J. Dixey, F. A. D. London, Trans. Ent. Soc., 1903, (153).

Prioneris autothisbe : orientalis n. subsp., P. elemanthe : themanana n. subsp. Fruhstorfer, H. Soc. Entomol., Zürich, 18, 1903, (35).

thestylis : formosana D. subsp. **Fruhstorfer**, H. Berliner ent. Zs., **48**, 1903, (109).

Rhodocera cleopatra, L., observations. Brascassat, M. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (64).

Charentes. **Dupuy**, G. Question. *l.c.* (9-10).

(33-34). Giard, A. l.c.

A propos de l'observation de M. Brascassat. Giard, A. l.c. (84).

Adanson, (7. de. *l.c.* (33-52).

Tachyris nero : neronis n. subsp. Fruhstorfer, H. Soc. Entomol., Zürich, 18, 1903, (17).

*Teracolus*, a monograph on the genus. **Sharpe**, E. M. B. **Pts** 9, 10, [1901]. pt. 11 [1902] London (101-156, pls xxxiixilii). 4to.

n. ab., T. incretus ab. panganensis n. ab.

Thurau, F. Berliner ent. Zs., 48, 1903, (312).

Terias eximia n. sp. Ostafrika. Thurau, F. l.c. (117-144).

# PAPILIONIDAE.

GENERAL.

Aitken, E. H. and Comber, E. List of butterflies of family *Papilionidae*, from Koukan. Bombay, J. Nat. Hist. Soc., 15, 1903, (50-55).

Fruhstorfer, H. Neue Papilioformen und andere Lepidopteren aus Ost-Asien und dem malayischen Archipel. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (306– 315).

------- Neue Papilioniden aus dem australischen Gebiet. *l.c.* 16, 1903, (11--16).

Verzeichnis der in Tonkin, Annam und Siam gesammelten Papilioniden und Besprechung verwandter Formen. Berliner eut. Za., 47, 1902, [1903], (167-234).

Moore, F. Lepidoptera indica. Parts LXI-LXVI. Vol. VI. London, 1903, (1-104, pls. 467-512).

Wytaman, P. Fascicule 4. Lepidoptera Rhopalocera fam. Papilionidae, subfam. Leptocircinae. In: Genera insectorum. Bruxelles, 1902, (3, av. 1 pl.). fr. 2.50.

Young, L. C. H. The classification of the Lepidoptera Papilionina. Bombay, J. Nat. Hist. Soc., 15, 1903, (294-311).

#### SPECIAL.

Deoris n. gen., type Papilio agetes. Moore, F. Lep. Ind., VI, 1903, (31).

Junonia erigone: gardeneri n. non. = Precis celebensis Butl.; J. erigone: leucophora n. subsp. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (306-315).

Ornithoptera criton : critonides n. subsp. **Fruhstorfer**, H. Soc. Entomol., Zürich, **18**, 1903, (149).

goliath. **Fassi**, A. H. Insektenbörse, Leipzig, 20, 1903, (100).

miranda : neomiranda n. subsp. Fruhstorfer, H. Soc. Ento.nol., Zürich, 18, 1903, (57). Ornithoptera paradisea ab. auriflua n. subsp. Fruhstorfer, H. l.c. (49).

*priamus* n. var. Fruhstorfer, H. Berliner ent. Zs., 48, 1903, ((18-20)).

*\_\_\_\_\_ zacheri* n. sp. **Suffert**, E. Insektenbörse, Leipzig, **20**, 1903, (235–236).

Papilio, neue Formen aus dem indomalayischen Gebiet. **Pruhstorfer**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (161– 168).

nn. spp. Africa. **Boths**child, Hon. W. and Jordan, K. Nov. Zool., Tring, **10**, 1903, (488-489).

n. subsp. Fruhstorfer, H. Berliner ent. Zs., 48, 1903, ((3-4)).

nn. subspp. **Fruhstorfer**, H. D. ent. Zs. Iris, Berlin, **14**, (1901), 1902, (270, 342-349); **15**, 1902, (169-178, 306-315); **16**, 1903, (11-16).

nn. subspp. Afrika. Fruhstorfer, H. Stettiner ent. Ztg., 64, 1903, (359-360).

------ nn. varr. Fruhstorfer, H. Soc. Entomol., Zürich, 17, 1902, (57).

antiphates : antiphanus n. subsp. **Fruhstorfer**, H. *l.c.* **16**, 1902, (170).

worth, A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (103–104).

homerus. Jamaica. Bobinson, W. l.c. 14, 1903, (17-21).

*macareus*: lioneli n. nom. for *P. indicus* Niceville; *P. jordani* n. sp.; 5 nn. subspp. **Fruhstorfer**, H. Soc. Entomol., Zürich, **17**, 1902, (74).

macfarlanei : cestius n. subsp (Lokalität unbekannt). Fruhstorfer, H. l.c. 18, (149).

machaon, chenilles exhalant une odeur de musc. **Calllon**, F. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (38).

varr.). **Neuburger**, W. Soc. Entomol., Zürich, **18**, 1903, (42-43).

Adanson, G. de. Feuille jeunes natural., Paris, (sér. 4), **38**, 1903, (205).

des Schwalbenschwanzes. Spengel, [J.

W.]. Giessen, Ber. Ges. Natk., 33, 1899-1902, (206-207).

Papilio mikado var. albidus n. var. Wileman, A. E. Entomologist, London, 36, 1903, (300).

*philenor* in New Hampshire following food plant, Aristolochia sipho. **Foster**, F. H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (326).

*podalirius* L., limite septentrionale de son extension en France et en Belgique. **Bocquigny-Adanson**, G. de. Feuille jeunes natural., Paris, (sér. 4). **33**, 1903, (163).

quigny-Adanson, G. de. *l.c.* **31**, 1903, (19).

*polyzenes* var. *curvifascia* n. var. **Skinner**, H. Philadelphia, Pa., Ent. News Acad. Nat. Szi., **13**, 1902, (183).

*princeps* n. sp. Neuguinea. Weymer, G. Ent. Zs., Guben, **16**, (1902-03), 1902, (5-6).

**Druce,** H. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (221-222).

zenocles : kephisos n. subsp. Fruhstorfer, H. Soc. Entomol., Zürich, 16, 1902, (145-146).

Parnassius nn. spp. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, **16**, 1903, (43– 43, mit Taf.).

acco: acconius n. subsp. Sikkim. **Fruhstorfer**, H. Insektenbörse, Leipzig, **20**, 1903, (148).

*apollodelius*, Ein Hybride. Frings, C. *l.c.* (52).

clodius var. altaurus n. var. United States. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (290-298).

*cpaphus : hucei* n. subsp. Afrika. **Fruhstorfer**, H. Stettiner Ent. Ztg, **64**, 1903, (360-361).

imperator: augustus n. subspp. **Fruhstorfer**, H. Soc. Entomol., Zürich, **18**, 1903, (113).

Pathysa nn. spp. Travancore, Sikkim. Moore, F. Lep. Ind., London, VI, 1903, (22, pl. 475, figs. 1, 2; 29, pl. 478, fig. 1).

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Podalirius, géonémie. Nerville, F. de. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (205).

Thais polyzena, Ei und ersten Raupenstadien. **Zdobnicky**, W. Soc. Entomol., Zürich, **18**, 1903, (36).

rumina, T. alicea, T. paucipunctata, T. bella nn. abb. Neuburger, W. l.e. 17, (154-155).

Troides omphrysus gardineri n. nom. für Troides ruficollis Rothschild. **Fruhstorfer**, H. l.c. 1902, (57).

priamus : poseidon var. boreas n. var. Fruhstorfer, H. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (349).

n. var. Obi. Ney, F. Insektenbörse, Leipzig, 20, 1903, (36).

# HESPERIDAE.

## GENERAL.

Mabille, P. Lepidoptera rhopalocera fam. *Hesperidae*. In : Wytsman ; Genera Insectorum, Bruxelles, 1903, (78). 15 fr.

**Oberthur**, C. The Hesperiides of Brittany. Ent. Rec., London, **15**, 1903, (179–180).

**Skinner**, H. [*Hesperidae* from the United States.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (183).

#### SPECIAL.

Aethilla subviolacea n. sp. Ecuador. Mabille, P. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (32).

Anatolmis regulus n. sp. California. Grinnell, F., jun. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (11)

Ate acquatorica n. sp. Ecuador. Mabille, P. In: Wtysman, P., Genera Insectorum, Bruxelles, 1903, (57).

Baoris ogrugana n. sp. West Africa. Lathy, P. L. London, Trans. Ent. Soc., 1903, (204-205, pl. VIII).

Bolla n. gen. Mabille, P. In: Wtysman, P., Genera Insectorum, Bruxelles, 1903, (72).

Camptopleura cataphance n. sp. Mabille, P. l.c. (69).

Charidia n. gen. Mabille, P. l.c. (73).

Choaspes hemizanthus n. sp., n. subsp. New Guinea. **Rothschild**, W. and Jordan, K. Nov. Zool., Tring, **10**, 1903, (481, pl. XI).

Cobalopsis duspecca n. sp. Bolivia. Weeks, A. G., jun. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (104-108).

Cocceius syloson n. sp. Mabille, P. In: Wtysman, P., Genera Insectorum, Bruxelles, 1903, (3<sup>c</sup>).

Croniades n. gen. Mabille, P. l.c. (13).

Cyclogypha n. gen., C. cacruleonigra n. sp. Mabille, P. l.c. (70).

Dichelura n. gen. Mabille, P. l.c. (47).

Epargyreus arsaccs n. sp. Mabille, P. l.c. (24).

Eudamus nn. spp. Mabille, P. l.c. (24).

Gerosis n. gen. Mabille, P. l.c. (49).

Granila n. gen. Mabille, P. lc. (11).

Hesperia actacon, gynandrous. Ford. Entomologist, London, 36, 1903, (242).

Leucochitonea hindei n. sp. British East Africa. Druce, H. H. C. J. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (636-637).

Marela n. gen., M. tamyris n. sp. Mabille, P. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (41).

Megathymus ursus n. sp. Arizona. **Poling**, O. C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, ([97]-98, with pl.).

Metardaris n. gen. Mabille, P. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (11).

Miltomiges n. gen. Mabille, P. l.c. (72).

Mionectes n. gen. Mabille, P. l.c. (41).

Myscelus nn. spp. Mabille, P. l.c. (13-14).

Netrobalanae n. gen. Mabille, P. l.c. (76).

Nisoniades brunnea, Florida. Skinner, H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (110).

**Smyth**, E. A., *jun. l.c.* (333).

Oxypalpus fulous n. sp. West Africa. Lathy, P. L. London, Trans. Ent. Soc., 1903, (203-204, pl. VIII).

Paches naryeus n. sp. Mabille, P. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (57).

Pamphila cuadrala n. sp. Bolivia. Weeks, A. G., jun. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 27, 1901, (353-360).

*palaemon* Pall. ab. *melicertes* m. und *P. silrius* Knoch. ab. *catella* m. **Schults**, O. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (321-323).

sabuleti var. tecumsch n. var. Grinnell, F., jun. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (10-11).

Pellicia pericles n. sp. Mabille, P. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (59).

Physalea n. gen. Mabille, P. l.c. (26).

Pithonides gellius n. sp. Mabille, P. l.c. (56).

Pyrdalus n. gen. Mabille, P. l.c. (60).

Sebaldia n. gen. Mabille, P. l.c. (66).

Stacmactis n. gen. Mabille, P. l.c. (70).

Syrichthus nigella n. sp. Weeks, A. G., jun. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (104-108).

Telegonus nn. spp. Brazil. Mabille, P. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (25-26).

Telesto melania n. sp., T. monticolae Olliff. Australia. Waterhouse, G. A. Vict. Nat., Melbourne, **20**, 1903, (52– 54).

Thymele nn. spp. **Mabille**, P. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (27).

Trapezites maheta, Hewitson, T.mahcta var. iacchoides n. var., T. maheta var. phigaloides. Australia. **Waterhouse**, G. A. Vict. Nat., Melbourne, **20**, 1903, (54-57).

# HETEROCERA.

# GENERAL.

Die palaearktischen Grossschmetterlinge und ihre Naturgeschichte. Bd 1 bearb. von Fritz Rühl. Bd 2. Nachtfalter. Abt. 1, bearb. von. Max Bartel. Lfg 22 = Bd 2, Lfg 6. Leipzig (J. Paul), 1902, (241-288). 1,50 M.

**Crombrugghe de Piequendaele**, dc. Note sur quelques microlépidoptères de la faune belge. Bruxelles, Ann. Soc. ent. Relgique, **45**, 1901, (100-104); 1902, (481-483).

Dudgeon, G. C., Elwes, H. J., Hampson, Sir G. F. A catalogue of the Heterocera of Sikhim and Bhutan. Bombay, J. Nat. Hist. Soc., 15, 1903, (319-326).

**Dyar**, H. G. A review of the North American species of the Lepidopterons family *Anthroceridae*. [With bibliography.] Washington, D.C., Proc Ent. Soc., 5, 1903, (322-329).

**Fruhstorfer**, H. Verzeichnis der in Tonkin, Annam und Siam gesammelten Nemeobiinae und Libythaeinae und Besprechung verwandter Formen. Berliner ent. Zs., **48**, 1903, (274–296).

Fuchs, A. Alte und neue Kleinfalter der europäischen Fauna. Stettiner ent. Ztg., 64, 1903, (227-247).

Alte und neue Gross-Schmetterlinge der europäischen Fauna. Wiesbaden, Jahrb. Ver. Natk., **55**, 1902, Abt. II, (67-80).

Hampson, S.r.G. F. The moths of India. Supplementary Paper to the volumes in "The Fauna of British Iudia." Ser. II, pts. VI-X. Bombay, J. Nat. Hist. Soc., 14, 1903, (639-659); 15, No. 2, 1903, (19-37, 206-225, 1 pl.).

Herr, O. Verzeichniss der auf der Mammuth-Expedition gesammelten Lepidoptera. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (61-87).

Hudson, G. V. On some new species of Macrolepidoptera. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (243-245).

Kearfott, W. D. Notes on a Eriocranid larva. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (129-132).

Labonneton, C. de. Almanach du chasseur de chenilles. Interméd. bombycult., Paris, 2, 1902, (336-341, 361-369); 3, 1903, (6-15). Laurent, P. The moths (Heterocera) of Eastern Pennsylvania. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (43-45, 69-72, 111-113, 139-140, 169-171).

Markov, M. Matériaux pour servir à la faune des Macrolépidoptères du gouvernement de Poltava. (Russ.) Charikov, Trd. Obšč. ispyt. prir., 37, 1902, [1903], (257-272).

Miyake, T. [Heterocera of Japan, figured and annotated.] (Japanese) Dobuts. Z., Tokyo, **15**, 1903, (311-316).

**Bothschild**, Hon. W. and Jordan, K. A monograph of Charazes and the allied Prionopterous genera (conclusion). Nov. Zool., Tring, **10**, 1903, (326–342).

Sanderson, E. D. Some destructive caterpillars. Agric. Exp. Sta., Delaware, Newark, Bull., No. 56, 1902, (28, with 14 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1902, (372).

Shufeldt, R. W. Beautiful moths. [Heterocera.] Amer. Inv., Washington, D.C., 10, 1903, (33-95).

**Stebbing**, E. P. Larvae found in acorns of *Quercus semicarpifolia* in Punjab. Description and note. Departmental Notes on Insects that affect Forestry No. 2. Calcutta, 1903, (161– 162).

**Swinhoe**, C. A revision of the Old World *Lymantriidae* in the national collection. London, Trans. Ent. Soc., **1903**, (375–498).

rom the Malay Peninsula. Fascic. Malay. Zool., 1, (51-109).

Walsingham, Lord. Spanish and Moorish Micro-Lepidopters [cont.] Ent. Mag., London, 39, 1903, (179-187, 209-214, 262-268, 292-293).

*phoridae* and Tineina. Nat. Hist. Sokotra, (343-356, pl. XXI).

# CASTNIIDAE.

Apoprogones n. gen., A. hesperistis n. sp. Zululand. **Hampson**, Sir G. F. London, Trans. Ent. Soc., **1903**, (137– 139).

# SATURNIDAE.

Aglia tau L., einige aberative Formen darunter ab. caecata Schultz. Schultz, O. Soc. Entomol., Zürich, 17, 1903, (178-179).

Gross und Aglia tau L. var. cupreola m. Werner, A. l.c. (129–130); Ent. Zs., Guben, 16, (1902–03), 1902, (65–66).

Antheraea jana nn. subspp. Borneo and Burma. **Rothschild**, Hon. W. Nov. Zool., Tring, **10**, 1903, (311).

*pernyi* Guér., Zucht- und Akklimatisationsversuche im nordwestlichen Deutschland. **Bothke**, M. Ent. Jahrb., Leipzig, **12**, 1903, (160–164).

Attacus tucumani n. sp. S. America. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (304).

Bunaea patruelis n. sp. Distant, W. L. Insecta transvaaliensia, Pt. IV, (96).

G. Die Lepidopteren der Kuene-Sambesi-Expedition. Berlin, 1903, (543-559).

Caligula japonica, Häutungen. Gruss, Fr., jun. Insektenbörse, Leipzig, 20, 1903, (388–389).

· Campimoptilum ochraceum n. sp. Deutsch Ost-Afrika. Aurivillius, C. Entomol. Tidskr., Stockholm, 2, 1901, (113-128).

Hylesia nn. spp. S. America. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (306–307).

Platisamia cecropia, Hermaphroditismus. Heckel. Ent. Zs., Guben, 16. (1902-03), 1902, (31).

Samia cecropia I. 3 × Numiu ceanothi Behr & notice sur l'hybride. Auberjonois, M. J. naturaliste, Mâcon, 2, 1902, (90-96, av. 2 pls.).

H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (132–134, with pl.).

Saturnia (Agapema Neum. and Dyar) anona n. sp. Arizona. Ottolengvi, R. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (311-314).

<u>pyri.</u> **Coulon.** Feuille jounes natural., Paris, (sér. 4), **35**, 1903, (38). Saturnia pyri, capture. Godon, J. L.c. 33, 1902, (9).

u. Schule, Leipzig, 2, 1903, (229-232).

# CERATOCAMPIDAE.

Citheronia sepuleralis in Pennsylvania. Geddes, J. M. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (284-285).

Eusyssaura n. gen., type Attacus honesta Stoll. Packard, A. S. New York, N.Y., J. Ent. Soc., 11, 1903, (214-219).

Hyperdirphia n. gen., type Attacus tarquinia Cramer. **Packard**, A. S. *l.e.* (244-249).

Leucopteryz n. gen., type Ceranthia mollis Butler. Packard, A. S. l.c. (244-249).

Mesoleuca n. gen., type Hemileuca cenosa Walker. **Packard**, A. S. l.c. (244-249).

Protautomeris n. gen., typ3 Dirphia moeonia Druce. **Packard**, A. S. l.c. (244-249).

Rhodormiscodes n. gen., type Ormiscodes rosea Druce. **Packard**, A. S. l.c. (244-249).

# BOMBYCIDAE.

#### GENERAL.

Cózard, L. Educations de Bombyciens séricigènes en 1902. Paris, Bul. soc. nat. acclim., **49**, 1902, (382-386).

Rudow. Schmarotzer der einheimischen Spinner. Insektenbörse, Leipzig, 20, 1903, (196-197).

#### SPECIAL.

Bombyx mori, Seidenbaufrage. Dammer, U. Tropenpflanzer, Berlin, 7, 1903, (72-79).

Stoffwechslung. Farkas, K. Math. Termt. Ért., Bulapest, 21, 1903, (59-94). Bombyz mori, la ponte. Gal, J. Paris, C. R. Acad. sci., 137, 1903, (932-934).

variations. **Kellogg**, V. L. and **Bell**, R. G. Scierce, New York, N.Y., (N. Ser.), **18**, 1903, (741-748).

glucose par les tissus. Maignon, F. Paris, C.-R. Acad. sci, 137, 1903, (93-95).

*populi* L., Raupe und Puppe. (Holländisch) **Caland**, M. 's Gravenhage, Tijdschr. Ent., **46**, [1903], (65-70).

quercus, Unregelmässige Entwicklung. Frings, C. Soc. Entomol., Zürich, 17, 1903, (185-186).

*rubi*, Lebensweise. **Halerland**, J. Insektenbörse, Leipzig, **20**, 1903, (115).

Dendrolimus laricis Tschtwr. n. sp. Ein neuer und schädlicher Spinner der paläarktischen Region. **Tschetwerikoff**, S. Soc. Entomol., Zürich, **18**, 1903, (89-90).

# EUPTEROTIDAE.

Apatelodes fastidiosa n. sp. Tucuman. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (308).

Dirphia nn. spp. Ecuador. Dognin, P. l.c. (305-306).

Hoplojana n. gen., H. indecisa n. sp. Aurivillius, C. Entomol., Tidskr., Stockholm, 22, 1901, (113-128).

Hypsoides ambriensis n. sp. Madagascar. Poujade, G. A. Bul. Muséum, Paris, 1903, (57).

Janomima karschi n. sp. Afrika. Weymer, G. D. ent. Zs. Iris, Berlin, **16**, 1903, (221-235).

Phiala pulverea n. sp. Distant, W. L. Insocta transvaaliensia, Pt. IV, (82).

Phyllalia flavicostata n. sp. South Africa. Faweett, J. M. London, Trans. Zool. Soc., 17, 1903, (173).

Prismosticta tiretta n. sp. Malay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (52).

#### SPHINGIDAE.

# GENERAL.

**Budow.** Die Schmarotzer unserer einheimischen Schwärmer (Sphingiden). Insektenbörse, Leipzig, **20**, 1903, (196).

# SPECIAL.

Acherontia sp. from Japan, described and figured. (Japanese) **Miyake**, T. Dobuts. Z., Tokyo, **15**, 1903, (354–356, 384–390).

A. Fouille jeunes natural., Paris, (sór. 4), **33**, 1903, (124–127).

Lytacq, A. L. *l.e.* (150-151).

Loiselle, A. A. *l.c.* (127). évolution.

P. *l.e.* (104-105). évolution. **Siépi**,

styx crathis n. nom. Rothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, Supplement, 1903, (23-24).

Accommery nn. spp. **Rothschild**, *Hon.* W. and **Jordan**, K. *l.c.* (528, 530-531).

Aellopos fodus var. titan in New Mexico. Cockerell, T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (326).

Agnosia n. gen. India and Ceylon. Rothschild, Hon. W. and Jordan, K. *l.e.* (294-295).

Akbesia n. gen. Syria. **Bothschild**, Hon. W. and Jordan, K. l.c. (191-192).

Aleuron nn. spp. South America. Rothschild, Hon. W. and Jordan, K. I.c. (396-399).

Amblighterus ypsilon n. sp. Bothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, Supplement, 1903, (182-183).

Ambulyz postica, larva. Fawcett, J. M. London, Trans. Zool. Soc., 17, 1903, (174, pl. VII, figs. 1, 1A).

Lisecta n. sp. Congo. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113-128).

Amorpha amurensis: sinica n. subsp. China. Bothschild, Hon. W. and Jordan, K Nov. Zool., Tring, 9, Supplement, 1903, (337).

*populi* ab. *pallida* Tutt und A. *populi* ab. *subflava* Gillmer. Gillmer, M. Insektenbörse, Leipzig, 20, 1903, (28-29).

(n 2-9053)

Ampelosca n. gen. Bothschild, Hon. W. and Jordan, K. l.c. (522).

Amphimoea n. gen. America. Rothschild, Hon. W. and Jordan, K. l.c. (60).

Anambulyx n. gen. North India. Bothschild, Hon. W. and Jordan, K. l.e. (312).

Angonyz meeki n. sp., A. testacea: papuana n. subsp. Rothschild, Hon. W. and Jordan, K. l.e. (544-545).

Antinephole lunulata n. sp. Africa. Bothschild, Hon. W. and Jordan, K. l.c. (598).

Atemnora n. gen. Rothschild, Hon. W. and Jordan, K. l.c. (615-616).

Batocnema n gen., B. cocquereli: comorana n. subsp. East Africa. **Bothschild**, Hon. W. and **Jordan**, K. l.e. (190-191).

Bellia n. gen., type coecus. **Tutt**, J. W. Ent. Rec., London, **15**, 1903, (43).

Berutana n. gen. Rothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, supplement, 1903, (319-320).

Callambulyz n. gen., C. rubricosa: amanda n. subsp. **Bothschild**, Hon. W. and Jordan, K. l.c. (307-309).

Cechenena n. gen., C. helops: papuana n. subsp. **Bothschild**, Hon. W. and Jordan, K. l.e. (799, 802).

Celerio euphorbiae nn. subspp. Bothschild, Hon. W. and Jordan, K. l.c. (720-722).

Centroctena n. gen. Africa. Bothschild, Hon. W. and Jordan, K. l.c. (790).

Cephonodes nn. spp. **Rothschild**, Hon. W. and Jordan, K. l.c. (464-471).

Ceridia n. gen., C. mira n. sp. East Africa. **Bothschild**, *Hon.* W. and Jordan, K. *l.e.* (286-287).

Chaerocampa eson, C. orphneus, larvs, pupa. Fawostt, J. M. London, Trans. Zool. Soc., 17, 1903, (175–176, pl. VII, figs. 6-8, pl. VIII, figs. 20–22).

Chaerocina n. gen. East Africa. **Bothschild**, *Hon.* W. and **Jordan**, K. Nov. Zool., Tring, **9**, supplement, 1903, (741). Chlaenogramma undata n. sp., n. subsp. South America. **Bothschild**, *Hon.* W. and **Jordan**, K. *l.e.* (96–97, pl. XI).

Clanidopsis n. gen. N. W. India. Bothschild, Hon. W. and Jordan, K. l.c. 294).

Clanis nn. spp. Bothschild, Hon. W. and Jordan, K. l.c. (216-219).

Clarina n. gen., type syriaca. Tutt, J. W. Ent. Rec., London, 15, 1903, (76).

 Cocytius lucifer n. sp. Rothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, supplement, 1903, (59-60).

Coelon'a n. gen. Rothschild, Hon. W. and Jordan, K. l.c. (24).

Coenotes n. gen. Queensland. Bothschild, Hon. W. and Jordan, K. l.e. (114).

· Compagene n. gen. China. Bothschild, Hon. W. and Jordan, K. l.c. (188).

Cypa decolor: euroa n. subsp. New Guinea. Rothschild, Hon. W. and Jordan, K. l.c. (299).

Daddia n. gen., type kindermanni. **Tatt, J.** W. Ent. Rec., Loudon, **15**, 1903, (43).

Daphnis nerti, I., trouvées dans la Gironde, note sur les chenilles. **Rondou**. Bordeaux, Actes soc. linn., **58**, 1903, (Proc.-verb., CCLXX).

Deilephila, Hybriden. Mory, C. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1903, (460-469).

sichei n. sp. **Püngeler**, R. Berliner ent. Zs., **47**, 1902, [1903], (235–238, mit 1 Taf.).

Dictyosoma n. gen. **Rothschild**, Hon. W. and **Jordan**, K. Nov. Zool., Tring, 9, supplement, 1903, (111-112).

Dolbinopsis n. gen. N.W. India. Rothschild, Hon. W. and Jordan, K. I.e. (159).

Dolbogene n. gen. Central America. Rothschild, Hon. W. and Jordan, K. l.c. (103).

Dovania n. gen., D. poecila n. sp. British Central Africa. **Rothschild**, *Hon.* W. and **Jordan**, K. *l.c.* (46, 47, pl. VI). Ellenbeckia n. gen., E. monospila n. sp. Bothschild, Hon. W. and Jordan, K. l.c. (809-810).

Enpinanga n. gen. Indo-Malay. Rothschild, Hon. W. and Jordan, K. l.c. (545).

Enyo pronoë: fuscatus n. subsp. Bothschild, Hon. W. and Jordan, K. l.c. (401).

Epistor nn. spp. **Bothschild**, Hon. W. and Jordan, K. l.e. (404, 407).

Erinnyis obscura : conformis n. subsp. (talapagos Islands. Bothschild, Hon. W. and Jordan, K. l.c. (369).

Euryglottis aper : gutticentris n. subsp. Bolivia. Rothschild, Ilon. W. and Jordan, K. l.e. (99).

Eurypteryz shelfordi n. sp., E. bhaga: obtruncata n. subsp. **Bothschild**, Hon. W. and Jordan, K. l.c. (595, 813).

Florina n. gen., type japonica. **Tutt**, J. W. Ent. Rec., London, **15**, 1903, (78).

Grammodia n. gen. America. **Roth**schild, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, supplement, 1903, (371).

Haemorrhagia nn. subspp. Bottschild, Hon. W. and Jordan, K. I.c. (451, 457).

Ilemaris tenuis and II. diffinis, identity. Smyth, E. H., Jun. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (82).

Hemeroplanes inuus n. sp. America. Bothschild Hon. W. and Jordan, K. l.c. (391).

*Hippotion* nn. spp. Africa. **Both-schild**, *Hon.* W. and Jordan, K. *I.e.* (753, 761, 812).

Hoplioenema n. gen., H. mclanoleuca n. sp. W. Australia. **Rothschild**, Hon. W. and Jordan, K. l.c. (158).

Hoplistopus n. gen., H. peuricei, H. butti nn. spp. Africa. **Bothschild**, Hon. W. and **Jordan**, K. l.e. (49-50, pls. V and XII).

Hyloicus nn. spp. Rothschild, Hon. W. and Jordan, K. l.c. (120-149).

Indiana n. gen., type bhaga. **Tutt**, J. W. Ent. Rec., London, **15**, 1903, (101).

Isogramma n. gen. Texas. Bothschild, Hon. W. and Jordan, K. l.c. (104-105). Isoparce n. gen. **Bothschild**, Hon. W. and Jordan, K. *l.c.* (109-110).

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Kayeia n. gen., type maackii. **Tutt**, J. W. Ent. Rec., London, **15**, 1903, (42).

Kentochrysalis consimilis n. sp. Japan. Bothschild, *llon*. W. and Jordan, K. Nov. Zool., Tring, 9, Supplement, 1903, (164).

Langia zenzeroides: nawai n. subsp. Japan. Rothschild, Hon. W. and Jordan, K. l.e. (292).

Lepisesia rega n. sp. United States. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (290-298).

Leptoclanis n. gen., L. pulchra n. sp. Africa. Rothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, Supplement, 1903, (228-229).

. Leucomonia n. gen. Australia. Rothschild, Hon. W. and Jordan, K. l.c. (11).

Leucorhamplia n. gen., L. diffusa, L. longistriga nn. spp. S. America. Bothschild, 11on. W. and Jordan, K. l.c. (380-382).

Leucostrophus n. gen. Africa. **Bothschild**, *Hon.* W. and **Jordan**, K. *l.e.* (671).

Likoma n. gen., L. apicalis n. sp. Bothschild, Hon. W. and Jordan, K. l.e. (265-266).

Lilina n. gen., type pinastrina. **Tutt**, J. W. Ent. Rec., London, **15**, 1903, (101).

Lomocyma n. gen. Madagascar. Rothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, Supplement, 1903, (47-48).

Lycosphingia n. gen. West Africa. Rothschild, Hon. W. and Jordan, K. l.c. (264).

Macroglossum nn. spp. Rothschild, Hon. W. and Jordan, K. l.c. (629-630, 636-669).

Marumba nn. spp. Bothschild, Hon. W. and Jordan, K. l.c. (274, 277-278, 806).

Megacorma n gen. Oriental Region. Rothschild, Hon. W. and Jordan, K. l.c. (15).

Microsphinx n. gen. South Africa. Bothschild, Hon. W. and Jordan, K. l.c. (593). Nannoparce n. gen. Bothschild, Hon. W. and Jordan, K. l.c. (110).

Neogene n. gen. Rothschild, Hon. W. and Jordan, K. l.c. (112-113).

Nephele nn. spp. **Bothschild**, Hon. W. and Jordan, K. l.c. (558, 562).

Nicholsonia n. gen., type salicets. Tutt, J. W. Ent. Rec., London, 15, 1903, (43).

Nyceryx nictitans: saturata n. subsp. Peru. Bothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, supplement, 1903, (420).

Odontosida n. gen., O. erlangeri n. sp. South Africa. Rothschild, Hon. W. and Jordan, K. l.c. (586, 811-812).

Oligographa n. gen. Natal. Bothschild, Hon. W. and Jordan, K. l.c. (48-49).

Orecta n. gen. Bothschild, Hon. W. and Jordan, K. l.e. (185-186).

Oxyambulyz n. gen., O. bima, O. meeki nn. spp., O. doheryti : salomonis n. subsp. Solonon Islands. **Bothschild**, Hon. W. and Jordan, K. l.c. (192-209).

Pachygonia drucei n. sp. Central America. **Bothschild**, *llon*. W. and Jordan, K. *l.c.* (\$11).

Pachylia syccs: insularis n. subsp. West Indies. **Bothschild**, Hon. W. and Jordan, K. l.c. (375-376).

Pachysphinz n. gen., P. modesta: regalis n. subsp. Nearctic Region. Rothschild, Hon. W. and Jordan, K. l.c. (339-343).

Panacra nn. spp. **Bothschild**, Hon. W. and Jordan, K. l.c. (537, 539-540).

Panogena n. gen., Madagascar. Bothschild, Hon. W. and Jordan, K. l.c. (33).

Parum n. gen. Rothschild, Hon. W. and Jordan, K. l.c. (295-296).

Pemba n. gen., P. distanti n. sp. East Africa. **Bothschild**, Hon. W. and Jordan, K. l.c. (45-46).

Perigonia nn. spp. South America. **Bothschild**, *Ilon*. W. and **Jordan**, K. *l.c.* (424-435).

Phanoxyla n. gen. Bothschild, Hon. W. and Jordan, K. l.c. (712).

Philodila n. gen. Bothschild, Hon. W. and Jordan, K. l.c. (514). 2 U 2

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Pholus nn. spp. Rothschild, Hon. W. and Jordan, K. l.c. (479-488).

Phylloziphia n. gen., P. oberthueri n. sp. Africa. Rothschild, Hon. W. and Jordan, K. l.e. (263-264).

Platysphinx n. gen., P. phyllis n. sp. W. Africa. Rothschild, Hon. W. and Jordan, K. l.c. (224-227).

Poliana n gen., P. micra n. sp. Africa. Rothschild, *llon.* W. and Jordan, K. *l.c.* (38-59, 809).

Poliodes n. gen., P. roseicornis n. sp. East Africa. Rothschild, Hon. W. and Jordan, K. l.e. (285-286).

Polyj#ychus nn. spp. **Bochschild**, Hon. W. and Jordan, K. l.e. (237-262, 810).

*grayi*, larva, pupa. **Paw**. **ostt**, J. M. London, Trans. Zool. Soc., **17**, 1903, (174, pl. VII, figs. 2–5).

Prasdora n. gen., P. marshalli, P. plagiata, P. leucophaea nn. spp. Africa. Rothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, Supplement, 1903, (50-52, pl. V, XII, LXVI).

Proserpinus juanita: oslari n. subep. Arizona. **Bothschild**, Hon. W. and Jordan, K. *l.c.* (610).

Protaleuron n. gen, P. rhodogaster n. sp. South America. **Bothschild**, Hon. W. and Jordan, K. l.e. (392-393).

Protambulyz n. gen., P. euryalus, P. ockendeni, P. goeldii, P. carteri nn. spp. **Bothschild**, Hon. W. and Jordan, K. *L.c.* (174-180).

Protoparce nn. spp. nn. subspp. Costa Rica. Rothschild, Hon. W. and Jordan, K. l.e. (74, 77-94).

<u>convolvuli.</u> Theinert, B. Ent. Zs., Guben, **16**, (1902–1903), 1903, (86-87).

Pseudoclanis karschin. sp., P postica: occidentalis n. subsp. Africa. Bothschild *Uon*. W. and Jordan, K. Nov. Zool., Tring, 9, Supplement, 1903, (220– 222).

Pseudodolb'na acqualis n. sp. Assam. Rothschild, Hon. W. and Jordan, K. I.c. (101).

Psilogramma n. gen. Oriental Region. Rothschild, Hon. W. and Jordan, K. l.c. (42). Regia n. gen, type torenia. **Tutt.** J. W. Ent. Rec., London, **15**, 1903, (101).

Rethera n. gen. Western Asia. Rothschild, *Hon.* W. and Jordan, K. Nov. Zool., Tring, 9, Supplement, 1903, (547).

Rhagastis n. gen., R. confusa n. sp. R. lunata; sikhimensis, R. albomarginatus: evertii nn. subspp. Bothchild, Hon. W. and Jordan, K. l.c. (791, 795-799).

Rhodafra n. gen., R. marshalli n. sp. South Africa. **Bothschild**, Hon. W. and Jordan, K. l.c. (740-741).

Rhodoprasina n. gen. North India. Bothschild, Hon. W. and Jordan, K. I.c. (292-293).

Rhyncholaba n. gen. Rothschild, Hon. W. and Jordan, K. l.c. (789).

Sichia n. gen., type quercus. Tutt, J. W. Ent. Rec., London, 15, 1903, (42).

Smerinthulus nn. spp. Rothschild, Hon. W. and Jordan, K. l.e. (301-302).

Smerinthus populi L. ab. decorata. Schultz, O. Berliner ent. Zs, 47, 1902, [1903], (288).

Sphinx atropos. Leverkühn, P. Oruith. Monatschr., Gera, 28, 1903, (294– 297).

contolvuli L., glandis salivaires. Bordas, L. Paris, C.-R. soc. biol., 55, 1903, (141-143).

Lucitiosa var. una n. var. Skinner, H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (168).

Synoechan.gen. Queensland. Bothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 2, Supplement, 1903, (157).

Temnora nn. spp. Africa. **Roth**schild, Hon. W. and Jordan, K. l.e. (568, 571-584, 811).

Temnoripais n. gen. Madagascar. Rothschild, Hon. W. and Jordan, K. l.c. (585).

Tetrachroa n. gen. Australia. Bothschild, Hon. W. and Jordan, K. l.e. (156).

Thamnoecha n. gen. N. W. India. Rothschild, Hon. W. and Jordan, K. l.e. (153).

# Lepidoptera.

Theretra incarnata n. sp., nn. subspp. Rothschild, Hon. W. and Jordan, K. l.c. (770, 781, 787–788).

Tinostoma n. gen. Sandwich Islands. **Bothschild**, Hon. W. and Jordan, K. *l.c.* (497-498).

Trogolegnum n. gen. Mexico. **Both**schild, Hon. W. and Jordan, K. *l.c.* (187).

Turneria n gen., type hippophaes. Tutt, J. W. Ent. Rec., London, 15, 1903, (76).

Xanthopan n. gen. Africa. Rothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, Supplement, 1903, (30– 31).

Xylophanes nn. spp., nn. nomm. Rothschild, Hon. W. and Jordan, K. l.c. (686-706).

# COCYTIIDAE.

Deilemera, Hubner, old and new species. Swinhoe, C. London, Trans. ent. Soc., 1903, (53-84, pls. III, IV).

distincta. Swinhos, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (193).

# NOTODONTIDAE.

Anthena consanguinea n. sp. Distant, W. L. Insecta transvaaliensia, Pt. IV, (92).

Anticyra ruforittata n. sp. Congo. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113–128).

Bascera amydra n. sp. Australia. Turner, A. J. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (74).

Corma mirifica n. sp. Siam. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (500).

Destolmia lineata Walker, larvae and pupae. Goudie, D. Vict. Nat., Melbourne, 19, 1903, (132); 20, 1903, (42).

Discophlebia blosyrodes n. sp. Australia. Turner, A. J. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 23, 1903, (67).

Ecnomodes n. gen., for E. sagittaria, Luc, Australia. Turner, A J. Sydney,

Gallaba ochropepla n. sp. Australia. Turner, A. J. *l.c.* (69).

Gargetta acarodes n. sp. Australia. Turner, A. J. *l.c.* (71).

Haplozana n. gen., H. nigrolineata n. sp. Congo. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113– 128).

Hemiceras egregia n. sp. Ecuador. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (176).

Hyleora dilucida Felder, larvae and pupae. Goudie, D. Vict. Nat., Melbourne, 19, 1903, (170-171).

Notodonta tiefi n. sp. Ural. Bartel, M. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (183-230).

Paradiastema n. gen., P. n. grocineta n. sp. Congo. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113– 128).

Pheraspis n. gen., P. polioxutha, P. mesotypa, P. spodea nn. spp. Australia. **Turner**, A. J. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (61).

Pheressaces n. gen., P. spirucha n. sp. Australia. **Turner**, A. J. *l.c.* (57).

Polienus n. gen., P. modestus n. sp. Distant, W. L. Insecta transvaaliensia, Pt. IV, (93-94).

Pydna hunyada n. sp. S. Java. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (504-505).

winhoe, C. *l.c.* 12, (199).

Rosema nn. spp. S. America. Druce, H. Ann. Msg. Nat. Hist., Londor, (Ser. 7), 11, 1903, (199).

<u>dealbata</u> n. sp. Ecuador. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (309).

Stauropus (?) euryscia n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (27-74).

*fagi*, Raupe. **Bisvogt**, B. Soc. Entomol., Zürich, **16**, 1902, (185-186).

Teleclita n. gen., T. cydista n. sp. Australia. Turner, A. J. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (53). Themerastis n. gen., T. celaena n. sp. Australia, Turner, A. J. l.c. (63).

Turnaca subcarnea n. sp. British New Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (120).

# SESIIDAE.

Albuna beutenmüllerin. sp. **Skinner**, H. Philadelphi, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (126).

Bembecia marginata in New Mexico. Occkerell, T. D. A. *l.c.* 13, 1902, (100-101).

Euhagena nebraskae. New Mexico. Cockerell, T. D. A. *l.c.* (303). Correction, *Ib.* 14, 1903, (29).

Sannina exi: iosa, general ethology. Marlatt, C. L. Washington, D.C., Cir. U. S. Dept. Agric. Div. Ent., No. 54, 1903, (6) 23.5 cm.

Sanninoidea opalescens. Woodworth, C. W. Agric. Exp. Sta., California, Berkeley, Bull., No. 143, 1902, (15, with 7 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 14, 1903, (468-469).

Sesia, Aufsuchen der Raupen. Grunack, A. Ent. Zs., Guben, 16, (1902-03), 1902, (37-38).

<u>— annellata Z. Prins.</u> Wien, JahrBer. Entom. Ver., **11**, (1900), 1901, (109–112).

*empiformis* Esp. var., *hungarica* mibi n. var. **Tomola.** *l.c.* **12**, (1901), 1902, (13-16).

*jakuta* n. sp. Lens-Expedition, **Herz**, O. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 15], 1902–1903, (1-22).

*tantalus : clavipes* n. subsp. Central America. **Bothschild**, Hon. W. and Jordan, K. Nov. Zool., Tring, 9, Supplement, 1903, (436).

#### SYNTOMIDAE.

# GENERAL.

Schrottky, C. Beitrag zur Kenntniss der Syntomiden Argentiniens. D. ent. Zs. Iris, Berlin, 15, 1902, (133-136).

#### SPECIAL.

Argyroeides lydia n. sp. Brazil. Druce, H. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (197).

Cosmosoma nn. spp. S. America. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (226).

Cyanopepla girardi n. sp. Amérique du Sud. Dognin, P. l.c. (229).

Diptilon sylpha n. sp. Amérique du Sud. Dognin, P. l.c. (228).

*Epitoxis* nn. spp. Africa. **Hampson**; Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (339-340).

Eressa zanthostacta n. sp. Queensland. Hampson, Sir G. F. l.c. (339).

Eucereon papuyanum n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. S.c. ent. Belgique, **46**, 1902, (229).

Euchromia vitiensis n. sp. Fiji. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (340-341).

Eurota tisamena n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (227).

Hyaleucerea picticepe n. sp. Brazil. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (341).

Ioanthrene joda n. sp. Poru. Druce, H. l.c. (196).

Mesolasia hampsoni n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (228).

Phocnicoprocta chamboni n. sp. Amérique du Sud. **Dognin**, P. l.c. (473).

Pseudomya ochreiventris n. sp. Amérique du Sud. Dognin, P. l.c. (227).

Sarosa epona n. sp. S. America. Dognin, P. l.c. (226).

Saurita bicolor n. sp. Amérique du Sud. Dognin, P. *l.c.* (227).

eryptoleuca n. sp. Brazil. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (340).

Sciopsyche remissa n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (229).

Sphecosoma nigriceps n. sp. Bolivia. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, Ser. 7), 11, 1903, (340). Syntomeida austera n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, 46, 1902, (226-233, 235-350, 473-480).

Syntomis nn. spp. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (338-339).

Teucer brunnea n. sp. Argentina. Hampson, Sir G. F. l.c. (341).

Trichaeta nn. spp. **Hampson**, Sir G. F. *l.c.* (337–338).

#### ZYGAENIDAE.

#### GENERAL.

Dziurzynski, C. Neue Zygaenen-Aberrationen, nebst kleinen Bemerkungen über bereits bekannte Aberrationen. D. eut. Zs. Iris, Berlin, 15, (1902), 1903, (335–338).

**Piepers,** M. C. et **Snellen**, P. C. T. . . . Enumération . . . [des Zygaenidae] . . . de Java. 's Gravenhage, Tijdschr. Ent., **45**, 1903, (151– 242, av. 3 pl.).

#### SPECIAL.

Anomocotes noz n. sp. Congo. Aurivillius C. Entomol. Tidskr., Stockholm, 22, 1901, (113-128).

Arichalca elegans n. sp. Afrika. Weymer, (†. D. ent. Zs. Iris, Berlin, 16, 1903, (221-235).

Brachartona nn. spp. Java, **Piepers**, M. C. et **Snellen**, P. C. T. 's Gravenhage, Tijdschr. Ent., **45**, 1903, (234-236, pl. XV, figs. 8-10).

Doratopieryz xanthomelas n. sp. Angola. **Bothschild**, Hon. W. and Jordan, K. Nov. Zool., Tring, **10**, 1903, (484, pl. XI).

Ephemeroidea virescens n. sp. Java. Piepers, M. C. et **Banellen**, P. C. T. 's Gravenhage, Tijdschr. Ent., **45**, 1903, (222, pl. XVIII, Fig. 11, pl. XV, figs. 4-5).

Heterusia nn. spp. New Guinea. Rothschild, Hon. W. and Jordan, K. Nov. Zool., Tring, 10, 1903, (483-484, pl. XII).

Hydrothauma ada nn. subspp. Malay Archipelago. Rothschill, Hon. W. and Jordan, K. l.e. (483, pl. XII). Illiberis discoidalis n. sp. Tonkin. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (500).

Isbarta aspasia n. sp. Java. Piepers. M. C. and Snellen, P. C. T. 's Gravenhage, Tijdschr. Ent., 45, 1903, (183, pl. XIV, fig. 3, pl. XIII, fig. 2).

Pseudonyctemera n. gen. for Milleria ficta Butl., Leptosoma marginale Sm, arcuatum Sn. and Chalcosia decipiene. Java. Piepers, M. C. et Snellen, P. C. T. I.c. (210).

Tryphanophora nn. spp. Java. Piepers, M. C. et Snellen, P. C. T. *l.c.* (218-220, pl. XIII, fig. 10, pl. XV, figs. 1-3).

Zygaena, einige merkwürdige Formen aus der Bukowina. Hormuzaki, C. von. Soc. Entomol., Zürich, 17, 1902, (137– 139).

angelicae O. Drivrsyński, Wien, JahrBer. Entom. Ver., 11, (1900), 1901, (117).

carniolica Sc. Wagner, F. Insektonbörse, Leipzig, 20, 1903, (29).

ephialtes. Haneld. Berliner ent. Zs., 48, 1903, (125-(26), (28)).

<u>fausta</u> n. var. Krüger. l.c. ((24)-(25)).

dige Art. Ferner Hybrid von Z. minos Q and Syntomis phegea 3). Doleschall, H. Soc. Entomol., Zürich, 17, 1902, (121).

# PSYCHIDAE.

Chalia künckelii n. sp. République Argentine. Heylaerts, F.J. Bruxelles, Ann. Soc., Belgique, **45**, 1901, (97).

Epichnopteryz pulla var. volkeri n. var. Trautmann, W. Ent. Zs., Guben, 16, (1902-03), 1903, (78-79).

#### COSSIDAE.

*arics* n. sp. Palaestina. **Püngeler**, R. D. ent Zs. Iris, Berlin, **15**, 1903, (143-146). Holocera puncratia n. sp. Afrika. Weymer, G. l.c. 16, 1903, (221-235).

Xyleutes nn. spr. Queensland. Bothschild, Hon. W. Nov. Zool., Tring, 10, 1903, (306-308).

**Turner**, A. J. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (1-26).

## ARBELIDAE.

Catarbela n. gen., C. strigosa n. sp. West. Afrika. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (114-128).

Marshalliana n. gen., M. birittata n. sp. Mashuna. Aurivillius, C. l.c. (113– 128).

Metarbela (?) umtaliana n. sp. Mashuna. Aurivillius, C. l.c. (113– 128).

# CHRYSOPOLOMIDAE.

Chrysopoloma flaviceps n. sp. Mashuna. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113– 128).

Phasicnecus nn. spp. Distant, W. L. Insecta transvaaliensia, Pt. IV, (84).

## HEPIALIDAE.

Charagia virescens, Dbld. Quail. Wellington, Trans. N. Zeal., Inst., 35, 1903, (249-255).

Dalaca sladeni n. sp. South America. Heron, F. A. and Hampson, Sir G. F. London, Proc. Zool. Soc., 1903, 2, (260).

## DREPANIDAE.

Oreta miltodes n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (27-74).

Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (255).

Perophora producta n. sp. Colombia. Dognin, P. Bruxelles, Anr. Soc. ent., Belgique, 45, 1901, (176). Phalacra acutipennis n. sp. Khasia Hills. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (502– 503).

Problepsidis ostia n. sp. Malay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (59).

Pyropsyche n. gen., P. moncaunella n. sp. Spain. **Chapman**, T. A. Ent. Rec., London, **15**, 1903, (324–330).

Spectroreta n. gen. Warren, W. Nov. Zool., Tring, 10, 1903, (255-256).

Teldenia strigosa n. sp. New Guinea. Warren, W. l.c. (256).

Tridrepana fulcata, Snell nn. abb. New Guines. Warren, W. l.c. (346-317).

Urogonodes n. gen. New Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (347).

#### LIMACODIDAE.

Echedorus vitreus n. sp. Merida. Dognin, P. Bruxell 18, Ann. Soc. ent., Belgique, 45, 1901, (309).

Sibine pallescens n. sp. Venezuela. Dognin, P. l.c. (309).

Thosea sybilla n. sp. Siam. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (502).

## THYRIDIDAE.

Brizia particolor n. sp. Solomon Islands. Warren, W. Nov. Zool., Tring. 10, 1903, (256-257).

Heteroschista n. gen., H. nigranalis n. sp. Niger. Warren, W. l.c. (271).

Margaronia eburnealis n. sp. Malay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (105).

nitidalis. Quaintance, A. L. Agric. Exp. Sta., Georgia, Experiment. Bull., No. 54, 1901, (71-94, with 3 pls.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902. (871-872),

E. Stettiner ent. Ztg, 64, 1903, (97-112).

Prasinozena monospila, Meyr from Khasis, notes. Hampson, Sir G. F. Bombey, J. Nat. Hist. Soc., 14, 1903,

Peninsula. **Swinhoe**, C. Fascic. Malay. Zool., **1**, (98).

Rhodoneura capotona n. sp. Malay Poninsula. Swinhoe, C. l.c. (96).

Striglina nn. spp. Warren, W. Nov. Zool., Tring, 10, 1903, (257-258).

# LASIOCAMPIDAE.

Caeculia trilinea n. sp. Loja. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (306).

Chilena marshalli n. sp. Mashuns. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113-128).

Chondrostega aurivillii n. sp. Palästina. **Püngeler**, R. D. ent. Zs. Iris, Berlin, **15**, 1902, (143–146, mit. 1 Taf.).

Clisiocampa americana. Britton, W. E. Agric. Exp. Sta., Connecticut, New Haven, Bull., No. 139, 1902, (12 with 3 pls, 3 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (371-372).

Gastropacha pini, Beschreibung einer abnormen Raupe. Kolbe, H. J. Allg. Zs. Ent., Neudamm, 8, 1903, (1-9, 25-30).

A. V. (Russ.) St. Peterburg, Izv. Lösn. Inst., 7, 1901, (29-102, mit 1 Taf.).

zahlen zum Gebrauche bei seiner Bekämpfung. **Trost**, C. Tharander forstl. Jahrb. **53**, 1903, (92–119).

Gastroplakocis meridionalis n. sp. Mashuna. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (114–128).

Hydrias nn. spp. Venezuela. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (307-308).

Lasiocampa quercus, L. Bocquigny-Adanson, G. de. Feuille jounes natural., (sér. 4), **34**, 1903, (19–20).

Stdgr. & × var. alpina Frey Q und

deren Rückkreuzung mit *Las. quercus* var. sicula Stdgr. Schults, H. Ent. Zs., Guben, 16, (1903-03), 1903, (94).

Nadiasa nn. spp. Mashuna. Aurivillius, C. Entomol. Tidskr., Stockholm, 22, 1901, (113-128).

Opsirrhina eyclomela n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183-201).

Ormiscodes fornaz n. sp. S. America. Druce, H. Ann. Mag. Nat. Hist., I.ondon, (Ser. 7), 11, 1903, (198).

Dognin, P. Bruxelles, Ann. Soc. ent. Soc., 45, 1901, (305).

Poecilocampa populi, account of the larva. **Douglas**, J. Entomologist, London, **36**, 1903, (13-14).

Trabala pallida n. sp. South Africa. Pawcett, J. M. London, Trans. Zool. Soc., 17, 1903, (181).

# LYMANTRIDAE.

Abynotha n. gen. Swinhoe, C. London, Trans. Ent. Soc., 1903, (479).

Anepa n. gen. Australia. Swinhoe, C. l.c. (478).

Anthela nn. spp. Australia. Swinhoe, C. l.e. (447-453).

Aroann. spp. Swinhoe, C. l.c. (455-457).

Cobanilla plumbacea n. sp. Malay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (62).

Dasychira nn. spp., n. nom. Swinhoe, C. London, Trans. Ent. Soc., 1903, (467-470).

*magnalia* n. sp. Khasia Hills. **Swinhoe**, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (198).

Euproctis nn. spp., nn. nomm. Swinhoe, C. London, Trans. Ent. Soc., 1903, (396-428).

nn. spp. Balu, Java, Borneo. **Swinhoe**, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (194-197).

Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (120). Euproctis meeki n. sp. N. Australia. Druce, H. Ann. Mag. Nat. Hist., London, (Ser. 7), **13**, 1903, (222).

ralia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (28).

Ileracula leonina n. sp. Australia. Turner, A. J. l.c. (1-26).

Hcteronygmia chismona n. sp. Gold Coast. **Swinhos**, C. London, Trans. Ent. Soc., **1903**, (480).

Ivela n. gen. Japan. Swinhoe, C. l.c. (388).

Laelia lavia n. sp. Brit. E. Africa. Swinhoe, C. *l.c.* (443).

Leucoma nn. spp. **Swinhoe**, C. l.c. (379-384).

Lomadonta johnstoni n. sp. Congo. Swinhoe, C. London, Trans. Ent. Soc., 1903, (480).

Lymantria nn. spp., n. nom. Swinhoe, C. l.c. (483-495).

monacha, ravages committed in Sweden by. Bengtsson, S. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (145-157).

Lysaris monarcha. Metzger, C. Berlin, Mitt. D. LandwGes., 18, 1903, Beilage, (39–48, mit 1 Karte).

Marbla n. gen. Swinhoe, C. London, Trans. Ent. Soc, 1903, (436).

Oleue montana n. sp. North Carolina. Beutenmüller, W. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (585-586). Separate. 24.5 cm.

Orgyia, the European spp. Specialisation in habits and structure. **Chap**man, T. A. Ent. Rec., London, **15**, 1903, (169-171, with pls.).

nn. spp. **Swinhoe**, C. London, Trans. Ent. Soc., **1903**, (459-460).

*aurolimbata* Gn. at Begar. **Chapman**, T. A. Ent. Rec., London, **15**, 1903, (113-118, pls. IV, V).

*nigriplaga* n. sp. N. Borneo. **Swinhoe**, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (194).

J. C. Ent. Rec., London, 15, 1903, (283-284). Pantana semilucida n. nom. Swinhoe. C. London, Trans. Ent. Soc., 1903, (439).

Pirga magna n. sp. British S. Africa. Swinhoe, C. *l.c.* (436).

Porthesia nn. spp. Swinhoe, C. l.e. (393-395).

Rajacoa n. gen., type Cypra forbesi Druce. Swinhoe, C. London, Trans. Ent. Soc., 1903, (434-435).

*antra* n. sp. Humboldt Bay. **Swinhoe**, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (194).

Sapelia n. gen., S. limpida, S. flavipectus nn. spp. West Africa. **Swinhoe**, C. London, Trans. Ent. Soc., **1903**, (388-390).

Stracena n. gen., S. fuscivena n. sp. West Africa. Swinhoe, C. l.c. (388– 389).

#### HYPSIDAE.

#### GENERAL.

Dudgeon, G. C., Elwes, H. J. and Hampeon Sir G. [Moths of the family Hypsidae found at Sikkin and Bhutan.] Bombay, J. Nat. Hist. Soc., 14, 1903, (761).

#### SPECIAL.

Aganais nn. spp. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (503).

Asota nn. spp. Swinhoe, C. l.c. (504).

*anawa* n. sp. Malay Peninsula. **Swinhoe**, C. Fascic. Malay Zool., 1, (66).

Nyctemera manifesta n. sp. Congo. Swinhoe, C. London, Trans. Ent. Soc., 1903, (434).

#### ARCTIIDAE.

#### GENERAL.

Plerce, F. N. Specific differences in Lithosidae as determined by structure of genitalia. Entomologist, London, **36**, 1903, (81-86).

#### SPECIAL.

Acantharctia nn. spp. Bartel, M. D. ent. Zs. Iris, Berlin, 16, 1903, (194).

Amastus nn. spp. Südamerika. Dognin, P. Bruxelles, Ann. soc. ent. Belgique, 45, 1901, (174, 304).

Amazia flaripuncta n. sp. Brazil. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (351).

Amphicallia piceos gnata n. sp. Bartel, M. D. ent. Zs. Iris, Berlin, 16, 1903, (170-214).

Anaphosia n. gen., A. cyanogramma n. sp. Mashonaland. **Hampson**, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (244).

Anazita sophia n. sp. Venezuela. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (173).

Arachnis dilecta, note. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (94).

Arctia caja L. ab. Thiele. Berliner, ent. Zs., 48, 1903, ((29)).

*flazia*, Zucht zwei Generationen. **Tiedemann**, von. Ent. Zs., Guben, **16**, (1902/03), 1902, (9-10, 25-26, 29-30).

maculosa var. stertzi n. var. **Schulz**, G. L. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (328-329).

Asura nn. spp. Siam. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (501).

Automolis nn. spp. Amérique du Sud. **Dognin**, P. Bruxelles, Ann. Soc. Ent., Belgique, **46**, 1902, (231-232).

*troias* n. sp. S. America. Druce, H. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (197).

Callidota albiceps n. sp. Venezuela. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (175).

zella n. sp. United States. **Dyar**, H. G. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (290-298).

Celama nn. spp. **Hampson**, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (341-342).

Chelonia pudica Esp., observations. Brascassat, M. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (64). Chrysomesia n. gen., C. barbicostata n. sp. New Guinea. **Hampson**, Sir G. F. l.e. (350).

Clemensia urucata n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (230).

Clerckia fulvia: trigona n. subsp. British New Guines. **Rothschild**, Hon. W. Nov. Zool., Tring, **10**, 1903, (312).

Creatonotus nn. spp. Bartel, M. D. ent. Zs. Iris, Berlin, 16, 1903, (170-214).

Darantasia pervittata n. sp. New Guines. **Hampson**, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (344).

Devara semidolens n. sp. S. America. Druce, H. l.c. (198).

Diacrisia euryphlebia n. sp. Zululand. Hampson, Sir G. F. l.c. (351).

Diaphone angoleneis n. sp. Weymer, G. Die Lepidopteren der Kuene-Sambesi-Expedition. Berlin, 1903, (543-559).

<u>libertina</u> n. sp. **Bartel**, M. D. ent. Zs. Iris, Berlin, **16**, 1903, (170-214).

Earias syriacana n. sp. Bartel, M. l.c. (215-220).

Ecpantheria theophila n. sp. Amérique du Sud. **Dognin**, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (233).

Elysius insulsa n. sp. Amérique de Sud. Dognin, P. *l.e.* (232).

Estigmena atropunctala n. sp. Fawcett, J. M. London, Trans. Zool. Soc., 17, 1903, (179–180).

Eugoa immunda n. sp. Siam. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (501–502).

Euprepia pudica. Foulquier, G. Feuille jeunes natural., Paris, (sér. 4), 83, 1903, (51).

Giard, A. l.c.

(51). **Siépi**, P. *l.c.* 

(33-34).

Eurosia fuliginea n. sp. Natal. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (347). Gnophria rubricellis L. aber. flavicollis Neubr. Neuburger, W. Soc. Entomol., Zürich, 17, 1903, (155).

Haploz, variation. Merrick, H. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (1-2, with pl.).

*Heliosia micra* n. sp. Queensland. **Hampson**, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (345).

Hemihyalea erganoides n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, 46, 1902, (232).

Idalus veneta n. sp. Colombia. Dognin, P. l.c. 45, 1901, (175).

Ilema melasonea n. sp. British East Africa. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (343).

Illice nn. spp. South America. Hampson, Sir G. F. l.c. (347-348).

Ischnarctia n. gen. (~ Utetheisa), I. brunnescens n. sp. Bartel, M. D. ent. Zs. Iris, Berlin, 16, 1903, (206-207).

Lexis minima n. sp. New Guinea. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (342).

Lithosia deplana Esp. var. unicolor n. var. **Bankes**, E. M. Ent. Mag., London, **39**, 1903, (56-57).

*grisea* ab. *pallifrons* n. ab. **Fachs**, A. Soc. Entomol., Zürich, **18**, 1903, (73).

Metareva nn. spp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent., Belgique, **46**, 1902, (229–230).

Micrilema n. gen., M. craushayi n. sp. Basutoland. **Hampson**, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (343).

Nemophila noctuella. Adkin, R. E. Entomologist, London, **36**, 1903, (274–276).

Nola acutula n. sp. Centralasien. **Püngeler**, R. D. ent. Zs. Iris, Berlin, **15**, 1902, (147-160).

crambiformis n. sp. Ural. Bobel in Bartel, M. *l.c.* (183-230).

*lauta* n. sp. Siam. **Swinhoe**, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (502).

. D. ent. Zs. Iris, Berlin, **15**, 1902, (141-142, mit 1 Taf.).

Opharus flaricostata n. sp. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (175).

Ovipennis binghami n. sp. Upper Burma. **Hampson**, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (349).

Parasiccia perirrorata n. sp. W. China. Hampson, Sir G. F. l.c. (349).

Pericallia accensa n. sp. Sumatra. Swinhos, C. l.c. 12, (193-194).

Phaegoptera genoveva n. sp. Venezuela. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (173).

Phragmantobia viridie n. sp. South America. Druce, H. Ann. Mag. Nst. Hist., London, (Ser. 7), 12, 1903, (222).

Phryganidia californica, life history. Letcher, B. New York, N.Y., J. Ent. Soc., 11, 1903, (125-127).

Phyrganopsis atrescens n. sp. Cape Colony. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (343).

Pleretes (Pericallia) matronula, Zucht. Hoffmann, C. Ent. Zs., Guben, 16, (1902–03), 1902, (30–31).

Prinasura n. gen., P. pyrrhopeansma n. sp. New South Wales. **Hampson**, Sir G. F. Ann. Mag. Nat. Hist, London, (Ser. 7), **11**, 1903, (349-350).

Prumala ignipicta n. sp. Brazil. Hampson, Sir G. F. l.c. (350-351).

*Rhodogastria* nn. spp. **Bartel, M**. D. ent. Zs. Iris, Berlin, **16**, 1903, (208– 209).

Roeselia infuscata n. sp. Mashonaland. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (342).

Scaptesyle fovealis n. sp. New Guinea. Hampson, Sir G. F. l.c. (345).

Spilosoma nn. spp. Afrika. Bartel, M. D. ent. Zs. Iris, Berlin, 16, 1903, (173-193).

Stictane apiealis n. sp. W. Africa. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (344).

Teracotona nn. spp. Bartel, M. D. ent. Zs. Iris, Berlin, 16, 1903, (199-214). 669

Zygaenopsis rubiana n. sp. Solomon Islands. **Bothschild**, Hon. W. Nov. Zool., Tring, **10**, 1903, (312).

## CYLLOPODIDAE.

*Flavinia superba* n. sp. Peru. **Druce**, H. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (197).

#### AGARISTIDAE.

#### GENERAL.

Dudgeon, G. C., Elwes, H. J. and Hampson, Sir G. [Notes on Moths of the family Agaristidae, found at Sikhim and Bhutan.] Bombay, J. Nat. Hist. Soc., 14, 1903, (762).

#### SPECIAL.

Argyrolepidia aurea n. sp. British New Guinea. Jordan, K. Nov. Zool., Tring, 10, 1903, (315).

unimacula n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (29).

Burgena reducta n. sp. Solomon Islands. **Bothschild**, Hon. W. and Jordan, K. Nov. Zool., Tring, **10**, 1903, (487).

Cruria nn. spp. Australia. Bower, O. B. Adelaide, S. Aust. Trans. R. Soc., 27, 1903, (27-74).

**Turner**, A. J. *l.c.* (1-26).

Immetalia nn. spp. New Guinea. Bothschild, Ilon. W. and Jordan, K. Nov. Zool., Tring, 10, 1903, (486, pl. XII).

Phalaenoides resplendens n. sp. New Guinea. **Bothschild**, Hon. W. and Jordan, R. l.c. (487, pl. XII).

Scrobigera vacillans: taeniata n. subsp. Celebes. **Rothschild**, Hon. W. and **Jordan**, K. *l.c.* (487, pl. XII).

#### GEOMETRIDAE.

#### GENERAL.

Fuchs, A. Beiträge zur Kenntnis der Lepidopteren-Fauna von Sumatra. Erste Besprechung: Neue Geometriden. Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (81-91).

Grote, R. A. Nachtrag zu dem Aufsatze "Geometridengattungsnamen", Ins. Börse XIX Jg. 1902. Insektenbörse, Leipzig, **20**, 1903, (85).

Pront, L. B. Notes on Spanish Geometrides, collected by Dr. Chapman in 1902. Ent Rec., London, 15, 1903, (96-98).

Some Geometrides collected by Paymaster-in-Chief Gervase F. Mathew, R.N., on the Mediterranean, &c. Eutomologist, London, **36**, 1903, (204-206).

#### SPECIAL,

Abrazas grossulariata, die Zeichnunge-Variabilität. Schröder, C. Allg. Zs. Ent., Neudamm, 8, 1903, (105-119, 145-157, 177-194, 228-234).

*sylvata : continuata n. ab.* Japan. **Warren**, W. Nov. Zool., Tring, **10**, 1903, (269).

Acidalia nn. spp. Sumatra. Fuchs, A. Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (81-91).

nn. spp. Kashmir and Sikkim. **Hampson**, G. F. Bombay, J. Nat. Hist. Soc., **14**, 1903, (650–651, pl. C, fig. 13).

lucellata n. sp. Centralasien. **Püngeler**, R. D. ent. Zs. Iris, Berlin, 15, 1902, (147-160).

rufaria, Hubn. Central Asia and Kashmir. A. aequisinuata, Wan. Bhutan and Khasis. A. indeterminata, Wan. Simla and Tibet. Notes cn the species, and 6 nn. spp. from Kashmir, Cuddapah and Sikkim. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (649-651).

**Dognin**, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (179).

Acrotomodes cretinotata n. sp. Amérique du Sud. **Dognin**, P. *l.c.* 46, 1902, (341).

Adeta n. gen., A. semifascia n. sp. New Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (377). Acschrosioma n. gen., A. marmorata n. sp. New Guinea. Warren, W. l.c. (372).

Agathia nn. spp. New Guinea. Warren, W. l.c. (353-354)

Alcis nn. spp., nn. varr. New Guinea. Warren, W. *l.c.* (388-389).

Anapalta aurifera n. sp. New Guines. Warren, W. l.c. (373).

Angelia n. gen., A. tephrochroa, A. callisarca nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183-201).

Angeronia prunaria, notes on breeding. Pickett, C. P. Ent. Rec., London, 15, 1903, (144-149).

Aniserpites n. gen., A. purpureoviridis, A. sordida nn. spp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (378).

Anisocolpia aroensis n. sp. New Guines. Warren, W. l.e. (382).

Anisodes aequalipunctata n. sp. Ecuador Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (176).

marginepunctata n. sp. Amérique du Sud. Dognin, P. l.c. 46, 1902, (344).

similaria Wlk. from Ceylon, notes. **Bampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (639–659).

Anisogamia nn. spp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (354-355).

albifimbria n. sp. Solomon Islands: Warren, W. l.c. (262).

Anisoperas proxima n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (339).

Anisopteryz. Weed, C. M. Agric. Exp. Sta., New Hampshire, Durham, Bull., No. 85, 1901, (69–76, with 5 figs.); [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 13, 1902, (873).

Anosiodes n. gen., A. hybrida n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (412-413).

Antarchia n. gen., A. subrubescens n. sp. New Guinea. Warren, W. l.c. (407).

.1nticlea subcaesia n. sp. New Guinea. Warren, W. l.c. (373-374). Aplochlora fallax n. sp. Solomon Islands. Warren, W. l.c. (268).

Arycanda nn. spp., n. ab. New Guinea. Warren, W. l.c. (385-387).

Aspilates albaria n. sp. Ural. Bartel, M. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (183-230).

Astheniodes n. gen., A. argentiplumbea, Tibet; A. polycymaria, "Indis "nn. spp. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (647, 648).

Bapta bimaculata F. var. et ab. bipunctata Fuchs. Fuchs, A. Soc. Entomol., Zürich, 18, 1903, (43).

rique du Sad. **Dognin**, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (341).

Boarmia lioptilaria n. sp. Malay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (91).

marcentaria n. sp. Centralasien. **Pängeler**, R. D. ent. Zs. Iris, Berlin, **15**, 1902, (147-160).

*xylotrema* n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Spc., 27, 1903, (27-74).

Bonatea undilinea n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (478).

Bordeta floridata n. sp. Solomon Islands. Warren, W. Nov. Zool., Tring, 10, 1903, (269).

furcata n. sp. New Guinea. Rothschild, Hon. W. and Jordan, K. l.c. (486, pl. X11).

Brachyglene divisa n. sp. Amérique du Sud. Dognin, P. Braxelles, Ann. Soc. ent. Belgique, **46**, 1902, (474).

Calamodes lignaria n. sp. Augola. Warren, W. Nov. Zool., Tring, 10, 1903, (275).

Calletaera ansorgei n. sp. Niger. Warren, W. l.e. (275-276).

Calleulype n. gen. Warren, W. l.c. (264).

Calospila (?) siderata n. sp. Bolivia. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (184).

Calyptocome incarnata n. sp. Amérique du Sud. Dognin, P. l.c. 46, 1902, (345). Cambogia ingrataria, Warr., Khasis, notes. **Hampson**, Sir G. F. Bombey, J. Nat. Hist. Soc., **14**, 1903, (647).

Capasa bifurcata n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (408).

Carpella marginata n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (478).

Casbia albinotata n. sp., n. sb. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (401–402).

Catoria canidentata n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902 (480).

Celerena nn. spp. New Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (348).

siamica n. sp. Siam. Swinhoe, C. Aun. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (510).

Chesiadodes bidisata n. sp. Arizona. Dyar, H. G. Washington, D.C., Proc. Ent. Soc. 5, 1903, (223-232).

Chlorochroma nn. spp., n. ab. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (355-357).

Chloroclysta fulminea n. sp. S. America. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1:101, (310).

Chloroclystis nn. spp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (378-379).

Chrysochloroma ornatifimbria n. sp. Solomon Islands. Warren, W. l.e. (262-263).

Chrysocraspedia nn. spp. Ceylon. Hampeon, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (652, pl. C, fig. 22).

mn. spp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (365-366).

rubricata n. sp. Malay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (94). Chrysolene aurora n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (366-367).

Cidaria luteola n. sp. Paragusy. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (183).

Cirsodes meridaria n. sp. Venezuela. Dognin, P. *l.c.* (185).

Cnemodes rubripuncta n. sp. Amérique du Sud. Dognin, P. *l.e.* 46, 1902, (344).

Coenocalpe marmorata n. sp. Amérique du Sud. Dognin, P. I.c. (348).

Colliz icteraria n. sp. Mslay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (93).

Crasilogia n. gen., C. dispar n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (374-375).

Craspedia nn. spp. Ecusdor. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (177).

bispurcata, Warr. Khasis, notes; C. polystigmaria n. sp. Kashmir. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (649).

Africa. Warren, W. Nov. Zool., Tring, 10, 1903, (272).

Craspedosis nn. spp. New Guinea. Warren, W. l.c. (387-388).

Cymatophora (?) nn. spp. Amérique du Sud. **Dognin**, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (348– 350).

du Sud. Dognin, P. l.c. (479).

Darantasia perichroa n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183-201).

Darna conscita n. sp. S. America. Druce, H. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (198).

Declana glacialis n. sp. Hudson, G. V. Wellington, Trans. N. Zeal. Inst., 35, 1903, (245).

Dectochilus marginata n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (339).

Dialephtis scmimarginata n. sp. Amérique du Sud. **Dognin**, P. l.c. (342). 4431

Dichromodes nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183-201).

*griseata* n. sp. **Hudson**, G. V. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (244-245).

Dirades nn. spp. Australia. **Turner**, A. J. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (1-26).

Dysphania imperatrix n. sp. Solomon Islands. Warren, W. Nov. Zool., Tring, 10, 1903, (261–262).

Ectropis recticomata n. sp. Mulay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (90-91).

Elphos exalbata n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (390).

Enconista amoritaria n. sp. Palaestina. **Püngeler**, R. D. ent. Zs. Iris, Berlin, **15**, 1902, (143-146).

Endemia n. gen., E. tenera n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (357-358).

Eois pararussearia n. sp. Ecuador. Dognin, P. Bruxelles, Anu. Soc. ent. Belgique, 45, 1901, (179).

Epiphryne citrinata n. sp. New Zealand. Warren, W. Nov. Zool., Tring, 10, 1903, (265-266).

*Epirrhoe respondens* n. sp. Amérique du Sud. **Dognin**, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (347).

*subrufaria* n. sp. British East Africa. **Warren**, W. Nov. Zool., Tring, **10**, 1903, (273).

Episothalma cognataria n. sp. Siam. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (510).

Eremocentra n. gen. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (367).

Erythrolophus postlineata, Warr. from "India," notes. **Hampson**, Sir G. E. Bombay, J. Nat. Hist. Soc., **14**, 1903, (652).

Euchloris dichroa n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (216-239).

Eucosmia palpata n. sp. Ecuador. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (181). Eucrostes cymaria n. sp. Simla. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (655).

semitaria n. sp. Palaestina. Büngeler, R. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (331-333).

Eucrostis (Nemoria?) subtusumbrata n. sp. Sumatra. Fuchs, A. Wiesbaden, Jahrb. Ner. Natk., 55, 1902, Abt. II, (81-91).

Eucymatoge falsidica n. sp. New Guinea. Warren, W. Nov. Zool., 'Tring, 10, 1903, (379).

Eudule atrimorsa n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (477).

Amérique du Sud. **Dognin**, P. *l.c.* (338).

Eugnesia decolorata n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (383-384).

Euippe inferna n. sp. New Guinea. Warren, W. l.c. (405-406).

Eupithecia, Beiträge zur Kenntnis der Gattung. Dietze, K. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (251-264, mit 1 Taf.).

*liguriata* Mill. histoire naturelle. **Chrétien**, P. Naturaliste, Paris, (sér. 2), **24**, 1902, (239–241).

ruficorpus, Warr. from Khasis, E. oblongata, Thunbg, Central Asia and Kashmir, notes; and 3 nn. spp. from Ceylon and Kashmir. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (643, 644).

Eurythecodes mutabilis n. sp., nn. abb. British East Africa. Warren, W. Nov. Zool., Tring, **10**, 1903, (277).

Eusarca maculifascia n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (339).

Galechia norregiae n. sp. Strand, E. Berliner ent. Zs., 47, 1902, [1903], (155-156).

Gasterocome subdivisa n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (390-391). Gastrinopa n. gen., G. xylistis n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183-201).

Geometra rufifrontaria n. sp. Calicut. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (655).

G. M. Entomologist, London, **36**, 1903, (227-228).

Gnophos difficilis Alph. var. korlata n. var. Fuchs, A. Soc. Entomol., Zürich, 18, 1903, (43).

govina. **Bebei**, H. Wien, Verh. Zool-Bot. Ges., **51**, 1901, (801).

tralasien. Püngeler, R. D. ent. Zs. Iris, Berlin, 15, 1902, (147–160).

ab. Fuchs, F. Soc. Entomol., Zürich, 18, 1903, (73).

Gonanticlea sublustris n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (375).

Gonophaga nn. spp., nn. abb. New Guinea. Warren, W. l.c. (408-410).

Gullaca n. gen., G. festivata n. sp. East Indies. Warren, W. l.c. (266).

Gymnoscelis festiva n. sp. New Guinea. Warren, W. l.c. (380).

ceylon and Java, G. attenuata, Moore, Ceylon, and G. albicandata, Warr, Sikkim. Notes on the species. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **14**, 1903, (640).

Halterophora thalassias n. sp. New Guinea. Warren, W. l.c. (263-264).

Hammaptera trochilarioides n. sp. Ecuador, Brazil. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901 (182).

Hemerophila praestantaria n. sp. Centralasien. Püngeler, R. D. ent. Zs. Iris, Berlin, 15, 1902, (147–160).

Hemistola ? punctifimbria n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (358).

Heterodisca ignea n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (410).

Heteromiza robusta n. sp. New Guines. Warren, W. l.c. (411). (x 2-9053) Heterusia rubrimarmorata n. sp. l'Amérique du Sud. Dognin, P. Bruxelles, Ann Soc. Ent. Belgique, 46, 1902, (338).

*Hibernia.* **Gillmer, M. Insekten**börse, Leipzig, **20**, 1903, (291–292, 299– 300).

Holorista seminigra n. sp. New Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (383).

Hulstina n. gen., H. terlineata n. sp. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (178-179).

*Hybernia erectaria* n. sp. Centralasien. **Püngeler**, R. D. ent. Zs. Iris, Berlin, **15**, 1902, (147-160).

Hybridoneura abnormis. Warr. from Khasis. Notes. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **14**, 1903, (641).

Hydrelia nn. spp. Tibet. **Hampson**, Sir G. F. *l.c.* 14, 1903, (646, pl. C, fig. 25).

Hypephyra plenimargo n. sp. New Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (406).

Hypnochlora popayanaria n. sp. Colombia. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (310).

Hypochroma nn. spp., n. ab. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (350-352).

Hypographa cyanorrhoea n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183– 201).

dilutaria n. sp. W. Australia. Warren, W. Nov. Zool., Tring, 10, 1903, (260).

Hypycnopa n. gen., H. delotis n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183-201).

Ingena lucifera n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (385).

Iodis nn. spp. New Guines. Warren, W. l.c. (358-359).

Iridobapta n. gen., I. huntei n. sp. British New Guinea. Warren, W. l.c. (120-121).

Jodis (Nemoria vel Hemithea ?) pariciliata n. sp. Sumatrs. **Fuchs**, A. Wiesbaden, Jahrb. Ver. Natk., **55**, 1902, Abt. II, (81-91). Josia subcuneifera n. sp. Amerique du Sud. Dognin, P. Bruxelles. Ann. Soc. Ent. Belgique, **46**, 1902, (342).

Larentia nn. spp. Brazil. Dognin, P. l.c. 45, 1901, (179, 180).

aqueata var. hercegovinens's n. var. **Bot-1**, H. Wien, Verh. Zool. Bot. Ges., **51**, 1901, (799).

tralasien. **Püngeler**, R. D. Ent. Zs. Iris, Berlin, **15**, 1902, (147-160).

*corylata* Thunbg, ab. *albida* n. ab. **Herr**, O. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 15] 1902–1903, (1–22).

*picata* und *L. designata*, Jugendstadien. **Gauckler**, H. Insektenbörse, Leipzig, **20**, 1903, (331–332).

*püngeleri* n. sp. **Stertz**, O. D. ent. Zs. Iris, Berlin, **15**, 1902, (96–99, mit 1 Taf.).

Leptomeris isodesman.sp. Australia, Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (216-239).

Leptosidia n. gen., L. araearia n. sp. Kashmir and Kangra Valley. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (653).

Lignyoptera thaumastaria n. sp. Bosnia. **Rebel**, H. Wien, Verh. Zool. Bot. Ges., **51**, 1901, (800).

Liphyra grandis n. sp. Neuguinea. Weymer, G. Ent. Zs., Guben, 16, (1902-03), 1902, (5-6).

Lobophorodes n. gen., L. undulans n. sp. Tibet. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **14**, 1903, (646).

Loxochila? meeki n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (359).

Lycauges fragilis n. sp. British East Africa. Warren, W. l.c. (272).

Lygris peloponnesiaca, Naturgeschichte. **Püngeler**, R. Berliner ent. Zs., **48**, 1903, (321-322).

Mesotrophe? rufiplaga n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (367).

Miantonota punctilinea n. sp. Amérique du Sud. **Dognin**, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (337). Microschema n. nom. for Dysschema. New Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (349).

Microsema attenuata n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (340).

Milionia nn. spp. British New Guinea. Jordan, K. Nov. Zool., Tring, 10, 1903, (315-316).

nn. spp. New Guinea. Rothschild, Hon. W. and Jordan, K. *l.e.* (485–486, pl. XII).

Mucronodes inopia n. sp. Venczuela. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (186).

Myrioblephara nn. spp., nn. abb. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (391-395).

Nearcha nn. spp. Australia. Lower, O. B. Adelaide, S. Aust. Trans. R. Soc., 27, 1903, (183-201).

Neoscelis n. pen., N. rivula n. sp. Ceylon and Java. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (639).

Neostega n. gen., N. flaviguttata n. sp. Niger. Warren, W. Nov. Zool., Tring, 10, 1903, (276).

Nipteria nn. spp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (346).

Notoreas synclinalis n. sp. Hudson, G. V. Wellington, Trans. N. Zeal. Inst., 85, 1903, (244).

Ochyria (?) sicyata n. sp. Brazil. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (183).

du Sud. Dognin, P. l.c. 46, 1902, (347).

Odezia tibiale. Finke, L. Ent. Zs., Guben, 16, (1902-03), 1902, (2, 10).

Odontoptila mimica n. sp. Dognin, P. Bruxelles, Ann. Soc. ent., Belgique, 46, 1902, (343).

Oenochroma guttilinea n. sp. Queensland. Warren, W. Nov. Zool., Tring, 10, 1903, (260-261).

Oenoptila flavirupta n. sp. New Guinea. Warren, W. l.c. (402).

**Dognin**, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (185). Orthosia helvola ab. cinnamomea n. ab. Fuchs, A. Soc. Entomol., Zürich, 18, 1903, (3).

*rutacilla*. **de Rougemont**, F. Arch. Sci. Phys., Genève, (4), **16**, 1903, (731-732).

Ozydia nn. spp. Bolivia and Merida. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (186).

Pachytyla n. gen., P. doliopa n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183– 201).

Paradromulia anomala, variation, synonymy nn. spp., nn. abb. New Guinea. **Warren**, W. Nov. Zool., Tring, **10**, 1903, (396-398).

Paraleis nn. spp. Now Guinea. Warren, W. l.c. (398-401).

Parallage intricata n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (346).

Paramelora n. gen., P. zophodesma n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183– 201).

Paratostega pallidicosta n. sp. Solomon Islands. Warren, W. Nov. Zool., Tring, 10, 1903, (269).

Pareclipsis ansorgeata n. sp. Niger. Warren, W. l.c. (278).

Pauresthes n. gen., P. caniola, P. signifera nn. spp. New Guinea. Warren, W. l.c. (359-361).

Perigramme immaculata n. sp. Amérique du Sud. Dognin, P. Bruxelles, Anu. Soc. Ent. Belgique, 46, 1902, (478).

du Sud. Dognin, P. l.c. (346).

*Perizera* nn. spp. New Guinea. **Warren**, W. Nov. Zool., Tring, **10**, 1903, (307-369).

Petrodara gibbosa n. sp., nn. abb. New Guines. Warren, W. l.c. (406-407).

Phaeoclaena nn. spp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (475).

Pharepis (recte Therapis) evonymaria Schiff nov. ab. Wagner, F. Soc. Entomol., Zürich, 18, 1903, (92-93).

(s 2-9053)

Phibalapteryx fusconotata n. sp. Ecuador. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (180).

Phoredesma (Euchloris) dulcinata n. sp. Sumatra. **Fuchs**, A. Wiesbaden, Jahrb. Ver. Natk., **55**, 1902, Abt. II, (81-91).

(Comibaena) pustulata, Aufn., notes. Burrows, C. R. N. Ent. Rec., London, 15, 1903, (171-177, 203-205, pl. VII).

Phrudophleps n. gen., P. viridis n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (413-414).

*Phyllodonta* nn. spp. Bolivia and Chili. **Dognin**, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (187).

*Pingasa* nn. spp. New Guinea. **Warren**, W. Nov. Zool., Tring, **10**, 1903, (352-353).

Pisoraca simplex n. sp. New Guinea. Warren, W. *l.c.* (369-370).

Plectoneura subrubida n. sp. New Guinea. Warren, W. l.c. (385).

Poecilalcis nigriscripta n. sp. New Guinea. Warren, W. l.c. (401).

Poecilostigma n. gen., P. periculosa, P. vagabunda nn. spp. New Guines. Warren, W. l.c. (361-362).

Polla optimaria n. sp. Bolivia. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (188).

Polypoetes? nn. spp. Amérique du Sud. Dognin, P. *l.c.* 46, 1902, (476– 477).

Prasinocyma dohertyi n. sp. British East Africa. **Warren**, W. Nov. Zool., Tring, **10**, 1903, (271).

Problepsis transposita n. sp. New Guines. Warren, W. l.c. (370).

Prochoerodes fleximargo n. sp. Amérique du Sud. **Dognin**, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (338).

Prorocorys admirabilis n. sp. Solomon Islands. **Warren**, W. Nov. Zool., Tring, **10**, 1903, (267).

Prostenodes n. gen., P. comosa n. sp. New Guinea. Warren, W. l.c. (370-371).

Pealiodes trossula n. sp. Ecuador. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (183). Pseudotsrpna ocellata, Warr. from Khasis, P. subsimilis, Warr. from Sikkim, notes; P. elacaria n. sp. Sikkim. Hampeon, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (654).

Psychophora, referred to Geometridae. Dyar, H. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (191-192).

*fasciata* n. sp. **Skinner**, H. *l.c.* (141–143).

Ptychopoda cubitata n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (345).

fumilinea n. sp. Natal. Warren, W. Nov. Zool., Tring, 10, 1903, (272-273).

inamoena n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (477).

duines. Warren, W. Nov. Zool., Tring, 10, 1903, (371-372).

Pyrinia diepanea n. sp. Amérique -du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, 46, 1902, (340).

Pyrrhaspis n. gen., P. coerulea, P. punctifimbria nn. spp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (362-363).

Pyrrhorachis viridula n. sp. New Guines. Warren, W. l.c. (363).

Racheospila luteifimbria n. sp. Colombia. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (309).

Rambara strigicosta n. sp. New "Guines. Warren, W. Nov. Zool., 'Tring, 10, 1903, (349).

Remodes erebata n. sp. Solomon Islands. Warren, W. l.c. (267-268).

Rhinoprora lineola n. sp. New Guinea. Warren, W. l.c. (380).

pine Islands. Warren, W. l.c. (267).

Rhodostrophia nn. spp., Kashmir and Simla. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (653-654).

Rhomborista inquinata n. sp. New Guines. Warren, W. Nov. Zool., 10, 1903, (363). Rhopalista finitima n. sp. Brazil. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (182).

Rhynchopsota n. gen., R. delogramma n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183-201).

Sangalopeis angulimacula n. sp. Amérique du Sud. **Dognin**, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (341).

Sarcinodes subfulida : derufata n. ab. British New (juines. Warren, W. Nov. Zool., Tring, **10**, 1903, (121).

Scinneria n. gen., type frigidaria Guen. Dyar, H. G. Philadelphis, Ps., Ent. News Acad. Nat. Sci., 14, 1903, (193-196).

Scioglyptis trisyneura n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183– 201).

Scotosia nn. spp. Brazil and Paraguay. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (181).

Selidosema fascialata n. sp. Philpott, A. Wellington, Trans. N. Zeal. Inst., 85, 1903, (248-249).

------ monacha n. sp. Hudson, G. V. *l.c.* (245).

Semaeopus anomala n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (343).

Stamnodes elwesi, Alph. from Sikkim and Tibet, notes. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **14**, 1903, (648, pl. C, fig. 16).

Stenoplastis nn. spp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (474).

Sterrha rufula n. sp. Borneo. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (199).

ab. ochracearia nn. abb. Fuchs, A. Soc. Entomol., Zürich, 18, 1903, (3).

Tatosoma topea n. sp. Philpott, A. Wellington, Trans. N. Zeal. Inst., 35, 1903, (247-248).

Tazeotis nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183-201).

Tazilepis n. gen., T. regularis n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (402-403). Telenomeuta n. gen. Warren, W. l.c. (264).

Tephroclystia nn. spp. British East Africa. Warren, W. l.c. (274).

Guinea. Warren, W. l.c. (381).

*rufipalpata* n. sp. Amérique du Sud. **Dognin**, P. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (348, 479).

Amérique du Sud. Dognin, P. l.c. (480).

virgaurcata Dbld., Lebensgeschichte. **Elos**, R. Wien, Verh. ZoolBot. Ges., **51**, 1901, (785).

Tephroclystis thalictrata n. sp. **Püngeler**, R. D. ent. Zs. Iris, Berlin, **15**, 1902, (137-140, mit 1 Taf.).

Tessarotis n. gen., T. rubrata n. sp. Queensland. Warren, W. Nov. Zool., Tring, 10, 1903, (269-270).

Thalassodes nn. spp., nn. abb. New Guinea. Warren, W. l.c. (364-365).

*aureofulva* Warr. from Khasis, notes; and 2 nn. spp. from Burma and Ceylon. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **14**, 1903, (655-656, pl. C, figs. 7, 34).

Thalera fimbrialis Scop. in Great Britain. Capper, C. Ent. Mag., London, **39**, 1903, (216).

*Iavitincta*, Warr. from Khasis, *T. albipuncta*, Warr. from Khasis, *notes.* Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., **14**, 1903, (656-657).

Thamnocausta n. gen., T. malachitis n. sp. New Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (381-382).

Thamnonoma punctilineata n. sp. Amérique du Sud. **Dognin**, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (345).

Therapis pallidilinea n. sp., n. ab. New Guinea. **Warren**, W. Nov. Zool., Tring, **10**, 1903, (411).

Thysanotricha n. gen., T. ziczacata n. sp. Solomon Islands. Warren, W. l.c. (264).

Tolmera n. gen., T. albibasalis n. sp. New Guines. Warren, W. l.c. (401-402). Trichopterygia multipunctata n. sp. Sikkim. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc, **14**, 1903, (645).

Trichopteryz polystictaria n. sp. Tibet and Yatong. Hampson, Sir G. F. l.e. (645).

Tripteridia n. gen., T. novella n. sp. New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (375-376).

Tristrophis veneris : unistriga n. ab. Japan. Warren, W. l.c. (268).

Trochistis nn. spp. New Guinea. Warren, W. l.c. (404-405).

Urepione epona n. sp. Ecuador. Dognin, P. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (189).

Venusia laria, Oberth, from Tibet; and 3 nn. spp. from Punjab and Tibet. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (646-647, pl C, fig. 5).

G. V. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (244).

Xanthorhoe nn. spp. Philpott, A. l.c. (248).

Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183– 201).

Indies. Warren, W. l.c. (265).

Xenobiston n. gen., X. casta n. sp. Egypt. Warren, W. and Rothschild, N. C. Entomologist, London, 36, 1903, (225-226, pl. IV).

Xenochlaena n. gen. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (183-201).

*Xenospora* n. gen. **Warren**, W. Nov. Zool., Tring, **10**, 1903, (265).

Zamacra flabellaria, notes on the resting attitude. Bate, D. M. A. Ento-mologist, London, 36, 1903, (106).

#### NOCTUIDAE.

#### GENERAL.

**Aimé**, A. La noctuelle du frêne. Nature, Paris, **30**, (2<sup>e</sup> sem.), 1902, (314–315). Beutenmüller, W. Descriptive catalogue of the *Noetuidae* found within fifty miles of New York City. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 14, 1901, (229-312, with 4 pls.).

Hampson, Sir G. F. Catalogue of the Noctuidae in the collection of the British Museum. London, 1903, (XX + 689); Atlas of 23 pls. (LV-LXXVII). 8vo. This forms Vol. IV. of the Cat. Lep. Phalaenae, and is devoted to the subfam. Agrotimae.

Smith, J. B. New Noctuids for 1903, No. 4, with notes on certain described species. Philadelphia, Pa., Acad. Nst. Sci. Trans. Ent. Soc., 29, 1903, (191-224, with pl.).

**Uffeln**. Zur Kenntniss einiger Eulen-Arten. D. ent. Zs. Iris, Berlin, **15**, (1902), 1903, (316-320).

#### SPECIAL.

Abagro'is ornatus n. sp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (1-23).

Acanthocoles n. gen., A. eucesta n. sp. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (1-26).

Acontia nn. spp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (191-224).

Acrobyla n. gen. (~ Metopoceras), A. kncuckerin.sp. Sinai-Halbinsel. **Rebel**, H. D. ent. Zs. Iris, Berlin, **16**, 1903, (68-70, mit 1 Taf.).

Acronycta psorallina n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (31).

*pfizenmaieri* n. sp. Nord-Oest Siberia. **Herr**, O. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (75).

schultz, O. Soc. Entomol., Zürich, 16, 1902, (170).

Agrotis nn. spp. **Hampson**, Sir G. Cat. Lep. Phal., IV, 1903, (416-459, .662).

nn. spp. Lena-Expedition. Herz, O. Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 15], 1902–1903, (1-22).

m. spp. N. O. Siberia, Herz, O. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (61-87). Agrotis candeliscqua. Wendlandt, P. Ent. Zs., Guben, 16, (1902-03), 1902, (61-62).

*cursoria* var. *obscura* var. *sagitta*, Heimaths-Nachweis. **Riesen**, A. Stettiner ent. Ztg, **64**, 1903, (358).

weis. **Riesen**, A. *l.c.* (37-38).

intolerabilis n. sp. Centralasien. **Püngeler**, R. [Forts.] D. ent. Zs. Iris, Berlin, **15**, 1902, (147–160, mit 2 Taf.).

rubi View.—florida Schm. Petersen, W. Fnt. Zs., Guben, 16, (1902-03), 1902, (2).

Amaloptila n. gen., A. triorbis n. sp. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (1-26).

Amolita nn. spp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc, **29**, 1903, (191-224).

Amphipyra satinea. de Rougemont, F. Arch. Sci. Phys., Genève, [4], 16, 1903, (731-732).

Amyna spilonota n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (27-74).

Anarta laerta n. sp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (1-23).

*lamuta* n. sp. N. O. Siberia. **Herz**, O. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (82).

Anytus tenuilinea n. sp. Smith, J. B. New York, N.Y., J. Ent. Soc., 11, 1903, (188–193).

Aretypa n. gen., type, Eucalyptra pectinicarnis. Smith, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (191-224).

Avitta alternans n. sp. British New Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (124).

*cupienda* n. sp. **Swinhoe**, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (509).

*eurrhoa* n. sp. Australia. **Lower**, O. B. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (27–74).

Bleptina odontias n. sp. Australia. Lower, O. B. l.c. (27-74).

Bomolocha atomaria n. sp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (191-224).

- 1

Bryophila ceratopyga n. sp. Centralasien. Püngeler, R. D. ent. Zs. Iris, Berlin, 15, 1902, (147–160).

Calesia vinolia n. sp. Fergusson Island. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (508).

Callyna leuconota n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (35).

Capnodes albisigillata n. sp., C. finipalpis : trimaculata n. subsp. British New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (123-124).

badia n. sp. Malay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (82).

ralia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (41).

Caradrina (?) nn. spp. Australia. Lower, O. B. *l.c.* (31).

A. J. l.c. (4-5).

<u>wullschlegeli</u> n. вр. **Рйп**geler, R. Soc. Entomol., Zürich, 17, 1903, (145-147).

Carea plagioscia n. sp. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (7).

robinsoni n. sp. Malay Peninsula. **Swinhoe**, C. Fascic. Malay. Zool., **1**, (75).

Carneades nn. spp. Smith, J. B. New York, N.Y., J. Ent. Soc., 11, 1903, (6, 7).

J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Ent. Soc., 29, 1903, (203).

Catocala, notes, 4 nn. varr. Beutenmüller, W. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (505– 510). Separate. 24.5 cm.

C. F. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (287).

Schrank. Some remarks on this genus in the Catalogue of Lepidopters by Staudinger and Rebel, 1901. (Russ.) Kunecov, N. I. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (71-75 + engl. Res. 75-76).

[described and figured]. (Japanese)

Miyake, T. Dobuts. Z., Tokyo, 15, 1903, (354-356, 384-390).

Catocala, protection, evolution [Color]. Weeks, A. C. New York, N.Y., J. Ent. Soc., 11, 1903, (221-226).

*mesopotamica* n. nom. = C. aspasia Stand. 1896, Catocala eduardsi n. nom. = C. mariana Hy. Edw. 1875. **Kuznecov**, N. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (71-75 + engl. Res. 75-76).

necov, N I. *l.c.* (166-168, with 4 figs.).

J. Soc. Entomol., Zürich, 17, 1902, (97-98).

Celaena calcirena n. sp. Centralasien. Püngeler, R. D. ent. Zs. Iris, Berlin, 16, 1902, (147-160).

Cerma fascia n. sp. **Smith**, J. R. New York, N.Y., J. Ent. Soc., **11**, 1903, (188-193).

Cerynea decorata n. sp. Siam Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (505).

Chloridea nn. spp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (42–48, pl. LV).

Chlorocleptria n. gen. Hampson, Sir G. l.c. (50).

Churia thermodes n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (27-74).

Chytoniz nn. spp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (188–193).

Cladocerotis n. gen. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (138).

Cleophana anarrhini. Giârd, A. Feuille jeunes natural., Paris, (sér. 4), 33, 1902, (33-34).

Coenotoca n. gen. C. monophyes n. sp. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (2).

Conacontia nn. spp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (191-224, with pl.).

Conservula furva n. sp. Tropical America. Schaus, W. New York, N.Y., J. Ent. Soc., 11, 1903, (230-236).

Corgatha pusilla n. sp. Siam. Swinhos, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (505). Corula (?) nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (39-40).

**Turner**, A. J. *l.e.* (10).

Cosmia venosa n. sp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (1-23).

Cucullia linosyridis n. sp. Fuchs, A. Soc. Entomol., Zürich, 18, 1903, (83-84).

Cymatophoropsis catagrapha n. sp. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (7).

Dierna achroa n. sp. Australia. Lower, O. B. l.c. (35).

Diphthera beryllodes n. sp. Australia. Turner, A. J. l.c. (5).

Dysocnemis borealis n. sp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (24, pl. LV).

Ectopatria n. gen., E. paurogramma, E. spilomata, E. umbrosa nn. spp. Australia. Hampson, Sir G. l.c. (653-654, pl. LXXVII).

Egnasia franconia n. sp. South Java. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (508).

Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc, 27, 1903, (41).

Eligina orthoxantha n. sp. Lower, O. B. l.c. (27-74).

*Epidemas obecuras* n. sp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (1-23).

Episilia nn. spp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (489-509, pl. LXXIII).

*Epunda bacheri* n. sp. Palaestina. **Püngeler**, R. D. ent. Zs. Iris, Berlin, **14**, (1901), 1902, (331-333).

Erastria onthodes n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (32).

Eucalyptra nn. spp. Smith, J. B. Philadelphia, Pa., Acad. Nat. Sci. Trans. Amer. Ent. Soc., 29, 1903, (191-224).

Euclidia dyari n. sp. Smith, J. B. l.c. (191-224).

Eucoptocnemis stenistis n. sp. Chili. Hampson, Sir G. Cat. Lep. Phal., IV., 1903, (463). Eueretagratis inattenta n. sp. Smith, J. B. New York, N.Y., J. Ent. Soc., 11, 1903, (5).

Eupanychis mezicana n. sp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (95).

Euthisanotia semiviridis n. sp. Peru. Druce, H. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (200).

Euzoa nn. spp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (166-336, 661).

(= Carneades) nesilens n. sp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (192).

Feltia nn. spp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (350, 355, pl. LXVIII).

Fishia exhilarata n. sp. Smith, J. B. Philadelphis, Pa., Acad. Nat. Sci., Trans. Ent. Soc., 29, 1903, (202).

Fodina chrysomera n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (39).

Gadirthra hades n. sp. Australia. Lower, O. B. *l.c.* (36).

Grammodes callizeris n. sp. Australia. Lower, O. B. l.c. (38).

Hadena (Xylophasia) nn. spp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (8-9).

adusta Esp. var. nova bathensis Lutzau? nur die schon bekannte var. virgata Tutt oder nicht? Slevogt, B. Soc. Entomol., Zürich, 17, 1902, (89).

m. Lutzau, C. von. *l.e.* 18, (129– 131).

dolia n. sp. Centralasien. Püngeler, R. D. ent. Zs. Iris, Berlin, 15, 1902, (177-260).

*exhausta* n. sp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Ent. Soc., **29**, 1903, (194).

ferrago Ev. ab. umbrata n. ab. Lena Expedition. Herz, O. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 15], 1902-1903, (1-22).

ful to cereals. Lampa, I. (Swedish)

Entomol. Tidskr., Stockholm, 22, 1901, (129-136, with pl.).

Hamodes pseudoptera n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (27-74).

Heliothis cora Ev. ab. odenwalli n. ab. Lena Expedition. Herr, O. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 15], 1902– 1903, (1-22).

Heterormista fulvitaenia n. sp. British New Guinea. Warren, W. Nov. Zool., Tring, **10**, 1903, (121–122).

Himella nn. spp. Tropical America. Schaus, W. New York, N.Y., J. Ent. Soc., 11, 1903, (230-236).

Hiptelia apfelbecki n. sp. Bosnia. Rebei, H. Wien, Verh. Zool. Bot. Ges., 51, 1901, (798).

Hispena nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (49).

Homopryalis monodia n. sp. United Statee. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (290-298).

Hyblaca puera Cram.; H. puera var. nigra MS; H. constellata Guen attacking Teak in India and Burma. Description, life history, relations to forest protection and remedies, points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry No. 2. Calcutta, 1903, (287, 294, 298, with pls. and figs.).

Hydraecia nn. spp. Tropical America. Schaus, W. New York, N.Y., J. Ent. 11, 1903 (230-236).

Hypena cremona n. sp. Fergusson Island. **Swinhoe**, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (509– 510).

gypeoepila n. sp. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (14).

Hyperlopha amicta n. sp. Australia. Turner, A. J. *l.c.* (10).

Idalima n. gen. Australia. Turner, A. J. l.c. (1-26).

Ischyja polystigma n. sp. Australia. Lower, O. B. *l.c.* (36). Isogona reniformis n. sp. Smith, J. B. Philadelphia, Ps., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (214).

Labanda amabilis n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (647).

duinea. Warren, W. Nov. Zool., Tring, 10, 1903, (125).

Laphygma frugiperda, habits. Chittenden, F. H. Washington, D.C., Bull., U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 29, 1901, (64). 23 cm.

Lena n. gen., L. poppiusi n. sp. Lena Expedition. Herr, O. Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 15], 1902– 1903, (9).

Lepidotrama n. nom. = Trama Harvey not Heyd. **Gockerell**, T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (182).

Leucania acontosema n. ap. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (4).

<u>deserticola</u> n. sp. Ural. Bartel, M. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (183-230).

Leucanitis nn. subspp. **Fuchs, A.** Soc. Entomol., Zürich, **18**, 1903, (50– 51).

Lineopalpa orsara n. sp. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (506-507).

Luperina migrata n. sp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (188).

Lycophotia nn. spp. **Hampson**, Sir G. Cat. Lep. Phal., IV, 1903, (518– 576).

*atristriata* n. sp. Brazil. Druce, H. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (199-200).

microstigman. sp. Tropical America. Schaus, W. New York, N.Y., J. Ent. Soc., 11, 1903, (230).

Lythrodes n. gen., L. radiatus, L. venatus, L. discistriga nn. spp. Smith, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (206– 207).

Mamestra nn. spp. Centralasien. Püngeler, R. D. ent. Zs. Iris, Berlin, 15, 1902, (147-160). Mamestra nn. spp. Tropical America. Schaus, W. New York, N.Y., J. Ent. Soc., 11, 1903, (230–231).

*artesta* n. sp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., **Trans.** Ent. Soc., **29**, 1903, (197).

Lunolacta n. sp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (17).

ralia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1902, (3).

Manruta n. gen., M. elingua n. sp. smith, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Ent. Soc., 29, 1903, (205, with pl.).

Marapana rhodea n. sp. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (1-26).

Mecistoptera lithochroa n. sp. Australia. Lower, O. B. l.c. (48).

Mecodina nn. spp. Australia. Lower, O. B. *l.e.* (42).

Melanchra nn. spp. Philpott, A. Wellington, Trans. N. Zeal. Inst., 35, 1903, (246-247).

G. V. *l.c.* (243-245).

Melicleptria kasloa n. sp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (208).

Mesembreuxoa n. gen., M. chilensis n. sp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (137).

Metachrostis costiplaga n. sp. Egypt. Warren, W. and Bothschild, N. C. Entomologist, London, **36**, 1903, (225–226, pl. IV).

*fausta* n. sp. Tandong. **Swinhoe**, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (506).

Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (44).

Micragotis n. gen., M. exusta, M. axylide, M. lacetata, M. rufescens, M. acydonta, M. mirostigma, M. prosarca nn. spp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (148-152, 659).

Miselia iota n. sp. **Hudson**, G. V. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (243). Moma geminata n. sp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (1-23).

Namangana contumax n. sp. Contralasion. Plingeler, R. D. ent. Zs. Iris, Berlin, 15, 1902, (147-160).

Neocleptria n. gen. for Heliothis punctifera Walk. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (32).

Nephelodes tertialis n. sp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (1-23).

Netrocerocora n. gen. (~ Rusina), N. quadriplaga n. sp. Ural. **Bartel**, M. D. ent. Zs. Iris, Berlin, 15, (1902), 1903, (183-230).

Neurois n. gen. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (610).

Noctua amia n. sp. Arizona. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (224).

Nonagria, preliminary revision of species. **Smith**, J. B. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (56).

revision of, North American spp.; N. alameda n. sp. **Smith**, J. B. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (311-321, with pl.).

Noorda accensalis n. sp. Siam. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (507).

Oncocnemis nn. spp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (11-12).

Onychagrotis n. gen. for Agrotis rileyana Morr. **Hampson**, Sir G. Cat. Lep. Phal., IV, 1903, (465).

Ophiusa nn. spp. Australia. Lower, O. B. Adelaide, S. Aust. Trans. R. Soc., 27, 1903, (37–38).

**Fawcett**, J. M. London, Trans. Zool. Soc., **17**, 1903, (pl. VIII, figs. 15-16).

stolida Fab., new to Britain. Jäger, J. Ent. Mag., London, 39, 1903, (269).

Orosagrotis n. gen., O. amphora, O. cashmirensis nn. spp. Kashmir. **Hamp**son, Sir G. Cat. Lep. Phal., IV, 1903, (135).

Oxacenanus longipalpis n. sp. Malay Peninsula. Swinhoe, C. Fascic. Malay Zool., 1, (83). Pachnobia roosta n. sp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Ent. Soc., **29**, 1903, (203).

Palindia merricki n. sp. Holland, W. J. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (172-173).

Panilla melanosticta n. sp. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (12).

Parazestia n. gen. for Amphipyra flaricaudata Warr. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (601).

Peridroma eaucia, habits. Ohittenden, F. H. Washington, D.C., Bull. U. S. Dept. Agric.. Div. Ent., (N. Ser.), No. 29, 1901, (64). 23 cm.

Perigonica tertia n. sp. United States. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (294).

Perigrapha dukinfieldi n. sp. Tropical America. Schaus, W. New York, N.Y., J. Ent. Soc., 11, 1903, (236).

Phiprosopus callitrichoides, larva. Daecke, E. l.c. (105).

Placerobela n. gen., P. brachyphylla n. sp. Australia. **Turner**, A. J. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (13-14).

Plathypena scabra, habits and development. Ohttenden, F. H. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 30, 1901, (45-50).

Platyja sada n. sp. Malay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (79).

Plecoptera pellicea n. sp. Siam. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (507).

Plusia aurifera, nouveau pour la Provence. **Siépi**. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (101– 102).

Polia nn. spp. Centralasien. Püngeler, R. l.c. (146-160).

dubia, eine neue interessante Form aus den Hautes Pyrénées. Stertz, O. *l.c.* (180-181).

Polydesma auriculata n. sp. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (9).

*prasina* n. sp. Assam. **Swinhos**, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (200). Porosagrotis nn. spp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (143, 658).

Prorocopis nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (44, 46).

Protagrotis n. gen. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (655).

Proteuxoa n. gen., P. mniodes, P. amaurodes nn. spp. **Hampson**, Sir G. l.c. (649-659).

Pseudacontia groteana n. sp. Arizona. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (223-232).

Pseudohadena idumaea n. sp. Palaestina. Ptingeler, R. D. ent. Zs. Iris, Berlin, 14, (1901), 1902, (331-333).

Pseudophia lunaris, ein neuer Feind der Eichenkulturen. Wilbrand. Allg. Forstztg, Frankfurt a. M., 79, 1903, (11-13).

**Pingeler**, R. D. ent. Zs. Iris, Berlin, **14**, (1901), 1902, (331-333).

Pseudotamila carminatra n. sp. smith, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (191-224).

Pterocyclophora huntei n. sp. British New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (122).

Pyrocleptria n. gen., P. californica n. sp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (25).

Raghura nn. spp. **Hampson**, Sir G. l.c. (29-32).

Raparna nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (43).

Raphia cinderella n. sp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Ent. Soc., **29**, 1903, (193).

Rhodocleptria n. gen. for Noctua incarinata Fr. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (33).

*Rhynchagrotis* nn. spp. **Smith**, J. B. New York, N.Y., J. Ent. Soc., **11**, 1903, (3).

Richia nn. spp. **Hampson**, Sir G. l.e. (596-200).

carnea n. sp. Chili, Druce, H. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (200). Scolecocampa atriluna n. sp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (217).

Scopelosoma colorada n. sp. Smith, J. B. New York, N.Y., J. Ent. Soc., 11, 1903, (21).

Scotogramma albinuda n. sp. **Smith**, J. B. *l.*c. (19).

Stenagrotis n. gen. for Trachodopalpus edmondsi Butl. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (139).

Stictoptera huma n. sp. Malay Peninsula. Swinhoe, C. Fascic. Malay. Zool., 1, (75).

Stilbia insularis n. sp. Fuchs, A. Soc. Entomol., Zürich, 18, 1903, (9–10).

Stretchia mys n. sp. United States. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (290-298).

Talapa gebenna n. sp. Siam and Singapore. **Swinhoe**, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (509).

Tarache nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (32-33).

Thyas nn. spp. Australia. Turner, A. J. l.c. (8-9).

*pallescens* n. sp. Borneo. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (507).

Thyria nn. spp. Colombia, Brazil. Druce, H. l.c. (201-202).

Thyresoscelis huntei n. sp. British New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (123).

*Timora* nn. spp. W. Africa. **Druce**, H. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (200-201).

nn. spp. **Hampson**, Sir G. Cat. Lep. Phal., IV, 1903, (110-117, 168).

Tornacontia tripartita n. sp. **Smith**, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (209-210, 224).

Trichclea [Trichoclea] nora n. sp. Smith, J. B. l.c. (198).

Trigonodes isosceles n. sp. British New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (123). Triphaena comes Hb. (Melanozonias, Gmel), two variable broods from Forres **Prout**, L. B. Ent. Rec., London, **15**, 1903, (217-222).

Tripeeuzoa n. gen., T. strigata n. sp. Hampson, Sir G. Cat. Lep. Phal., IV, 1903, (139).

Valeria jaspidea. de Rougemont, F. Acad. Sci. Phys., Genève, [4], 16, 1903, (731-732).

*oleagina*, Beitrag zur Naturgeschichte. **Völker**, U. Ent. Zs., Guben, **16**, (1902–03), 1902, (38–39).

Xanthopastis timais, larva. Dyar, H. G. New York, N.Y., J. Ent. Soc., 11, 1903, (104).

Xanthoptera nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (48).

A. J. l.c. (11).

Xylomiges conspicillaris var. grisea n. var. Trautmann, W. Ent. Zs., Guben, 16, (1902–03), 1903, (78–79).

Yrias nn. spp. Smith, J. B. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (215).

Zagira xylonota n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (34).

Zethes nn. spp. Malay Peninsula. Swinhoe, O. Fascic. Malay. Zool., 1, (81).

nn. spp. British New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (125-126).

*Turner, A. J. Adelaide, S. Aust., Trans.* R. Soc., 27, 1903, (12).

Lower, O. B. *l.e.* (40).

## EPICOPEIIDAE.

Epicopeia, revision. Danet A. and Wytsman, P. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (5 pp., 1 pl. noire et 1 pl. coloriée hors texte). fr. 5.35.

# URANIIDAE.

Cirrhura n. gen., C. cometifera n. sp. British New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (343-344).

Hypercydas n. gen., H. calliloma n. sp. Australia. Turner, A. J. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (23).

Monobolodes ustimacula n. sp. British New Guines. Warren, W. Nov. Zool., Tring, 10, 1903, (344-345).

Nyctalemon curvata n. sp. Skinner, H. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (298).

Pterotosoma n. gen., P. bilineata n. sp. British New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (345-346).

#### EPIPLEMIDAE.

Asyngria n. gen., A. nigripuncta n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, 46, 1902, (336).

Calizzia amorata, life history. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (131-133).

Crypsicoela n. gen., C. subocellata n. sp. Amérique du Sud. Dognin, P. Bruxelles, Ann. Soc. Ent. Belgique, 46, 1902, (335).

Epiplema, nn. spp. Amérique du Sud. Dognin, P. *l.c.* (336-337).

mn. spp. Solomon Islands. Warren, W. Nov. Zool., Tring, 10, 1903, (259-260).

du Sud. **Dognin**, P. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (473).

inquinata n. sp. British New Guinea. Warren, W. Nov. Zool., Tring, 10, 1903, (344).

#### PYRALIDAE.

#### GENERAL.

Hofgren, G. Pyralids new for the Swedish fauna. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (241-248).

Iches, L. Le ver des pommes. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (145-147, av. fig.).

#### SPECIAL.

Acara dohrni n. sp. Sumatra. Hering, E. Stettiner ent. Ztg, 64, 1903, (3), (87, pl. I, fig. 4).

Acrobasis verrucella Hb., and A. rubrotibrella F. R., as British insects. Barrett, C. G. Ent. Mag., London, **39**, 1903, (164–166).

Actenia orbicentralis n. sp. **Rebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (190-126).

Ambia cyanealis n. sp. Ceylon. Hampeon, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (206-225, 1 pl.).

*dohrni* n. sp. Sumatra. **Hering**, E. Stettiner ent. Ztg, **64**, 1903, (51, pl. I, fig. 30).

Anerastia nn. spp. Australia. Lower, O. B. Adelside, S. Aust., Trans. R. Soc., 27, 1903, (52).

Anisothriz nobilis n. sp. British Guiana. Druce, H. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (202-203).

Archemis argocephala n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (64).

Asarta nigrella n. sp. Spain. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (58).

Aulacodes triplaga n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R Soc., 27, 1903, (62).

Blabiaides n. gen., B. strigerella n. sp. Ceylon. Hampson, Sir G. F. Ser. ii, pt. ix. Bombay, J. Nat. Hist. Soc., 15, 1903, (25).

Bocchoris amandalis n. sp. Siam. Swinhoe, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (511).

*quaternalis* from Ceylon described. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **15**, No. 2, 1903, (214, 1 pl.).

Bostra cervinalis n. sp. Robel, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

Caenodomus fumosalis n. sp. Khasis. Hampson, Sir G. F. Ser. ii, pt. ix. Bombay, J. Nat. Hist. Soc., 15, 1903, 5, pl. C, fig. 30). Calamachrous sterrhalis n. sp. Simla. Hampson, Sir G. F. l.c. (206-225, 1 pl.).

Charltona fusca n. sp. Ceylon. Hampson, Sir G. F. l.c. 14, (659, pl. C, fig. 18).

Chilo boxanus n. sp. Hering, E. Stettiner ent. Ztg, 64, 1903, (111).

Chrysauge nn. spp. Brazil. Druce, H. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (203).

Cirrhochrista cyclophora n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (50).

*grabezouskyi* n. sp. **Hering**, E. Stettiner ent. Ztg, **64**, 1903, (108).

Cledeobia moldarica subsp. Spain. Hampson, Sir G. F. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (58).

Clupeosoma (?) mimetica n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (65).

Corcyra cephalonica, Stn. from Ceylon, notes. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **14**, 1903, (657).

Cornifrons Led, genus described; C. iulceratatis Led, from Ferozepore and Deesa described. **Hampson**, Sir G. F. *l.e.* **15**, (224).

Crambus offectalis, note. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (285-286).

*phoeostrigellus* n. sp. Kashmir. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **14**, 1903, (658).

*photoleuca* n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (27-74).

A. Stettiner ent. Ztg, **64**, 1903, (232).

tott, W. D. New York, N.Y., J. Ent. Soc., 11, 1903, (149).

Criophthona trileuca n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (66).

Crocidophora exstigmalis n. sp. Burma. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (206-225, 1 pl.). Cryptoblabes ephestialis n. sp. Ceylon. Hampson, Sir G. F. Ser. ii, pt. ix. l.e. 15, (32).

Cybolomia Led, genus described; C. Pentadalis Led, from Deess, described. Hampson, Sir G. F. l.c. 15, (220, 224, with 1 pl.).

Cydalima fimbriata n. sp. Hering, E. Stettiner ent. Ztg, 64, 1903, (105).

Diathraustodes fulvofusa, Hmpsn from Khasis, notes. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **15**, 1903, (211, with 1 pl.).

*similis* n. sp. Khasis. **Hampson**, Sir G. F. *l.e.* (206-225, with 1 pl.).

Diatroea aculeata n. pp. Sikkim. Hampson, Sir G. F. l.c. 14, (659, pl. C, fig. 15).

saccharalis Fbr., obliterallus L., papillon borer, des Antilles, et Diatraea etriatalis Snell. le papillon borer de Java et de l'île Maurice et de Réunion, différence entre les deux espèces. **Fougères**, Marquis de. Paris, Bul. soc. nat. acclim., **50**, 1903, (60-62).

*tirgosa* n. sp. Sumatra. **Hering**, E. Stettiner ent. Ztg, **64**, 1903, (79, pl. I, fig. 32).

Dichocrocis leptalis n. sp. Simla. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (206-225, with 1 pl.).

Eccopidia rinistis n. sp. Ceylon. Hampson, Sir G. F. l.c. (21).

Eldana leucostictalis n sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (50).

Embryoglossa bipuncta n. sp. Khasis. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (658).

Endotricha nn. spp. Kashmir, Sikkim, Khasis. Hampson, Sir G. F. l.c. 15, 1903, (206-225, with 1 pl.).

Ephestia kuchnella. Jacobi, A. Berlin, Flugbl. Gesundhtsamt, Nr. 16, 1902, (4).

Co., Indiana, new locality. Johnson, W. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 18, 1902, (159).

*Epinoorda* n. gen., *E. caradjae* n. sp. **Bebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

Eristena straminealis n. sp. Sikhim. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (206-225, 1 pl.).

Eromene pygmaea n. sp. Sumatra. Hering, E. Stettiner ent. Ztg, 64, 1903, (81, pl. I, fig. 33).

Etiella nn. spp. Ceylon, Simla, Kashmir. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (33).

holozona n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (57).

Eucallaenia ragonoti n. sp. Hering, E. Stettiner ent. Ztg, 64, 1903, (110).

Euzophera nn. spp. Kashmir, Sinla. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (24).

semifuneralis. Delaware. Sanderson, E. D. Agric. Exp. Sta., Delaware, Newark, Rep., 1901, (127-199, with 6 pls., 16 figs.). [Review], Washington, D.C., U.S. Dept. Agric. Off. Exp. Sta. Rec., 14, 1902, (268-269).

Euzopherodes nn. spp. Ceylon, Sikhim. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (24).

. \_\_\_\_\_ allocrossa n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (57).

*Erergestis* nn. spp. **Bebel**, H. D. ent. Zs. Iris, Berlin, **16**, 1903, (6).

Galleria melonella, die Wachsmotten. von U. T. Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (730-732).

Kenntnis der Anatomie der Raupe. Metalnikoff, S. Zool. Anz., Leipzig, 26, 1903, (619-623).

Glyphodes glanculalis, Green and G. marginata, Hunpsn., additional descriptions. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **15**, 1903, (216, with 1 pl.).

*praefulgida* n. sp. **Hering**, E. Stettiner ent. Ztg, **64**, 1903, (107, pl. I, fig. 125).

Goniopalpia n. gen., G. delicatalis n. sp. Khasis. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (19). Herculia medialis n. sp. Simla. Hampson, Sir G. F. l.c. (206-225, with 1 pl.).

Heterographis nn. spp. Australia Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (57, 58).

hellenica, Stgr., *H. dererticola*, Stgr., *H. nireicostella*, Itag., *H. eraticulella* Rag. and 3 nn. spp. from Deess and Ceylon. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **15**, 1903, (23).

Homoeosoma elongellum n. sp. Arizona. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (227).

melanosticta n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (58).

*nigrimedialis* n. sp., Khasis, *H. nimbella*, Zell, notes. **Hampson**, *Sir* G. F. . . . Ser. ii, pt. ix. Bombay, J. Nat. Hist. Soc., **15**, 1903, (21).

Hypsipyla nn. spp. Sikhim and Ceylon. **Hampson**, Sir G. F. l.c. (30, pl. C, fig. 26).

robusta Moore, India attacking "Tun" and Mahogany, description, life history, relations to forest-protection and remedies, points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry, No. 2. Calcutta, 1903, (312, pl. XIX, fig. 3a-c). 25 cm.

Jocara thermoptera n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (59).

Lamacha angulifera n. sp. Khasis. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (206-225, 1 pl.).

Lambaesia n. gen. (~ Hypochalcia Hb), L. caradjae n. sp. Rebel, H. D. ent. Zs. Iris, Berlin, 16, 1903, (1-8).

Lamoria nigrisparsalis n. sp. Ceylon. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (658).

Lepidogma jordanalis n. sp. **Bebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126, mit 1 Taf.).

Lepyrodes neptis, Cram., change of specific name to L. pueritia, Cram., note on cynonymy. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **15**, 1903, (217, 1 pl.).

Luma longidentalis n. sp. Bhutan. Hc.mpson, Sir G. F. l.c. (206-225, 1 pl.). Lygropia chryselectra n. sp. Australia. Lower, O.B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (64).

Macna praetextata n. sp. Hering, E. Stettiner ent. Ztg, 64, 1903, (98).

Marasmia hezagona n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (63).

Maricopa lustrella n. sp. Arizona. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (227).

Massepha ambialis n. sp. Khasis. Hampson, Sir (J. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (214).

Meliesoblaptes agramma n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (49).

Mescinia olivescalis n. sp. Ceylon. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (25).

Metasia nn. spp. N.W. and Southern India. Hampson, Sir G. F. l.c. (206– 225, 1 pl.).

Myelais pectinicornella, note on larva. M. ephestialis n. sp. Simla and Sikhim. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (29).

Nacoleia nn. spp. Ceylon and Nilgiris. Hampson, Sir G. F. l.e. (206-225, 1 pl.).

*cuprealis*, Moore, and N. *vulgalis* Guen, notes on synonymy. **Hampson**, Sir G. F. l.c. (215, 1 pl.).

zanthosco'a n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (63).

Nephopteryz nn. spp. Australia. Lower, O. B. *l.c.* (53-56).

similella Zinck., a new British Phycid. Barrett, C. G. Ent. Mag., London, 39, 1903, (1).

new for the Swedish faana. (Swedish) Lampa, S. Entomol. Tidskr., Stockholm, 22, 1901, (248).

rivulella, Rag., N. fumosela, Rag., N. myrmidonella Hag., N. atrisquamella Hampson, and 7 nn. spp. from Deessa, Ceylon, Madras, Simla, Bolgaum and Bali. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **15**, 1903, (26-29). Noctuelia dichroalis n. sp. Ceylon. Hampson, Sir G. F. l.c. (206-225, 1 pl.).

Noorda nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (65).

Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (219).

Nosophora chironalis, Wek., changes in synonymy. N. triguttalis, Warr., addition to synonymy. **Hampson**, Sir G. F. *l.c.* (214, 1 pl.).

Nymphula diplopa n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (62).

turbata, Butt, raised to specific rank, N. hampeoni South, from Khasis, an additional species described. **Hampeon**, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (209, 1 pl.).

Odontopaschia n. gen., O. virescens n. sp. Khasis. Hampson, Sir G. F. l.c. (34).

Oligostigma auropunctalis n. sp. Bhutan. Hampson, Sir G. F. l.e. (206– 225, 1 pl.).

Assam, notes. Hampson, Sir G. F. l.c. (210, 1 pl.).

Pachynoa, Led reduced to synomymic rank see Polygrammodes, Guen. Hampson, Sir G. F. l.e. (217, 1 pl.).

E. Stettiner ent. Ztg, 64, 1903, (102).

Pachyzanela phecopterlis. Guen additional description. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (218, 1 pl.).

Pagyda pullalis n. sp. Siam. Swinhos, C. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (510-511).

Hering, E. Stettiner ent. Ztg, 64, 1903, (101).

Patissa fulvidorsalis n. sp. Sikhim. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (19).

heldi n. sp. Sumatra. Hering, E. Stettiner ent. Ztg, 64, 1903, (68).

Persicoptera chionosyga n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (60). 689

Phrynganodes discipunctalis n. sp. South Kanara. **Hampson**, Sir G. F. l.c. (206-225, 1 pl.).

Phycita nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (53).

*monopecten* n. nom. for *P. hyemalis* Butler, from Ceylon. *P. steniella*, notes. *P. hyemalis* transferred to *Nephopteryx*, and 4 nn. spp. from Sikhim, Deesa, and Kashmir. **Hampson**, G. F. Bombay, J. Nat. Hist. Soc., **15**, 1903, (27-31).

Piletocera discalis n. sp. Ceylon. Hampson, Sir G. F. *l.c.* (206-225, 1 pl.).

Pionea nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (218).

<u>leucura</u> n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (67).

Platamonia poecilura n. sp. Sumatra. Hering, E. Stettiner ent. Ztg, 64, 1903, (142, pl. I, fig. 59).

Platytes trichialis n. sp. Bombay. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 14, 1903, (659).

Polygrummodes grossalis Guen. and P. mocruealis Walk. from Khasis described; P. nigrilinealis n. sp. Sikkim. Hampson, Sir G. F. l.c. (217-218).

Polyocha pulverlalis, Khasis, P. ornatella nn. spp. Kangra Valley, P. tricoloralis n. nom. for P. tariegatella, Hmpsn., P. varie; atella, Rag. Noto. **Hampson**, Sir G. F. I.c. (20-21).

Psorosa nn. spp. Simla, Sikhim. Hampson, Sir G. F. l.e. (22).

Ptyomazia n. gen., P. trigonifera n. sp. Ceylon. **Hampson**, Sir G. F. l.e. (26).

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*Pyralis.* **Dufour,** G. Chron. Agric., Lausanne, **15**, 1902, (319-328, av. 4 Fig.).

*prepialis* n. sp. Sikhim. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **15**, 1903, (201).

*transcaspica* n. sp. **Rebel**, H. D. ent. Zs. 1ris, Berlin, **16**, 1903, (3).

Pyrausta nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (67-68).

*macharalis*, Wlk., change in synonymy.nn. spp. Chamba, Kashmir. Deesa, Sikhim. **Hampson**, Sir G. F. Bombay, J. Nat. Hist. Soc., **15**, 1903, (223-224).

*machoeralis*, Wlk. Bombay, Berar, Central Provinces, Madras and Burma, attacking Teak. Description, life history, relations to forest-protection and remedies in the nursery, points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2. Calcutta, 1903, (301, pls. XVIII+XIX, fig. 2). 25 cm.

H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (305).

*wockei* n. sp. **Bang-Haas in Rebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

Saluria minutella n. sp. Deesa and Ceylon. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (20).

Sandrabatis phaeella n. sp. Sikhim. Hampson, Sir G. F. l.c. (25).

Schoenobius aurivena n. sp. Khasis. Hampson, Sir G. F. l.c. (20).

Scoparia ingratella Tell. from Kashmir, notes; nn. spp. Nilgiris, Bombay, Khasis, Simla. **Hampson**, Sir G. F. *l.c.* (212-213, 1 pl.)

Statina, notes on the genus, S. cashmiralis n. sp. Kashmir. **Hampson**, Sir G. F. l.c. (20).

Stemmatophora minoralis, S. subflovialis from Ceylou. **Hampson**, Sir (j. F. l.c. (207-208).

Stenia rubriceps n. sp. Dharmsala. Hampson, Sir G. F. l.c. (212).

Stericta aleuropa n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (59).

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2 r

Stericta suspensalis, Wlk., notes and 2 nn. spp. **Hampson**, G. F. Bombay, J. Nat. Hist. Soc., **15**, 1903, (36).

Sylepta homomorpha Meyr. from Ceyfon described, S. multilinealis Guen and S. quadrimaculalis, Koll. additional synomymy, S. picalis n. sp. Khasis. Hampeon, Sir G. F. l.e. (216).

Symphysa adelalis n. sp. Kearfott, W. D. New York, N.Y., J. Ent. Soc., 11, 1903, (145).

Talie nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (51).

Tegostoma kabylalis n. sp. Bang-Haas in Rebel, H. D. ent. Zs. Iris, Berlin, 15, 1902, (100-126).

Tcgulifera phaeaptera n. sp. Ceylon. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (207).

Tephris glaucobasis n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (56).

Teratausta n. gen., T. odontalis n. sp. Silhet. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., 15, 1903, (225).

Tirathaba chlorosema n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (219).

irrufatella, Rag. from ('eylon, notes. Hampson, Sir G. F. Bonibay, J. Nat. Hist. Soc., 14, 1903, (658).

*Titanio pulchra* n. sp. Alph in Rebel, H. D. ent. Zs. Iris, Berlin, **15**, 1002, (100-126).

Trichophysetis nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (61).

*acutangulalis* n. sp. Palni Hills. Hampson, Sir G. F. Bombay, J. Nat. Hist. Soc., **15**, 1903, (207).

Hampson, Sir G. F. l.e. (206, 1 pl.).

Tyndis albidefinis n. sp. Simla. Hampson, Sir G. F. le. (209).

Tyspanodes metachrystalis n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (63).

Vitula serratilineella. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (104).

#### PIEROPHORIDAE.

# SPECIAL.

Aciptilia nirea n. sp. **Snellen**, P. C. T. s' Gravenhage, Tijdschr. Ent., **46**, [1903], (56, pl. V, fig. 17).

Oxyptilus geodactylus n. sp. Fuchs, A. Stettiner ent. Ztg, 64, 1403, (3-16).

habits. Crombrugghe de Picquendaele, de. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (103).

Platyptilia (?) asiatica n. sp. Bang-Haas in Robel, H. D: ent. Zs. Iris, Berlin, 15, 1903, (100-126).

marmarodaetyla n. sp. United States. **Dyar**, H. G. Washingtun, D.C., Proc. Ent. Soc., **5**, 1903, (296).

rhusiodactyla n. sp. Fuchs, A. Stettiner ent. Ztg, 64, 1903, (14).

Pterophorus nn. spp. Arizona. Dyar, H. G. Washington, D.C., Proc. Eut. Soc., 5, 1903, (228).

Stenoptilia schuarzi n. sp. Arizona. Dyar, H. G. l.c. (228).

# ALUCITIDAE.

Orneodes hexadaetyla in Idaho. Aldrich, J. M. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 13, 1902, (156).

Houghton, C. O. *l.c.* (89).

# TORTRICIDAE.

## GENERAL.

Mährlem. Die Bekämpfung des Springwurmwicklers. Mitt. Weinbau, Geisenheim, 15, 1903, (50-54, 72-76).

Malloch, J. R. Further notes on the Tortricidae of Dumbartonshire. Ent. Mag., London, **39**, 1903, (3-4).

Zehntner, L. . . Mottenbekämpfung . . (Holländisch) Salatiga, Bull. Cacao, 5, 1903, (1-53, mit 1 Taf.).

# Special.

Archips granadanus n. sp. Spain. Walsingham, Lord. Ent. Mag., London, 39, 1903, (183).

Arotrophora cosmoplaca n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (219).

Atychia nn. spp. Australia. Lower, O. B. *l.c.* (68).

Cacoccia obsoletana. Slingerland, M. V. Agric. Exp. Sta., New York, (Cornell Station), Ithaca, Bull., No. 190, 1901, (143-164, with 15 figs.); [Review], Washington, D.C., U. S. Dept. Agric., Off. Exp. Sta. Rec., 13, 1901, (371-372).

Carpocapea, nomenclature. Busck, A. New York, N.Y., J. Ent. Soc., **11**, 1903, (106-111).

\_\_\_\_\_ pomonana. Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (934– 935).

**Gillette**, C. P. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **31**, 1902, (1-23).

broods. Gillette, C. P. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (193-196).

generation. **Simpson**, C. B. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (63-65).

**son**, C. B. *l.c.* (N. Ser.), No. **30**, 1901, (51–75); No. **41**, 1903, (105).

Cerace triphaenella n. sp. **Snellen**, P. C. T. s' Gravenhage, Tijdschr. Ent., **46**, [1903], (26).

Unephasia sciaphila laetana Styr., note. **Ohrétien**, P. Naturaliste, Paris, (sér. 2), **23**, 1903, (11–12).

Cochylis : contro [di essa]. Berlese, A. Bollettino di Entomologia agraria, Padova, 9, 1902, (82-86, con fig.).

Conchylis ambiguella, Bekämpfung. Lenert, A. Erfahrungen in der Bekämpfung des Heu- und Sauerwurms. Trier (J. Lintz), 1903, (36, mit 1 Taf.). 22 cm. 0,80 M.

austriana, nouvelle Conchylis cécidogène. **Chrétien**, P. Naturaliste, Paris, (sér. 2), **24**, 1902, (257-258). Conchylis (Cocryx) suaveolana n. sp. **Fuchs**, A. Stettiaer ent. Ztg, **64**, 1903, (6).

Cymolamia faillana n. sp. Fuchs, A. l.c. (7).

Epinotia nn. spp. Arizona. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (230-231).

Eucelis malcolmiae n. sp. Spain and Morocco Walsingham, Lord. Ent. Mag., London, **39**, 1903, (213-214).

*Eucosma* nn. spp. North America. **Dyar**, H. G. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (179–180, 229, 297).

Evetria neomexicana n. sp. Dyar, H. G. I.c. (285-286).

Grapholitha conterminata. H. S. (fin). Pierre, Abbé. Echange, Lyon, 17. 1902, (28-29).

Laspeyresia nn. spp. Spain and Morocco. Walsingham, Lord. Ent. Mag., London, **39**, 1903, (209-211).

Loxopera rubiginana n. sp. Morocco and Algeria. Walsingham, Lord. l.c. (183).

Pammene nn. spp. Morocco. Walsingham, Lord. l.c. (211-213).

morphose, Generationscyclen, **Bodzianko**, V. N. Moskva, Dnevn. Zool. Otd. Imp. Obšč. Hub. jest., **III**, 5, 1903, (28-41). 35 cm.

Phalonia nn. spp. Spain and Morocco. Walsingham, Lord. l.e. (184-186).

**Dyar**, H. G. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (232).

Phoropteris comptana. Smith, J. B. Agric. Exp. Sta., New Jersey, New Brunswick, Bull., No. 149, 1901, (17, with 2 pls.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1901, (161).

Phthinolophus n. gen., P. indentamus n. sp. **Dyar**, H. G. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (306-307).

Retinia buoliana injuring Scotch pine. Pack-Beresford. Irish Nat., Dublin, 12, 1903, (299).

turionanae, schädliches Auftreten, allgemeine Bemerkungen über die Lebensweise der Retinien überhaupt. Ritzema Bos, J. Centralbl.

(N 2-9053)

2 r 2

Bakt., Jena, Abt. 2, 10, 1903, (241-250).

Steganoplycha tantillana n. sp. **Puchs**, A. Stettiner ent. Ztg, **64**, 1903, (241).

Thiodia strgiana n. sp. Arizona. Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1903, (220).

Tortricomorpha nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (69-70).

Tortrix nn. spp. Fuchs, A. Stettiner ent. Ztg, 64, 1903, (1-2).

dorsalana n. sp. Arizona, Dyar, H. G. Washington, D.C., Proc. Ent. Soc., 5, 1603, (231).

# TINEIDAE.

# GENERAL.

**Busck**, A. A revision of the American moths of the family *Gelechildae*, with descriptions of new species. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., **25**, 1903, (767-938, with pl.).

[North American Yronomcutidae.] New York, N.Y, J. Ent. Soc., 11, 1903, (45-59).

**Clément**, A. L. La teigne du crin. Nature, Paris, **30**, (2<sup>c</sup> sem.), 1902, (251-252).

Malloch, J. R. Further notes on the Tineina of Dumbartonshire. Ent. Mag., London, **39**, 1903, (3-4).

Turner, A. J. Revision of Australian Lepidoptera. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (42-92).

Turner, H. J. Notes on various Coleophorids. Ent. Rec., London, 15, 1903, (88–92).

Zehntner, L. . . Mottenbekämpfung . . . (Holländisch) Salatiga Bull. Cacao, 5, 1903, (1-53, mit 1 Taf.).

## SPECIAL.

*Abebaea* nn. spp. N. America. **Busck**, A. New York, N.Y., J. Ent. Soc., **11**, 1903, (53-55).

Acompsia mesozona n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (225). Adela anatolica n. sp. **Bebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902; (100-126).

Agriophara tephroptera n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (230).

Alabonia nn. spp. Morocco and Spain. Walsingham, Lord. Ent. Mag., London, 89, (292-293).

Anacampsis nn. spp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus., Proc., 25, 1903, (848).

*biformella* n. sp. **Schütze**. Ent. Zs., Guben, **16**, (1902-03), 1902, (13).

corerdalella n. sp. N. Jersey. **Kearfott**, W. D. New York, N.Y., J. Ent. Soc., **11**, 1903, (162, pl. IX, fig. 13).

*polychromella* n. sp. **Rebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

Apodia nn. spp. Spain and Morocco. Walsingham, *l.ord.* Ent. Mag., London, **39**, 1903, (263-264).

Aproacrema kcarfottella n. sp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (842).

Argyresthia prenjella n. sp. Hercegovina. Rebel, H. Wien, Verh. Zcol-Bot. Ges., 51, 1901, (802).

Aristeis macrotricha n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (225).

Aristotelia nn. spp. America. **Busch**, A. Washington, D.C., Smithsoniau Inst, Nation. Mus. Proc., **25**, 1903, (799– 804).

Attera nn. spp. Australia. **Turner**, A. J. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (79).

Atychia caradjae n. sp. **Bebel**, H. D. ent. Zs. Iris, Eerlin, **15**, 1902, (100-126).

Autoneda n. nom. = Neda Chambers. Busek, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (782).

Batrachedra stegodyphobius n. sp. Orange River Colony. Walsingham, Lord. Ent. Mag., Lenden, 29, 1903, (100-167).

mensalism with Stegodyphus. Pecock, R.I. l.c. (167-170). Boletobia fuliginosa, colonie de. Smits, A. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (224).

Borkhausenia callioptis n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (226).

haasi (rebeli B. Hass Preisl. No. 45) n. sp. **Rebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

walsingham, Lord. Ent. Mag., Londou, 39, 1903, (293).

*kokujevi* sp. n. Rossia orient. **Krulikovskij**, L. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (177–182).

Brackenridgia n. gen., type Incurvaria acerifoliella Fitch. Busch, H. Washington, D.C., Proc. Ent. Soc., 5, 1903, (193).

Cacogamia n. gen., C. elcgans, C. (?) luteella nn. spp. **Snellen**, P. C. T. s' Gravenhage, Tijdschr. Ent., **46**, [1903], (48-50, pl. V., figs. 10-14).

Caceyra maculopa n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (224).

Cemiostoma aceris n. sp. Fuchs, A. Stettiner ent. Ztg, 64, 1903, (245).

Ceratophora pluzopterella n. sp. **Snellen**, P. C. T. s'Gravenhage, Tijdschr. Ent., **46**, [1903], (41, pl. IV, figs. 11, 12).

*Cerostoma* nn. spp. North America. Busck, A. New York, N.Y., J. Ent. Soc., **11**, 1903, (48-52).

Choreutis myllerana, var. holotoxa n. var. Alps. **Meyrick**, E. Ent. Mag., London, **39**, 1903, (5-6).

Chrysoryctis nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (238).

Coleophora nn. spp. **Fuchs**,  $\Lambda$ . Stettiner ent. Ztg, **64**, 1903, (10-13).

Coproptilia n. gen., C. glebicolorella n. sp. **Snellen**, P. C. T. s' Gravenhage, Tijdschr. Ent., **46**, [1903], (32–34, pl. V, figs. 4, 5).

Cryptophaga nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (198-199).

tralia. Lower, O. B. l.c. (70).

Cryptophasa stipella n. sp. Snellen, P. T. C. s'Gravenhage, Tijdschr. Ent., 46, [1903], (31, pl. V, figs. 1, 2). Dasyse: n. gen., D. barbatus, Chr. for Morophaga barbata, Chr.; D. rugosellus, Stn., synonymy. Durrant, J. H. Calcutta, Ind. Mus. Notes, 5, 1903, (92).

Decelona n. gen., D yuccasella n. sp. America. Busch, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (837).

Depressaria depressella H b. var., prangosella n. var., nn. spp. Spain and Morocco. Walsingham, Lord. Eut. Mag., London, **39**, 1903, (266-268).

semenovi n. sp. Rossia orient. sept. **Krulikovskij**, L. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (30-32).

Didactylota altithermella n. sp. S. Europe. Walsingham, Lord. Ent. Mag., London, **39**, 1903, (265).

Diplodoma palaestinella n. sp. **Bebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

Dissoctena albidella n. sp. Bang-Haas in Rebel, H. l.c. (100-126).

Epidictica n. gen., E. calliphylla, E. thiospila nn. spp. Australia. Turner, A. J. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (81).

Epimenia [Epermenia] nn. spp. Kearfott, W. D. New York, N.Y., J. Ent. Soc., 11, 1903, (162-164).

Epithectis sylvicolella n. sp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus., Proc., 25, 1903, (818).

*Epopsia* n. gen., *E. metreta* n. sp. Australia. **Turner**, A. J. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (90).

Eudrymopsis n. gen., E. zyloscopa n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (228).

Eulecria atradelpha n. sp. Australia. Lower, O. B. *l.c.* (221).

*Eusynopa* n. gen. **Lower**, O. B. *1*... (237).

Gelechia nn. spp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus., Proc., 25, 1903, (856-889).

(Recurvaria) nanella Hb., life history. Houghton, J. T. Ent. Mag., l.ondon, **39**, 1903, (219-221). Gelechia (Lita) nordlandicolella n. sp. Norwegen. Strand, E. Ent. Zs., Guben, 16, (1902–03), 1902, (21).

*operculella.* California. **Clarke**, W. T. Agric. Exp. Sta., California, Berkeley, Bull., No. **135**, 1901, (30, with 10 figs.). **23** cm.; [review], Washington, D.C.; U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1902, (765-766).

eimilella n. sp. **Snellen**, P. C. T. 's' Gravenhage, Tijdschr. Ent., **46**, [1903], (44, pl. V, figs. 5-6).

Gnorimoschema nn. spp. America. Busck, A. Washington, D.C.. Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (825-834).

\_\_\_\_\_ nn. spp. **Kearfott**, W. D. New York, N.Y., J. Ent. Soc., **11**, 1903, (158-160).

Gracilaria strassenella n. sp. Antarktisches Gebiet. **Enderlein**, G. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition, **3**, Lfg 7, Jena, 1903, (251).

Greya n. gen. related to Incurvaria. Busck, A. Washington, D.C., Proc. Ent. Soc., 5, 1903, (194):

Guestia? nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (226-227).

Harpella aureatella n. sp. Snellen, P. C. T. s' Gravenhage, Tijdschr. Ent., 46, [1903], (47, pl. IV, fig. 13).

Hedycharis n. gen., H. phoenobapta n. sp. Australia. **Turner**, A. J. Sydney, N.S.W., Proc. Linn. Soc., N. S. Wales, **28**, 1903, (90).

Heliocausta nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (220).

Holoscolia nn. spp. Rebel, H. D. ent. Zs. Iris, Berlin, 15, 1902, (100-126).

Hoplitica rhodopepla n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (221).

Hypsolophus helianthemi n. sp. Spain. Walsingham, Lord. Ent. Mag., London, 39, 1903, (265-266).

Hyponomeuta malinella, Winterquartier. Lucas, E. Pomol. Monatshefte., Stuttgart, 49, 1903, (77-78). Iphierga crypsilopha n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (73).

Lower, O. B. *l.e.* (239).

Lactura eupoceila n. sp. Australia. Turner, A. J. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (86).

Lecithocera nn. spp. **Snellen**, P. C. T. s' Gravenhage, Tijdschr. Ent., **46**, [1903], (35-37, pl. IV, figs. 6-8).

Lepidoscia nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (234-237).

Australia. Lower, O. B. l.c. (71).

Limnoecia xanthopelta n. sp. Australia. Lower, O. B. l.c. (231).

Linosticha nn. spp. Australia Lower, O. B. l.e. (222).

Lita trinella n. sp. Fuchs, A. Stettiner ent. Ztg, 64, 1903, (9).

Lithocolletis hamameliella n. sp. Busck, A. Washington, D.C., Proc. Ent. Soc., 5, 1903, (189).

Macrozygona n. gen.. M. microtoma n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (200).

Malacotricha deceptella n. sp. **Snellen**, P. C. T. s' Gravenhage, Tidjschr. Ent., **46**, [1903], (49, pl. 1V, fig. 9).

Megacraspedus pusillus n. sp. Spain. Walsingham, Lord. Ent. Mag., London, 39, 1903, (206).

Micropteryx kardamylensis n. sp. Morea. **Bebel**, H. Nachtrag. Berliner ent. Zs., **48**, 1903, (248).

Mompha conturbatella H. B., description of the larva and pupa. **Bankes**, E. R. Ent. Mag., London, **39**, 1903, (133-136).

Narycia nu. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (231-237).

Neodactylota n. gen., N. barberella n. sp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus., Proc., 25, 1903, (835–836).

Ocystola paralia n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (225). Olycha n. gen., O. grosscpunctella n. sp. **Snellen**, P. C. T. s' Gravenhage, Tijdschr. Ent., **46**, [1903], (28, 29, pl. IV, figs. 2, 3).

Operyga n. gen., O. eugramma nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903. (230).

Paltodora nn. spp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (776-778).

Paralechia n. gen. America. Busck, A. l.e. (820).

Philobata nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (223).

Pleurota minimella n. sp. Rebel, H. D. ent. Zs. Iris, Berlin, 15, 1902, (100-126).

Procometie nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (199-200).

*Prodoxus*, North American species. **Dyar**, H. G. New York, N.Y., J. Ent. Soc., **11**, 1903, (102-104).

Pronuba, North American species. Dyar, H. G *l.c.* (102-104).

Prostomeus n. gen., P. brunneus n. sp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (837-838).

Protolechia n. gen. Australia. Meyrick, E. Ent. Mag., London, **39**, 1903, (291).

Psecalia nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (227-228).

*pseudocythrella* n. sp. **Rebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100–126).

Recurvaria nn. spp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (810-814).

nn. spp. **Kearfott**, W. D. New York, N.Y., J. Ent. Soc., **11**, 1903, (154-157).

Saropla poliochra n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (224).

Seardia porphyrea n. sp. Australia. Lower, O. B. l.c. (74).

tralia. Lower, (). B. *l.e.* (233).

Scythris nn. spp. **Rebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

Stagmatophora divitella Cst. n'est pas cécidogène. Chrétien, P. Paris, Bull. soc. ent., **1902**, (261-264).

Steganoptych: pyricolana, orchard pest. **Sanderson**, E. D. Agric. Exp. Sta., Delaware, Newark, Bull., No. **53**, 1901, (19, with 11 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., **13**, 1902, (872-873).

Symmoca nn. spp. **Rebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

**Haas** in **Bebel**, H. *l.c.* (100-136).

Telecrates streptogramma n. sp. Australia. Lower, O. B. Adelside, S. Aust., Trans. R. Soc., 27, 1903. (229).

Telphusa betulella. America. Busch, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (788).

Thaumatopsis daeckeellus n. sp. Kearfott, W. D. New York, N.Y. J. Ent. Soc., 11, 1903, (149).

Trachoma walsinghamiella n. sp. N. America. **Busck**, A. l.c. (57).

Trichotaphe fernaldella n. sp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (915).

Trypanisma fagella n. sp. America. Busck, A. l.c. (816).

Xenopathia nitea n. sp. **Rebel H.** D. ent. Zs. Iris, Berlin, **15**, 1902, (100– 126):

Xylorycta philonympha n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (229).

**W**Xysmatodoma vn. spp. Australia. Lower, O. B. *l.c.* (71-73).

Ypeolophus lygropa n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (70).

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Zaratha cramerella . . . neue Futterpflanze. (Holländisch) Zehntner, L. Salatiga, Bull. Cacao, 4, 1902, (53– 56).

.

Zaratha cramerella [Cacaomotte] Bekämpfung. (Holländisch) Zehntner, L. l.c. 5, 1903, (1-53, mit 1 Taf.).

Zelleria celastrusellan. sp. Kearfott, W. D. New York, N.Y., J. Ent. Soc., 11, 1903, (150, pl. 1X, fig. 1).

# UNCLASSIFIED BY THE SLIP-MAKER.

Coradina pulmonaris. de **Rougemont**, F. Arch. Sci. Phys., Genève, [4], **16**, 1903, (731-732).

# LIST OF NEW GENERA AND SPECIES.

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Gelechia (Lita) nordlandicolella n. sp. Norwegen. Strand, E. Ent. Zs., Guben, 16, (1902–03), 1902, (21).

*operculella*. California. **Olarke**, W. T. Agric. Exp. Sta., California, Berkeley, Bull., No. **135**, 1901, (30, with 10 figs.). 23 cm.; [review], Washington, D.C.; U. S. Dept. Agric. Off. Exp. Sta. Rec., **13**, 1902, (765-766).

<u>similella</u> n. sp. **Snellen**, P. C. T. 's' Gravenhage, Tijdschr. Ent., **46**, [1903], (44, pl. V, figs. 5–6).

Gnorimoschema nn. spp. America. Busck, A. Washington, D.C.. Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (825-834).

Gracilaria strassenella n. sp. Antarktisches Gebiet. **Enderlein**, G. Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition, **3**, Lfg 7, Jena, 1903, (251).

Greya n. gen. related to Incurraria. Busck, A. Washington, D.C., Proc. Ent. Soc., 5, 1903, (194).

Guestia? nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (226-227).

Harpella aureatella n. sp. Snellen, P. C. T. s' Gravenhage, Tijdschr. Ent., 46, [1903], (47, pl. IV, fig. 13).

Hedycharis n. gen., H. phoenobapta n. sp. Australia. Turner, A. J. Sydney, N.S.W., Proc. Linn. Soc., N. S. Wales, 28, 1903, (90).

Heliocausta nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (220).

Holoscolia nn. spp. **Bebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

Hoplitica rhodopepla n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (221).

Hypsolophus helianthemi n. sp. Spain. Walsingham, Lord. Ent. Mag., London, **39**, 1903, (265-266).

Hyponomèuta malinella, Winterquartier. Lucas, E. Pomol. Monatshefte., Stuttgart, 49, 1903, (77-78). Iphierga crypsiloplu n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (73).

Lower, O. B. *l.c.* (239).

Lactura eupoccila n. sp. Australia. Turner, A. J. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (86).

Lecithocera nn. spp. **Snellen**, P. C. T. s' Gravenhage, Tijdschr. Ent., **46**, [1903], (35-37, pl. IV, figs. 6-8).

Lepidoscia nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (234–237).

Australia. Lower, O. B. l.c. (71).

Limnoecia ranthopelta n. sp. Australia. Lower, O. B. l.c. (231).

Linosticha nn. spp. Australia Lower, O. B. l.c. (222).

Lita trinella n. sp. Fuchs, A. Stettiner ent. Ztg, 64, 1903, (9).

Lithocolletis hamameliella n. sp. Busck, A. Washington, D.C., Proc. Ent. Soc., 5, 1903, (189).

Macrozygona n. gen.. M. microtoma n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (200).

Malacotricha deceptella n. sp. **Snellen**, P. C. T. s' Gravenhage, Tidjschr. Ent., **46**, [1903], (49, pl. 1V, fig. 9).

Megacraspedus pusillus n. sp. Spain. Walsingham, Lord. Ent. Mag., London, 39, 1903, (266).

Micropteryx kardamyleneis n. sp. Morea. **Bebel**, H. Nachtrag. Berliner ent. Zs., **48**, 1903, (248).

Mompha conturbatella H. B., description of the larva and pupa. **Bankes**, E. R. Ent. Mag., London, **39**, 1903, (133-136).

Narycia nu. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (231-237).

Neodactylota n. gen., N. barberella n. sp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus., Proc., 25, 1903, (835–836).

Ocystola paralia n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (225). Olycha n. gen., O. grosscpunctella n. sp. **Snellen**, P. C. T. s' Gravenhage, Tijdschr. Ent., **46**, [1903], (28, 29, pl. IV, figs. 2, 3).

Opezyga n. gen., O. eugramma nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903. (230).

Paltodora nn. spp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (776-778).

Paralechia n. gen. America. Busck, A. l.e. (820).

Philobata nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (223).

Pleurota minimella n. sp. Rebel, H. D. ent. Zs. Iris, Berlin, 15, 1902, (100-126).

Procometis nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (199-200).

*Prodoxus*, North American species. **Dyar**, H. G. New York, N.Y., J. Ent. Soc., **11**, 1903, (102-104).

Pronuba, North American species. Dyar, H. G. *l.c.* (102-104).

Prostomeus n. gen., P. brunneus n. sp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (837-838).

Protolechia n. gen. Australia. Meyrick, E. Ent. Mag., London, **39**, 1903, (291).

Psecadia nn. spp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (227-228).

*pseudocythrella* n. sp. **Rebel**, H. D. ent. Zs. Iris, Berlin, **15**, **19**02, (100–126).

Recurvaria nn. spp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (810-814).

nn. spp. **Kearfott**, W. D. New York, N.Y., J. Ent. Soc., **11**, 1903, (154-157).

Saropla poliochra n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (224).

Seardia porphyrea n. sp. Australia. Lower, O. B. *l.c.* (74).

tralis. Lower, O. B. *l.c.* (238).

Scythris nn. spp. **Rebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

Stagmatophora divitella Cst. n'est pas cécidogène. Chrétien, P. Paris, Bull. soc. ent., 1902, (261-264).

Steganoptycha pyricolana, orchard pest. **Sanderson**, E. D. Agrie, Exp. Sta., Delaware, Newark, Bull., No. **53**, 1901, (19, with 11 figs.). 23 cm.; [review], Washington, D.C., U. S. Dept. Agrie, Off. Exp. Sta., Rec., **13**, 1902, (872-873).

Symmoca nn. spp. **Rebel**, H. D. ent. Zs. Iris, Berlin, **15**, 1902, (100-126).

**Haas** in **Rebel**, H. *l.c.* (100-136).

Telecrates streptogramma n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903. (229).

Telphusa betulella. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (788).

Thaumatopsis daeckeellus n. sp. Kearfott, W. D. New York, N.Y. J. Ent. Soc., 11, 1903, (149).

Trachoma walsinghamiella n. sp. N. America. Busck, A. l.c. (57).

Trichotaphe fernaldella n. sp. America. Busck, A. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 25, 1903, (915).

Trypanisma fagella n. sp. America. Busck, A. l.c. (816).

Xenopathia nirea n. sp. Rebel H. D. ent. Zs. Iris, Berlin, 15, 1902, (100-126):

Xylorycta philonympha n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (229).

**W**Xysmatodoma vn. spp. Australia. Lower, O. B. *l.c.* (71-73).

Ypsolophus lygropa n. sp. Australia. Lower, O. B. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (70).

<u>mometellus.</u> Slingerland, M. V. Agric. Exp. Sta., New York, (Cornell station). Ithaca, Bull., No. **187**, 1901, (77-101, with 9 figs.); [review], Washington, D.C., U. S. Dept. Agric., Off. Exp. Sta., Rec., **13**, 1901, (68).

Zaratha cramerella . . . neue Futterpflanze. (Hollandisch) Zehntner, L. Salatiga, Bull. Cacao, 4, 1902, (53– 56).

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      - luteatus n. subsp. Rothschild and Jordan. 539A.
      - philippinensis n. Rothschild and subsp. Jordan. 539a. undatus n. subsp.
      - Rothschild and Jordan. 5394.

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  - ------ aegyptus: iduna n. subsp. Fruhstorfer. 197.
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# 4603-4631 HYMENOPTERA.

# TITLES.

Morphologische Abonyi, Sándor. und physiologische Beschreibung des Dormkungle der Honigbiene. (Apis Darmkanals der Honigbiene (Apis mellifica L.). Allatt. Közlem., Budapest, 2, 1903, (137-168, mit Taf. XI-XIV). [4607 4631]. 1

Alfken, J. P. Zwei neue Bienen aus Japan. Zs. Hymenopter., Teschendorf, **3**, 1903, (209–211). [4631].

– Zur Kenntnis einiger Zs. Hymenopter., Centrie-Arten. Teschendorf, 3, 1903, (211-213). [4631]. 3

André, E. Fasc. II. Hymenoptera fam. Mutillidae In Wytsman, P. Genera Insectorum. Bruxelles, 1902, (77, av. 3 pls. hors texte). 20 fr. [4631]. 4

André, Ernest. Hyménoptères formicides récoltés au Japon, par M. Harmand. Bul. Muséum, Paris, **1903**, (128). [4631 4627 cc]. 5

# Lepidoptera.

Description d'une nouvelle espèce de Dorymyrmex et tableau dichotomique des ouvrières de ce genre. Zs. Hymonopter., Teschendorf, **3**, 1903, (364-365). [4631]. 7

**Ashmead**, William H[arris]. A new *Pammegischia*. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **12**, 1901, (277-278). [4631]. 8

A new bumble bee [Bombus titusi n. sp.] from Colorado. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (50). [4627 gi 4631]. 9

[not synonymous]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (318). [4631]. 10

*Prozespa*, a new genus in the Vespidae. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (182). [4631]. 11

Two new parasitic Hymenoptera [n. sp. in *Dryinus* and *Cheiloneurus*]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (192-193). [4631]. 12

Some new genera in the Cynipoidea. Washington, D.C., Proc. Ent. Soc., 5, 1903, (221-223). [4631]. 13

*— Myrmecosalius*, a new genus in the *Ceropalidae*. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (307–308). [4631]. 14

Classification of the pointed-tailed wasps or the super-family Proctotrypoidea II. [Families Diapriidae and Ceraphronidae]. New York, N.Y., J. Ent. Soc., 11, 1903, (28-35). [4631].

15 Display="block-transform: constraints of the superfamily Proctotrypoidea. III. [Family Scelionidae]. New York, N.Y., J. Ent. Soc., **11**, 1503, (86-99). [4631]. 16

Two new Hymenopterous parasites. [Orgilus kearfotti n. sp. and Protopanteles recurvariae n. sp.]. New York, N.Y., J. Ent. Soc., 11, 1903, (144). [4631]. 17

in the Pireninae, Family Chalcididae, (x 2-9053) Order Hymenoptera. Calcutta, Ind. Mus. Notes, 5. 1903, (61-62). [4631]. 18

Bachmetjew, P. Ein Versuch, die Frage über die Parthenogenese der Drohnen mittels der analytisch-statistischen Methode zu lösen. Allg. Zs. Ent., Neudamm, 8, 1903, (37-44). [4611 4631 2423].

Baer, W. Zur Apiden-Fauna der Kurischen Nehrung. Allg. Zs. Ent., Neudamm, 8, 1903, (157–161). [4627 dc]. 20

Barker, F. E. The bull-ants of Victoria [Myrmecia forficata, Fabr. and M. sanguinea, Smith.] Vict. Nat., Melbourne, 20, 1903, (105–111). [4619 4627 if 4631]. 21

Barthélemy, U. Une reine qui change de domicile. Rev. Internat. Apicult., Nyon, 24, 1902, (197-198). [4619 4631]. 22

Moyen d'expulser les larves de males des ravons. Rev. Internat. Apicult., Nyon, **25**, 1903, (207-208). [4019 4631]. 23

Benetti, V. Richerche biologiche sui Bombi. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (38-40). [4611 4631]. 24

Bessler, J. G. Illustriertes Lehrbuch der Bienenzucht. 3. Aufl. Neu bearb. v. J. Elsässer. Stuttgart, Berlin, Leipzig (W. Kohlhammer), 1903, (VII + 304). 18 cm. 2 M. [4631]. 25

Bignell, G. C. British oak galls. Falmouth, Rep. R. Cornwall Polyt. Soc., 1902, (72-93). [4619 4631]. 26

**Bingham**, C. T. On the Hymenoptera collected by Mr. W. L. Distant in tho Transvaal, South Africa, with descriptions of supposed new species. Ann. Mag. Nat. Hist., Iondon, (Ser. 7), **11**, 1903, (46-69). [4627 fg 4631]. 27

The fauna of British India, including Ceylon and Burma. Published under the authority of the Secretary of State for India in Council. Edited by W. T. Blanford. Hymenoptera, Vol. II. Ants and Cuckoo-wasps. London, 1903, (xix + 506, 1 pl., illustr.). 8vo. [Review], Ann. Mag. Nat. Hist, London, (Ser. 7), **12**, 1903, (190-191). [4627 ef 4631]. 28

Hymenoptera. Diagnoses of Aculeate Hymenoptera. Fascic. Malay. Zool., 2, App., (iii vii). [4627 eg 4631]. 29

3в

Bisschrop van Tuinen, K. Die Sägewirkzeuge der Cimbicini. (Holländisch) 's Gravenhage, Tijdschr. Ent., 16, [1903], (58-64, 3 Taf.). [4607 4631]. 30

Bloesch, C. Einige Notizen über Cynipiden und Chalcidier aus der Ungegend von Laufenburg. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 11, 1003, (46-55). [4627 di 4619 4631]. 31

Bouvier, E. L. Quelques observations sur les insectes mellifères et leurs rapports avec les fleurs. Bul. Muséum, Paris, **1903**, (192-196); Naturaliste, Paris, (sér. 2), **25**, 1903, (147-148). [4619 4631]. 32

La vie des abeilles. Bul. Inst. psych. internat., Paris, 2, 1902, (88-105). [4619 4631]. 33

Bradley, J. Chester. A new species of Dyseidopus Kriechbaumer (Pimplinae). Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (307-308). [4631]. 34

[Note on Smicra bimaculata Strecker] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (26). [4631]. 35

Agathobanchus aequatus [redescribed] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (144– 146, with fig. in text). [4631]. 36

Brandicourt, Virgile. Pucerons et fourmis. Nature, Paris, **30**, (2<sup>e</sup> semest.), 1902, (202). [4631 4619 4031 4019] 37

Brauns, H. Beiträge zur Kenntnis södafrikanischer Masariclen. Zs. Hymenopter., Teschendorf, 2, 1902, (181–185, 275–282, 373–374); 3, 1903, (65–73). [4631]. 38

*Epeolus militaris* Gerst. und *Epeolus friesei* m. Zs. Hymenopter., Teschendorf, **3**, 1903, (362-364). [4631]. 39

Ein neues Chrysidengenus aus der *Panorpes*-Gruppe. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (460-461). [4631]. 40

Brauns, J. Ueber das Weibchen von Dorylus (Rhogmus) fimbriatus Shuck. Zs. Hymenopter., Teschendorf, 3, 1903, (394-298). [4631]. 41

Brünnich. Der Magen der Honigbiene. Schweiz. Bienenztg, Aarau, 25, 1902, (208-217, 10 figs.). [4611 4631]. 42

•

Brünnich. Der Eierstock der Bienenkönigin. Schweiz. Bienenztg, Aarau, 25, 1902, (417–420). [4615–4631].

Der "Nestduft" bei den Insekten, speciell bei den Bienen. Schweiz. Bienenztg, Aarau, 25, 1902, (476-479). [4619]. 44

Brues, Charles Thomas. Descriptions of new ant-like and myrmecophilous Hymenoptera. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (119–128, with pl.). [4631]. 4.5

On the sleeping habits of some aculeate Hymenoptera. New York, N.Y., J. Ent. Soc., 11, 1903, (228-230). [4619 4631]. 46

Studies of Texan bees. Part I. Austin. Cont. Zool. Lab. Univ. Tex., No. 41, in Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (79 85, with figs. in text). [4627 gi 4631]. 47

v. Melander, A. L.

Bruner, Lawrence. Some notes ou the bee genus Andrena. [With table of North American species.] Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Eut. Soc., **29**, 1903, (239–258). [4627 y 4631]. 48

Bugnion, E. Tube digestif de Xylocopa. Arch. Sci. Phys., Genève, (sér. 4), 15, 1903, (92-93). [4607 4631]. 49

Recherches histologiques sur le tube digestif du Xylocopa riolacra. Aarau, Verh. Schweiz. Natf. Ges., **85**, 1902, (76); Arch. Sci. Phys., Genève, (sér. 4), **14**, 1902, (531-534). [4607 4631]. 50

Bulman, G. W. The constancy of the bee. Zoologist, London, (Ser. 4), 6, 1902, (220-222). [4619 4631]. 51

Burfeind, H. Aus dem Leben der Honigbiene. [Einblage d. Königin.] Aus d. Heimat, Bremerhaven, **1901–02**, 1903, (38). [4631–4619]. 52

Buttel-Beepen, von. Aus dem Leben der Honigbiene. Allg. Zs. Ent., Neudamm, 8, 1903, (453-457). [461:) 4631]. 53

Ueber die Bedeutung der Stirnaugen und der Seitenaugen bei der Honigbiene. Bienenwirthsch. Centralbl., Hannover, **39**, 1903, (322-325). [4011 4631]. 54 Buttel-Reepen, von. Die Parthenogenesis bei der Honigbiene. Natur u. Schule, Leipzig, 1, 1902, (230-239). [4611 4631]. 55

Die stammesgeschichtliche Entstehung des Bienenstaates sowie Beiträge zur Lebensweise der solitären u. sozialen Bienen (Hummeln, Meliponinen, etc.). Vortrag . . . Stark erweitert, mit Anm. u. Zusätzen hrsg. Leipzig (G. Thieme), 1903, (XII + 138). 23 cm. 2,40 M. · [4619 4623]. 56

**Cameron**, P. Descriptions of nineteen new species of *Laridae*, *Odynerus* and *Apidae* from Barrackpore. London, Trans. Ent. Soc., **1903**, (117-132). [4627 ef 4631]. 57

Descriptions of twelve new genera and species of *Ichneumonidae* (Heresiarchini and Amblypygi) and three species of *Ampulex* from the Khasia hills, India. London, Trans. Ent. Soc., **1903**, (219–238). [4627 *ef* 4631]. 58

On some new genera and species of parasitic and fossorial Hymenoptera from the Khasia hills, Assam. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (173-185, 313-331). [4627 ef 4631]. 59

On some new genera and species of parasitic Hymenoptera from the Khasia hills, Assam. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (266-272, 363-371, 565-583). [4627 ef **4631**]. 60

Hymenoptera orientalia, or contributions to the knowledge of the Hymenoptera of the Oriental zoological region. The Hymenoptera of the Khasia hills. Part 2, Section 2. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (1-50). [4627 ef 4631]. 6]

Some new genera and species of Hymenoptera. Entomologist, London, **36**, 1903, (9). [4603 4631]. 62

On the parasitic Hymenopters and *Tenthredinidae* collected by Mr. Edward Whymper on the "Great Andes of the Equator." Entomologist, London, **36**, 1903, (95–97, 120–123, 158–161). [4627 h 4631]. 63

Description of a new species of Ammoplanus (Hymenoptera) from South Africa. Entomologist, Loudon, **36**, 1903, (178). [4627 fg 4631]. 64 (x 2-9053) **Cameron**, P. Descriptions of ten new species and nine new genera of *Ichneunonidae* from India, Ceylon and Japan. Entomologist, London, **36**, 1903, (233-241, 260-261). [4627 ef ec 4631].

Descriptions of four new species of Vespa from Japan. Entomologist, London, **36**, 1903, (278-281). [4627 ec 4631]. 66

[Fossoria and Apidae.] Descriptions of new species of Hymenoptera taken by Mr. Edward Whymper on the "Higher Andes of the Equator." Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (225–238). [4627 h 4631]. 67

List of N. Zeal. Hymenoptera. Wellington, Trans. N. Zeal. Inst., 35, 1903, (290-299). [4631] 68 Vespa germanica F. in. India Zs. Hymenopter., Teschendorf, **3**, 1903, (317). [463] 4627 ef]. 69 Hymenoptera (Ichneu-Fauna of Maldive monidae). and Laccadive Islands, 1, (51-63). [4627 ma 4631].

**Carpenter,** G. H. and **Pack-Beresford,** D. R. The relationship of *Vespa austriaca* to *Vespa rufa*. Ent. Mag., London, **39**, 1903, (230-242, pl. IV); Irish Nat, Dublin, **12**, 1903, (221-238, pl. II). [4619 4631]. 71

**Casteel,** D. B. and **Phillips**, E. F. Comparative variability of drones and workers of the honey bee [Apis mellifica]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **6**, 1903, (18-37, with text fig.). [4623 4631]. 72

**Cockerell,** T[heodore] D[ru] A[lison]. Bees of the genus Nomada from California. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (559–579). [4627, gi 4631]. 73

North American bees of the genus Nomada. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (580-614). [4627 g 4631]. 74

Notes on some genera of bees. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (183-189). [4631]. 75

The bee genus Xenoglossa in California. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (103). [4627 gi 4631]. 76

3в2

Cockerell, T[heodore] D[ru] A[lison]. The genus Lithurgopsis. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (182). [4631]. 77

*Xylocopa varipuneta* Patt. [in Arizona, Lower California and Mexico]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (318). [4631]. 78

----- Colletes crucis [n. sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (1304). [4631]. 79

A new bee of the genus Andrena. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (215). [4631]. 80

A new plant-louse [Aphis tetrapteralis n. sp.] from southern California [with note on the ant which attends it, new form of Cremastogaster]. Los Angeles, Bull., So. ('al. Acad. Sci., 1, 1902, (40-41). [4031 4631]. 81

Hymenoptera of southern California. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, (70-71, 137-140). [4627 gi 4631]. 82

New American Hymenoptera mostly of the genus Nomada. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (200-214). [4627 g 4631]. 83

North American bees and a new Homopteron. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (442-455). [4031 4627 g 4631]. 84

 Notes
 on
 the
 bee:
 genus

 Halietus.
 Entomologist,
 London,
 36,
 1903, (206-208).
 [4631].
 86

**Coupin**, IIenri. Les *Bembex*. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (65-67, av. fig.). [4631 4619 4615]. 87

Les lyménoptères parasites. Nature, Paris, (1° sem.), 31, 1903, (297-299, av. fig.). [4619 4615]. 88

**Crepieux-Jamin**, J. I.e3 essaims naturels. Rev. Internat. Apicult., Nyon, **25**, 1903, (129-131). [4619 4631]. 89

Czerski, Stanisław. Nouvelles recherches sur la myrmécophilie. (Polonais) Wszechświat, Warszawa, 22, 1903, (308-311). [4619 4819]. 90 Dadant, C. P. La fécondité des fauxbourdons. Rev. Internat. Apicult., Nyon, 25, 1903, (61–64). [4619 4631]. 91

Dalla Torre, von et Kieffer, J. J. Fasc-10. Hymenoptera. Fam. Cynipidae. In : Wytsman, P., Genera Insectorum, Bruxelles, 1902, (53-84). fr. 11.20. [4631]. 92

**Dambach** Die Bienenlaus. Schweiz. Bienenztg, Aarau, **25**, 1902, (447-449). [4219 4231 4619]. 93

**Dickel**, Ferd. Hat die Biene Eigenwärme und welche? D. ill. Bienenztg, Leipzig, **19**, 1902, (50-52). [4611 4631]. 94

Die neueste Entwicklungsphase meiner Lehre. D. ill. Bienenztg, Leipzig, **20**, 1903, (174–177). [4611]. 95

Einiges über meine Theorie der Geschlechtsbildung. [1n: Kalender für deutsche Bienenfreunde, hrsg. v. O. Krancher.] Leipzig, 1903, (108-111). [4611]. 96

Dominique, J. Sur un hyménoptère nouveau pour la Loire-Inférieure. Nantes, Bul. 60c. sci. nat., 12, 1902, (XXVII-XXVIII). [4631]. 97

Dorr, Emile. Rareté des lépidoptères. Abondance de parasites. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (38). [4419 4219 4619]. 98

Doumas. Observations sur l'apiculture en Algérie. Paris, Bul. soc. nat. acclim., 50, 1903, (86-90). [4603 4631]. 99

Dreyling, L. Ueber die wachsbereitenden Organe der Honigbiene. Zool. Anz., Leipzig, 26, 1903, (710-715). [4607 4631]. 100

**Du Buysson**, R. Nidification de quelques Mégachiles. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (751– 755). [4619 4631]. 101

Monographie des guêpes ou Vespa. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (260–288, av. pl.). [4603 4631]. 102

Description d'une Polybie nouvelle d'Afrique. Paris, Bul. soc. ent., **1902**, (253-254). [4631 4627 fd]. 103

 **Du Buysson**, R. Hyménoptères récoltés au Japon par M. J. Harmand. Bul. Muséum, Paris, **1903**, (125–127). [4631 4627 ec]. 105

du Musée de Vienne. Wien, Ann. NatHist. Hofmus., **16**, 1901, (97-104). [4631]. 106

Ducke, Adolf. Neue südamerikanische Chrysididen. Zs. Hymenopter., Teschendorf, **3**, 1903, (129-136, 226-232). [4627 h 4631]. 107

Beitrag zur Synonymie der neotropischen Apiden. Zs. Hymenopter., Teschendorf, **3**, 1903, (176-177). [4031]. 108

Biologische Notizen über einige südamerikanische Hymenoptera. Allg. Zs. Ent., Neudamm, **8**, 1903, (368-372). [4619 4611]. 109 Neue Arten der genus Bothynostethus Kohl. Wien, Verh. ZoolBot. Ges., **52**, 1902, (575-580). [4607 4631]. 110

Dufour, H. r. Forel, A.

Eckel, Lida S. The resin gnat Diplosis and three of its parasites. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (279-284, with pl.). [4231 4619 4631].

Emery, C. A propos de la classification des Formicides: réponse à l'article publié sous le même titre par M. le prof. Forel. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (197–198). [4631]. 112

Enderlein, Günther. Drei neue Bienen mit rüsselartiger Verlängerung des Kopfes. Berliner ent. Zs., 48, 1903, (35-40). [4631]. 113

Zwei neue ostafrikanische Zeuzerania - Arten. [Z. globiceps u. Z. tenuistilus.] Berliner ent. Zs., 48, 1903, (41-44). [4627 fb 4631]. 114

Neue und weniger bekannte africanische Xylocopen, besonders aus der Ausbeute des Freiherrn von Erlanger in Galla und Somali. Berliner ent. Zs., 48, 1903, (45-64). [4627 f 4631]. 115

**Escherich,** K[arl]. Beiträge zur Kenntnis der Thysanuren. Reihe I. Zool. Anz., Leipzig, **26**, 1903, (345–366). [3619 3631 4619]. 116

Ameisen. Ueber die Biologie der

**Everett**, J. D. On the mathematics of bees' cells. Loudon, Proc. Physic. Soc., **18**, 1903, (510–513). [4619]. 118

Face, H[enri]. Détails sur la biologie des hyménoptères, la perforation des métaux. Lausanne, Bull. Soc. Sci. Nat, (sér. 4), **39**, 1903, (III-IV); Arch. Sci. Phys., Genève, (sér. 4), **15**, 1903, (214-215). [4619]. 119

Fernald, H. The plum webbing sawfly [Lydia rufipes]. Philadelphia, Pa., Ent. News, Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (298-302). [4615 4631]. 120

Ferton, Ch. Notes détachées sur l'instinct des hyménoptères mellifères et ravisseurs (2° série), avec la description d'une nouvelle espèce. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (499-531, av. 1 pl.). [4619 4631].

Fielde, Adele M[arion]. Notes on an ant [Stenamma fulrum piceum]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (599-625). [4619 4631]. 122

Supplementary notes on an ant [Stenamma fulrum piceum]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (491-495). [4619 4631]. 123

Experiments with ants induced to swim. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (617-624). [4619 4631]. 124

Artificial mixed nests of ants. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (320-325). [4619 4631]. 125

A cause of foud between ants of the same species living in different communities. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (326-329). [4619 4631]. 126

**Fischer**, Ed[uard]. Myrmecodia echinata (aus Sumatra). Bern, Mitt. Natf. Ges., **1903**, (XI). [4619 4631]. 127

Florentin, R. Note sur une larve de Tenthrède du noisetier et du bouleau. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (105-107. av. fig.). [4615 4619 4631]. 128

Forel, Aug. A propos de la classification des fourmis. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (136-141). 129 [4631]. Variétés myrmécologiques. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (334-382). 1294 Fourmis termitophages, lestobiose, Atta tardigrada, sous-genres d'Euponera. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (389-398). [4619 4631]. 130 Les fourmis du Sahara Algérien, recoltées par M. le professeur A. Lameere et le docteur A. Diehl. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (147-156). [4627 fc 4631]. 131 Nouvelles espèces de Ponerinae. Rev. Suisse Zool, Genève, 9, 1901, (325-353) ; Aussi publié à part. Genève (Kündig et fils), 1901, (28). 8vo. [4631]. 132

Myrmecinae nouveaux de l'Inde et de Ceylan. Rev. Suisse Zool., Genève, **10**, 1902, (165-249). [4627 *ef* 4631]. 133

Fourmis nouvelles d'Australie. Rev. Suisse Zool., Genève, **10**, 1902, (465-548). [4627 *i* 4631]. 134

Les fourmis des Iles Andamans et Nicobares. Rev. Suisse Zool., Genève, **11**, 1903, (399–411). [4627 ma 4631]. 135

Die Sitten und Nester einiger Ameisen der Sahara bei Fugurt und Biskra. Beobachtet von Dr. August Diehl. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (453–459). [4619 4627 fa]. 136

Faune myrmécologique des noyers dans le canton de Vaud. Lausanne, Bul. Soc. Sci. Nat., (sér. 4), **39**, 1903, (83-94). [4627 di 4631]. 137

Recherches biologiques récentes de Miss Adèle Fielde sur les fourmis. Lausanne, Bul. Soc. Sci. Nat., (sér. 4), **39**, 1903, (95–99). [4619]. 138 Les Formicides de l'empire

des Indes et de Ceylon. Bombay. J. Nat. Hist. Soc., 14, 1903, (679-715). [4631]. 139

Einige neue Ameisen aus Süd-Angola. [In : Kunene-Sambesi-Expedition, hrsg. v. O. Warburg.] Berlin, 1903, (559-564). [4627 f 4631]. 141 The social life of ants. [Translated by F. C. de Sumichrast.] Int. Mon., Burlington, Vt. 5, 1902, (563-579, 710-724). [4619 4631]. 142

Forel, Aug. et Dufour, H. La sensibilité des fourmis à l'action de la lumière ultra-violette et à celle des rayons Röntgen. Aarau, Verh. Schweiz. Natf. Ges., 85, 1902, (81-82); Arch. Sci. Phys., Genève, (Ser. 4), 14, 1902, (558-559). [4611]. 143A

For, William J[oseph]. Lithurgopsis, a new genus of bees. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (137-140). [4631]. 143

**Preierleben**, Georg. Unsere Ameisen. Aus d. Heimat, Stuttgart, **16**, 1903, (67–68). [4627 dc]. 145

**Prey-Gessner**, E. Bemerkungen ueber die Imhoff'schen Apiden-Arten in der "Isis" von Oken 1832 and 1834. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1902, (412-418). [4631].

146 Bombus grandaevus Heer. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1902, (419). [4631]. 147 - Hymenoptera Helvetiae. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1903, Beilage (149-180); 11, 1903, Beilage (181-212). [4627 di 4631]. 148 Die Männchen der Anthrena aeneiventris Mor., incisa Evers.,

parviceps Krchb. und rogenhoferi Mor. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 11, 1903, (40–45). [4623 4631]. 149

Hyménoptères du Valais. Bul. Murith., Aigle, **31**, 1902, (21-80). [4627 *di*].

Hyménoptères du Valais (Suite). Bul. Murith., Aigle, **33**, 1903, (200-248). [4627 di]. 151

**Priese**, H. Meliturgula, eine neue Bienengattung aus Süd-Afrika. Zs. Hymenopter., Teschendorf, **3**, 1903, (33-34). [4627 fg 4631]. 152

 **Priese**, H. Neue *Megachile*-Arten des Sanda-Archipel. Zs.Hymenopter., Teschendorf, **3**, 1903, (241–245, 349– 359). [4627 eg 4631]. 154

Neue Arten der Bienengatung Megachile (Blattschneiderbiene) aus Amerika. Zs. Hymenopter., Teschendorf, **3**, 1903, (246–248). [4627 g 4631]. 155

Neue Bombus-Arten aus der neotropischen Region. Zs. Hymenopter., Teschendorf, **3**, 1903, (253–255). [4627 h 4631]. 156

Neue afrikanische Megachile-Arten II. Zs. Hymenopter., Teschendorf, **3**, 1903, (273-390). [4627 f 4631]. 157

Neue Meliponiden II. Zs. Hymenopter., Teschendorf, **3**, 1903, (359– 361). [4631]. 158

Ueber eine Koloniebildung bei der Mörtelbiene. (*Chalicodoma muraria* Retz.) Allg Zs. Ent., Neudamm, **8**, 1903, (313-315). [4619 4631]. 159

Machtrag zur Monographie der Bienengattung *Buglossa*. (Ungarisch) Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (574–575). [4631]. 160

Frohawk, F. W. Attitude of hibernating wasp. Entomologist, London, 36, 1903, (33-34). [4619 4631]. 161

Gaulle, J. de. Un erratum au Catalogus Hymenopterorum de Dalla Torre. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (26). [4631 4627]. 162

Gerstung, F. Der Bienenstaat. Glauhen u. Wissen, Stuttgart, 1, 1903, (183-190, 221-228). [4631 4619].

**Giard**, Alfred. Larve des feuilles du noisetier. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (52). [4619 4615 4631]. 164

Larve de Tenthrède du noisetier et du bouleau [réponse à M. R. Florentin]. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (133). [4615 4619 4631]. 165

Girault, A. Arsene. A new species of gall-wasp [Aulacidea solidaginis] (Cynipidae) from Goldenrod (Solidago). Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (323-324, with fig. in text). [4631]. 166 Warum werden die Königinzellen senkrecht angelegt? Bienenwirthsch. Centralbl., Hannover, **39**, 1903, (52). [4619 4631]. 168

Zur Befruchtung der Königinnen. Bienenwirthsch. Centralbl., Hannover, **39**, 1903, (310) [4619 4631]. 169

**Goodchild**, J. G. Ants in relation to flowers. Edinburgh, Trans. Nat. Soc., 5, 1903, (10-23). [4619 4615]. 170

Gravenhorst, C. J. H. Der praktische Imker. Lehrbuch der rationellen Bienenzucht auf beweglichen und unbeweglichen Waben. 5. verm. u. verb. Aufl., neue Ausg. Leipzig (R. C. Schmidt u. Co.), 1903, (XVIII + 275). 23 cm. Geb. 5 M. [4603 4631]. 171

Gubler, Ulr. Une reine qui ne pond que des œufs stériles. Rev. Internat. Apicult., Nyon, 24, 1902, (149). [4619] 172

**Habermehl**, H. Ueber Ichneumoniden. Varietäten und neue Arten. Zs. Hymenopter., Teschendorf, **3**, 1903, (97–104, 185–192, 217–225). [4631]. 173

Neue Ichneumoniden aus Südwestdeutschland. Zs. Hymenopter., Teschendorf, **3**, 1903, (345–348). [4631]. 174

Hamlyn-Harris, R. The stingless buos of North and South America, considered in the light of domestication. Ent. Rec., London, **15**, 1903, (99–100). [4627 g lt 4619]. 175

Handlirsch, Anton. Vier neue Arten der Hymenopteren-Gattung Gorytes. Wien, Verh. ZoolBot. Ges., 51, 1901, (351-356). [4631]. 176

Harling, George. Auffälliges Naturspiel. [Beine statt der Antennen bei Halictus sp.] Zs. Hymenopter., Teschendorf, **3**, 1903, (208). [4623]. 177

Heyden, L[ukas] von. Beiträge zur Kenntnis der Hymenopteren-Fauna der weiteren Umgegend von Frankfurt a. M. [TI IX: *Apidae.*] Frankfurt a. M., Ber. Senckenb. Ges., **1903**, Tl 2, (97-112). [4627 de]. 178

Hickson, S. J. [Presidential address]. Nature, London, **68**, 1903, (452–458). [0000 6003 4603 .0803]. 179 Hilgendorf, F. W. On a supposed magnetic sense of direction in bees. Wellington, Trans. N. Zeal. Inst., 35, 1903, (482–489). [4619]. 180

**Höppner**, Hans. Weitere Beiträge zur Biologie nordwestdeutscher Hymenopteren. [*Caenocryptus bimaculatus* Grv.] Allg. Zs. Ent., Neudamm, **8**, 1903, (194–202). [4619 4631]. 181

Weitere Beiträge zur Bienenfauna der Lüneburger Heide und Mitteilungen über dasVorkommen einiger Gold- und Faltenwespen daselbst. Aus. d. Heimat, Bremerhaven, **1901/02**, 1903, (17-27). [4027 dc]. 182

Beiträge zur Biologie nordwestdeutscher Hymenopteren. Aus. d. Heimat, Bremerhaven, **1901/02**, 1903, (36-38). [4619]. 183

Holliday, Margaret. A study of some ergatogynic ants. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (293-328). [4607 4631]. 184

Howard, L[eland] O[ssian]. On the habits of Entilia sinuata [in relation to ants]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (75-78). [0219 4019 4031 4619 4031]. 185

**Hudson**, W. H. The Naturalist in La Plata. [Fourth edition. Letterpress as in previous editions, plates different.] London, 1903, (1X + 394). 8vo. [0050 4627 hi 5627 hi 5827 hi 6027 hi]. 186

**Ihering**, H. von. Biologie der stachellosen Honigbienen Brasiliens. Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (179-287, mit 13 'Taf.). [4619–4631]. 187

**Ihering**, Rudolph von. Biologische Beobachtungen an brasilianischen Bombue-Nestern. Allg. Zs. Ent., Neudamm, **8**, 1903, (447-453). [4619 4631]. 188

Zur Frage nach dem Ursprung der Staatenbildung bei den sozialen Hymenopteren. Zool. Anz., Leipzig, 27, 1903, (113-118). [4619 4623]. 189

Contribution à l'étude des Vespides de l'Amérique du Sud. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (144-145). [4631 4627 h]. 190

Israël, W. Ein Ephialtesweibchen bei seiner Eiablage. Gera, Jahresber. Ges. Natk., 43-45, (1900-02), 1903, (82-84). [4631 4619]. 191 Jacobs, J. Ch. Catalogue des ichneumonides de la Belgique appartenant au groupe des Ophionides. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (200-212). [4631]. 192

Johnson, S. Arthur. Nests of Agenia architecta Say. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (290). [4619 4631]. 193

Kaempf, Rich. Das Bienenleben im Winter. D. ill. Bienenztg, Leipzig, **19**, 1902, (3-5). [4619 4631]. 194

Gedanken über die Drohnenschlacht. Bienenwirthsch. Centralbl., Hannover, **38**, 1902, (358–360). [4631 4619]. 195

Karavajev, V. Sur l'observation des fournis dans des nids en plâtre artificiels. (Russ.) Rev. Russ. Ent., JaroslavII, **3**, 1903, (94-98, 174-176). [4619]. 196

**Eterer**, J. J. Zwei neue Hymenopteren (1 Cynipide und 1 Ichneumonide und Bemerkungen über einige Evaniiden. Zs. Hymenopter., Teschendorf, **3**, 1903. (110-111). [4631]. 197

Beschreibung einer neuen australischen Gasteruption-Art. Zs. Hymenopter., Teschendorf, **3**, 1903, (384). [4627 i 4631]. 198

Zur Lebensweise einiger Synergus-Arten. Allg. Zs. Ent., Neudamm, 8, 1903, (122–123). [4619 4631]. 199

---- v. Dalle Torre, von. 200

**Kipping**, [Sebastian Josef]. Der gegenwärtige Standpunkt meiner Entwicklungstheorie der Honigbiene. (Zu Ferdin. Dickels Aufsatz in Bd 16 d. Ztg). Natw. Wochenschr., Jena, **18**, 1903, (313-315). [4611 4631]. 201

**Kirby**, W. F. Hymenoptera. Ichneumons, Wasps and Bees. [The number of species of Hymenoptera composing this fauna is considered to be probably very large, though only 44 are known.] Nat. Hiet. Sokotra, (235-257, pls. XV, XVI). [4627 ff 4631]. 202

Kohl, Franz Friedrich. Zur Kenntnis der palaearktischen Diodontus-Arten. Wien, Verh. ZoolBot. Ges., 51, 1901, (120-134, 1 Taf.). [4607 4631]. 203

Ueber neue Arten der Hymenopteren - Gattung Tachyephex Kohl. Wien, Verh. ZoolBot. Ges., **51**. 1901, (777-781, 1 Taf.). [4631]. 204 745

Kohl, Franz Friedrich. Zur Kenntnis der Sandwespen (Gen. Ammophila Kirby). Wien, Ann. Nat.-Hist. Hofmus., 16, 1901, (142-164, 2 Taf.). [4631]. 205

Kokujev, N. R. Nouvelles espèces transcaspiennes de la sousfamille des Agathidinae. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (240-247). [4627 ea 4631]. 206

Hymenoptera asiatica nova. I, 11. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (285-288, 388-389). [4627 ea 4631]. 207

Kolbe, H. J. Myrmekophile Insekten, speciell *Thorictus foreli* Wasm. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (237-253). [4831 4819 4619]. 209

Konow, F. W. Zwei neue Pamphilius. Zs. Hymenopter., Teschendorf, **3**, 1903, (37-38). [4631]. 210

Neue Tenthrediniden. (Blennocampides, Selandriades und 1 Varietät von Allantus fasciatus Scop.). Zs. Hymenopter., Teschendorf, **3**, 1903, (145-153). [4031]. 212

Ueber die Holmgren'schen Nematiden sowie über Kiaersche und andere Tentbrediniden. Zs. Hymenopter., Teschendorf, **3**, 1903, (154-162). [4631]. 213

Einiges über die Subtribus Perreyides. Zs. Hymenopter., Teschendorf, 3, 1903, (162-166). [4631]. 214

Ein neues Tenthrediniden-Genus. Zs. Hymenopter., Teschendorf, **8**, 1903, (315-316). [4631]. 215

Hyménoptères Teuthrédinides récoltés au Japon par M. J. Harmand. Bul. Muséum, Paris, **1903**, (128). [4627 ec 4631]. 216

Ueber neue oder wenig bekannte Tenthrediniden des russischen Reiches und Centralasiens. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (115-132). [4627 db ea eb 4631]. 217

Kopp, C. Ueber die Wohnungen deutscher Hautflügler. Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (LVII-LX). [4619]. 218

Beobachtungen über den Nestbau von Vespa media D. (†. Aus d. Heimat, Stuttgart, 16, 1903, (26-27). [4631]. 219

Krancher, L. r. Krancher, O.

Krancher, O. und Krancher, L. Kleines Lexikon der Bienenzucht und Bienenkunde, unter teilweiser Berücksichtigung von Geschichte und Pflanzenkunde der Bienenzüchter. Lfg 1-13. Leipzig (R. C. Schmidt & Co.), 1902, (III + 507). 19 cm. Die Lfg 0,40 M. Complet geb. 6 M. [4603 4631]. 220

**Erausse**, A. H. Erkennen Ameisen einer Kolonie andere, derselben Art angehörenden, aber aus einer anderen Kolonie stammenden Ameisen? Northus, Altona, **5**, 1903, (7-8). [4619]. 221

Krieger, R. Zur Synonymik der Ichneumoniden. Zs. Hymenopter., Teschendorf, **3**, 1903, (290-294). [4631]. 222.

**Eryger**, T. P. The Danish trimerous *Chalcididae*. (Danish with a German summary). Kjöbenhavn, Ent. Medd., (Ser. 2), **2**, 1903, (192–197). [4627 da 4631]. 223

**Kulagin**, N[ikolaj]. Aus dem Leber der Bienen. Allg. Zs. Ent., Neudamm, 8, 1903, (395-397). [4619 4631]. 224

**Kulwieć**, Kazimierz. [Parasites des insectes]. (Polonais) Wszechświat, Warszawa, **22**, 1903, (213-217, 246-249). [4619 4819 1419 3019]. 225

Lambotte, Ul. Recherches sur le microbe de la "Loque," maladie des abeilles. Ann. Inst. Pasteur, Paris, 16; 1902, (694-704). [4619]. 226

Lameere, Aug. Note sur les mœurs des fourmis du Sahara. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (160–169). [4619]. 226A

Lewis, E. J. The oak galls and gall Insects of Epping Forest. Pt. I. Stratford, Essex Nat., (267-286). Pt. II. Descriptive and faunistic, *ib.*, **13**, 1903, (138-160, incomplete). [4627 de 4615]. 227

Ljungström, J[ohn] Alb[ert]. Pees in winter-time. (Swedish) Stockholm, 1901, (156, with pl.). 18 cm. [4619-4631]. 228.

Lotter, J. W. Katechismus der Bienenzucht. 6. Aufl. Nürnberg (F. Korn), 1903, (IV + 234). 18 cm. 1,60 M. [0060 4603 4631]. 229 Lüke. Weiteres zur Lyda-Kalamität. Zs. Forstw., Berlin, **35**, 1903, (411–417). [4631]. 230

Lüstner, [Gustav]. Kurze Mitteilung über eine im Marke eines Rebschenkels aufgefundene Grabwespe. Mitt. Weinbau, Geisenheim, **15**, 1903, (108–109). [4631]. 231

McClendon, J. F. v. Wheeler, W[illiam] M[orton].

McLachlan. [Megachile and flowers.] Ent. Mag., London, **39**, 1903, (255). [4619 4631]. 232

Maeterlinck, Maurice. The wrath of the bee. Harper's Monthly Magazine, New York and London, 105, 1902, ([467]-469). [4619 4631]. 233

Das Leben der Bienen. Autorisierte Ausg. in das Deutsche übertragen von Friedrich v. Oppeln-Bronikowski. 2. erweit. Aufl. Leipzig (E. Diederiche), 1903, (264). 20 cm. 4,50 M. [4619 4631]. 234

Marchand, Ernest. Inventaire des Tenthrédinides [sic] ou mouches à scie (Hymenoptera-Chalastogastra) recueillies aux environs de Nantes, suivi de notices sur quelques espèces particulièrement nuisibles. Nantes, Bul. soc. sci. nat., (sér. 2, 2), 12, 1902, (233-296). [4619 4627 df 4631]. 236

Marlatt, C[harles] L[ester]. A Chalcidid parasite [Syntomosphyrum esurus] of the Asiatic lady-bird [Chilocorus similis] [with note by Dr. L. O. Howard]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (138-139). [4619 4631 4831]. 237

Maupy, L. La charge de l'abeille. Rev. Internat. Apicult., Nyon, 24, 1902, (32-33). [4619 4631]. 238

Mayr, Gustav. Südafrikanische Formiciden, gesammelt von Dr. Hans Braus. Wien, Ann. NatHist. Hofmus., 16, 1901, (1-30, 2 Taf.). [4627 fg 4631]. 239

Melander, Axel Leonard. Notes on North American Mutillidae, with descriptions of new species. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (291-330, with pl.). [4627 gf ha 4631]. 240

duests and parasites of the burrowing bee Halictus [nn. spp. of Dipters and Hymenoptera]. Wood's Holl, Mass., Mar. Biol. Bull., 5, 1903, (1-27, with text figs.). [2419 4231 4619 4631]. 241

Metze, Oskar. Ein Bienenschwarm im Platzregen. Aus d. Heimat, Stuttgart, 16, 1903, (69). [4631 4619]. 242

Meves, Friedr. Ueber "Richtungskörperbildung" im Hoden von Hymenopteren. Anat. Anz., Jena, 24, 1903, (29-32). [4615]. 243

Richtungskörperbildung in der Spermatogenese. Kiel, Mitt. Ver. schlesw.-holst. Aerzte, (N.F.), 11, 1903, (240-241). [4615]. 244

Mocsáry, Alexand. Species novae vel minus cognitae generis Synagris Latr. Budapest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (503-508). [4631]. 245

Morice, F. D. New Hymenoptera Aculeata taken by the Swedish Zoological expedition to Egypt and the White Nile in the spring of 1901. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (610-615). [4627 fb 4631]. 246

Help-notes towards the determination of British Tenthredinidae. Ent. Mag., Iondon, **39**, 1903, (9-14, 47-54, 114-119, 187-193, 242-245, 275-277). [4607 4627 de 4631]. 247

Gynandromorph Osmia. London, Proc. Ent. Soc., 1903, (6). [4611 4631]. 248

The probable "hosts" of Ammobates corinatus Morawitz and Phiarus melectoides Smith. Zs. Hymenopter., Teschendorf, 3, 1903, (317). [4631]. 249

----- v. Saunders, E.

Morley, C. Insects, especially parasitic Hymenoptera, noticed in the New Forest in August, 1901. Ent. Mag., London, 39, 1903, (25-29). [4627 de]. 250

Ichneumonologia britannica. The Ichneumons of Great Britain. A descriptive account of the families, genera and species indigenous to the British Islands, together with notes as to classification, localities, habitats, hoets, etc. Ichneumoninae. Plymouth, 1903, (1.+315, 1 pl.). 8vo. [46?7 de 4619 4631]. 251

- r. Saunders, E.

747

Insect pests of the sugarcane. Calcutta, Ind. Mus. Notes, 5, 1903, (164–182, with pls.). [4019 4419 4619 4819]. 253

**Nielsen, T.** C. Note on the lifehistory of *Perisemus fulvicornis* Curt. (Danish, with an English summary) Kjöbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (105–109). [4619 4631]. 254

Observations on the lifehistory of some Danish fossorial wasps. (Danish) Kjöbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (110-114). [4619 4627 da 4631]. 255

Untersuchungen über die Lebensweise und Entwicklung einiger Arten der Gattung Synergus. Allg. Zs. Ent., Neudamm, **8**, 1903, (35-37). [4631]. 256

Nilsen, J. C. Ueber die Entwicklung von Bombylius pumilus Meig., einer Fliege, welche bei Colletes dariesana Smith schmarotzt. Zool, Jahrb.. Jena, Abt. f. Syst., **18**, 1903, (647-658, mit 1 Taf.). [**42**19 4231 4619 4631]. 257

Noel, P. Les ennemis des abeilles. Naturaliste, Paris, (sér. 2), 24, 1902, (70-71, 87, 96-97). [4619 4631]. 258

Norman, A. M. Notes on the Natural History of East Finmark. [Insecta.] Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (166-173). [4227 db 4231 4427 db 4431 4627 db 4631 4827 db 4831]. 259

Nurse, C. G. New species of Indian Aculeate Hymenoptera. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (393-403, 511-526, 528-549). [4627 ef 4631]. 260

New species of Indian Chrysididae. [Continuation.] Entomologist, London, **36**, 1903, (10-12, 40-42). [4627 ef 4631]. 261 — New species of Indian Hymenoptera. Bombay, J. Nat. Hist. Soc., **15**, 1903, (1-18). [4627 ef 4631]. 262

Olivier, Ernest. Note entomologique. Echange, Lyon, 17, 1902, (46). [4631]. 203

Oppeln-Bronikowski, Friedrich von v. Maeterlinck, M. Oudemans, A. C. Symbiose von Coptorthosoma und Greenia. Eine Prioritätsfrage. Zool. Anz., Leipzig, 27, 1903, (137–139). [4631 4619 3031 3019]. 264

Pack-Bereaford, D. R. Notes on wasps. Irish Nat., Dublin, 12, 1903, (16-17). [4631]. 265

[Hibernating position of the wasp.] Irish Nat., Dublin, **12**, 1903, (167). [4619]. 266

---- v. Carpenter, G. H.

Patsner, C. G. E. Schlesiens Bienenzucht. [In: Bunte Bilder aus dem Schlesierlande, Bd 2.] Breslau, 1903, (127-133). [4603 4631]. 267

Péres, C. Contribution à l'étude des métamorphoses. Bul. sci. France-Belgique, Paris, **37**, 1903, (195-427, av. fig. et 3 pls.); Thèse fac. sci. Lille, 1902, (240, av. 3 pls.). 29 cm. [4603 4615 0215]. 268

Perez, J. Espèces nouvelles de Mellifères paléarctiques. Bordeaux, Actes soc. linn., (sér. 6, 7), 57, 1902, (Proc.verb., XLIII-XLVIII, CLXXIV-CLXXIX). [4631]. 269

Diagnoses d'espèces nouvelles de Mellifères. Bordeaux, Actes soc. linn., **58**, 1903, (Proc.-verb., LXXVIII-XCIII, CCVIII-CCXXXVI). [4631]. 270

Perraudière, R. de la. Note sur Coroebus fasciatus Vill.—bifasciatus Ol. et ses parasites. Paris, Bul. soc. ent., **1902**, (251-253). [4619 4831 4819]. 271

Petrunkewitsch, Alexander. Das Schicksal der Richtungskörper im Drohnenei. Ein Beitrag zur Kenntniss der uatürlichen Parthenogenese. Zool. Jahrb., Jena, Abt. f. Anat., **17**, 1903, (481-516, mit 3 Taf.). [4611 4615]. 272

Phillips, E. F. v. Costeel, D. B.

Pic, M. Notes hyménoptérologiques. Echange, Lyon, 17, 1902, (38). [4619 4627 df 4631]. 273

Hyménoptères recueillis en Grèce. Echange, Lyon, 17, 1902, (46). [4631 4627 dl]. 274

Diagnoses d'Ichneumoniens faisant partie de la collection Pic. Echange, Lyon, **17**, 1902, (57-58). [4631]. 275 **Pic**, M. Les types d'Ichneumoniens de ma collection. Echange, Lyon, **17**, 1902, (62, 70-78); **19**, 1903, (96, 104, 120, 136). [4631]. **276** 

Picard, F. Mœurs de l'Ammophila tydei Guill. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (15–17). [4631 4619]. 277

**Pierre**, *Alblé*. Sur l'évolution de *Lixus iridis* Oliv. et de Chalcidides parasites de l'œuf, de la larve et de l'image. Echange, Lyon, **19**, 1903, (108-110, 116-117, 132-133, 141-144). [4831 4819 4631 4619]. 278

Plateau, Felix. Observations sur le phénomène de la constance chez quelques hyménoptères. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (56-83). [4619]. 270

Characteristic Construction of the second state of the second sta

Pomerancev, D. V. Beitrag zur Kenntnis der auf der Fichte (*Picca* excelsa) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Lešn. Inst., **8**, 1902, (3-25, mit 1 Taf.), [4015 4019 4415 4410 4015 4619 4815 4819]. 231

Quail, A. A fly and a spider. (Salius monachus and Porrhothele antipodiana.) Wellington, Trans. N. Zeal. Inst., 35, 1903, (256-258). [4619 3019]. 282

**Beber**, D. Übertragung von Bieneneiern aus bestifteten Zellen in leere Zellen durch die Arbeitsbienen. Schweiz. Bienenztg, Aarau, **25**, 1902, (273-276). [4619 4031]. 283

**Rey**, Eugène. Zur Eiablage von Lophyrus pini. Insektenbörse, Leipzig, **20**, 1903, (268). [4631 4619]. 284

Robertson, Charles. Some new or little known bees. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (79-81). [4631]. 285

Synopsis of Spherodinae [New genera Drepanium, Proteraner, Spherodium, Dialonia and Machaeris]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, [[103]-107). [4631]. 286

Synopsis of Megachilidae and Bombinae. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Sci., 29, 1903, (163-178). [4631]. 287 **Bod.** Edouard. Maeterlinck's essay on the life of bces. [Translated by F. C. de Sumichrast.] Int. Mon., Burlington, Vt., **5**, 1902, (431-447). [4619 4631]. 288

Bodigas, Edgar. Contre les fourmis. Bruxelles, Bul. Soc. roy. linn., **1992.** No. 7. [4619]. 289

Rohrbacher, Al. Wirkungen von Bienenstichen. D. ill. Bienenztg. Leipzig, 20, 1903, (56-57). [4619 4631]. 290

**Bossum**, A. J. van. Pteronus spiraeac Zdd., eine für die niederländische Fauna neue Blattwespe. (Holländisch) 's Gravenhage, Tijdschr. Ent., **45**, 1903, (246-257, mit 1 Taf.). [4627 dd **46**31]. 201

Rothe, H. H. Das Leben der Hummeln. Natw. Wochenschr., Jena, 18, 1903, (457-462). [4619 4631]. 292

**Bothney**, G. A. J. The aculeate Hymenopters of Barrackpore, Bengal. London, Traus. Ent. Soc., **1903**, (93-116). [4619 4627 ef]. 293

**Bucker**, Augusta. A glimpse of the life history of *Mutilla vesta* Cresson. Austin, Cont. Zool. Lab. Univ. 'Tex., No. 44, in Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (75-77). [4619 4631]. 294

**Budow.** Einige ausländische Insektenbauten. Insektenbörse, Leipzig, **20.** 1903, (19). [4619]. **295** 

Zwei Insektenbauten aus Cevlon. Insektenbörse, Leipzig, **20.** 1903, (164). [4619]. 296

Einige Insektenbauten. Insektenbörse, Leipzig, 20, 1903, (259– 260, 269–270). [4619]. 297

Verzeichnis der Nester bauenden Hautflügler, Hymenoptera, Europas. Ent. Jahrb., Leipzig, **12**, 1903, (182-209). [4619 4631]. 298

Russkij, M. Die Ameisenfauna der Astrachanischen Kirgisensteppe. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (294-316). [4627 db 4631]. 299

Une nouvelle fourmi de la Transcaspienne. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1003, (36-37). [4627 ek 4631]. **300** 

Fourmis de la province Transbaïcalienne. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (205–207). [4627 ea 4631]. 301 **Busskij**, M. Die Ameisen der Umgrbungen des Aral-Sees. (Russ.) Taškent, 1zv. Turk. Otd. Russ. Geogr. Obšč, **3**, 1902, livr. 1, (1-25). [4627 4631].

302 **Saakov.** Ueber die künstliche Vermehrung des Parasiten der Eier der Getreidewanze (*Eurygaster integriceps* Orch.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, **TV**, No. 2, 1903, (12). [4019 4615 4619]. 303

Sahlberg, John. [Entomologische Forschungsreisen in den Mittelmeer gegenden und Central-Asien.] (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1902–1903, (1–34); [No. 17], (1–38). [4427 4627 4827 dl dm ei fa fb] 303A

**Sargent**, Frederick le Roy. Plants that keep a body-guard. Plant World, Washington, D.C., **6**, 1903, (103-905). [4619]. 304

Saunders, E. Hymenoptera Aculeata collected by the Rev. Alfred E. Eaton, M.A., in Madeira and Teneriffe, in the spring of 1902, including notes on species taken by the late T. Vernon Wollaston and F. A. Bellamy. London, Trans. Ent. Soc., 1903, (207-218). Supplementary note, *ib.*, (551). [4627 *lb* 4631]. 305

 Odynerus (Hoplopus) simil 

 limus Mor., a wasp new to the British

 list. Ent. Mag., London, **39**, 1903,

 (6-7). [4627 de 4631].
 306

 Hymenoptera Aculeata in

 Jersey, June, 1903. Ent. Mag., London,

 **39**, 1903, (245-248). [4627 de 4631].

 307

On the relationship of Aculeate inquilines and their hosts. Ent. Mag., London, **39**, 1903, (272-274). [4619 4031]. 309

C. Hymenopters collected by Colonel Yerbury in Herefordshire, 1902. Ent. Mag., London, **39**, 1903, (111-114). [4627 de 4631]. 310

menoptera in South Kerry. Irish Nat, Dublin, **12**, 1903, (68). [4627 de]. 311

**Schenk**, Otto. Die antennalen Hautsinnesorgane einiger Lepidopteren und Hymenopteren mit besonderer Berücksichtigung der sexuellen Unterschiede. Zool. Jahrb., Jena, Abt. f. Anat. **17**, 1903, (573-618, mit 2 Taf.). [4407 4607]. 312 Schismer, C. Ibalia cutellator Ltr. und Ibalia schirmeri Kff., Schmarotzer bei Sirez jurencus L. Soc. Entomol., Zürich, 18, 1903, (121-122). [4619 4631]. 313

Schletterer, August. Beitrag zur Hymenopteren Fauna von Süd-Istrien. Wien, Verh. ZoolBot. Ges., 51, 1901, (215-220). [4627 dk 4631]. 314

Schmiedeknecht, O. Die Ichneumonidentribus der Anomalinen. Eine Uebersicht sämmtlicher Gattungen sowie der paläarktischen Arten. Zs. Hymenopter., Teschendorf, 2, 1902, (357-368); 3, 1903, (1-8, 73-80, 171-176). [4631]. 315

Opuscula Ichneumonologica. Fasc. I. II. Blankenburg i. Thür. (Selbstverlag, I)ruck v. W. Greve, Neubraudenhurg), 1902–1903, (1–160). 23 cm. [4631]. 316

Schrottky, C. Neue brasilianische Hymenopteren. Zs. Hymenopter., Teschendorf, 3, 1903, (39–45). [4627 h/ 4631]. 317

Schulz, W. A. Ueber Tipulophion rufithoraz Cam. Zs. Hymenopter., Teschendorf, 3, 1903, (249-253). [4631]. 318

Kritische Bemerkungen zur Hymenopteren-Fauna des nordwestlichen Südamerika. Berliner ent. Zs., **48**, 1903, (253-262). [4627 h 4631]. 319

Beiträge zur näheren Kenntnis der Schlupfwespenfamilie Pelecinidae Hal. München, SitzBer. Ak. Wiss., math.-phys. Cl., **33**, 1903, (435-450, mit 1 Taf.). [4631]. 32)

Materialien zu einer Hymenopterenfauna der westindischen Inseln. München, SitzBer. Ak. Wiss., math.-phys. Cl., **33**, 1903, (451-488, mit Taf.). [4627 he 4631]. 321

Schuster, Ludwig. Das Verbreitungsgebiet der Violettflügeligen Holzbiene (Xylocopa tiolacea) in Deutschlund. Zool. (larten, Frankfurt a. M., 44, 1903, (28-29). [4631]. 322

**Semenov**, A. P. De novo Eraniidarum genere. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (173). [4631]. 323

Analecta hymenopterologica I. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (199). [4631]. 324 Serebrianikov, A. V. Ueber den grossen Kiefernspinner (Gastropacha pini Ochsh). (Russ.) St. Peterburg, Izv. Lešn. Inst., 7, 1901, (29-102, mit 1 Taf.). [4403 4431 4619]. 326

**Sharp**, D. Vespa rufa + austriaca. Ent. Mag., London, **39**, 1903, (297-299). [4619 4623 4631]. 327

**Slosson**, Annie Trumbull. Additional list of insects taken in Alpine region of Mt. Washington. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (4-8) [2427 gg 4631 4831]. 328

Additional list of insecta taken in Alpine region of Mt. Washington [nn. spp. in Parasitica]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (319-321). [2427 gg 4631]. 329

Speiser, P[aul]. Ergänzungen zu (Zwalinas ,, Neuem Verzeichnis der Fliegen Ost- und Westpreussens". II. Allg. Zs. Ent., Neudamm, 8, 1903, (161– 165). [4627 dc]. 330

**Stachelhausen**, L. von. Vererbung bei den Bienen. D. Bienenzucht, Freiburg i. B., **11**, 1903, (21-23). [4619 4623]. 331

**Stäger,** Rob. Beobachtungen über Insekteneinbruch und Honigraub an Blüten mit tiefgeborgenem Nektar. Natur u. Offenb., Münster, **48**, 1902, (234–236). [4619]. 332

**Stebbing**, E. P. Insect pests of the sugarcane in India. Calcutta, Ind. Mus. Notes, **5**, 1903, (64–91). [3819 ±019 ±019 ±019 ±019 ±019]. 333

Departmental Notes on insects that affect forestry, No. 2. Calcutta, 1903, (V-VII + 151-334, with 13 pls.). 25 cm. [2419 4031 4231 4431 4631 4831]. 334

**Strand**, Embr. Hymenopterologic contributions to the fauna of Norway. (Norw.) Kristiania, Forh. Vid. selsk., 1903, No. 8, (8). [4627 da]. 335

**Strobl**, Gabriel. Ichneumoniden Steiermarks (und der Nachbarländer) (Fortsetzung). Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (3-100). [4627 dk 4631]. 336

- v. Rod, Edouard.

Swezey, Otto H. Observations on Hymenopterous parasites of certain Fulgoridae. Columbus, Ohio, Univ. Bull., (Ser. 7), No. 23, 1903, (Cont. Dept. Zool. Ent.). [Reprint from Ohio Nat. Columbus, Ohio, 3, 1903, (444-451, with pl.)] Separate. 23 cm. [4019 4031 4631<sup>-1</sup>. 337

**Brépligeti**, Győrő. System der palaearctischen Braconiden. (Hung.) Állatt. Közlem., Budapest, **2**, 1903, (105–114). [4631]. 338

**Szópligeti**, Victor. Neue Evaniiden aus der Sammlung des ungarischen National-Museums. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903. (364-395). [4631]. 339

Neue Joppinen aus der Sammlung des ungarischen National-Museums. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (477–483). [4631]. 340

Taillandier.Les abeilles pourraient-elles transformer des larves d'ouvrièresen mâles ?.Rev. Internat.Api-cult.,Nyon,24, 1902, (155-156).[4619]4631].

Thisse, Jac[obus] P[ieter]. Les insectes qui visitent le nénuphas blanc [Nymphaea alba L.] (Holländisch) De-Levende Natuur, Amsterdam, 7, 1903, (120-121, av. fig.) [4631–4619]. 342

**Titus**, E. S. (†. Three new Anthidinae from Colorado. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (169–171). [4627 gi 4631]. 343

Vachal, J. Hyménoptères rapportés du Japon par M. Harmand. Mellifère-(4<sup>e</sup> mémoire). Bul. Muséum, Paris, 1903, (129-132). [4631 4627 ec]. 344

Vassiljev, I. V. Der Baumweissling (Aporia cratasgi L.) und dessen Parasiten. (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, III, No. 8, 1902. (36, mit 16 Fig.). [4215 4219 4419 4015 4619]. 345

Viehmeyer, H. Kleinere Beiträge zur Biologie einiger Ameisengäste. Allg. Zs. Ent., Neudamm, 8, 1903, (15-17). [2419 4619 4631]. 346

Viereck, Henry L. Hymenoptera of Beulah, New Mexico. Philadelphia, Pa.. Acad. Nat. Sci., Trans. Amer. Ent. Soc.. 29, 1902–1903, (43–100). [4627 gi 4631]. 347 Viereck, Henry L. Classification of bees of the genus *Bombomelecta*. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (179–182). [4631]. 348

Hymenoptera from southern California and New Mexico with descriptions of new species. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (728-743). [4627 gi 4631]. 349

The home of some aculeate Hymenoptera [in New Jersey] with descriptions of two new species [of *Plenoculus*]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (71-74). [4627 gg 4631]. 350

A new species of Cratichneumon. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (87). [4631]. 351

Concerning bees [Andrena fulvipennis and A. salicis]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (237-238). [4631]. 352

Bombus gelidus Cress, Bombus kincaidii Ckell. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (54). [4631]. 353

Maryland Hymenoptera (Aculeata). Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (119-123). [4627 gh]. 351

A group of diurnal Mutil'idae [Photomorphus johnsoni n. gen. et n. sp. and P. alogus n. sp.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (249-251). [4631]. 355

Wasilkowski, Wł. Les principes géométriques de la structure des cellules des abeilles. (Pol.) Muzeum, Lwów, 19, 1903, (896-899). [4619]. 356

Wasmann, E[rich]. Zum Mimicrytypus der Dorylinengäste. (135. Beitrag zur Kenntnis der Myrmecophilen und Termitophilen.) Zool. Anz., Leipzig, 26, 1903, (581-590). [4619 4819]. 357

Zur Brutpflege der blutroten Raubameise (Formica sanguinea Ltr.). Insektenbörse, Leipzig, 20, 1903, (275-276). [4631 4619]. 358

Waterhouse, C. O. Notes on the nests of bees of the genus *Trigona*. London, Trans. ent. Soc., **1903**, (133-136, pl. VI). [4619 4631]. 359 Webster, F. M. Some insect inhabitants of the stems of Elymus canadensis. Washington, D.C., Bull. U. S. Dept. Agric., Div. Ent., No. 40, 1903, (92-93). [4619 4631]. 360

Some insects attacking the stems of growing wheat, rye, barley and oats, and methods of prevention and suppression. [Life histories and descriptions of species of *Isosoma*, Meromyza and Oscinis]. Washington, D.C., Bull. U.S. Dept. Agric., Div. Ent., No. 42, 1903, (62). 23 cm. [2419 4231 4631]. 361

Weith, R. J. Curious habits of certain Hymenoptera [embodying notes by F. S. Daggett on the alighting of Hymenoptera on surface of water]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (90). [4619]. 362

Wendelen, Ch. Une fourmi incommode et d'une destruction difficile. Chasse et pêche, Bruxelles, 1901, (782). [4619]. 363

Wender, Adolf. Eine merkwürdige Eigenschaft des Bienenstachels. Aus d. Heimat, Stuttgart, 16, 1903, (106). [4619 4631]. 364

Wheeler, William Morton. Extraordinary females in three species of *Formica*, with remarks on mutation in the *Formicidae*. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (639-651). [4607–4623–4631]. 365

Some new gynandromorphous ants, with a review of the previously recorded cases [with bibliography]. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (653-683). [4623 4631]. 366

*Erebomyrma*, a new genus of Hypogneic ants from Texas. Austin, Cont. Zool. Lab. Univ. Tex., No. **45**, *in* Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (137-148). [4627 gi 4631]. 367

A revision of the North American ants of the genus *Leptothorax* Mayr. Austin, Cont. Zool. Lab. Univ. Tex., No. **48**, *in* Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (215-260, with pl.). [**4631**]. 368

The origin of female and worker ants from the eggs of parthenogenic workers. Science, New York, N.Y., (N. Scr.), 18, 1903, (830-833). [0211 4611 4631]. 369 Wheeler, William Morton. Notices biologiques sur les fourmis mexicaines. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (199-205). [4611 4627 h 4631]. 370

Fournis mexicaines. Bruxelles, Ann. Soc. Ent. Belgique, **45**, 1901, (123-136). [4627 h 4631]. 371

and McOlendon, J. F. Dimorphic queens in an Americau ant. (*I.asius latipes* Walsh) [with bibliography]. Austin, Cont. Zool. Lab. Univ. Tex., No. **46**, in Wood's Holl, Mass., Mar. Biol. Lab. Bull., **4**, 1903, (149–163). [4607 4619 4631]. 372

Willis, J. C. and Burkill, J. H. Notes on the anthophilous insect fauna of the Clova mountains. Ann. Scot. Nat. Hist., Edinburgh, 1903, (29 37, 99-102). [2419 4419 4427 de 4627 de 4631]. 373

Yung, Emile. ('ombien y a t-il de fourmis dans une fourmillière (Formica rufa?). Chasse et pêche, Bruxelles, 1901, (295-297). [4619]. 374

Zavřel, Jan. Untersuchungen über die Entwicklung der Stirnaugen (Stemmata) von Vespa. Prag, SitzBer. Böhm. Ges. Wiss., 1902, No. XIII, 1903, (36, mit 3 Taf.). [4615–4631]. 375

# 4603 COMPREHENSIVE AND GENERAL WORKS.

#### GENERAL.

**Cameron**, P. Some new genera and species of Hymenoptera. Entomologist, London, **36**, 1903, (9).

Du Buysson, Robert. Monographie des guêpes ou Vespa. Paris, Ann. soc. ent., 72, 2° semest.), 1903, (260-288, av. pl.).

Forel, Au. Variétés myrmécologiques. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (334-382).

Hickson, S. J. [Presidential address.] Nature, London, 68, 1903, (452-458).

Jacobs, J. C. Diptères de la Belgique. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (356-357).

Lotter, J. W. Katechismus der Bienenzucht. 6 Aufl. Nürnberg (F. Korn), 1903, (IV + 234). 18 cm. 1,60 M. Páres, C. Contribution à l'étade des métamorphoses. Bul. sci. France-Belgique, Paris, 37, 1903, (195-427, av. fig. et 3 pls.); Thèse fac. sci. Lille, 1902, (240, av. 3 pls.). 29 cm.

#### Economics.

**Doumas.** Observations sur l'apiculture en Algérie. Paris, Bul. soc. nat. acclim., **50**, 1903, (86–90).

Gravenhorst, C. J. H. Der praktische Imker. Lehrbuch der rationellen Bienenzucht auf beweglichen und unbeweglichen Waben. 5. verm. u. verb. Aufl., neue Ausg. Leipzig (R. C. Schmidt u. Co.), 1903, (XVIII + 275). 23 cm. Geb. 5 M.

**Krancher**, O. und **Krancher**, L. Kleines Lexikon der Bienenzucht und Bienenkunde, unter teilweiser Berücksichtigung von Geschichte und Pflanzenkunde der Bienenzüchter. Lfg 1-13. Leipzig (R. C. Schmidt u. Co.), 1902, (111 + 507). 19 cm. Die Lfg 0,40 M. Complet geb. 6 M.

Patzner, C. G. E. Schlesiens Bienenzucht. [ln: Bunte Bilder aus dem Schlesierlande, Bd. 2.] Breslau, 1903, (127-133).

# 4607 STRUCTURE.

#### GENERAL.

Ducke, Adolf. Bothynostethus, neotropische Arten. Wien, Verh. ZoolBot. Ges., 52, 1902, (575-580).

Kohl, Franz Friedrich. Zur Kenntnis der palaearktischen *Diodontue*-Arten. *l.e.* 51, 1901, (120-134, mit 1 Taf.).

Morice, F. D. Help-notes towards the determination of British *Tenthredinidae*. Ent. Mag., London, **39**, 1903, (9-14, 47-54, 114-119, 187-193, 242-245, 275-277).

Wheeler, William Morton. Extraordinary females in three species of *Formica*, with remarks on mutation in the *Formicidae*. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (639-051). Separate. **24.5** cm.

\_\_\_\_\_ and **McClendon**, J. F. Dimorphic queens in an American ant (Lasius latires Walsh) [with bibliography]. Austin, Cont. Zool. Lab. Univ. Tex., No. 46, in Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (149-163).

### COMPARATIVE ANATOMY.

**Bisschop van Tuinen, K.** Die Sägewerkzeuge der Cimbicini [vergleichend dargeetellt]. (Holländisch) 's Gravenhage, Tijdschr. Ent., **46**, [1903], (58-64, 3 Taf.).

#### NERVOUS SYSTEM.

Schenk, Otto. Die antennalen Hautsinnesorgane einiger Lepidopteren und Hymenopteren mit besonderer Berücksichtigung der sexuellen Unterschiede. Zool. Jahrb., Jena, Abt. f. Anst., 17, 1903, (573-618, mit 2 Taf.).

## ALIMENTARY SYSTEM.

Bugnion, E. Recherches histologiques sur le tube digestif du Xylocopa violacae. Asrau, Verh. Schweiz. Natf. Ges., 85, 1902, (76); Arch. Sci. Phys., Genève, (sér. 4), 14, 1902, (531–534).

## SPECIAL GLANDS.

**Dreyling**, L. Ueber die wachsbereitenden Organe der Honigbiene. Zool. Anz., Leipzig, **26**, 1903, (710–715).

## REPRODUCTIVE ORGANS.

**Bisschop van Tuinen**, K. Die Sägewerkzeuge der Cimbicini [vergleichend dargestellt]. (Holländisch) 's Gravenhage, Tijdschr. Ent., **46**, [1903], (58-64, 3 Taf.).

Holliday, Margaret. A study of some ergatogynic ants. Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (293-328).

(N 2-9053)

# 4611 PHYSIOLOGY.

#### GENERAL.

Dickel, Ferd. Hat die Biene Eigenwärme und welche? D. ill. Bienenztg, Leipzig, **19**, 1902, (50-52).

Wheeler, W. M. Notices biologiques sur les fourmis mexicaines. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (199– 205).

## PARTHENOGENESIS.

Bachmetjew, P. Ein Versuch, die Frage über die Parthenogenese der Drohnen mittels der analytisch-statistischen Methode zu lösen. Allg. Zs. Ent., Neudamm, 8, 1903, (37-44).

Benetti, V. Ricerche biologiche sui Bombi. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (38-40).

Buttel-Reepen, H. von. Die Parthenogenesis bei der Honigbiene. Natur u. Schule, Leipzig, 1, 1902, (230-239).

Petrunkewitsch, Alexander. Das Schicksal der Richtungskörper im Drohnenei. Ein Beitrag zur Kenntniss der natürlichen Parthenogenese. Zool. Jahrb., Jens, Abt. f. Anat., 17, 1903, (481-516, mit 3 Taf.).

Wheeler, W. M. The origin of female and worker ants from the eggs of parthenogenic workers. Science, New York, N.Y., (N. Ser.), 18, 1903, (830-833).

#### HERMAPHRODITISM.

Morice. Gynandromorph Osmia. London, Proc. Ent. Soc., 1903, (6).

# PRODUCTION OF SEX.

Dickel, Ferd. Einiges über meine Theorie der Geschlechtsbildung. [In: Kalender für deutsche Bienenfreunde, hrsg. v. O. Krancher.] Leipzig, 1903, (108-111).

Die neueste Entwicklungsphase meiner Lehre. D. ill. Bienenztg, Leipzig, **20**, 1903, (174–177).

**Eipping**, [Sebastian Josef]. Der gegenwärtige Standpunkt meiner Entwicklungstheorie der Honigbiene. (Zu Ferdin. Dickels Aufsatz in Bd 16 d. Ztg). Natw. Wochenschr., Jena, **18**, 1903, (313-315).

### PRODUCTION OF CASTE.

Benetti, V. Bombus, ricerche biologiche. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (38-40).

#### FUNCTION OF SENSE ORGANS.

Buttel-Reepen, von. Ueber die Bedeutung der Stirnaugen und der Seitenaugen bei der Honigbiene. Bienenwirthsch. Centrabl., Hanover, **39**, 1903, (322-325).

### FUNCTION OF SPECIAL STRUCTURES.

Ducke, A. Biologische Notizen über einige südamerikanische Hymenoptera. Allg. Zs. Ent., Neudamm, **8**, 1903, (368– 372).

#### ASSIMILATION.

Brünnich. Der Magen der Honigbiene. Schweiz. Bienenztg, Aarau, 25, 1902, (208-217, mit 1 fig.).

# EXPERIMENTAL PHYSIOLOGY.

Forel, Aug[uste] et Dufour, H. La sensibilité des fournis à l'action de la lumière ultra-violette et à celle des rayons Röntgen. Aarau, Verh. Schweiz. Natf. Ges., 85, 1902, (81-82); Arch. Sci. Phys., Genève, (sér. 4), 14, 1902, (558-559).

#### **4615** DEVELOPMENT.

#### GENERAL.

Brünnich. Der Eierstock der Bienenkönigin. Schweiz. Bienenztg, Aarau, 25, 1902, (417-420).

**Coupin**, Henri. Les *Bembez*. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (65-67, av. fig.).

I.es hyménoptères parasites. l.c. (297-299, av. fig.).

**Pernald**, H. T. The plum webbing saw-fly (*Lyda rufipes*). Philadelphia, Pa., Fnt. News Acad. Nat. Sci., **14**, 1903, (298-302). Goodchild, J. G. Ants in relation to flowers. Edinburgh, Trans. Nat. Soc., 5, 1903, (10-23).

Lowis, E. J. The oak galls and gall insects of Epping Forest. Pt. 1. Stratford, Esser Nat., 12, 1903, (267-286). Pt. II. Descriptive and faunistic, *ib.*, 13, 1903, (138-160, incomplete).

Pierre, Abbé. Sur l'évolution de Lizue iridie Oliv. et de Chalcidides parasites de l'œuf, de la larve et de l'image. Echange, Lyon, **19**, 1903, (108-110, 116-117, 132-133, 141-144).

Zavřel, Jan. . . . Entwicklung der Stemmata von Vespa. . . . Prag, Sitz-Ber. Böhm. Ges. Wiss., **1902**, No. XIII, 1903, (36, mit 3 Taf.).

#### SPERMATOGENESIS.

Moves, Friedr. Ueber "Richtungskörperbildung" im Hoden von Hymenopteren. Anat. Anz., Jena, 24, 1903, (29-32).

——— Richtungskörperbildung in der Spermatogenese. Kiel, Mitt. Ver. schlesw.-holst. Aerzte, (N.F.), **11**, 1903, (240-241).

#### EMBRYOLOGY.

Petrunkewitsch, Alexander. Das Schicksal der Richtungskörper im Drohnenei. Ein Beitrag zur Kenntniss der natürlichen Parthenogenese. Zool. Jahrb., Jena, Abt. f. Anat., 17, 1903, (481-516, mit 3 Taf.).

# METAMORPHOSIS AND LARVAL FORMS.

Florentin, R. Note sur une larve de Tenthrède du noisetier et du bouleau. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (105-107, av. fig.).

Giard, Alfred. Larve des feuilles du noisetier. *l.c.* (52).

------ Larve de Tenthrède du noisetier et du bouleau [réponse à M. R. Florentin]. *l.e.* (133).

Pérez, C. Contribution à l'étude des métamorphoses. Bul. sci. France-Belgique, Paris. 37, 1903, (195-427, av. fg. et 3 pls.); Thèse fac. sci. Lille, 1902, (240, av. 3 pls.). 29 cm. **Pomerancev**, D. V. Beitrag zur Kenntnis der auf der Fichte (*Picea excelsa*) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Lésn. Inst., **8**, 1902, (3-25, mit 1 Taf.).

**Saakov.** Ueber die künstliche Vermehrung des Parasiten der Eier der Getreidewanze (*Eurygaster integriceps* Orch.) (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, **IV**, No. 2, 1903, (12).

Vassiljev, I. V. Der Baumweissling (Aporia crataegi L.) und dessen Parasiten. (Russ.) *l.c.* III, No. 8, 1902, (36, mit 16 Fig.).

# 4619 ETHOLOGY.

#### GENERAL.

Barker, E. E. The bell-ants of Victoria. Vict. Nat., Melbourne, 20, 1903, (105-111).

Barthélemy, N. Moyen d'expulser les larves de mâles des rayons. Rev. Internat. Apicult., Nyon, 25, 1903, (207-208).

Bloesch, C. Einige Notizen über Cynipiden und Chalcidier aus der Umgegend von Laufenburg. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **11**, 1903, (46-55).

Brandicourt, Virgile. Pucerons et fourmis. Nature, Paris, **30**, (2° semest.), 1902, (202).

Buttel-Reepen, von. Aus dem Leben der Honigbiene. Allg. Zs. Ent., Neudamm, 8, 1903, (453-457).

**Coupin**, Henri. Les *Bembez*. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (65–67, av. fig.).

Escherich, K[arl]. Ueber die Biologie der Ameisen. Uebersicht über die neueren Arbeiten. Zool. Centralbl., Leipzig, **10**, 1903, (209–250).

Everett, J. D. On the mathematics of bees' cells. London, Proc. Physic. Soc., 18, 1903, (510-513).

**Faces**, H[enri]. (Détails sur la biologie des Hyménoptères. La perforation des métaux). Lausanne, Bull. Soc. Sci. Nat., (sér. 4), **39**, 1903, (III-IV); Arch. Sci. Phys., Genève, (sér. 4), **15**, 1903, (214-215).

(n 2-9053)

**Fielde**, Adele M[arion]. Notes on an ant [Stenamma fultum piceum]. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (599-625).

Supplementary notes on an ant. [Stenamma fulvum piceum]. l.c. 55, 1903, (491-495).

induced to swim. *l.c.* (617-624).

Fischer, E[duard]. Myrmecodia echinata (aus Sumatrs). Bern, Mitt. Natf. Ges., **1903**, (XI).

Florentin, R. Note sur une larve de Tenthrède du noisetier et du bouleau. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (105-107, av. fig.).

Forel, Aug[uste]. Recherches biologiques récentes de Miss Adèle Fielde sur les fourmis. Lausanne, Bul. Soc. Sci. Nat., (sér. 4), **39**, 1903, (95-99).

The social life of ants. [Translated by F. C. de Sumichrast.] Int. Mon., Burlington, Vt., 5, 1902, (563-579, 710-724).

Giard, Alfred. Larve des feuilles du noisetier. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (52).

Larve de Tenthrède du noisetier et du bouleau [réponse à M. R. Florentin]. *l.e.* (133).

**Höppner**, Hans. Weitere Beiträge zur Biologie nordwestdeutscher Hymenopteren. [*Caenocryptus bimaculatus* Grv.] Allg. Zs. Ent., Neudamm, **8**, 1903, (194-202).

**Maeterlinck**, Maurice. The wrath of the bee. Harper's Monthly Magazine, New York and London, **105**, 1902, ([467]-469).

Das Leben der Bienen. Autorisierte Ausg. in das Deutsche übertragen von Friedrich v. Oppeln-Bronikowski. 2. erweit Aufl. Leipzig (E. Diederichs), 1903, (264). 20 cm. 4,50 M.

**Maupy**, L. La charge de l'abeille Rev. Internat. Apicult., Nyon, **24**, 1902, (32-33).

Morley, Claude. Ichneumonologia britannica. The Ichneumous of Great Britain. A descriptive account of the families, genera and species indigenous to the British Islands, together with notes as to classification, localities, habitats, hosts, &c., Ichneumoninae. Plymouth, 1903, (1 + 315, 1 pl.). 8vo.

Pic, M. Notes hyménoptérologiques. Echange, Lyon, 17, 1902, (38).

**Bod**, Edouard. Maeterlinck's essay on the life of bees [Translated by . . . F. C. de Sumichrast]. Int. Mon., Burlington, Vt., 5, 1902, (431-447).

Rothney, G. A. J. The Aculeate Hymenoptera of Barrackpore, Bengal. London, Trans. ent. Soc., **1903**, (93-116).

**Bucker**, Augusta. A glimpse of the life history of *Mutilla vesta* Cresson. Austin, Cont. Zool. Lab. Univ. Tex., No. **44**, *in* Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (75-77).

**Budow.** Zwei Insektenbauten aus Ceylon. Insektenbörse, Leipzig, 20, 1903, (164).

\_\_\_\_\_ Einige Insektenbauten. l.c. (259-260, 269-270).

#### HABITS.

Barthélemy, U. Une reine qui change de domicile. Rev. Internat. Apicult., Nyon, 24, 1902, (197-198).

Bouvier, E. L. Quelques observations sur les insectes mellifères at leurs rapports avec les fleurs. Bul. Muséum, Paris, 1903, (192-196); Naturaliste, Paris, (sér. 2), 25, 1903, (147-148).

Brues, Charles T. On the sleeping habits of some aculeate Hymenoptera. New York, N.Y., J. Ent. Soc., **11**, 1903, (228-230).

**Coupin**, Henri. Les *Bembex*. Nature, Paris, **31**, (1<sup>er</sup> semest.), 1903, (65-67, av. 2 fig.).

Orépieux-Jamin, J. Les essaims naturels. Rev. Internat. Apicult., Nyon, 25, 1903, (129–131).

Fielde, Adele M[arion]. Artificial mixed nests of ants. Woods Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (320-325).

Forel, August. Fourmis termitophages, lestobiose, Atta tardigrada, sous-genres d'Euponera. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (389-398).

Friese, H. Ueber eine Koloniebildung bei der Mörtelbiene. (Chalicodoma muraria Retz.) Allg. Zs. Ent., Neudamm, 8, 1903, (313-315).

Goeken, F. Eigentümliche Schwarmanlegestellen [der Honigbiene]. Bienenwirthsch. Centrabl., Hannover, 38, 1902, (357-358).

Warum werden die Königinzellen senkrecht angelegt? *l.e.* **39**, 1903, (52).

Goodchild, J. G. Ants in relation to flowers. Edinburgh, Trans. Nat. Soc., 5, 1903, (10-23).

Hamlyn-Harris, R. The stingless bees of North and South America considered in the light of domestication. Ent. Rec., London, 15, 1903, (99–100).

Johnson, S. Arthur. Nests of Agenia architecta Say. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (290).

Karavajev, V. Sur l'observation des fourmis dans des nids en plâtre artificiels. (Russ.) Rev. Russ. Ent., Jaroslavlí, 3, 1903, (94-98, 174-176).

Kieffer, J. J. Zur Lebensweise einiger Synergus-Arten. Allg. Zs. Ent., Neudamm, 8, 1903, (122-123).

Kulagin N[ikolaj]. Aus dem Leben der Bienen. *l.c.* (395-397).

Lameere, Aug. Note sur les moeurs des fourmis du Sahara. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (160-169).

McLachian. [Megachile and flowers.] Ent. Mag., London, **39**, 1903, (255).

**Nielsen**, T. C. Note on the life-history of *Perisemus fulricornis* Curb. (Danish with an English summary) Kjöbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (105-109).

Picard, F. Mœurs de l'Ammophila tydei Guill. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (15-17).

**Flateau**, Felix. Note sur les erreurs commises par les hyménoptères visitant les fleurs. Bruxelles, Ann. Soc. ent. Belgique, **46**, 19C2, (113-129).

**Pomerancev** D[mitrij Vladimirovič]. Beitrag zur Kenntnis der auf der Fichte (*Picea ezcelsa*) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Lešn. Inst., **8**, 1902, (3-25, mit 1 Taf.).

**Bothe**, H. H. Das Leben der Hummeln. Natw. Wochenschr., Jena, **18**, 1903, (457-462).

Saakov. Ueber die künstliche Vermehrung des Parasiten der Eier der .Getreidewanze (Eurygaster integriceps Orch.) (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, IV. No. 2, 1903, (12).

**Sargent**, Frederick Le Roy. Plants that keep a body-guard. Plant World, Washington, D.C., **6**, 1903, (103–105).

**Stebbing**, E. P. Insect pests of the sugar cane in India, *Dorylus orientalis* Westw. Calcutta, Ind. Mus. Notes, 5, 1903, (77).

Thijsse, Jac[obus] P[ieter]. Les insectes qui visitent le nénuphas blanc (Nymphaea alba L.). (Holländisch) De Levende Natuur, Amsterdam, 7, 1903, (120-121, av. fig.).

Wasilkowski, W. Les principes géométriques de la structure des cellules des abeilles. (Polonais) Muzeum, Lwów, 19, 1903, (896-899).

wetth, R. J. Curious habits of certain Hymenoptera [embodying notes by F. S. Daggett on the slighting of Hymenoptera on surface of water]. Philadephia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (90).

Wheeler, W[illiam] M[orton] and McClendon, J. F. Dimorphic queens in an American ant (*Lasius latipes* Walsh) [with bibliography]. Austin, Cont. Zool. Lab. Univ. Tex., No. 46, *in* Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (149– 163).

Yung, Emile. Combien y a t-il de fourmis dans une fourmillière (*Formica rufa*)? Chasse et pêche, Bruxelles, **1901**, (295-297).

#### HIBERNATION.

Frohawk, F. W. Attitude of hibernating wasp. Entomologist, London, 36, 1903, (33-31).

Kaempf, Rich. Das Bienenleben im Winter. D. ill. Bienenztg, Leipzig, 19, 1902, (3-5).

Ljungström, J[ohn] A[lbert]. Bees in winter-time. (Swedish) Stockholm, 1901, (156, with pl.). 18 cm.

**Pack Beresford.** [Hibernating position of the wasp.] Irish Nat., Dublin, **12**, 1903, (167).

#### PARENTAL RELATIONS.

Wasmann, E[rich]. Zur Brutpflege der blutroten Raubameise (Formica sanguinea Ltr.). Insektenbörse, Leipzig, 20, 1903, (275-276).

## SEXUAL RELATIONS.

**Bulman**, G. W. The constancy of the bee. Zoologist, London, (Ser. 4), 6, 1902, (220-222).

**Carpenter,** G. H. and **Pack-Beresford**, D. R. The relationship of Vespa austriaca to Vespa rufa. Ent. Mag., London, **39**, 1903, (230-242, pl. IV); Irish Nat., Dublin, **12**, 1903, (221-238, pl. II).

**Dadant**, C. P. La fécondité des fauxbourdons. Rev. Internat. Apicult., Nyon, **25**, 1903, (61-64).

Goeken, F. Zur Befruchtung der Koniginnen. Bienenwirthsch. Centrabl., Hannover, **39**, 1903, (310).

**Kaempf**, R. Gedanken über die Drohnenschlacht. *l.c.* **38**, 1902, (358– 360).

**Plateau**, Félix. Observations sur le phénomène de la constance chez quelques hyménoptères. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (56-83).

**Sharp**, D. Vespa rufa + austriaca. Ent. Mag., London, **39**, 1903, (297-299).

Taillandier. Les abeilles pourraient-elles transformer des larves d'ouvrières en mâles ? . . . Rev. Internat. Apicult., Nyon, 24, 1902, (155– 156).

#### **OVIPOSITION.**

Brünnich. Der "Nestduft" bei den Insekten, speciell bei den Bienen. Schweiz. Bienenztg, Aarau, 25, 1902, (476-479).

Burfeind, H. Aus dem Leben der Honigbiene. [Eiablage d. Königin.] Aus d. Heimat, Bremerhaven, **1902-03**, 1903, (38).

Du Buyeson, R. Nidification de quelques Mégachiles. Paris, Ann. soc. ent., 71, (2<sup>e</sup> semest.), 1902, [1903], (751-755).

Ducke, A. Biologische Notizen über einige südamerikanische Hymenopteren. Allg. Zs. Ent., Neudamm, **8**, 1903, (368– 372).

Forel, A[uguste]. Die Sitten und Nester einiger Ameisen der Sahara bei Tugurt und Biskra. Beobachtet von Dr. August Diehl. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (453– 459).

Gubler, Ulr. Une reine qui ne pond que des œufs stériles. Rev. Internat. Apicult., Nyon, 24, 1902, (149).

**Höppner**, H[ans]. Beiträge zur Biologie nordwestdeutscher Hymenopteren. Aus d. Heimat, Bremerhaven, **1901–02**, 1903, (36-38).

Israël, W. Ein Ephialtesweibchen bei seiner Eiablage. Gera, Jahresber. Ges. Natk., **43–45**, (1900–02), 1903, (82– 84).

Kopp, C. Ueber die Wohnungen deutscher Hautflügler. Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (LVII-LX).

**Reber**, D. Uebertragung von Bieneneiern aus bestifteten Zellen in leere Zellen durch die Arbeitsbienen. Schweiz. Bieneuztg, Aarau, **25**, 1902, (273-276).

Rey, Eugène. Zur Eiablage von Lophyrus pini. Insektenbörse, Leipzig, 20, 1903, (268).

**Budow**. Verzeichnis der Nester bauenden Hautflügler, Hymenoptera, Furopas. Ent. Jahrb., Leipzig, **12**, 1903, (182–209).

Einige ausländische Insektenbauten. Insektenborse, Leipzig, 20, 1903, (19).

Vassiljev, I. V. Der Baumweissling (Aporia crataegi L) und dessen Parasiten. (Russ.) Trd. B. entom. Ucen. Kom. Zeml., St. Peterburg, III, No. 8, 1902, (36, mit 16 fg.).

Waterhouse, C. O. Notes on the nests of bees of the genus *Trigona*. London, Trans. ent. Soc., **1903**, (133-136, pl. VI).

#### INSTINCT AND PSYCHOLOGY.

**Ferton**, Ch. Notes détachées sur l'instinct des hyménoptères mellifères et ravisseurs (2<sup>e</sup> série), avec la description d'une nouvelle espèce. Paris, Ann. soc. ent., 71, (2<sup>e</sup> semest.), 1902, (499-531, av. 1 pl.).

**Higendorf.** On a supposed magnetic sense of direction in bees. Wellington, Trans. N. Zeal. Inst., **35**, 1903, (482–489).

**Kransse**, A. H. Erkennen Ameisen einer Kolonie andere, derselben Art angehörenden, aber aus einer anderen Kolonie stammenden Ameisen? Nerthus, Altona, **5**, 1903, (7-8).

Stäger, Rob. Beobachtungen über Insekteneinbruch und Honigraub an Blüten mit tiefgeborgenem Nektar. Natur u. Offenb., Münster, **48**, 1902, (234-236).

# SOCIAL RELATIONS.

Bouvier. La vie des abeilles. Bui. Inst. psych. internat., Paris, 2, 1902, (88-105).

Buttel-Reepen, H. von. Die stammesgeschichtliche Entstehung des Bienenstaates sowie Beiträge zur Lebenweise der solitären u. sozialen Bienen (Hummeln, Meliponinen etc.) Vortrag . . . Stark erweitert, mit Anm. u. Zusätzen hrsg. Leipzig (G. Thieme), 1903, (XII + 138). 23 cm. 2,40 M.

**Fielde**, Adele M[arion]. A cause of feud between ants of the same species living in different communities. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **5**, 1903, (326-329).

Gerstung, F. Der Bienenstast. Glauben u. Wissen, Stuttgart, 1, 1903, (183-190, 221-228).

**Ihering**, H. von. Biologie der stachellosen Honigbienen Brasiliens. Zool. Jahrb., Jena, Abt. f. Syst., **19**. 1903, (179-287, mit 13 Taf.).

Ihering, Rodolpho von. Zur Frage nach dem Ursprung der Staatenbildung bei den sozialen Hymenopteren. Zool. Anz., Leipzig, 27, 1903, (113-118).

------ Biologische Beobachtungen an brasilianischen Bombus Nestern. Allg. Zs. Ent., Neudamm, **8**, 1903, (447-453).

Metze, Oskar. Ein Bienenschwarm im Platzregen. Aus d. Heimat, Stuttgart, 16, 1903, (69).

Stachelhausen, L. von. Vererbung bei den Bienen. D. Bienenzucht, Freiburg i. B., **11**, 1903, (21-23).

### SYMBIOSIS.

**Ozeraki**, Stanisław. Nouvelles recherches sur la myrmécophilie. (Polonais) Wszechświat, Warszawa, **22**, 1903, (308-311).

Escherich, K[arl]. Beiträge zur Kenntnis der Thysanuren. Reihe I. Zool. Anz., Leipzig, 26, 1903, (345– 366).

Howard, L[eland] O[ssian]. On the habits of *Entilia sinuata* [in relation to ants]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (75-78).

Kolbe, H. J. Myrmekophile Insekten, speciell *Thorictus foreli* Wasm. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (237-253).

Melander, Axel Leonard and Brues, Charles Thomas. Guests and parasites of the burrowing bee *Halietus* [nn. spp. of Diptera and Hymenoptera]. Wood's Holl, Mass., Mar. Biol. Bull., 5, 1903, (1-27, with text.-fig.).

Oudemans, A. C. Symbiose von Coptorthosoma und Greenia. Eine Prioritätsfrage. Zool. Anz., Leipzig, 27, 1903, (137–139).

Quail, A. A fly and a spider. (Salius monachus and Porrhothele antipodiana). Wellington, Trans. N. Zeal. Inst., **35**, 1903, (256–268).

Viehmeyer, H. Kleinere Beiträge zur Biologie einiger Ameisengäste. Allg. Ze Ent., Neudamm, **3**, 1903, (15– 17).

Wasmann, E[rich]. Zum Mimicrytypus der Dorylinengäste. (135. Beitrag zur Kenntnis der Myrmecophilen und Termitophilen.) Zool. Anz., Leipzig, 26, 1903, (581-590).

## PARASITISM.

Parasitic Hymenoptera. [Translated from La Nature.] Sci. Amer. Sup., New York, N.Y., 55, 1903, (22952).

Bignell, G. C. British oak galls. Falmouth, Rep. R. Cornwall Polyt. Soc., 1902, (72–93).

Coupin, Henri. Les Hyménoptères parasites. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (297-299, av. fig.). Dambach. Die Bienenlaus. Schweiz. Bienenztg, Aarau, 25, 1902, (447-449).

**Dorr**, Emile. Rareté des lépidoptères. Abondance de parasites. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (38).

Eakel, Lida S. The resin-gnat Diplosis and three of its parasites. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (279-284, with pl.).

Kulwieć, K. Parasites des insectes. (Polonais) Wszechświat, Warszawa, 22, 1903, (213-217, 246-249).

Lambotte, Ul. Recherches sur le microbe de la "Loque," maladie des abeilles. Ann. Inst. Pasteur, Paris, 16, 1902, (694-704).

Marlatt, C[harles] L[ester]. A Chalcidid parasite [Syntomosphyrum esurus] of the Asiatic lady-bird [Chilocorus similis] [with note by Mr. L. O. Howard]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (138-139).

Nicéville, Lionel de (the late). Insect pests of frait trees. [Burycephalus alcocki Green, parasitic on Ceroplastes floridensis Comst. (a fruit pest.)] Calcutta, Ind. Mus. Notes, 5, 1903, (117-127, with pls.).

Insect pests of the sugar cane. [Apinteles scirpophagae Ashm., Bracon nicevillii Bingh., Goniozus indicus Ashm., Pimpla praedator Fabr. var., all parasitic on Scirpophaga aurifua (a sugar cane pest)]. I.c. (164-182, with pls.).

Nielsen, T. C. Observations on the life history of some Danish fcesorial wasps. (Danish) Kjöbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (110–114).

Nilson, J. C. Ueber die Entwicklung von Bombylius pumilus Meig. einer Fliege, welche bei Colletes daviesana Smith schmarotzt. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (647-658, mit 1 Taf.).

Perraudière, R. de la. Note sur Coroebus fasciatus Vill. — bifasciatus Ol. et ses parasites. Paris, Bul. soc. ent., 1902, (251-253).

Plerre, abbé. Sur l'évolution de Lizue iridis Oliv. et de Chalcidides parasites de l'œuf, de la larve et de l'image. Echange, Lyon, **19**, 1903, (108-110, 116-117, 132-133, 141-144). Saunders, E. On the relationship of Aculeate inquilines and their hosts. Ent. Mag., London, 39, 1903, (272-274).

Schirmer, C. Ibalia cutellator Ltr. and Ibalia schirmeri Kfl., Schmarotzer bei Sirez jurencus L. Soc. Entomol., Zürich, 18, 1903, (121-122).

Screbrianikov, A. V. Ueber den grossen Kiefernspinner (Gastropacha pini). (Russ.) St. Peterburg, Izv. Lösn. Inst., 7, 1901, (29–101, mit 1 Taf.).

Webster, F. M. Some insect inhabitants of the stems of *Elymus canadensis*. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (92-93).

#### DEFENSIVE PROCESSES.

Wender, Adolf. Eine merkwürdige Eigenschaft des Bienenstachels. Aus d. Heimat, Stuttgart, **16**, 1903, (106).

#### UTILITY AND HARMFULNESS.

Marchand, Ernest. Inventaire des Tentbrédinides [sic] ou mouches à scie (Hymenoptera-Chalastogastra) recueillies aux environs de Nantes, suivi de notices sur quelques espèces particulièrement nuisibles. Nantes, Bul. soc. sci. nat., (sér. 2, 2), 12, 1902, (233-296).

Moel, P. Les ennemis des abeilles. Naturaliste, Paris, (sér. 2), 24, 1902, (70-71, 87, 96-97).

**Pomerancev**, D. V. Beitrag zur Kenntnis der auf der Fichte (*Picea ezcelaa*) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Löen. Inst., **8**, 1902, (3-25, mit 1 Taf.).

**Bodigas**, Edgar. (Contre les fourmis. Bruxelles, Bul. Soc. roy. linn., **1902**, No. 7.

Rohrbacher, Al. Wirkungen von Bienenstichen. D. ill. Bienenztg, Leipzig, 20, 1903, (56-57).

Wendelen, Ch. Une fourmi incommode et d'une destruction difficile. Chasse et pêche, Bruxelles, **1901**, (782).

#### PATHOLOGY.

Die Faulbrut der Bienen. Schweiz. Landw. Centralbl., Frauenfeld, **21**, 1902, (343-347). [4631].

# 4623 VARIATION AND ÆTIOLOGY.

#### GENEBAL.

**Casteel**, D. B. and **Phillips**, E. F. Comparative variability of drones and workers of the honey bee [Apis melli-fica]. Wood's Holl, Mass., Mar. Biol. Lab. Bull., **6**, 1903, (18-37, with text-fig.).

**Prey-Gessner**, E. Die Männchen der Anthrena aeneiventris Mor., incisa Evers. parviceps Krchb. und rogenhoferi Mor. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **11**, 1903, (40–45).

Wheeler, William Morton. Extraordinary females in three species of Formica, with remarks on mutation in the Formicidae. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (639-651).

Some new gynandromorphous ants, with a review of the previously recorded cases. [With bibliography.] *l.e.* (653-683).

#### TERATOLOGICAL VARIATION.

Harling, George. Auffälliges Naturspiel. [Beine statt der Antennen bei Halictus sp.] Zs. Hymenopter., Teschendorf, 3, 1903, (208).

#### HEREDITY.

**Stachellhausen**, L. von. Vererbung bei den Bienen. D. Bienenzucht, Freiburg i. B., **11**, 1903, (21-23).

#### CROSSES AND HYBRIDS.

**Sharp**, D. Vespa rufa + austriaca. Ent. Mag., London, **39**, 1903, (297-299).

#### EVOLUTION.

Buttel-Reepen, H. von. Die stammesgeschichtliche Entstehung des Bienenstaates sowie Beiträge zur Lebensweise der solitären u. sozialen Bienen (Hummeln, Meliponinen etc.) Vortrag . . . Stark erweitert, mit Anm. u. Zusätzen hrsg. Leipzig (G. Thieme), 1903, (XII + 138). 23 cm. 2,40 M.

Ihering, Rodolpho von. Zur Frage nach dem Ursprung der Staatenbildung bei den sozialen Hymenopteren. Zool. Anz., Leipzig, **27**, 1903, (113–118).

# 4627

## 4627 GEOGRAPHICAL DISTRIBUTION.

# a EARTH AS A WHOLE.

Gaulle, J. de. Un erratum au Catalogus Hymenopterorum de Dalla Torre. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (26).

# d EUROPE.

## da SOANDINAVIA.

**Eryger**, T. P. The Danish trimerous *Chalcididae*. (Danish, with a German summary) Kjöbenhavn, Ent. Medd., (Ser. 2), **2**, 1903, (192–197).

Nielsen, T. C. Observations on the life-history of some Danish fossorial wasps. (Danish) *l.c.* (110-114).

**strand**, Embr. Hymenopterologic contribution to the fauna of Norway. (Norw.) Kristiania, Forh. Vid. selsk., **1903**, No. 8, (8).

db RESSIA IN EUROPE.

Konow, F. W. Ueber neue oder wenig bekannte Tenthrediniden des Russischen Reiches und Centralasiens. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (115-132).

Norman, A. M. Notes on the natural history of East Finnark. [Hymenopters.] Ann. Mag. Nat. Hist., London, (Ser: 7), 11, 1903, (166-173).

Russkij, M. Die Ameisenfauna der Astrachanischen Kirgisensteppe. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (294-316).

#### de German Empire.

Baer, W. Zur Apiden-Fauna der Kurischen Nehrung. Allg. Zs. Ent., Neudamm, 8, 1903, (157-161).

Freierleben, Georg. Unsere Ameisen. Aus d. Heimat, Stuttgart, **16**, 1903, (67-68).

Heyden, L[ukas] von. Beiträge zur Kenntnis der Hymenopteren-Fauna der weiteren Umgegend von Frankfurt a. M. [Tl IX: Apidae.] Frankfurt a. M., Ber. Senckenb. Ges., **1903**, Tl 2, (97-112). **Höppner**, Hans. Weitere Beiträge zur Bienenfauna der Lüneburger Heide und Mitteilungen über das Vorkommen einiger Gold- und Faltenwespen daselbst. Aus. d. Heimat, Bremerhaven, **1901– 1902**, 1903, (17–27).

**Speiser**, P[aul]. Ergäuzungen zu Czwalinas "Neuem Verzeichnis der Fliegen Ost- und Westpreussens". II. Allg. Zs. Ent., Neudamm, **8**, 1903, (161– 165).

#### dd Holland and Belgium.

**Bossum**, A. J. van. . . Eine für die niederländische Fauna neue Blattwespe [*Pteronus spiraeae*]. (Holländisch) s' Gravenhage, Tijdschr. Ent., **45**, 1903, (248-257, mit 1 Taf.).

de British Islands.

Lewis, E. J. The oak galls and gall insects of Epping Forest. Pt. I. Stratford, Essex Nat., 12, 1903, (267-286). Pt. II. Descriptive and faunistic. *ib.*, 13, 1903, (138-160, incomplete).

Morley, C. Insects, especially parasitic Hymenoptera, noticed in the New Forest in August, 1901. Ent. Mag., London, **39**, 1903, (25-29).

Ichneumonologia britannica. The Ichneumons of Great Britain. A descriptive account of the families, genera, and species indigenous to the British Islands, together with notes as to classification, localities, habitats, hosts, etc. Ichneumoninae. Plymouth, 1903, (1 + 315, 1 pl.).

**Morice,** F. D. Help-notes towards the determination of British *Tenthredinidae*. Ent. Mag., London, **39**, 1903, (9–14, 47–54, 114–119, 187–193, 242–245, 275–277).

Saunders, E. Odynerus (Hoplopus) simillimus Mor., a wasp new to the British list. l.c. (6-7).

Jersey, June, 1903. *l.c.* (245-248).

C. Hymenoptera collected by Colonel Yerbury in Herefordshire, 1902. *l.c.* (111-114). Willis, J. C. and Burkill, J. H. Notes on the anthophilous insect fauns of the Clova mountains. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (29-37, 99-102).

### df FRANCE.

Marchand, Ernest. Inventaire des Tenthrédinides [sic] ou mouches à scie (Hymenoptera-Chalastogastra) recueillies aux environs de Nantes, suivi de notices sur quelques espèces particulièrement nuisibles. Nantes, Bul. soc. sci. nat., (sér. 2, 2), 12, 1902, (233-296).

Pic, M. Notes hyménoptérologiques. Echange, Lyon, 17, 1902, (38).

#### di SWITZERLAND.

**Bloesch**, C. Einige Notizen über Cynipiden und Chalcidier aus der Umgegend von Laufenburg. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **11**, 1903, (46-55).

Forel, Aug[uste]. Faune myrmécologique des noyers dans le canton de Vaud. Lausanne, Bul. Soc. Sci. Nat., (sér. 4), **39**, 1903, (83-94).

Frey-Gessner, E. Hyménoptères du Valais. Bul. Murith., Aigle, **31**, 1902, (21-80); **33**, 1903, (200-248).

Hymenoptera Helvetiae. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, Beilage, (149–180); **11**, 1903, Beilage, (181–212).

# dk AUSTRIA-HUNGARY.

Schletterer, August. Beitrag zur Hymenopteren-Fauna von Süd-Istrien. Wien, Verh. ZoolBot. Ges., 51, 1901, (215-220).

**Strobl**, G Steiermarks Ichneumoniden. Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (3-100).

# . dl Balkan Peninsula.

Pic, M. Hyménoptères recueillis en Grèce. Echange, Lyon, 17, 1902, (46).

Sahlberg, John. [Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien]. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., **45**, [No. 9], 1902–1903, (1–34); [No. 17], (1–38).

# dm MEDITERRANEAN.

Sahlberg, J. Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1902-1903, (1-34); [No. 17], (1-38)

#### ASIA.

ea ASIATIO RUSSIA.

Kolrujev, N. R. Nouvelles espèces transcaspiennes de la sousfamille Agathidinae. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (240-247).

———— Hymenoptera asiatica nova I. Kev. Russ. Ent., Jaroslavlí, **3**, 1903, (285-288).

Konow, F. W. Ueber neue oder wenig bekannte Tenthrediniden des russischen Reiches und Centralasiens. St. Peterburg, Ann. Mus. zool. Ac. Soc., 8, 1903, (115-132),

**Russkij**, M. Fourmis de la province Transbaïcalienne. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (205-207).

——— Die Ameisen der Umgebungen des Aral-Sees. (Russ.) Taskent, Izv. Turk. Otd. Russ. Geogr. Obšč., **3**, 1902, livr. I, (1-25).

# eb CHINA.

Konow, F. W. Ueber neue oder wenig bekannte Tenthredmiden des russischen Reiches und Centralasiens. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (115-132).

#### ec JAPANESE ISLANDS.

André, Ernest. Hyménoptères formicides récoltés au Japon, par M. Harmand. Bul. Muséum, Paris, **1903**, (128).

**Cameron**, P. Descriptions of ten new species and nine new genera of *Ichneumonidae* from India, Ceylon and Japan. Entomologist, London, **36**, 1903, (233-241, 260-261).

763

**Cameron**, P. Descriptions of four new species of *Vespa* from Japan. *l.c.* (278-281).

Du Buysson, R. Hyménoptères récoltés au Japon par M. J. Harmand. Bul. Muséum, Paris, **1903**, (125-127).

Konow, F. W. Hyménoptères Tenthrédinides récoltés au Japon par M. J. Harmand. Bul. Muséum, Paris, **1903**, (128).

Vachal, J. Hyménoptères rapportés du Japon par M. Harmand. Mellifères (4° mémoire). *l.c.* (129-132).

ef BRITISH INDIA.

**Bingham**, C. T. The fauna of British India, including Ceylon and Burma. Published under the authority of the Secretary of State for India in Council. Edited by W. T. Blanford. Hymenoptera, Vol. II. Ants and Cuckoo-waspe. London, 1903, (xix + 506, 1 <sub>1</sub>l. and illustrs.). 8vo. [Review], Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (190-191).

**Cameron**, P. On some new genera and species of parasitic and fossorial Hymenoptera from the Khasia Hills, Assam. *l.c.* **11**, 1903, (173–185, 313-331).

On some new genera and species of parasitic Hymenopters from the Khasia Hills, Assam. *l.c.* **12**, 1903, (266-272, 363-371, 565-583).

Descriptions of nineteen new species of Laridae, Odynerus, and Apidae from Barrackpore. London, Trans. ent. Soc., **1903**, (117-132).

<u>—</u> Descriptions of twelve new genera and species of *Ichneumonidae* (*Heresiarchini* and *Amblypygi*), and three species of *Ampulex* from the Khasia Hills, India. *l.c.* (219-238).

Descriptions of ten new species and nine new genera of *Ichneu*monidae from India, Ceylon and Japan. Entomologist, London, **36**, 1903, /233– 241, 260–261).

\_\_\_\_\_ Hymenoptera orientalia, contributions to the knowledge of the Hymenoptera of the Oriental zoological region. The Hymenoptera of the Khasia hills. Part 2, Section 2. Manchester, Mem. Lit. phil. Soc., 47, No. 14, 1903, (1-50).

**Cameron**, P. Vespa germanica F. in India. Zs. Hymenopter., Teschendorf, **3**, 1903, (317).

Forel, A[uguste]. Myrmicinae nouveaux de l'Inde et de Ceylon. Rev. Suisse Zool., Genève, 10, 1902, (165– 249).

Nurse, C[harles] G[eorge]. New species of Indian Hymenoptera. Bombay, J. Nat. Hist. Soc., 15, 1903, (1-18).

------- New species of Indian Aculeate Hymenoptera. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (393-403, 511-526, 529-549).

New species of Indian Chrysididae. [Continuation.] Entomologist, London, **36**, 1903, (10-12, 40-42).

**Bothney**, G. A. J. The Aculeate Hymenoptera of Barrackpore, Bengal. London, Trans. Ent. Soc., **1903**, (93– 116).

## eg MALAY PENINSULA AND ABCHIPELAGO.

Bingham, C. T. Diagnoses of Aculeate Hymenopters. Fascic. Malay. Zool., 2, App., (iii-vii).

Friese, H. Neue Arten der Bienengattung Xylocopa Latr. aus der neotropischen und orientalischen Region. Zs. Hymenopter., Teschendorf, **3**, 1903, (202– 208).

——— Neue Megachile-Arten des. Sunda Archipel. *l.c.* (241-245, 349-359).

#### ei ASIATIC TURKEY, ARABIA.

Sahlberg, J. Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 1], 1902-1903, (1-34); [No. 17], (1-38). ek Caspian.

Russkij, M. Une nouvelle fourmi de la Transcaspienne. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (36-37).

# f AFRICA.

Enderlein, Günther. Neue und weniger bekannte africanische Xylocopen, besonders aus der Ausbeute des Freiherrn vou Erlanger in Galla und Somali. Berliner ent. Zs., **48**, 1903, (45-64).

Friese, H. Neue afrikanische Megachile-Arten. II. Zs. Hymenopter., Teschendorf, 3, 1903, (273-290).

# fa MEDITERRANEAN STATES.

Forel, A[uguste]. Die Sitten und Nester einiger Ameisen der Sahara bei Tugurt und Biskra. Beobachtet von Dr. August Diehl. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, (453– 459).

Sahlberg, J. Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1502-1903, (1-34); [No. 17], (1-38).

# fb N.E. AFRICA.

Enderlein, Günther. Zwei neue ostafrikanische Zeuxerania-Arten. [Z. globiceps u. Z. tenuistilus.] Berliner ent. Zs., 48, 1903, (41-44).

Morice, F. D. New Hymenoptera Aculeata taken by the Swedish Zoological Expedition to Egypt and the White Nile in the spring of 1901. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (610-615).

Sahlberg, J. Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1902-1903, (1-34); [No. 17], (1-38).

# fc SAHARA AND FRENCH SOUDAN.

Forel, A. Les fourmis du Sahara algérien, récoltées par M. le professeur A. Lameere, et le docteur A. Diehl. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (147-156).

# fd WEST AFRICA.

Du Baysson, R. Description d'une Polybie nouvelle d'Afrique. Paris, Bul. soc. ent., 1902, (253-254).

du Congo. Bul. Muséum, Paris, **1902**, (599-601).

# fe ANGOLA.

Forel, A[ugust]. Einige neue Ameisen aus Süd-Angola. [In : Kunene-Sambesi-Expedition, hrsg. v. P. Warburg.] Berlin, 1903, (559-564).

# ff EAST AFRICA.

Kirby, W. F. Hymenopters. Ichneumons, wasps and bees. [The number of species of Hymenopters composing this fauna is considered to be probably very large, though only 44 are known.] Nat. Hist. Sokotra, (235-257, pls. XV, XVI).

# fg SOUTH AFRICA.

**Bingham**, C. T. On the Hymenopters collected by Mr. W. L. Distant in the Transvaal, South Africa, with descriptions of supposed new species. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (46-49).

**Gameron**, P. Description of a new species of Ammoplanus (Hymenopters) from South Africa. Entomologist, London, **36**, 1903, (178).

Friese, H. Meliturgula, eine neue Bienengattung aus Süd-Afrika. Zs. Hymenopter., Teschendorf, **3**, 1903, (33– 34).

Mayr, G. . . Südafrikanische Formiciden. Wien, Ann. NatHist. Hofmus., **16**, 1901, (1-30, 2 Taf.).

# g NORTH AMERICA.

Bruner, Lawrence. Some notes on the bee genus Andrena [with table of North American species]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (239-258). **Cockerell**, T[heodore] D[ru] A[lison]. North American bees of the genus Nomada. Philadelphia, Pa., Proc. Acad. Nat. Sci., **55**, 1903, (580-614).

New American Hymenoptera, mostly of the genus Nomada. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (200-214).

a new Homopteron. *l.c.* (442-455).

Friese, H. Neue Arten der Bienengattung Megachile [Blattschneiderbiene] aus Amerika. Zs. Hymenopter., Teschendorf, **3**, 1903, (246-248).

Hamlyn-Harris, R. The stingless bees of North and South America, considered in the light of domestication. Ent. Rec., London, 15, 1903, (99–100).

gf UNITED STATES.

Melander, Axel Leonard. Notes on North American *Mutillidae*, with descriptions of new species. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (291-330, with pl.). Separate. 24 cm.

gg North-Eastern United States.

Viereck, H. L. The home of some aculeate Hymenopters [in New Jersey] with descriptions of two new species [of *Plenoculus*]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (71-74).

gh South-Eastern United States.

Viereck, H. L. Maryland Hymenoptera (Aculeata). Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (119-123).

gi WESTERN UNITED STATES.

Ashmead, W[illia]m H[arris]. [Bombus titusi n. sp. from Colorado.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (50).

Brues, Charles Thomas. Studies of Texan bees. Part I. Austin, Cont. Zool. Lab. Univ. Tex., No. 41, in Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (79-85, with fig. in text.). **Gockerell**, T[heodore] D[ru] A[lison]. The bee-genus Xenoglossa in California. *l.e.* **13**, 1902, (103).

From California. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (559-579).

Hymenoptera of southern California. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, (70–71, 137–140).

Titus, E. S. G. Three new Anthidiinae from Colorado. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (169-171).

Viereck, Henry L. Hymenoptera of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (43-100).

Hymenoptera from southern California and New Mexico, with description of new species. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (728-743).

Wheeler, William Morton. Erebomyrma, a new genus of Hypogaeic ants from Texas. Austin, Cont. Zool. Lab. Univ. Tex., No. 45, in Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (137-148).

h Central and South America and West Indies.

**Cameron**, P. On the parasitic Hymenoptera and *Tenthredinidae* collected by Mr. Edward Whymper on the "Great Andes of the Equator." Entomologist, London, **36**, 1903, (95-97, 120-123, 158-161).

[Fossoria and Apiclae]. Descriptions of new species of Hymenopters taken by Mr. Edward Whymper on the "Higher Andes of the Equator." Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (225-238).

Ducke, Adolf. Neue südamerikanische Chrysididen. Zs Hymenopter., Teschendorf, **3**, 1903, (129-136, 226-232).

Friese, H. Neue Arten der Bienengattung Xylocopa Latr. aus der neotropischen und orientalischen Region. *l.e.* (202-208). Friese, H. Neue Bombus-Arten aus der neotropischen Region. l.c. (253– 255).

**Hamlyn-Harris**, R. The stingless bees of North and South America considered in the light of domestication. Ent. Rec., London, **15**, 1903, (99–100).

**Ihering**, Rodolpho von. Contribution à l'étude des Vespides de l'Amérique du Sud. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (144-155).

Schulz, W. A. Kritische Bemerkungen zur Hymenopteren-Fauna des nordwestlichen Südamerika. Berliner ent. Zs., 48, 1903, (253-262).

Wheeler, W. M. Fourmis mexicaines. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (123-136).

les fourmis mexicaines. *l.c.* (199-205).

ha MEXICO.

Melander, Axel Leonard. Notes on North American Mutillidae, with descriptions of new species. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (291-330, with pl.). Separate. 24 cm.

he WEST INDIES.

Schulz, W. A. Materialien zu einer Hymenopterenfauna der westindischen Inseln. München, SitzBer. Ak. Wiss., math-phys. Cl., 33, 1903, (451-488, mit Taf.).

hh BRAZIL.

**Schrottky**, C. Neue brasilianische Hymenopteren. Zs. Hymenopter., Teschendorf, **3**, 1903, (39–45).

hi Argentina.

Hudson, W. H. The Naturalist in La Plats. [Fourth edition. Letterpress as in previous editions, plates different]. London, 1903, (IX + 394). 8vo.

Montandon, A. L. Espèces nouvelles ou peu connues du genre *Belostoma* appartenant aux collections du Musée National Hongrois. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (358-363).

i AUSTRALASIA.

ic AUSTRALIA.

Forel, Aug[uste]. Fourmis nouvelles d'Australie. Rev. Suisse Zool., Genève, 10, 1902, (405-548). **Eleffer**, J. J. Beschreibung einer neuen Australischen *Gasteruption*-Art. Zs. Hymenopter., Teschendorf, **3**, 1903, (384).

if VIOTORIA.

**Barker**, E. E. Bull-ants of Victoria. Vict. Nat., Melbourne, **20**, 1903, (105–111).

l ATLANTIC.

# lb Azores, Canaries, Madeira, Cape Verde.

Saunders, E. Hymenoptera Aculeata collected by the Rev. A. E. Eaton, M.A., in Madeira and Teneriffe, in the spring of 1902, including some notes on species taken by the late T. Vernon Wollaston and F. A. Bellamy. London, Trans. Ent. Soc., 1903, (207-218), Supplementary note, *ib.*, (551).

m. INDIAN OCEAN.

ma ISLANDS N. OF THE EQUATOR.

Forel, A[uguste]. Les fourmis des Iles Andamans et Nicobares. . . . Rev. Suisse Zool., Genève, **11**, 1903, (399-411).

# 4631 TAXONOMY AND SYSTEMATIC.

# GENERAL.

**Bignell**, G. C. British oak galls. Falmouth, Rep. R. Cornwall Polyt. Soc., **1902**, (72-93).

**Gameron**, P. Descriptions of nineteen new species of *Laridae*, *Odynerus* and *Apidae* from Barrackpore. London, Trans. Ent. Soc., **1903**, (117-132).

Hymenopters (Ichneumonidae). Fauna of Maldive and Laccadive Islands, 1, (51-63).

Hymenoptera orientalia, or contributions to the knowledge of the Hymenoptera of the Oriental zoological region. The Hymenoptera of the Khasia hills. Part 2, Section 2. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (1-50).

List of N. Zealand Hymenoptera. Wellington, Trans. N. Zeal. Inst., 35, 1903, (290-299). 767

Cockerell, T. D. A. Hymenopters of Southern California. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, (70-71, 137-140).

Du Buysson, R. Hyménoptères récoltés au Japon par M. J. Harmand. Bul. Muséum, Paris, **1903**, (125–127).

**Prey-Gessner**, E. Hymenoptera Helvetiae. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1903, Beilage (149– 180); **11**, 1903, Beilage (181–212).

Gaulle, J. de. Un erratum au Catalogus Hymenopterorum de Dalla Torre. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (26).

**Kirby**, W. F. Hymenoptera. Ichneumons, Wasps and Bees. [The number of species of Hymenoptera composing this fauna is considered to be probably very large, though only 44 are known]. Nat. Hist. Sokotra, (235-257, pls. XV, XVI).

Melander, A. L. and Brues, C. T. New species of Hymenoptera. Wood's Holl, Mass., Mar. Biol. Bull., 5, 1903, (1-27, with text fig.).

Norman, A. M. Hymenoptera in: Notes on the Natural History of East Finmark. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (167).

Pic, M. Notes hyménoptérologiques. Echange, Lyon, 17, 1902, (38).

------ Hyménoptères recueillis en Grèce. *l.c.* (46).

**Budow.** Verzeichnis der Nester bauenden Hautflügler, Hymenoptera, Europas. Ent. Jahrb., Leipzig, **12**, 1903, (182-209).

Saunders, E. Aculeata collected by Colonel Yerbury in Herefordshire, 1902. Ent. Mag., London, **39**, 1903, (112-113).

------ Hymenopters Aculeata in Jersey, June, 1903. *l.c.* (245-248).

C. Hymenoptera collected by Col. Yerbury in Herefordshire, 1902. *l.c.* (111-114).

Schletterer, A. Beitrag zur Hymenopteren-Fauna von Süd-Istrien. Wien, Verh. ZoolBot. Ges., 51, 1901, (215-220).

Schulz, W. A. Kritische Bemerkungen zur Hymenopteien-Fauna des nordwestlichen Südamerika. Berliner ent. Zs., 48, 1903, (253-262). Schuls, W. A. Materialien zu einer Hymenopterenfauna der westindischen Inseln. München, SitzBer. Ak. Wiss., math.-phys. Cl., 33, 1903, (451-488, mit. Taf.).

Semenov, A. P. Analecta hymenopterologica I . . . Rev. Russ. Ent., Jaroslavlí, 3, 1903, (199).

**Swersey**, O. H. Observations on Hymenopterous parasites of certain *Fulgoridae*. Columbus, Ohio, Univ. Bull., (Ser. 7), No. 23, 1903, (Cont. Dept. Zool. Ent.). [Reprint from Ohio Nat. Columbus Ohio, **3**, 1903. (444 to 451, with pl.]. Separate, 23 cm.

Viereck, H. L. Hymenopters of Beulah, New Mexico. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (43–100).

Hymenoptera from southern California and New Mexico with descriptions of new species. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (728-743).

#### ACULEATA.

## GENERAL.

Brues, C. T. On the sleeping habits of some aculeate Hymenoptera. New York, N.Y., J. Ent. Soc., 11, 1903, (228-230).

**Viereck**, H. L. The home of some aculeate Hymenoptera in New Jersey with descriptions of two new species of *Plenoculus*. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (72-74).

### ANTHOPHILA.

#### GENERAL.

Parasitisme des Triangulins dans les nids de Mellifères. Feuille jeunes natural., Paris, (sér. 4), **33**, 1902, (13-14), d'après Green, Ern. On some parasites of *Xylocopa tenuiscapa*. Ent. Mag., London, **1902**, (232-233). [4619 4631 4819].

Bessler, J. G. Illustriertes Lehrbuch der Bienenzucht. 3. Aufl. Neu bearb. v. J. Elsässer. Stuttgart, Berlin, Leipzig (W. Kohlhammer), 1903. (VII + 304). 18 cm. 2 M.

٩

Bouvier. La vie des abeilles. Bul. Inst. psych. internat., Paris, 2, 1902, (88-105).

Quelques observations sur les insectes mellifères et leurs rapports avec les fleurs. Bul. Muséum, Paris, **1903**, (192–196); Naturaliste, Paris, (sér. 2), **25**, 1903, (147–148).

Brues, C. T. Studies of Texan bees Part 1. Austin, Cont. Zool. Lab. Univ. Tex., No. 41, in Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (79–85, with fig. in text.).

**Cameron**, P. Descriptions of new species of *Apidae* taken by Mr. Edward Whymper on the "Higher Andes of the Equator." Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (225–238).

**Cockerell,** T. D. A. Notes on some genera of bees. *l.c.* (183-189).

**Doumas**. Observations sur l'apiculture en Algérie. Paris, Bul. soc. nat. acclim., **50**, 1903, (86-90).

Du Buysson, R. Nidification de quelques Mégachiles. Paris, Ann. soc. ent., **71**, (2<sup>•</sup> semest.), 1902, [1903], (751-755).

Ducke, A. Beitrag zur Synonymie der neotropischen Apiden. Zs. Hymenopter., Teschendorf, **3**, 1903, (176–177).

Ferton, Ch. Notes détachées sur l'instinct des hyménoptères mellifères et ravisseurs (2° série), avec la description d'une nouvelle espèce. Paris, Ann. soc. ent., 71, (2° semest.), 1903, (499-531, av. 1 pl.).

Frey-Gessner, E. Bemerkungen ueher die Imhoff'schen Apiden-Arten in der "Isis" von Oken 1832 and 1834. Schaffhausen, Mitt. Schweiz. Entomol. Ges, 10, 1902, (412-418).

Anthrena aeneiventris Mor., incisa Evers. parviceps Krchb. und rogenkoferi Mor., die Männchen. l.c. 11, 1903, (40-45).

Friese, H. Neue afrikanische Megachile-Arten II. Zs. Hymenopter., Teschendorf, 3, 1903, (273-290).

Ljungström, J[ohn] Alb[ert]. Bees in winter-time. (Swedish) Stockholm, 1901, (156, with pl.). 18 cm.

Noel, P. Les ennemis des abeilles. Naturaliste, Paris, (sér. 2), 24, 1902, (70-71, 87, 96-97). Pórez, J. Espèces nouvelles de Mellifères paléarctiques. Bordeaux, Actes soc. linn., (sér. 6, 7), 57, 1902, (Proc. verb. XLIII-XLVIII, CLXXIV-CLXXIX).

Diagnoses d'espèces nouvelles de Mellifères. *l.c.* 58, 1903, (Proc.-verb., LXXVIII-XCIII, CCVIII-CCXXXVI).

**Bobertson**, C. Synopsis of *Mega-chilidae* and *Bombinae*. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (163–178).

Rod, E. Maeterlinck's essay on the life of bees. [Translated by F. C. de Sumichrast]. Int. Mon., Burlington, Vt., 5, 1902, (431-447).

Vachal, J. Hyménoptères rapportés du Japon par M. Harmand. Mellifères (4<sup>e</sup> mémoire). Bul. Muséum, Paris, 1903, (129–132).

Willis, J. C. and Burkill, J. H. Notes on the anthophilous insect fauna of the Clova mountains. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (29-37, 99-102).

### SPECIAL.

Agapostenon perucianus n. sp. Callao. **Cameron**, P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (237).

Alcidamea urulalis n. sp. California. Cockerell, T. D. A. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, (70-71, 137-140).

Ammobates corinatus, host. Mories, F. D. Zs. Hymenopter., Teschendorf., 3, 1903, (317).

Andrena, species. North America. Bruner, L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (239-258).

fulvipennis, A. salicis, notes. **Viereck**, H. L. Philadelphia, Pa., Ent. News. Acad. Nat. Sci., 13, 1902, (237-238).

Andrena nn. spp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (53-56).

T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (215).

*mimetica* n. sp. North America. **Cockerell**, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (442-443).

patella n. sp. Kashmir. Nurse, C. G. *l.c.* 11, 1903, (512-543).

Anthemois n. gen., type Megachile infragilis Cresson. **Bobertson**, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (163-178).

Anthidium conciliatum n. sp. Kashmir. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (517).

ham, C. T. Fuscic. Malay. Zool., 2, App., (VI).

pondreum n. sp. Colorado. Titus, E. S. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci.. 13, 1902, (169-171).

Anthophora nn. spp. North America. Cockerell, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (451– 452, 454–455).

nn. spp. Péres J. Bordeaux, Actes soc. linn., (Sér. 6), 7, 57, 1902, (Proc. verb. XLIII-XLV).

*quachalae* n. sp. **Cameron**, P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (233).

<u>nubiterrae</u> n. sp. New Mexico. Viereck, H. L. *l.c.* 1902-1903, (46).

Apis, notes. Cockerell, T. D, A. Entomologist, London, **36**, 1903, (177-178).

mellifica. Les petites abeilles noires. Rev. Intern. Apicult., Nyon, 25, 1903, (178–179).

Die Faulbrut. Schweiz. Landw. Centralbl., Frauenfeld, 21, 1902, (343-347). (x 2-9053) Apis mellifica. Histologie des Ernährungs-Systems. Abonyi, S. Állatt. Közlem., Budapest, 2, 1903, (137–168, mit Taf. XI-XIV).

der Drohnen. Bachmetjew, P. Allg. Zs. Ent., Neudamin, 8, 1903, (37–44).

change de domicile. Barthélemy, U. Rev. Internat. Apicult., Nyon, 24, 1902, (197-198).

pulser les larves de mâles des rayons. Barthflemy, N. *l.c.* 25, 1903, (207-208).

<u>mich.</u> Schweiz. Bienenztg, Aarau, **25**, 1902, (203-217, mit 1 fig.).

Königin. Brünnich. l.e. (417-420).

<u>— Bulman</u>, G. W. Zoologist, London, (Ser. 4), **6**, 1902, (220-222).

Königin. Burfeind, H. Aus d. Heimat, Bremerhaven, 1901-02, 1903, (38).

Buttel-Reepen, von. Allg. Zs. Ent., Neudamm, 8, 1903, (453-457).

Bedeutung der Stirnaugen und der Seitenaugen. Buttel-Reepen, von. Bienenwirthsch. Centralbl., Hannover, **39**, 1903, (322-325).

Eis. Buttel Reepen, H. von. Natur u. Schule, Leipzig, 1, 1902, (230–339).

Casteel, D. B. and Phillips, E. F. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 6, 1903, (18-37, with text-fig.).

I.es essains naturels. **Crépieux - Jamin**, J. Rev. Internat. Apicult., Nyon, **29**, 1903, (129-131).

des faux bourdons. **Dadant**, C. P. *l.c.* (61-64).

Dickel, F. D. ill. Bienenztg, Leipzig, 19, 1902, (50-52).

**Dreyling**, L. Zool. Anz., Leipzig, **26**, 1903, (710–715).

Apis mellifica, sociale Peziehungen. Gerstung, F. Glauben u. Wissen, Stuttgart, 1, 1903, (183-190, 221-228).

Schwarmanlegestellen. Goekan, F. Bienenwirtsch. Centralbl., Hannover, 38, 1902, (357-358).

die Königinzellen senkrecht angelegt? Goeken, F. *l.c.* **39**, 1903, (52).

der Königinnen. Goeken, F. l.c. (310).

C. J. H. Der praktische Imker. Lehrbuch der rationellen Bienenzucht auf beweglichen und unbeweglichen Waben. 5. verm. u. verb. Arfl., neue Ausg. Leipzig (R. C. Schmidt u. Co.), 1903, (XVIII + 275). 23 cm. Geb. 5 M.

ne pond que des œufs stériles. Gubler, U. Rev. Internat. Apicult., Nyon, 24, 1902, (149).

hungen. Kaempf, R. Bienenwirthsch. Centralbl., Hannover, **38**, 1902, (358– 360).

ter. **Eacmpf**, R. D. ill. Bienenztg, Leipzig, **19**, 1902, (3-5).

Kalender für deutsche Bienenfreunde auf dus Jahr 1903. Jg 16, hrsg. . . v. Oskar Krancher. Leipzig (R. C. Schmidt & Co.), 1903, (V111 + 184).

des Geschlechtes. **Kipping**, [S. J.]. Natw. Wochenschr., Jena, **18**, 1903, (313-315).

**Erancher**, L. Kleines Lexikon der Bienenzucht und Bienenkunde, unter teilweiser Lerücksichtigung von Geschichte und Pflanzenkunde der Bienenzüchter. Lfg 1-13. Leipzig (R. C. Schnidt & Co.), 1902, (111 + 507). 19 cm. Die Lfg 0,40 M. Complet geb. 6 M.

**Eulagin**, N. Allg. Zs. Ent., Neudamin, **8**, 1903, (395-397).

Katechismus der Bienenzucht. 6. Aufl. Nürnberg (F. Korn), 1903, (IV + 234). Apis mellifica. Masterlinck, M. Das Leben der Bienen. Autorisierte Ausg. in das Deutsche übertragen von Friedrich v. Oppeln-Bronikowski. 2. erweit. Aufl. Leipzig, 1903, (264).

M. The wrath of the bee. Harper's Monthly Magazine, New York and London, 105, 1902 ([467]-469).

Maupy, L. Rev. Internat. Apicalt., Nyon, 24, 1902, (32-33).

schwarm im Platzregen. Metze, O. Ans d. Heimat, Stuttgart, 16, 1903, (69).

Pataner, C. G. E. Schlesiens Bienenzucht. [In : Bunte Bilder aus dem Schlesierlande, Bd 2.] Breslau, 1903, (127-133).

Uebertragung von Eiern aus bestifteten Zellen in leere Zellen durch die Arbeitsbieneu. **Beber**, D. Schweiz. Bienenztg, Aarau, **25**, 1902, (273-276).

wirkungen von Stichen. **Bohrbacher**, A. D. ill. Bienenztg, Leipzig, **20**, 1903, (56-57).

Les abeilles pourraient-elles transformer des larves d'ouvrières en mâles? **Taillandier**. Rev. Internat. Apicult., Lyon, **24**, 1902, (155-156).

dige Eigenschaft des Bienenstachels. Wender, A. Aus d. Heimat, Stuttgart, 16, 1903, (106).

Bombias n. gen., type B. auricomus nom.nov. Robertson, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer Ent. Soc., 29, 1903, (176).

Bombomelecia, classification and nn. spp. Viersch, H. L. l.c. (179–182).

Bombus, ricerche biologiche. Benetti, V. Mon. zool. ital., Firenze, 13, 1902, (Supplemento), (38-40).

an brasilianischen Nestern. Ihering. R. von. Allg. Zs. Ent., Neudamm, 8, 1903, (447-453).

Lebensweise. **Rothe**, H. H. Natw. Wochenschr., Jena, **18**, 1903, (457-462).

Bombus grandaerus Heer. **Prey-**Gessner, E. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1902, (419).

gelidus Cress., Bombus kincaidii Ckll. Viereck, H. L. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (54).

*titusi* n. sp. Colorado. Ashmead, W. H. *l.c.* 13, 1902, (50).

Caenohalictus n. gen., C. trichiothalmus n. sp. Cameron, P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (231).

Centris. Alfken, J. D. Zs. Hymenopter., Teschendorf, 3, 1903, (211-213).

Centrosmia n. gen., type Osmia bucophala Cresson. **Bobertson**, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (170).

Ceratias n. gen., type Megachile pugnatus Say. **Bobertson**, C. l.e. (168– 172).

Ceratina nn. spp. British Guiana. Cocksrell, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (201– 202).

submaritima: ehrhorni n. subsp. California. Cockerell, T. D. A. *l.e.* (453).

**Cockerell**, T. D. A. *l.c.* (453).

Chalicodoma muraria, Koloniebildung. Friese, H. Allg. Zs. Ent., Neudamm, 8, 1903, (313-315).

Chelostoma au tralis n. sp. California. Cockerell, T. D. A. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, (70-71, 137-140).

Coelioxys curvispina n. sp. Borneo. Cameron, P. Entomologist, Loudon, 36, 1903, (9).

rufilarsus: rho's n. subsp. North 'America. **Oockerell**, T. D. A. Ann. Mag. Nat. Hist., London, (Ner. 7), **12**, 1903, (452).

stolidus n. sp. India. Nurse, C. G. *l.c.* 11, 1903, (548).

Colletes nn. spp. Pérez, J. Proc.verb. Soc., Bordeaux, 58, 1903, (CCXXIII-CCXXX).

Lin. + pp. New Mexico. **Viersck**, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1902-1903, (58-62).

(s 2-9053)

Colletes cruc's n. sp. **Cockerell**, T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (304).

dariesana, Parasitismus von Bombylius pumilus bei. Nilsen, J. C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (647-658, mit 1 Taf.).

Coptorthosoma, Symbiose mit Greenia. Oudemans, A. C. Zool. Anz., Leipzig, 27, 1903, (137-139).

Crocisa jägerskiöldi n. sp. Khartum. Morice, F. D. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (611-612).

kashmirensis n. sp. Kashmir. Nurse, C. G. *l.c.* 11, 1903, (548-549).

Cyphopy ja n. gen., type Megachile moulizaga Cresson. **Robertson**, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (169, 172).

Dasiapis n. gen., D. ochracea n. sp. North America. Cockerell, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (450-451).

Dasypoda minor n. sp. Pérez, J. Proc.-verb. Soc., Bordeaux, 58, 1903, (CCXXII).

Diagonozus n. gen., D. bicometes n sp. Kamerun. Enderlein, G. Berliner ent. Zs., 48, 1903, (35-37).

Dialonia n. gen., type Sphecodes antennariae. **Bobertson**, C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (104).

Dianthidium balli n. sp. Colorado. Titus, E. S. G. *l.e.* 13, 1902, (169-171).

Diceratosmia n. gen., type Osmia quadridentata ('resson. **Robertson**, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (166, 171).

Drepanium n. gen., type Sphecodes falcifer Pittn. **Robertson**, C. Philadelphia, Pa., Ent. News Acad, Nat. Sci., **14**, 1903, (103).

Epeolus autumnalis n. sp. **Bobertson**, C. l.c. **13**, 1902, (79-81).

*militaris* Gerst. und Epeolus friesci n. sp. **Brauns**, H. Zs. Hymenopter., Teschendorf, **3**, 1903, (362-364).

ecelestus var. tubercularis n. sp., E. scelestus var. tubercularis n. var. 3 D 2 Brues, C. T. Austin, Cont. Zool. Lab. Univ. Tex., No. 41 in: Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (81-82).

Eucera nn. spp. Párez, J. Bordeaux, Actes soc. linn., (sér. 6), 7, 57, 1902, (Proc.-verb. XLVI-XLVIII).

P. Philadelphia, I'a., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (234).

Euglossa leucopyga Fries & E. ornata Moes. & Beschreibung, nn. spp. et nn. varr. Friese, H. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (574-575).

Gna'hodon n. gen., type Megachile georgica ('resson, **Bobertson**, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (168, 172).

Gnathosmia n. gen., type Osmia georgica Cresson. Robertson, C. l.c. (165, 171).

Habropoda? carinifrons n. sp. Ecuador. Cameron, P. l.c. (235).

Halictoides daridsoni n. sp California. **Cockerell**, T. D. A. Los Angeles, Bull., So. Cal. Acad. Sci., **1**, 1902, (70-71, 137-140).

(Parahalictoides) oryz n. sp. New Mexico. **Viereck**, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1902–1903, (49).

Halictus, notes on the genus. Cockerell, T. D. A. Entomologist, London, **36**, 1903, (206-208).

Visitant les fleurs de Nymphaea alba. (Hollandais) **Thijsse**, J. P. De Levende Natuur, Amsterdam, **7**, 1903, (120-121, av. fig.).

nn. spp. Bengal. **Cameron**, P. London, Trans. Ent. Soc., **1903**, (130-132).

P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (330-331).

nn. spp. **Enderlein**, G. Berliner ent. Zs., **48**, 1903, (38, 40).

C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (541-542).

nn. spp. Pérez. Bordeaux, Actes & co linn., 58, 1903, (Proc.-verb., LXXVIII-XCIII, CCVIII-CCXVI). Halictus nn. spp. Japan. Vachal, J. Bul. Muséum, Paris, 1903, (129– 132).

arctifrons n. sp. Teneriffe. Saunders, E. London, Trans. Ent. Soc., 1903, (215).

cameron, P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (231).

C. T Fascic. Malay. Zool., 2, App., (V).

Heriades odontura n. sp. California. Cockerell, T. D. A. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, (70-71, 137-140).

Leucosmia n. gen., type Osmia albirentris Cresson. **Robertson**, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (166, 171).

Lithurgopsis n. gen., type Lithurgus apicalis Cresson. **For**, W. J. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (137-140).

\_\_\_\_\_ note. Fox, W. J. l.c. (182).

*gibbosus* var. opuntiae n. var. Cockerell, Γ. D. A. *l.c.* (182).

Machacris n. gen., type Sphecodes stygius, M. illinoensis n. sp. **Robertson**, C. l.c. 14, 1903, (104, 107).

Macrocera nn. spp. Pérez, J. Bordeaux, Actes soc. linn., (sér. 6), 7, 57, 1902, (Proc. verb. XLV-XLVI).

Megachile and flowers. McLachlan. Ent. Mag., London, **39**, 1903, (255).

nn. spp. **Cameron**, P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (232-233).

nn. spp. California. Cockerell, T. D. A. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, (70-71, 137-140).

nn. spp. Sunda-Archipel. **Friese**, H. Zs. Hymenopter., Teschendorf. **3**, 1903, (241-245, 349-359).

II. *l.c.* **3**, 1903, (246–248, 273–290).

Megachile nn. spp. Kashmir. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (546-547).

japonica n. sp. Japan. Alfren, J. D. Zs. Hymenopter., Teschendorf, 3, 1903, (209-211).

longula n. nom. = Megachile (= Lithurgus) oblonga Fox. Fox, W. J. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (137-140).

------ scindularia n. sp. Congo. Du Buysson, R. Bul. Muséum, Paris, 1902, (599-601).

tricarinata n. sp. Transvaal. **Bingham**, C. T. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (58– 59).

Megacillisa nn. spp. Cameron, P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (232, 237).

Melanomada n. subgen. (Nomada). Cockerell, T. D. A. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (587).

Melanostelis nyssonoides n. sp. Brues, ('. T. Austin, Cont. Zool. Lab. Univ. Tex., No. 41 in : Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (84).

Melipona, Brazilien, Biologie. Inering, H. von. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (172-287, mit 13 Taf.).

nn. spp. Bingham, C. T. Fascic. Malay. Zool., 2, App. (VI).

H. Zs. Hymenopter., Teschendorf, 3, 1903, (359-361).

Melissodes humilior n. sp. New Mexico. **Cockerell**, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (447-448).

Meliturgula n. gen., M. braunsi n. sp. Süd-Afrika. **Friese**, H. Zs. Hymenopter., Teschendorf, **3**, 1903, (33-34).

Microstelis n. gen., type Stelio lateralis Cresson. Bobertson, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (170-171).

Monilosmia n. gen., type Osmia canadensis Cresson. **Bobertson**, C. l.c. (166, 171).

Nomada, North American spp. Cockerell, T. D. A. Philadelphia, Pa., Proc. Acad. Nat. Sci, 55, 1903, (580-614). nn. spp. North America. **Cockerell**, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (444– 447).

nn. spp. N. astori var. ? ultima n. var. America. Cockerell, T. D. A. l.c. (203-214).

*deccrata* (Smith), description and 3 nn. spp. Kashmir. Nurse, C. G. *l.e.* **11**, 1903, (543-545).

formula n. sp. California-Viereck, H. L. Philadelphia, Pa, Proc-Acad. Nat. Sci., 54, 1902, (728-743).

C. Philadelphia, Pa., Ent News Acad. Nat. Sci., 13, 1902, (79-81).

Nomadula n. subg. (Nomada). Cockerell, T. D. A. Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (580-614).

Nomiann. spp. Transvaal. Bingham, C. T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (51-53).

<u>tegulata</u> Smith & from Egypt, description. **Morice**, F. D. *l.e.* (610–611).

Oligotropus n. gen., O. campanulas n. sp. **Bobertson**, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (168, 171).

Osmia, gynandrous. Morice. London,. Proc. Ent. Soc., 1903, (6).

nn. spp. **Boberts**(n, C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (79-81).

Alfken, J. D. Zs. Hymenopter., Teschendorf, **3**, 1903, (209-211).

*cochraceicornis* n. sp. **Ferton**, C. Paris, Ann. Soc. ent., **71**, (2<sup>e</sup> semest.), 1902, (499-531, av. 1 pl.).

Oxaca rersicolor n. sp. Brazil, Schrottky, C. Zs. Hym n pter., Teschendorf, 3, 1903, (39-45).

Panurginus nn. spp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acid. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (51-52). Panurgus rufiventris n. sp. Pórez, J. Proc.-verb. Soc., Bordeaux, 58, 1903, (CCXXII).

Paracentris n. gen., P. fulvorhirta n. sp. **Gameron**, P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (235-236).

Phiarus melectoides, host. Morios, F. D. Zs. Hymenopter., Teschendorf, 3, 1903, (317).

Podalirius canariensis n. sp. Tenerife. Saunders, E. London, Trans. Ent. Soc., 1903, (216-217).

Prochelostoma n. gen., type Heriades philadelphi Rob. **Robertson**, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (167–171).

Prosopis nn. spp. Transvasl. Bingham, C. T. Ann. Mag. Nat. Hist, London, (Ser. 7), **12**, 1903, (49-50).

.C. G. *l.e.* **11**, 1903, (534–538).

nn. spp. Pérez, J. Proc.verb. Soc., Bordeaux, 58, 1903, (CCXXX-CCXXXVI).

*atra* n. sp. Teneriffe. **Saunders**, E. London, Trans. Ent. Soc., **1903**, (212-213).

**Japan**. **Japan**. **Japan**. **Vachal**, J. Bul. Muséum, Paris, **1903**, (129–132).

Protan/hidium cockerelli n. sp. Colorado. **Titus**, E. S. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (169–171).

Proteraner n. gen., type Sphecodes ranunculi. Robertson, C. l.c. 14, 1903, (103).

Rhophites trispinosus nn. sp. Pérez, J. Bordeaux, Actes Soc. linn., 58, 1903, (Proc. verb. CCXX1).

Solenopalpa fertoni n. sp. Pérez, J. l.c. (XCIII).

Sphecodes nn. spp. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (538-541).

nn. spp. **Pérez**, J. Bordeaux, Actes soc. linn., **58**, 1903, (CCXVIII-CCXXI). Sphecodes fragaria n. sp. New Mexico. Cookerell in Visreck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (43-100).

Vachal, J. Bul. Muséum, Paris, 1903, (131).

Sphecodium n. gen., S. cressonii n. sp. Robertson, C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, ([103]-107).

Stelidium = Sphecodium. Robertson, C. l.c. ([103]-107).

Tetralonis brevipennis (Cam), description of species. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (549).

Triepeolus minimus n. sp. Robertson, C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (79-81).

*Trigona* Brazil, biologie. **Ihering**, H. von. Zool. Jahrb., Jena, Abt. f. Syst., **19**, 1903, (179–287, mit 13 Taf.).

Trypetce barbatus n. sp. Bobertson, C. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (171).

Xanthosarus n. gen., type Megachile latimanus Say. **Bobertson**, C. l.e. (168, 172).

Xanthosmia n. gen., type Osmia cordata Rob. Robertson, C. l.e. (166, 171).

Xenoglossa angelica n. sp. California. Cockerell, T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (103).

Xenoglossodes excurrens n. sp. North America. Cockerell, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (448-449).

Xylocopa, tube digestif. Bugrion, E. Arch. Sci. Phys., Genève, (Ser. 4), 15, 1903, (92-93).

nn. spp. aus der neotropischen und orientalischen Region. **Priese**, H. Zs. Hymenopter., Teschendorf, **3**, 1903, (202-208). Xylocopa nn. spp. Galla und Somali. Enderlein, G. Berliner ent. Zs., 48, 1903, (45-64).

*varipuncta*, geographical distribution. **Cockerell**, T. D. A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (318). Correction. *Ib.*, **14**, 1903, (29).

*violacea*, recherches histologiques sur le tube digestif. **Bugnion**, E. Aarau, Verh. Schweiz. Natf. Ges., **85**, 1902 (76); Arch. Sci. Phys., Genève, (Ser. 4), **14**, 1902, (531-534).

gebiet in Dentschland. Schuster, I.. Zool. Garten, Frankfurt a. M., 44, 1903, (28-29).

# VESPIDAE

## GENERAL.

Brauns, H. Beiträge zur Kenntnis südafrikanischer Masariden. Zs. Hymenopter., Teschendorf, 2, 1902, (181–185, 275–282, 373–374); 3, 1903, (65–73).

**Ihering**, R. von. Contribution à l'étude des Vespides de l'Amérique du Sud. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (144-155).

**Pack-Beresford**, D. R. Notes on wasps. Irish Nat., Dublin, **12**, 1903, (15-17).

## SPECIAL.

Alastor chrysocephalus n. sp. Brazil. Schrottky, C. Zs. Hymenopter., Teschendorf, 3, 1903, (39-45).

Ancistrocerus halophila n. sp. California. Viereck, H. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (728-743).

Ceramius nn. spp. Südamerika. Brauns, H. Zs. Hymenopter., Teschendorf, 2, 1902; 3, 1903, (65-68).

Eumenes nn. spp. Kashmir. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (530-532).

Nectarinia baccalaurea n. sp., N. augusti var. quinta n. var. Amérique du Sud. **Ihering**, R. von. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (153-154). (Ancistrocerus?) aberraticus n. sp. f. Morice, F. D. l.c. 12, 1903, (613-614).

cameron, P. London, Trans. Ent. Soc., 1903, (129).

(Hoplopus) simillimus Mor., new to the British list. Saunders, E. Ent. Mag., London, 39, 1903, (6-7).

Polistes spp. S. America. Ihering, R. von. Paris, Ann. soc. ent., 72, (2° somest.), 1903, (144-145).

*hertwigi* n. sp. **Schulz**, W. A. Muncih, SitzBer. Ak. Wiss., math-phys. Cl., **33**, 1903, (486).

Polybia nn. spp. Amérique du Sud. Ihering, R. von. *l.e.* (144–145).

*theresiana* n. sp. Nordwest. Südamerika. **Schuls**, W. A. Berliner ent. Zs., **48**, 1903, (257).

Provespa n. gen., type Vespa dorylloides Saussure. Ashmead, W. H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (182).

Rhynchium nn. spp. Assam. **Cameron**, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (328–330).

**Morice**, F. D. *l.e.* **12**, 1903, (612-613).

Symmorphus meridionalis n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (69).

Synagris amplissima Kohl., S. nyassas Stad., S. studimanni Stad., Beschreibung and 5 nn. spp. **Mocsary**, A. Budapest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (503-508).

Veepa, Entwicklung der Stemmata. Zavrel, Jan. Prag, SitzBer. Böhm. Gee. Wiss., 1902, No. XIII, 1903, (36, mit 3 Taf.).

monographie. Du Buysson, R. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (26C-288, av. pl.).

**Frohawk**, F. W. Entomologist, London, **36**, 1903, (33-34).

4631

Vespa nn. spp. Japan. Cameron, P. l.c. (278-281).

*austriaca*, relationship to V. rufa. Carpenter, G. H. and Pack-Beresford, D. R. Ent. Mag., London, **39**, 1903, (230-242, pl. IV); Irish Nat., Lublin, **12**, 1903, (221-235, pl. II).

*germanica* F. in India. **Cameron**, P. Zs. Hymenopter., Teschendorf, **3**, 1903, (317).

<u>media</u> D. G., Nestbau. **Kopp**, C. Aus d. Heimat, Stuttgart, **16**, 1903, (26-27).

rufa + austriaca. Saunders, E. Ent. Mag., London. 39, 1903, (272-274).

(297-299). Sharp, D. l.c.

## SPIIEGIDAE.

## GENERAL.

André, E. Fasc.-11 - Hymenoptera fam. Mutillidae. In : Wytsman, P. Genera Insectorum. Bruxelles, 1902, (77, av. 3 pls. hors texte). 20 fr.

Mutillides d'Afrique nouveaux ou imparfaitement connus. Zs. Hymenopter., Teschendorf, **3**, 1903, (81– 88, 137–144, 232-239).

**Cameron**, P. Descriptions of new species of Fossoria taken by Mr. Edward Whymper on the Higher Andes of the Equator. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (225-238).

**Coupin**, H. Les Bembez. Nature, Paris, (1<sup>er</sup> sem.), **31**, 1903, (65-67, av. fig.).

Nielsen, J. C. Observations on the life-history of some Danish fossorial wasps. (Danish) Kjöbenhavn, Ent. Med., (Ser. 2), 2, 1903, (110-114).

## SPECIAL.

Agenia architecta Say. Johnson, S. A. Philadelphis, Pa., Ent. News Acad. Nat. Sci., 14, 1203, (290).

euphorbiae n. sp. California. Viereck, H. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (728-743). Ageniozenus not synonymous with Ceropales. Ashmead, W. H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (318).

Ammophila nn. spp. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (518-520).

nn. spp., Quetta, Deesa. Nurse, C. G. Bonbay, J. Nat. Hist. Soc., 15, 1903, (8-9).

nn. spp. **Kohl**, F. F. Wien, Ann. NatHist. Hofmus., **16**, 1901, (142-164, 2 Taf).

Luffi n. sp. Jersey. Saunders, E. Ent. Mag., London, 39, 1903, (245-248).

tydei, mœurs. Ploard, F. Feuille jeunes natural., Paris, (sér. 4), 84, 1903, (15-17).

Ammoplanus mandibularis n. sp. South Africa. Cameron, P. Entomologist, London, 36, 1903, (178).

Ampulez nn. spp. Khasia Hills. Cameron, P. London, Trans. Ent. Soc., 1903, (234–238).

nn. spp., A. pilosa Cam. Assam. **Cameron**, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (319– 323).

Anoplius nn. spp. Assam. Cameron, P. l.c. (325-328).

Astata lubricata n. sp. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903.

*quettae* n. sp. Quetta. **Nurse**, C. G. Bombay, J. Nat. Hist. Soc., **15**, 1903, (1).

Atillum n. gen. André, E. in Wytsman, P. Genera Insectorum. Bruxelles, 1902, (16, 19, 47).

Bembez. Coupin, H. Nature, Paris, 31, (1<sup>er</sup> semest.), 1903, (65-67, av. 2 figs.).

irritata n. sp. India. Nurse, C. G. Anu. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (523-524).

Bothynostethus nn. spp. Ducke, A. Wien, Verh. ZoolBot. Ges., 52, 1902, (575-580).

Brachycistis cremastogaster n. sp. N. America. **Melander**, A. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (329).

Campsomeris (Dielis) argenteopilosa n. sp. **Cameron**, P. l.c. (225).

Cerceris nn. spp. India. Nurse, C. G. Anu. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (513, 524-526).

C. T. Fascic. Malay. Zool., 2, App., (V).

cockerelli n. sp. California. Viereck, H. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (728-743).

Ceropales not synonymous with Ageniozenus. Ashmead, W. H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (318).

*ligea* n. sp. **Bingham**, C. T. Fascic. Malay. Zool., **2**, App., (V). *marcia* n. sp. Kashmir. **Nurse**, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (513-514).

Chyphotes heathii n. sp. N. America. Melander, A. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (326).

Crabro nn. spp. Quetta, Peshin and Kangra Valley. Nurse, C.G. Bombay, J. Nat. Hist. Soc., **15**, 1903, (16-18).

*gulmargensis* n. sp. Kashmir. **Nurse**, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (528– 530).

Dasylabris hurei n. sp. l'Afrique. André, E. Zs. Hymenopter., Teschendorf, 3, 1903, (230).

Dasylabroides willowmorensis n. sp. l'Afrique. André, E. l.c. (85).

Diodontus nn. spp. Quetta and Peshin. Nurse, C. G. Bombay, J. Nat. Hist. Soc., 15, 1903, (13-14).

Discolia erythropoda n. sp. Assam. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (323-324).

Elis (Diel's) pygmaea n. sp. Brazil. Schrottky, C. Zs. Hymenopter., Teschendorf, 3, 1903, (39).

rubricata n. sp. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (402–403). Gastroscricus electus n. sp. Deesa. Nurse, C. G. Bombay, J. Nat. Hist. Soc., 15, 1903, (7).

Gory'cs nn. spp. Handlirsch, A. Wien, Verh. ZoolBot. Ges., 51, 1901, (351-356).

*lenis* n. sp. India. **Nurse**, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (521).

Homogambrus nn. spp. Deesa and Quetta. Baluchistan. Nurse, C. G. Bombay, J. Nat. Hist. Soc., 15, 1903, (2).

Hypoferreola nn. spp. Cameron, P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (129).

Labidomilla n. gen. for M. deformis Smith. **André**, E. in Wytsman, P. Genera Insectorum. Bruxelles, 1902, (14, 18, 16).

Larra neaera n. sp. Quetta. Nurse, C. G. Bombay, J. Nat. Hist. Soc., 15, 1903, (4).

*parsula* n. sp. Brazil. **Schrottky**, C. Zs Hymenopter., Teschendorf, **3**, 1903, (39–45).

Methoca incerta n. sp. l'Afrique. André, E. l.c. (81).

Mimesa alticola n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Eut. Soc., 29, 1902–1903, (66).

Miscophus nn. spp. Quetta, Baluchistan. Nurse, C. G. Bombay, J. Nat. Hist. Soc., 15, 1903, (7).

eatoni n. sp. Teneriffe. Saunders, E. London, Trans. Ent. Soc., 1903, (209-210).

Mutilla nn. spp. l'Afrique. André, E. Zs. Hymenopter., Teschendorf, 3, 1903, (139–143, 233–234).

nn. srp. North America. Melander, A. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (299-325).

descriptions of species and 8 nn. spp. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (394-400).

Cameron, P. l.c. (331).

Mutilla infensa n. sp. Melander, A. L. and Brues, C. T. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (24).

A. Austin, Cont. Zool. Lab. Univ. Tex., No. 44, in 1 hiladelphia, Pa., Eut. News Acad. Nat. Sci., 14, 1903, (75-77).

Myrmecosalius n. gen., M. nigriceps n. ep. Ashmead, W. H. Washington, D.C., Proc. Ent. Soc., 5, 1903, (307-308).

Myrmilla nn. spp. l'Afrique. André, E. Zs. Hymenopter., Teschendorf, 3, 1903, (88-137).

Myrmilloides n. gen. for M. grandiceps. Blake. André, E. in Wytsman, P. Genera Insectorum. Bruxelles, 1902, (16, 19, 27).

Myzins apimacula Cam. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (401).

Notogon'a nn. spp. Bengal. Cameron, P. London, Trans. Ent. Soc., 1903, (117-126).

nigripennis : occidentalis n. subsp. Viereck, H. I., Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (728-743).

Odontophotopsis n. gen., O. clandestinus, O. exogyrus, O. succineus nn. spp. California. **Viereck**, H. L. *l.c.* (728-743).

Oxybelus tegularis n. sp. Teneriffe. Saunders, E. London, Trans. Ent. Soc., 1903, (210-211).

Palarus nn. spp. Deesa. Nurse, C. G. Bombay, J. Nat. Hist. Soc., 15, 1903, (4-6).

Passaloecus dudgeoni n. sp. Kangra Valley and Punjab. Nurse, C. G. *l.c.* (12).

Pepsis nn. spp. Cameron, P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (226).

percephone n. sp. Brazil. Schrottky, C. Zs. Hymenopter., Teschendorf, 3, 1903, (39-45).

Photomorphus n. gen., P. alogus, P. johnsoni nn spp. Viereck, H. L. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (249). Photopsis lingulatus n. sp. California. Vierick, H. L. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, (728-743).

Plenoculus nn. spp. New Jersey. Viereck, H. L. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (71-74).

Pompilus nn. spp. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (511-513).

Promecilla n. gen. André, G. in Wytsman, P. Genera Insectorum. Bruxelles, 1902, (14, 30).

Psen atratus im Marke eines Rebschenkels. Lüstner, G. Mitt. Weinbau, Geisenheim, 15, 1903, (108-109).

*kashmirensis* n. sp. Kashmir. Nurse, C. (7. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (520-521)

refractus n. sp. Mt. Abu. Nurse, C. G. Bombay, J. Nat. Hist. Soc., 15, 1903, (11).

Pseudagenia marpesia n. sp. Bingham, C. T. Fascic. Malay. Zool., 2, App., (iv).

mutilata n. sp. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (403).

Salius nn. spp. Cameron, P. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (228).

nn. spp. Brazil. Schrottky, C. Zs. Hymenopter., Teschendorf, 3, 1903, (39-40).

avidus n. sp. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (403).

Sceliphron nn. spp. Brazil. Schrottky. C. Zs. Hymenopter., Teschendorf, 3, 1903, (41, 42).

Scolia, description of species. India. Nurse, C. G. Ann. Msg. Nat. Hist., London, (Ser. 7), 11, 1903, (401-402).

C. T. Fascic. Malay. Zool., 2, App., (iv).

Sphez nn. spp. Deess and Quetta. Nurse, C. G. Bombay, J. Nat. Hist. Soc., 15, 1903, (10-11).

(Harpactopus) eduardsi n. sp. Cameron, F. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Sor., 29, 1903, (230). Stigmus cucullus n. sp. Kangra Valley. Nurse, C. G. Bombay, J. Nat. Hist. Soc., 15, 1903, (12).

Stizus nn. spp. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (522-523).

*poecilopterus* Handlirsch 3. Morios, F. D. *l.c.* **12**, 1903, (614– 615).

tridens n. sp. Loire. Dominique, J. Nantes, Bul. soc. sci. nat., 12, 1902, (XXVII-XXXVIII).

Tachysphez nn. spp. Bengal. Cameron, P. London, Trans. Ent. Soc., 1903, (126–129).

\_\_\_\_\_ nn. spp. Kohl, F. F. Wien, Verh. ZoolBot. Ges., 51, 1901, (777-784, 1 Taf.).

*Tachytes* nn. spp. Mt. Abu, Deesa. Nurse, C. G. Bombay, J. Nat. Hist. Soc., **15**, 1903, (3).

Tallium n. gen. André, E. in Wytsman, P. Genera Insectorum. Bruxelles, 1902, (16, 19, 45).

*Tiphia exacta* n. sp. Kashmir. **Nurse**, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (400-401).

*odontogaster* n. sp. New Mexico. **Viereck**, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1902–1903, (71).

**Cameron**, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (324–325).

Trypoxylon mediator n. sp. Quetta. Nurse, C. G. Bombay, J. Nat. Hist. Soc., 15, 1903, (8).

responsum n. sp. India. Nurse, C. G. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (515-518).

Xylocrabro slossonae n. sp. (nom. nud.). Ashmead in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (4-8).

### FORMICIDAE.

## GENERAL.

André, E. Hyménoptères formicides récoltés au Japon, par M. Harmand. Bul. Muséum, Paris, **1903**, (128).

Bingham, C. T. The fauna of British India, including Ceylon and Burma. Published under the authority of the Secretary of State for India in Council. Edited by W. T. Blanford. Hymenoptera, Vol. II. Ants and Cuckoo-wisps. London, 1903, (XIX + 506, 1 pl. and illustrs.). 8vo. [Review], Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (190-191).

Brandicourt, V. Pucerons et fourmis. Nature, Paris, **30**, (2<sup>e</sup> semest.), 1902, (202).

Emery, C. A propos de la classification des Formicides; réponse à l'article publié sous le même titre par M. le prof. Forel. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (197-198).

Escherich, K. Ueber die Biologie der Ameisen. Uebersicht über die neueren Arbeiten. Zool. Centralbl., Leipzig, 10, 1903, (209-250).

Pielde, A. M. Experiments with ants induced to swim. Philadelphia, Ps., Proc. Acad. Nat. Sci., 55, 1903, (617-624).

Artificial mixed nests of ants. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (320-325).

A cause of feud between ants of the same species living in different communities. *l.c.* (326-329).

Forel, A. Faune myrmécologique des noyers dans le canton de Vaud. Lausanne, Bul. Soc. Sci. Nat., (Sér. 4), **39**, 1903, (83-94).

Les fournis des lles Andamans et Nicobares. Rev. Suisse Zool., Genève, **11**, 1903, (399–411).

A propos de la classification des fourmis. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (136-141).

Additional species of Camponotinae from India, with notes and localities. Bombay, J. Nat. Hist. Soc., 14, 1903, (710).

Additional species of *Dolichoderinae* from India, with notes and localities. *l.e.* (712).

Forel, A. Additional species of *Ponerinae* from India, with notes and localities. *l.c.* (713).

The social life of ants. [Translated by F. C. de Sumichrast.] Int. Mon., Burlington, Vt., 5, 1902, (563-579, 710-724).

Holliday, M. A study of some ergatogynic ants. Zool. Jahrb., Jena, Abt. f. Syst., 19, 1903, (293-328).

Howard, L. O. Symbiosis of Formicidae with Entilia sinuata. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **30**, 1901, (75-78).

Busskij, M. Die Ameisenfauna der astrachanischen Kirgisensteppe. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (294-316).

Fourmis de la province Transbaicalienne. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (205-207).

Die Ameisen der Umgebungen des Aral-Sees. (Russ.) Taškent, Izv. Turk. Otd. Russ. (ieogr. Obšč., 3, 1902, livr. I, (1-25).

Viehmeyer, H. Kleinere Beiträge zur Biologie einiger Ameisengäste. Allg. Zs. Ent., Neudamm, 8, 1903, (15– 17).

Wheeler, W. M. . . . Mutation in the Formicidae. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (639-651). Separate. 24.5 cm.

The origin of female and worker ants from the eggs of parthenogenic workers. Science, New York, N.Y., (N. Ser.), **18**, 1903, (830–833).

## SPECIAL.

Acantholepis nn. spp. Australia. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (477-482).

Acanthomyrmex luciolae Emery, notes. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (696).

Aenictus nn. spp. Bingham, C. T. Hym. Brit. Ind., II, 1903, (11).

steindachneri n. sp. Südafrika. **Mayr**, G. Wien, Ann. Nat-Hist. Hofmus., **16**, 1901, (1-30, 2 Taf.). Alfaria emergi n. sp. Colombia. Forel, A. Rev. Suisse Zool., Genève, 9, 1901, (326).

Anochetus punctaticeps n. sp. Südafriks. Mayr, G. Wien, Ann. NatHist. Hofmus, 16, 1901, (1-30, 2 Taf.).

talpa n. sp. Forel, A. Rev. Suisse Zool., Genève, 9, 1901, (351).

Camponotus nn. varr. Forel, A. I.c. 10, 1902, (493-508).

dicatus n. nom. = C. emeryo dicatus n. nom. = C. emeryi Forel. Forel, A. Bruxelles, Ann. Soc., ent. Belgique, 45, 1901, (369-371).

*maculatus* F. subsp. pictiventris n. subsp. Südafrika. **Mayr**, G. Wien, Ann. NatHist. Hofms., **16**, 1901, (1-30, 2 Taf.).

In: Kunene-Sambesi-Expedition, Berlin. 1903, (559-564).

Cardiocondyla, Emery, tableau des ouvrières, C. uroughtonii Forel, from Poona, notes. **Forel**, A. Bondbay, J. Nat. Hist. Soc., **14**, 1903, (688-689).

kosheunikozi n. sp. Turkestan ross. **Ruzski**j, M. Taškeut, Izv. Turk. Otd. Russ. Geogr. Obšč., **3**, 1902, livr. I, (1-25).

parvinoda n. sp. India. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (213).

Carebara lignata Westwood from Rangoon, notes. Forel, A. l.c. (691).

Cataulacus Smith, tableaux desouvrières, list of species with localities. Forel, A. l.c. (706).

mn. spp. Forel, Λ. In : Kunene - Sambesi - Expedition, Berlin, 1903, (559-564).

brookci n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (378).

*rugosus* Forel subsp. *micans* n. subsp. Südafrika. **Mayr**, G. Wien, Ann. NatHist. Hofmus., **16**, 1901, (1-30, 2 Taf.).

Centromyrmex greeni n. sp. Forel, A. Rev. Suisse. Zool., Genève, 9, 1901, (325). 781

Cerapachys cribrinodis var. natalensis n. var. Forel, A. l.c. (335).

*turneri* n. sp. Forel, A. l.c. 10, 1902, (405).

Colobopsis testacea n. sp. Ceylon. Bingham, C. T. Hym. Brit. Ind., II, 1903, (347).

Cremastogaster. California. Cockerell, T. D. A. Los Angeles, Bull., So. Cal. Acad. Sci., 1, 1902, (40-41).

tableau des ouvrières, list of species with localities. **Forel**, A. Bombay, J. Nat. Hist. Soc., **14**, 1903, (679, 682).

nn. spp. nn. varr. India. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (199-208, 405-548).

------ opaca Mayr var., dentinodis n. var. Mexico. Wheeler, W. M. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (130).

*opaciceps* n. sp. Südafrika. **Mayr**, G. Wien, Ann. NatHist. Hofmus., **16**, 1901, (130, 2 Taf.).

------- quadriformis var., gracilior n. var. Forel, A. Bruxelles, Ann. Soc. cnt. Belgique, 45, 1901, (391).

(374, 376). nn. spp. Forel, A. l.c.

Cryptocerus nn. spp. Mexico. Wheeler, W. M. l.c. (125-126).

*hamulus* Roger var., haytianus n. var. **Forel**, A. *l.e.* (337).

Cyphomyrmex rimosus var. major n. var. Wheeler, W. M. l.c. (125).

Diacamma nn. varr. Forel, A. Rev. Suisse Zool., Genève, 11, 1903, (400– 401).

Diplomorium longipenne n. sp. Südafrika. **Mayr**, G. Wien, Ann. NatHist. Hofmus., **16**, 1901, (1-30, 2 Taf.).

Dolichoderus burmanicus n. sp. Burma. Bingham, C. T. Hym. Brit. Ind., II, 1903, (293).

*turneri* n. sp. Queensland. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (462).

Dorylus (Rhogmus) fimbriatus Schuck., Weibchen. Brauns, J. Zs. Hymenopter., Teschendorf, 3, 1903, (294-298).

Dorymyrmex, tableau dichotomique des ouvrières de ce genre, D. baeri n. sp. André, E. l.c. (364-365). Eciton (Acama:us) goeldii n. sp. Forel, A. Rev. Suisse Zool., Genève, 9, 1901, (352).

Ectatomma (Mictoponera n. subgen.) diehlii n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (372).

Emeryella n. gen., E. schmitti n. sp. Forel, A. l.c. (334-335).

Epipheidole n. gen., E. inquilina n. sp. Wheeler, W. M. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1902, (653-683).

Erebomyrma n. gen, E. longii n. sp Texas. Wheeler, W. M. Austin, Cont. Zool. Lab. Univ. Tex., No. 45, *in* Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (137-148).

Eumecopone n. subgen. of neoponera Emery. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (335– 336).

Euponera nn. spp. Forel, A. Rev. Suisse Zool., Genève, 9, 1901, (333-343).

*fossigera* n. sp. Südafrika. **Mayr**, G. Wien, Ann. NatHist., Hofmus., **16**, 1901, (1-30, 2 Taf.).

(Pseudoponera) sharpi n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (379).

Formica nn. spp. et n. var. Wheeler, W. M. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (643-648).

wasmann, E. Insektenbörse, Leipzig, 20, 1903, (275–276).

*fusca* var. densiventris. n. var. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1902–1903, (74).

Hagensia n. subgen. (Megaloponera). Forel, A. Rev. Suisse Zool., Genève, 9, 1903, (333).

Holcomyrmex Mayr., tableau des ouvrières; list of species with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (692).

m. spp. Sahara algérien. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (150–151). Iridomyrmex nn. spp. nn. varr. Australia. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (466-470).

*myrmecodiae* var. andamensis n. var. Forel, A. l.c. 11, 1903, (407).

Lasius alieno-flavus n. sp. Himalaya. Bingham, C. T. Hym. Brit. Ind., II, 1903, (341).

Lat pes, physiology and habits. Wheeler, W. M. and McClendon, J. F. Austin, Cont. Zool. Lub. Univ. Tex., No. 46, in Wood's Holl, Mass., Mar. Biol. Lab. Bull., 4, 1903, (149-163).

(Acanthomyops) murphii n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (367-369).

umbratus : subumbratus n. subsp. New Mexico. **Viereck**, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1902–1903, (73).

Leptanilla havilandi n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (373).

Leptogenys nn. spp., nn. varr. Forel, A. Rev. Suisse Zool., Genève, 9, 1901, (328-332).

wheeler, W. M. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (123).

Leptothorax Mayr, note on the genus, list of species with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (698).

Revision of the N. American spp. with descriptions of nn. spp. Wheeler, W. M. Austin, ('ont. Zool. Lab. Univ. Tex., No. 48, in Philadelphia, Pa., Proc. Acad. Nat. Sci., 55, 1903, (215-260, with pl.).

nn. spp. India. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (228-231).

canadensis: obscurus n. subsp. New Mexico. Viereck, H. L. Philadelphia, Pa. Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (72).

var. Japon. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (371).

afrika. **Mayr**, G. Wien, Ann. NatHist. Hofmus., **16**, 1901, (1-30, 2 Taf.). Leptothorax petiolatus n. sp. Mexico. Wheeler, W. M. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (129).

Lionyrmez aurianus Emery, from Tenasserim, note on the species. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (699).

Lobopelta moelleri n. sp. India. Bingham, C. T. Hyni. Brit. Ind., II, 1903, (67).

Lophomyrmez Emery, tableau des ouvrières, list of species and localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (695).

Macromischa lucayensis n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (340-342).

Mayriella n. gen., M abstinens n. sp. Queensland. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (454).

Mcgaloponera (Hagensia n. subgen.) havilandi n. sp. Forel, A. l.e. 9, 1901, (333).

Melophorus nn. spp. Australia. Forel, A. l.c. 10, 1902, (483-488).

Meranoplus Smith, tableau des ouvrières, list of species with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (705).

nn. spp. India. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (240-241).

*diversus : unicolor* n. subsp. *M. hirsulus : minor* n. subsp. **Forel**, A. *l.c.* (455–457).

subsp. Südafrica. **Mayr**, G. Wien, Ann. NatHist. Hofmus., **16**, 1901, (1-30, mit 2 Taf.).

Mictoponera n. subgen. (Ectatomma Sm.). Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (372).

Monomorium Mayr., tableau des ouvrières, list of species with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (685-687).

\_\_\_\_\_ nn. spp. nn. varr. **Forel.** A. Rev. Suisse Zool., Genève, **10**, 1902, (209-213).

783

Monomorium nn. spp. Australie. Forel, A. l.c. (440–445).

A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (377).

*brauns*i n. sp. Südafrika. **Mayr**, (†. Wien, Ann. NatHist. Hofmus., **16**, 1901, (1-30, 2 Taf.).

------- heyeri n. sp. Porel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (389).

Myopopone moelleri n. sp. India. Bingham, C. T. Hym. Brit. Ind., II, 1903, (34).

Myrmecia forfica!a Fabr. and M. sanguinea Smith in Victoria. **Barker**, E. E. Vict. Nat., Melbourne, **20**, 1903, (105-111).

Myrmecina rugosa n. sp. Queensland. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (438).

Tenasserin, note on the species. Forel, A. Bombay, J. Nat Hist. Soc., 14, 1903, (699).

Myrmecocystus foreli n. sp. Transcaspia. (Russ.) **Burshij. M.** Rev. Russ. Ent., Jaroslavli, **3**, 1903, (36-37).

dameerei n. sp. Sahara algerien. **Foreι**, Λ. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (156–157).

Myrmecodia echinata aus Sumatra. Fischer, E. Bern, Mitt. Natf. Ges., 1903, (XI).

Myrmica Latr., tableau des ouvrières, list of species with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (696).

\_\_\_\_\_ nn. + pp. India. Forel, A. Rev. Suisse Zool., Genève, **10**, 1902, (226).

hergi n. sp. Turkestan ross. **Russkij** M. Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., **3**, 1902, livr. I, (1-25).

Myrmicaria Saunders, notes on species of, with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (708).

<u>baumii</u> n. sp. Forel, A. In: Kunene-Sambesi-Expedition, Berlin, 1903, (559-564). Neoponera nn. spp. Forel, A. Rev. Suisse Zool., Genève, 6, 1901, (348-349).

agilis n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (336).

Oligomyrmez Mayr., note, list of species with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (689, 690).

nn. spp. India. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (214-218).

**Porel**, A. *l.c.* (492).

Oxygyme n. subgen. of Cremastogaster. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (374-376).

Oxymyrmex nn. spp. **Porel**, A. In: Kunene-Sambesi-Expedition, Berlin, 1903, (559-564).

Pachycondyla nn. spp. et var. Forel, A. Rev. Suisse Zool., Genève, 9, 1903, (347).

*fuscoatra* Roger var., ccarensis n. var. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (336).

*Pheidole* nn. spp. India. **Bingham**, C. T. Hym. Brit. Ind., **II**, 1903, (228– 264).

\_\_\_\_\_ nn. spp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (348-366).

\_\_\_\_\_ nn. spp. nn. varr. Forel, A. Rev. Suisse Zool., Genève, **10**, 1902, (414-437).

------- nn. spp. nn. varr. India, Ceylon. Forel, A. l.c. (189-198).

mn. spp. Mexico. Wheeler, W. M. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (131-133).

A. *l.c.* (390).

*lamellifrons* n. sp. India. **Forel**, A. Rev. Suisse Zool., Genève, **10**, 1902, (219).

Plagiolepis dichron n. sp. Forel, A. l.c. (235).

<u>moelleri</u> n. sp. India. Bingham, C. T. Hym. Ind. Brit., II, 1903, (321).

**Forel**, A. In: Kunene-Sumbesi-Expedition, Berlin, 1903, (559-564).

Platythyrea augus'a n. sp., P. cozalis var., tritschleri n. var. Forel, A. Rev. Suisso Zool., Genève, 9, 1901, (336, 338).

Pogonomyrmex schmitti n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (339-340).

*Polyrhacis* nn. spp. **Bingham**, C. T. Hym. Brit. Ind., **II**, 1903, (391-403).

In. varr. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (515-532).

Ponera coarctata boerorum n. st. Forel, A. l.c. 9, 1901, (339).

Prenolepis caledonica n. sp., P. braueri var., glabrior n. var. Forel, A. l.c. 10, 1902, (490-491).

Pristomyrmex Mayr., tableau des ouvrières, list of species with localities. **Forel**, A. Bombay, J. Nat. Hist. Soc., **14**, 1903, (696).

Probolomyrmex n. gen., P. filiformis n. sp. Südafrika. **Mayr**, G. Wien, Ann. NatHist. Hofmus., **16**, 1901, (1-30, 2 Taf.).

Procryptocerus schmitti n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (338).

Proformica n. subgen. **Russkij**, M. St. Poterburg, Hor. Soc. Ent. Ross., **36**, 1903, (303).

Pseudomyrma elongata Mayr var. cubaensis n. var. Forel, A. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (342).

Rhopalomastix Forel, note on the genus; R. rothneyi Forel, from Barrackpore, notes. **Forel**, A. Bombay, J. Nat. Hist. Soc., **14**, 1903, (692). Rhopt.omyrmcz n. gen., R. globulinodis, R. transrersinodis nn. spr. Südafrika. Mayr, G. Wien, Ann. Nat. Hist. Hofmus., 16, 1901, (1-33, 2 Taf.).

------ uroughtonii n. sp. Iudia. Forel, A. Rev. Suisse Zool., Genève. 10, 1909, (231).

Sima Roger, tableau des espèces, list of species with localities. **Forel**, A. Bombay, J. Nat. Hist. Soc., **14**, 1903, (708, 709).

**Forel**, A. Rev. Suisse Zool., Geneve, **10**, 1902, (247-249, 402-404).

Solenopsis Westw., tableau des ouvrières, list of species with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 24, 1903, (689).

**Forel**, A. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1903, (152–153).

<u>——</u> *nitens* n. sp. Ceylou. Bingham, C. T. Hym. Brit. Ind., **П**, 1903, (160).

pergandi n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (343).

*emilaevis* n. sp. Sādafrika. **Mayr**, G. Wien, Ann. NatHist. Hofmus., **16**, 1901, (1-30, **2** Taf.).

**Forel**, A. Rev. Suisse Zool., Genève, **10**, 1902, (214).

Stenamma Westw., tableau des ouvières, list of species with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (693-694).

\_\_\_\_\_ nn. spp. India. Forel, A. Rev. Suisse Zcol., Genève, **10**, 190<sup>2</sup>, (220–225).

(Messor) caviceps n. sp. Sahara algerien. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1902, (147-156).

------- feae : nicobarensis n. st. Forel, A. Rev. Suisse Zool., Genève, 11, 1903, (405). :

:

,

# Hymenoptera.

Stenamma fulvum piceum, general ethology. Fielde, A. M. Philadelphia, Pa., Proc. Acad. Nat. Sci., 54, 1902, [1903], (599-625).

general ethology. **Fielde** A. M. *l.c.* 55, 1903, (491-495).

*resticoodi* Steph. var., *msilanum* n. var. **Forel**, A. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (347).

Stereomyrmex horni Emery, note on the species from Ceylon. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (696).

Stictoponera costata var. unicolor n. var. Forel, A. Rev. Suisse Zool., Genève, 9, 1901, (335).

Strumigenys Smith, tableau des ouvrières, list of species with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (707).

*clypeata* Roger, var. *pilinasis* n. var. **Forel**, A. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (339).

emarginata n. sp. Südafrika. Mayr, G. Wien, Ann. NatHist. Hofmus., 16, 1901, (1-30, 2 Taf.).

guttulata n. sp. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (458).

*smythiesii* n. sp., S. godefroyi var. indica n. var. Forel, A. l.c. (242-243).

Tapinoma andamanense n. sp. Forel, A. *l.c.* **11**, 1903, (407).

Tetramorium Mayr., tableau des ouvrières, list of species with localities. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (700).

nn. spp. India. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (232-238).

Südafrika. Mayr, G. Wien, Ann. NatHist. Hofmus., 16, 1901, (1-30, 2 Taf.).

C. T. Hym. Brit. Ind., **II**, 1903, (181).

(Xiphomyrmex) turneri n. sp. Queensland. Forel, A. Rev. Suisse Zool., Genève, 10, 1902, (447).

Mexico. Wheeler, W. M. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (128). (x 2-9053) Trapeziopelta hollandi n. sp. Forel, A. Rev. Suisse Zoo!., Genève, 9, 1901, (325).

Trichomyrmex rogeri Mayr, from Ceylon, note on the species. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (679-715).

Triglyphothriz Forel, tableau des ouvrières, list of species with localities. Forel, A. l.c. (703-704).

nn. spp. India. Forel, A. Rev Suisse Zool., Genève, 10, 1902, (239-240).

*microps* n. sp. Südafrika. **Mayr**, G. Wien, Ann. NatHist. Hofmus., **16**, 1901, (1-30, 2 Taf.).

Trigonoyaster recursipinosus Forel, note on the species from Poons. Forel, A. Bombay, J. Nat. Hist. Soc., 14, 1903, (699).

Vollenhovia lasvithoraz Emery from Tenasserin, note on the species. Forel, A. l.e. (699).

*rufiventris* n. sp. Forel, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (374).

## TUBULIFERA.

# CHRYSIDIDAE.

## GENERAL.

Du Buysson, R. Sur quelques Chrysidides du Musée de Vienne. Wien, Ann. NatHist. Hofmus., 16, 1901, (97-104).

Morice, F. D. Chrysididae collected by Col. Yerbury in Herefordshire, 1902. Ent. Mag., London, **39**, 1903, (113).

## SPECIAL.

Amisega aeneiceps n. sp. Südamerika. Ducke, A. Zs. Hymenopter., Teschendorf, 3, 1903, (129).

*Chrysis* nn. spp. **Bingham**, C. T. Hym. Brit. Ind., **II**, 1903, (440-487).

nn. spp. Du Buysson, R. Wien, Ann. NatHist. Hofmus., 16, 1901, (97-104).

nn. spp. Südamerika. Ducke, A. Zs. Hymenopter., Teschendorf, 3, 1903, (136, 226-232). Chrysis nn. spp. India. Nurse, C. G. Entomologist, London, 36, 1903, (10-12, 40-42).

cognitae. 2 nn. spp. S.W. Siberia. Semenov, A. P. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (397–400).

Cleptes. Du Buysson, R. Wien, Ann. NatHist. Hofmus., 16, 1901, (97-104).

Ellampus andinus n. sp. Ecusdor. Cameron, P. Entomologist, London, 36, 1903, (161).

*glomeratus* n. sp. **Du** Buysson, R. Wien, Ann. NatHist. Hofmus, **16**, 1903, (97–104).

harmandi n. sp. Japon. **Du Buysson**, R. Bul. Muséum, Paris, **1903**, (126).

Hedychrum haugianum n. sp. Congo. Du Buysson, R. *l.c.* 1903, (600).

Holophris. Du Buysson, R. Wien, Ann. NatHist. Hofmus., 16, 1901, (97-104).

Holopyga nn. spp. **Du Buysson**, R. l.c. (97-104).

C. T. Hym Brit. Ind., II, 1903, (423).

(Hedychridium) pallidolimbata n. sp. Südamerika. Ducke, A. Zs. Hymenopter., Teschendorf, 3, 1903, (133).

Notozus. Du Buysson, R. Wien, Ann. NatHist. Hofmus, 16, 1901, (97– 104).

Olochrysis semicuprea n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (70).

Panorpidea n. gen. verwandt mit Panorpes, P. mocearyi n. sp. Brauns, H. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (460-461).

Pseudepyris flaripes n. sp. Südamerika. Ducke, A. Zs. Hymenopter., Teschendorf, 3, 1903, (132).

# PARASITICA.

# PROCTOTRUPIDAE.

# General.

Ashmead, W. H. Classification of the pointed-tailed wasps, or the superfamily Proctotrypoides. II. [Families Diapriidae and Ceraphronidae] New York, N.Y., J. Ent. Soc., **11**, 1903, (28-35).

Ashmead, W. H. Classification of the pointed-tailed wasps, or the super-family Proctotrypoides. III. [Family Scelionidae]. l.c. (86-99).

## SPECIAL.

Auxopaedeutes n. gen., A. sodalis n. sp. Brues, C. T. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (126-127).

Caloteleia parvipennis n. sp. Melander, A. L. aud Bruss, C. T. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (22).

Dissomphalus harmandi n. sp. Japan. Du Buysson, R. Bul. Muséum, Paris, 1903, (126).

Dryinus ormenidis n. sp. Ashmead, W. H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (192-193).

Empyris subapterus n. sp. Melander, A. L. and Brues, C. T. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (23).

Galesus cozalis n. sp. (nom. nud.) Ashmead in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (4-8).

Gonatopus peculiaris n. sp. Brues, C. T. Philadelphia, Pa., Acad. Nat. Sci., Traus. Amer. Ent. Soc., 29, 1903, (25).

Hemilexodes ambigua n. sp. Brues, C. l'. l.c. (119–128, with pl.).

rotundiceps n. sp. (nom. nud.). Ashmead in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (4-8).

Idris nigricornis n. sp. Brues, C. T. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (119–128, with pl.).

Meyaspilus alticola n. sp. (nom. nud.). Ashmead in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (4-8). Mesitius myrmecophilus n. sp. Brues, C. T. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1903, (119– 128, with pl.).

Perisemus fulvicornis, note on the life-history. (Danish with an English summary) **Nielsen**, T. C. Kjöbenhavn, Ent. Medd., (Ser. 2), **2**, 1903, (105-109).

Scelio ashmeadi n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (74).

# CHALCIDIDAE.

## GENERAL.

**Bloesch**, C. Einige Notizen über Cynipiden und Chalcidier aus der Umgegend von Laufenburg. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **11**, 1903, (48-55).

**Kryger**, T. P. The Danish trimerous *Chalcididae*. Topographical Zoology. (Danish with a German Summary.) Kjöbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (192-197).

**Pierre**, Abbé. Chalcidides parasites de l'œul, de la larve et de l'image de *Lixus iridis* Oliv. Echange, Lyon, **19**, 1903, (108-110, 116-117, 132-133, 141-144).

## SPECIAL.

Cheiloneurus suczeyi n. sp. Ashmead, W. H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (192-193).

Cirrospilus immaculatus u. sp. (nom. nud.). Ashmead in Slosson, A. T. l.e. 13, 1902, (4-8).

Eupelmus ashmeadii n. sp. Melander, A. L. and Brues, C. T. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (21).

Eurycephalus n. gen., defined and differentiated from *Eerizates* Forster, *E. alcocki* n. sp. from Calcutta. Ashmead, W. H. Calcutta, Ind. Mus. Notes, **5**, 1903, (62).

Homalotylus slossonae n. sp. (nom. nud.). Ashmead in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (4-8).

(n 2-9053)

Isosoma, parasitism. Webster, F. M. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (92-93).

life history and description; economics. Webster, F. M. l.c. No. 42, 1903, (62). 23 cm.

Smicra bimaculata Strecker. Bradley, J. C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (26).

Syntasis diplosidis n. sp. Eckel, L. S. l.c. (283).

Syntomosphyrum esurus, parasitism. Marlatt, C. L. Washington, D.C., Proc. Ent. Soc., 5, 1903, (138–139).

Trigonoderus varipes n sp. New Mexico. Vieredk, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (75).

## ICHNEUMONIDAE.

# GENERAL.

**Cameron**, P. Descriptions of twelve new genera and species of *Ichneumonidae* (*Hercsiorchini* and *Amblypygi*) and three species of *Ampulex* from the Khasia hills, India. London, Trans. Ent. Soc., **1903**, (219-238).

Habermehl, [H.]. Neue Ichneumoniden aus Südwestdeutschland. Zs. Hymenopter., Teschendorf, **3**, 1903, (345-348).

Ueber Ichneumoniden. Varietäten und neue Arten. *l.c.* (97–104, 185–192, 217–225).

Jacobs, J. C. Catalogue des ichneumonides de la Belgique appartenant au groupe des Ophionides. Bruxelles, Anu. Soc. ent. Belgique, 47, 1903, (200-212).

Krieger, R. Zur Synonymik der Ichneumoniden. Zs. Hymenopter., Teschendorf, 3, 1903, (290-294).

Morley, C. Ichneumonidae collected by Col. Yerbury in Herefordshire, 1902. Ent. Mag., London, **39**, 1903, (113-114).

Ichneumonologia britannica. The Ichneumons of Great Britain. A descriptive account of the families, genera and species indigenous to the British Islands, together with notes as to classification, localities, habitats, hosts, etc. Ichneumoninae. Plymouth, 1903, (1 + 315, 1 pl.).

3 E 2

Ptc, M. Diagnoses d'Ichneumonieus faisant partie de la collection Pic. Echange, Lyon, 17, 1902, (57-58).

Les types d'Ichneumoniens de ma collection. *l.e.* (62, 70, 78); **19**, 1903, (96, 104, 120, 136).

Schmiedelmecht, O. Opuscula Ichneumonologica. Fasc. I. II. Blaukenburg i. Thür. (Selbstverlag, Druck v. W. Greve, Neubrandenburg), 1902-1903, (1-160). 23 cm.

Die Ichneumonidentribus der Anomalinen. Eine Uebersicht sämmtlicher Gattungen sowie der paläarktischen Arten. Zs. Hymenopter., Teschendorf, **2**, 1902, (357-368); **3**, 1903, (1-8, 73-80, 171-176).

Schulz, W. A. Beiträge zur näheren Kenntnis der Schlupfwespenfamilie Pelecinidae Hal. München, SitzBer. Ak. Wiss., math.-phys. Cl., 33, 1903, (435-450, mit 1 Taf.).

**Stebbing**, E. P. Hymenopterous larva found in teak in Nilumbur parasitic on *Hyblas puera* var. *nigra*, note on its occurrence. Departmental Notes on Insects that affect Forestry, No. 2, Calcutta, 1903, (296). 25 cm.

**Strobl**, J. Ichneumoniden Steiermarke. Graz, Mitt. Natw. Ver. Steierm., **1903**, 1903, (3-100).

## SPECIAL.

Acanthojoppa nn. spp. Assam. Cameron, J. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (180-181).

eron, P. *l.c.* **12**, 1903, (370–371, 565– 568).

Achaius n. gen., A. flavo-balteatus n. sp. Khasia. **Cameron**, P. l.c. (366– 368).

Agathobanchus aeguatus, redescribed. Bradley, J. C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (144– 146, with fig. in text).

Aglaocryptus n. gen., A. currimaculatus, A. striatifrons nn. spp. Khasia Hills. Cameron, P. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (34-38).

Aglaojoppa nn. spp. Assam. **Cameron**, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (177-180).

P. *l.c.* **12**, 1903, (363-367).

Algathia nn. spp. Assam. Cameron, P. l.c. 11, 1903, (315-316).

*parvinaculata* n. sp. Khasia. **Cameron**, P. *l.c.* **12**, 1903, (581–582).

Amblyjoppa nn. spp. Khasia. Cameron, P. l.c. (268-272).

Amblyteles nn. spp. et nn. var. Pic, M. Echange, Lyon, 17, 1902, (58).

Ancyra n. gen., A. flavomaculata n. sp. Khasia Hills. **Cameron**, P. London, Trans. Ent. Soc., **1903**, (228-229).

Aperileptus clypeatus, A. pleuralis n. sp. (nom. nud.). Ashmead in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (4-8).

Ashmead (ms) in Slosson, A. T. l.c. (319-321).

Atrometus flarifrons n. sp. (nom. nud.). Ashmead in Slosson, A. T. I.c. (4-8).

Bassus nn. spp. Oesterreich. Strobl, G. Graz, Mitt. Natw. Ver. Steierm., 1902, 1903, (97).

Bathycetes nidia n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (85).

Benecles n. gen., B. rufomaculatus n. sp. Ceylon. Cameron, P. Entomologist, London, **36**, 1903, (260–261).

Benyllus n. gen., B. rufus n. sp. Khasia Hills. **Cameron**, P. London, Trans. Ent. Soc., **1903**, (232-233).

Buathra n. gen., B. rufiventris n. sp. Khasia Hills. Cameron, P. l.c. (233– 234).

Caenocryptus himaculatus, Biologie. Höppner, H. Allg. Zs. Ent., Neudamm, 8, 1903, (194-202).

Callajoppa n. gen., C. bilineata n. sp. Japan. **Gameron**, P. Entomologist, London, **36**, 1903, (236-237).

Caspipina n. gen., C. ferruginea n. sp. Khasia Hills. **Cameron**, P. London, Trans. Ent. Soc., **1903**, (219).

violaceipennis n. sp. Khasia Hills. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (580).

Catoglyptus splendens n. sp. Oesterreich. Strobl, G. Graz, Mitt. Natw. Ver. Steierm., 1902, 1903, (29). Ceratocryptus n. gen., C. bituberculatus, C. tibialis nn. spp. Khasia Hills. **Cameron**, P. Manchester, Mem. Lit. Phil. Soc., **47**, No. 14, 1903, (5-10).

Charitojoppa varicolor n. sp. Khasia. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (573–574).

Chiaglas nn. spp. Khasia. Cameron, P. l.c. (578-580).

------ raripes n. sp. Assam. Cameron, P. *l.c.* 11, 1903, (314-315).

Chirotica inermis n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (83).

Chlorocryptus n. gen., C. metallicus, C. coeruleus nn. spp. Khasia Hills. **Gameron**, P. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (34-38).

Cnemocryptus n. gen., C. validicornis n. sp. Khasia Hills. **Cameron**, P. l.c. (38-40).

Cnemopimpla n. gen., C. pilosa n. sp. Ecuador. **Cameron**, P. Entomologist, London, **36**, 1903, (159–160).

Corynephanes tarsalis (nom. nud.). Ashmead (ms.) in **Slosson**, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (319-321).

Cratichneumon un. spp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (77-79).

artemis n. sp., C. pedalis with 2 nn. varr. Viereck, H. L. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (87).

Cryptopyge nn. spp. **Szépligeti**, V. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (480–481).

Ctenichneumon plicatus n. sp. Morley, C. Ichn. Brit., Plymouth, 1903, (172– 173).

('yanocryptus n. gen., ('. metallicus n. sp. Ecuador. **Cameron**, P. Entomologist, London, **36**, 1903, (121-122).

Cyanojoppa nn. spp. Assam. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (175-177).

Dagathia n. gen., D. brunnea n. sp. Khasia Hills. **Cameron**, P. Manchester, Mem. Lit. Phil. Soc., **47**, No. 14, 1903, (29). Darachosia fulripes n. sp. Khasia Hills. Cameron, l<sup>2</sup>. London, Trans. Ent. Soc., **1903**, (222–223).

Delebaea n. gen., D. albomaculata, D. fuscipes nn. spp. Ecuador. Cameron, P. Entomologist, London, **36**, 1903, (158-159).

Diacantharius n. gen., D. elegans n. sp. Schmeideknecht, O. Opuscula Ichneumonologie. Fase. I, 1902, (20).

Diadromus punicus var. rufiscapus n. var. Pic, M. Echange, Lyon, 17, 1902, (58).

Diatora compressa n. sp. (nom. nud.) Ashmead (m.s.) in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321).

Dimoetha nn. spp. Khasia. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (571-573).

Dinotomus? bicolorn.sp. ? **Szópligeti**, V. Budapest, Ann.-Hist. Nat. Mus. Nat. Hung., **1**, 1903, (483).

C. Ichn. Brit., Plymouth, 1903, (11).

Dolichoblastus Strobl n. subg. aff. Monoblastus Hy. Oesterreich. Strobl, G. Graz, Mitt. Natw. Ver. Steierm., 1902, 1903, (52).

Dyseidopus vancouverensis n. sp. Bradley, J. C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (307– 308).

Echtrus sibiricus n. sp. E. Siberia. Kokujev, N. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (288).

Eclytus haematothorax n. sp. Oesterreich. Strobl, G. Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (66).

Enchisiades n. gen., E. rufipes n. sp. Kbasia Hills. **Cameron**, P. London, Trans. Ent. Soc., **1903**, (220-221).

Ephialtes, Weibchen bei seiner Eiablage. Israël, W. Gera, Jahresber. Ges. Natk., 43-45, (1900-02), 1903, (82-84).

Epitomus americanus (nom. nud) Ashmead (m.s.) in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321). Erromenus nn. spp. Oesterreich. Strobl, G. Graz, Mitt. Natw. Ver. Steierm., 1902, 1903, (74-76).

Erythrojoppa lineata n. sp. Assam. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (184-185).

nigromacula'a n. sp. Khasia. **Cameron**, P. *l.c.* **12**, 1903, (368–369).

Etha n. gen., E. striatifrons, E. laevifrons, E. plumbca, E. fusciventris, E. testaceipes, E. dentata, E. rufofemorata nn. spp. Khasia Hills. Cameron, P. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (17-29).

Euryproctus nn. spp. Oesterreich. Strobl, G. Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (32-40).

Eutanyacra n. gen., E. pallidicozis n. sp. Khasia Hills. **Cameron**, P. London, Trans. Ent. Soc., **1903**, (227– 228).

stramineomaculata n. sp. Khasia. **Cameron**, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (576– 577).

Evirchoma n. gen., E. pallidimaculata n. sp. Khasia Hills. **Cameron**, P. London, Trans. Ent. Soc., **1903**, (223-224).

Exochilum varicolor n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (90).

Exochus nn. spp., Oesterreich. Strobl, G. Graz, Mitt. Natw. Ver. Steierm., 1902, 1903, (84-85).

Fedalma n. gen., F. tricolor n. sp. Assam. **Cameron**, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (318– 319).

Glypta areolata n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (89).

Gotra carinifrons n. sp. Khasia Hills. Cameron, P. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (10-11).

Habrojoppa nn. spp. Khasia. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (570–571).

Hadrocryptus n. gen., H. nasutus n. sp. Khasia Hills. Cameron, P. Manchester, Mem. Lit. Phil. Soc., 47. No. 14, 1903, (11-14).

Hadrodactylus affinis (nom. nud.) n. sp. Ashmead in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (4-8).

Hadrojoppa forticornis n. sp. Khasia. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (272-273).

Haliphera n. gen., H. maculipes n. sp. India. **Cameron**, P. Entomologist, London, **36**, 1903, (237-238).

Harrimaniella nn. spp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (86-87).

Harsaces n. gen., H. nigripes n. sp. Himalaya. **Cameron**, P. Entomologist, London, **36**, 1903, (238-239).

Hemiteles nn. spp. Khasia Hills. Cameron, P. Mauchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (44-46).

Himertosoma quinquecinctum n. sp. (nom. nud.). Ashmeed (ms.) in Sloeson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321).

Ichneumon nn. spp. et nn. varr. Pic, M. Echange, Lyon, 17, 1902, (57– 58).

montanus n. sp. Habermehl, H. Zs. Hymenopter., Teschendorf, 3, 1903, (99).

venustulus n. sp. Transcaspia, Turkestan. Kokujev, N. R. Rev. russ. ent., Jaroslavlí, **3**, 1903, (388-389).

Idiolexis collaris (nom. nud.) Anhmead (ms.) in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321).

Ileanta nn. spp. Khasia. **Cameron**, P. Ann. Mag. Nat. Hist., London, Ser. 7), **12**, 1903, (574–576).

Imeria n. gen., I. albomaculata. Assam. Cameron, P. l.c. 11, 1903, (173-174).

Ischnopus subhifasciatus n. sp. **Szópligeti**, V. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (482– 483).

Javra n. gen., J. parviceps, J. longicornis nn. spp. Khasia Hills. **Cameron**, P. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (47-50).

Joppa nn. spp. **Szépligeti**, V. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (477-480).

Kentrotryphon n. gen., aff. Trematopgyus, K. longecaudatus n. sp. Oesterreich. Strobl, G. Graz, Mitt. Natw Ver. Steierm., 1903, 1903, (71).

Labrorychus transcaspicus n. sp. Transcaspia. **Kokujev**, N. R. Rev. russ. ent., Jaroslavlí, **3**, 1903, (388-389).

Lagenesta ferruginea. & Assam. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (185).

Lamprojoppa fuscinerva n. sp. Khasia, **Gameron**, P. *l.c.* **12**, 1903, (574).

Larsephna n. gen., L. raripes, L. flavolineata nn. spp. Ecuador. Cameron, P. Entomologist, London, 36, 1903, (97, 120-121).

Legnatia n. gen., L. fulvipes n. sp. Khasia Hills. **Cameron**, P. London, Trans. Ent. Soc., **1903**, (225-226).

Leptocryptus n. gen., L. longiventris n. sp. Khasia Hills. Cameron, P. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (14-15).

Leptothecus n. gen., L. rufomaculatus n. sp. India. **Cameron**, P. Entomologist, London, **36**, 1903, (240, 260).

Limnerium nn. spp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (91-92).

Linycus n. gen., L. rufipes n. sp. Ceylon. **Cameron**, P. Entomologist, London, **36**, 1903, (234-235).

Liotryphon Strobl n. gen., L. scotopterus (Gr.) - Tryphon scotopterus Gr. Strobl, G, Graz, Mitt. Natw. Ver. Steierm., 1902, 1903, (78).

Lisegnota nn. spp. New Mexico. Viersch, H. L. Philadelphia, Ps., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (83-84).

Lortygia n. gen., L. rufa n. sp. Khasia Hills. Cameron, P. Entomologist, London, **36**, 1903, (235–236).

Loogna n. gen., L. forticeps n. sp. Khasia Hills. **Cameron**, P. London, Trans. Ent. Soc., **1903**, (229–230). Macrojoppa nn. spp. **Szépligeti**, V. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (481–482).

Macrosterotrichus n. subgen. (Xylonomus). Kokujev, N. Rev. russ. ent., Jaroslavlí, 3, 1903, (285-288).

Melanomicrus n. nom., M. elliotti n. sp. Morley, C. Ichn. Brit., Plymouth, 1903, (287–288).

Meniscus occidentalis n. sp. New Mexico. Viereek, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (84).

Mesochorus areolatus n. sp. New Mexico. Viereck, H. L. l.c. (92).

Mesoleius leucomelas n. sp. Südwestdeutschland. **Habermehl**, H. Zs. Hymenopter., Teschendorf, **3**, 1903, (345– 348).

nn. spp. Oesterreich. **Strobl,** G. Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (11-27).

Mesoleptus alticola n. sp. Oesterreich. Strobl, (†. l.c. (5).

Monoblastus (Dolichoblastus) flavopictus n. sp. Oesterreich. Strobl, (J. l.c. (52).

*nigricentris* (nom. nud.). Ashmead (ms) in **Slosson**, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (319-321).

Myermo nn. spp. Assam. **Cameron**, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (316-318).

Naenaria n. gen., N. grandiceps n. sp. Assam. **Gameron**, P. *l.c.* (313– 314).

Notopygus nn. spp. Oesterreich. Strobl, G. Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (44).

Odontocryptus n. gen., O. bidentatus, O. sulcatus nn. spp. Khasia Hills. Cameron, P. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (40-44).

Orthocentrus macrocerus n. sp. Oesterreich. **Strobl.** G. Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (88).

Orthostigma delicata (nom. nud.). Ashmead (ms.) in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321).

Parabates uhymperin. sp. Ecuador. Cameron, P. Entomologist, London, 36, 1903, (160).

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Perilissus punctatissimus n. sp. Oesterreich. **Strobl**, G. Graz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (63).

Pezomachus nn. spp. Brues, C. T. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1903, (119–128, with pl.).

Phaenosomus alticola (nom. nud.). Ashmead (ms.) in **Blosson**, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321).

Phaeogenes beulahensis n. sp. New Mexico. Viereck, H. L. l.c. 1902-1903, (80).

Phygadeuon nanopterus n. sp. Kieffer, J. J. Zs. Hymenopter., Teschendorf, 3, 1903, (110-111).

polita n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (82).

pulchripes n. sp. Khasia Hills. Cameron, P. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (46-47).

Pimpla neonexicana n. sp. New Mexico. Viersek, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (88).

Platylabus ferrugineus n. sp. Ceylon. Cameron, P. Entomologist, London, 36, 1903, (237).

<u>latior</u> n. sp. **Pic**, M. Echange Lyon, **17**, 1902, (58).

Plesiognathus fragilis n. sp. New Mexico. Viereck, H. L. Philadelphis, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903. (82).

Poecilojoppa variegata n. sp. Q. **Szépligeti**, V. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (482).

Polyblastus nn. spp. Oesterreich. Strobl, G. Graz, Mitt. Natw. Ver. Steiern., **1902**, 1903, (55-61).

Polyclistus frontalis (nom. nud.). Ashmead (ms.) in **Slosson**, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci.., **13**, 1902, (319-321).

Polysphineta nn. spp. (nom. nud.). Ashmead (ms.) in **Slosson**, A. T. *l.c.* (319-321).

Porizon canaliculatus n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903 (43-100). Porizon vierecki n. sp. New Mexico. Cockerell, T. D. A. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (200-201).

Pramha n. gen., P. mandibularis n. sp. Khasia Hills. **Cameron**, P. London, Trans. Ent. Soc., **1903**, (231-232).

Proboloides n. nom., P. glabratus, P. maculatus nn. spp. Morley, C. Ichn. Brit., Plymouth, 1903, (160–162).

Psilosarge longipes (nom. nud). Ashmead (ms.) in **Slosson**, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (319-321).

*Rhorus braunsi* n. sp. Südwestdeutschland. **Habermehl**, H. Zs. Hymenopter., Teschendorf, **3**, 1903, (345-348).

Rhyssa skinneri n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (87).

Rizarcha nigripes (nom. nud.). Ashmead (ms.) in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321).

Sarntheinia gansuana n. sp. China, pr. Gan-su. Kokujev, N. R. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (389).

Scopasis monticola n. sp. (nom. nud.). Ashmead in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (4-8).

Scorpiorus albomarginatus (nom. nud.) Ashmead (ms.) in **Blosson**, A. T. *l.e.* (319–321).

\_\_\_\_\_ flavopictus n. sp. (nom. nud.). Ashmead in Blosson, A. T. l.e. (4-8).

Setanta femoralis n. sp. Khasia. Gameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (577–578).

Silsila n. gen., S. fulvipes, S. bilineata nn. spp. Khasia Hills. Cameron, P. Manchester, Mem. Lit. Phil. Soc., 47, No. 14, 1903, (1-5).

Spilocryptus nn. spp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (81).

Steriphocryptus n. gen., S. luteus n. sp. India. Cameron, P. Entomologist, London, 36, 1903, 233-234, 260-261). Sycaonia n. gen., S. rufo-facies n. sp. Khasia Hills, **Gameron**, P. London, Trans. Ent. Soc., **1903**, (224–225).

Taphanes n. gen., T. rufiventris n. sp. India. **Cameron**, P. Entomologist, London, **36**, 1903, (239-240).

Thalessa sp. or Rhyssa sp., parasitic on Sirex sp., description, life history, relations to the Forest, points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2. Calcutta, 1903, (156, pl. vii., fig. 2). 25 cm.

Theronia fulrescens var. mellipennis n. var. New Mexico. Viereek, H. L. Philadelphia, Pa, Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1902–1903, (88).

Tipulophion rufithoraz Cam. Schulz, W. A. Zs. Hymenopter., Teschendorf, 3, 1903, (249-253).

Trematopygus laevithoraz n. sp. Oesterreich. **Strobl**, G. (Fraz, Mitt. Natw. Ver. Steierm., **1902**, 1903, (69).

*Trichomma bituberculatum* n. sp. **Schmiddsmecht**, O. Zs. Hymenopter, Teschendorf, **2**, 1902, (357–368); **3**, 1903, (1–8, 73–80, 171–176).

Tryyhon nn. spp. Oesterreich. Strobl, G. Graz, Mitt. Natw. Ver. Steierm., 1902, 1903, (49).

Tyanites n. gen., T. rufipes n. sp. Écuador. Cameron, P. Entomologist, London, 36, 1903, (95-96).

Ulesta n. gen., U. varicornis n. sp. Khasia. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (582– 583).

Vabearis n. gen., V. forticornis n. sp. Ecuador. **Cameron**, P. Entomolgist, London, **36**, 1903, (96-97).

Whymperia n. gen., W. carinifrons n. sp. Ecuador. **Cameron**, P. *l.e.* (122-123).

Xanthojoppa nn. spp. Assam. Cameron, P. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (182–184).

ron, P. *l.c.* **12**, 1903, (367-370).

Xestojoppa nn. spp. Khasia. Cameron, P. l.c. (568-569).

Xorides opacus n. sp. E. Siberia. Kokujev, N. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (287). Zaporus minutus (nom. nud.) Ashmead (ms.) in **Slosson**, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (319-321).

Zootrephes bicoloripes (nom. nud.) Ashmead (ms.) in Slosson, A. T. l.c. (319-321).

## BRACONIDAE.

Agathis partus n. sp. New Mexico. Viereck, H L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902–1903, (96).

Anarcha micans n. sp. New Mexico. Viereck, H. L. *l.c.* (93).

Aphidius slossonae (nom. nud.) n. sp. Ashmead (ms.) in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321).

Baeognatha n. gen., B. turanica n. sp. Transcaspia. Kokajev, N. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (243).

Bracon sp. predaceous upon Scolytus minor MS., note on its habits. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2. Calcutta, 1903 (219). 25 cm.

Chelonus australis n. sp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (95).

brevipennis n. sp. Melander, A. L. and Brues, C. T. Wood's Holl, Mass., Mar. Biol. Lab. Bull., 5, 1903, (20).

Clinocentrus, synoptische Tabelle der Arten. **Szépligeti**, G. Állatt. Közlem., Budapest, **2**, 1903, (107-108).

Colastes, synoptische Tabelle der Arten. Szépligeti, G. l.c. (107).

Disophrys nn. spp. Transcaspia. **Kokujev**, N. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (245-246).

Macrodyctium monticola (nom. nud.) n. sp. Ashmead (ms.) in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321). Meteorus nn. spp. New Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902-1903, (94-95).

Ashmead (ms.) in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321).

Microdus nn. spp. (nom. nud.). Ashmead in Slosson, A. T. l.c. (4-8).

*meridionalis* n. sp. New Mexico. **Viereck**, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., **29**, 1902–1903, (96).

Microrhogas niger (nom. nud.) n. sp. Ashmead (ms.) in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (319-321).

Oncophanes, synoptische Tabelle der Arten. **Szépligeti**, G. Állatt. Közlem., Budapest, **2**, 1903, (107).

Orgilus kearfotti n. sp. Ashmead, W. H. New York, N.Y., J. Ent. Soc., 11, 1903, (144).

Pelecystoma, synoptische Tabelle der Arten. **Szépligeti**, G. Állatt. Közlem., Budapest, **2**, 1903, (108).

Phaenocarpa slossonae n. sp. (nom. nud.). Ashmead in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (4-8).

Phanerotoma nn. spp. Mongolia, Transcaspia. **Kokujev**, N. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (285–288).

Protopanteles recurvariae n. sp. Ashmead, W. H. New York, N.Y., J. Ent. Soc., 11, 1903, (144).

Rhogas, synoptische Tabelle der Arten. **Szépligeti**, G. Állatt. Közlem., Budapest, **2**, 1903, (108-114).

Mexico. Viereck, H. L. Philadelphia, Pa., Acad. Nat. Sci., Trana. Amer. Ent. Soc., 29, 1902-1903, (97).

sibiricus n. sp. E. Siberia. Kokujev, N. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (285-288).

Rhyssalus. Synoptische Tabelle der Arten. **Szépligeti**, G. Állatt. Közlem., Budapest, **2**, 1903, (107).

# EVANIIDAE.

#### SPECIAL.

Anaulacus n. gen. Semenov, A. P. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (173).

Aulocinus nn. spp. **Szépligeti**, V. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (390-393).

Aulax pterostigmatus n. sp. ? **Szép**ligeti, V. l.c. (394-395).

Brachygaster oculata n. sp. 2 Szépligeti, V. l.c. (377).

Evania nn. spp. **Szépligeti**, V. *l.c.* (378-388).

Evaniscus n. gen., E. tibialis n. sp. ? Szépligeti, V. l.e. (378).

Gasteruption nn. spp. Szépligeti, V. l.c. (367-375).

*andrei* n. sp. Anstralia. **Kieffer**, J. J. Zs. Hymenopter., Teschendorf, **3**, 1903, (384).

schletterer, A. Wien, Verh. ZoolBot. Ges., 51, 1901, (219).

Hyptia nn. spp. **Szépligeti**, V. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (375-377).

Monomachus bicolor n. sp. ? Szépligeti, V. l.c. (388-389).

Pammegischia ziphydriae n. sp. Ashmead, W. H. Philadelphis, Pa., Ent. News Acad. Nat. Sci., 12, 1901, (277-278).

Pristaulacus nn. spp. **Szépligeti, V.** Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (393-394).

Pseudofoenus latigenalis Schleit. J Beschreibung, nn. spp. Szépligeti, V. l.c. (365-367).

Tetraconus n. gen. verwandt mit Monamachus. T. mocsaryï n. sp. **?** Szépligeti, V. l.c. (389–390).

Zeuxevania nn. spp. Ostafrika. Enderlein, G. Berliner ent. Zs., 48, 1903, (41-44).

## CYNIPIDAE.

#### GENERAL.

Bloesch, C. Einige Notizen über Cynipiden und Chalcidier aus der Umgegend von Laufenburg. Schaffhausen, Mitt. Schweiz Entomol. Ges., 11, 1903, (46-55).

Dalla Torre von et Kieffer, J. J. Fasc-10-Hymenoptera Fam. Cynipidae. In: Wytsmap, P., Genera Insectorum. Bruxelles, 1902, (53-84). fr. 11,20.

#### SPECIAL.

Aulacidea solidaginis n. sp. Girault, A. A. Philadelphis, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (323-324, with fig. in text).

Callirhytis semicarpifoliae Cam. attacking "Kharshu" oak in the Punjab. Description, life-history, relations to forest-protection and remedies, points for observation. **Stebbing**, E. P. Departmental notes on Insects that affect Forestry. No. 2 Calcutta, 1903, (159, pl. VII, fig. 3, a, b, c.). 25 cm.

Dieucoila n. gen., type D. subopaca. Brazil. Ashmead, W. H. Washington, D.C., Proc. Ent. Soc., 5, 1903, (221-223).

Kiefferiella n. nom. = Kiefferia Ashm preoc. in Dipters, type K. rugosa. California. Ashmead, W. H. l.c. (221– 223).

Liebelia n. gen., L. cavarae n. sp. Kieffer, J. J. Zs. Hymenopter., Teschendorf, **3**, 1903, (110-111).

Odonteucoila n. gen., type O. chapadae. Brazil. Ashmead, W. H. Washington, D.C., Proc. Ent. Soc., 5, 1903, (221-223).

Periclistidea n. gen. (nom. nud.), P. monticola n. sp. Ashmead in Slosson, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (4-8).

Promiomera n. gen., type P. filicornis. Brazil, Ashmead, W. H. Washington, D.C., Proc. Ent. Soc., 5, 1903, (221-223).

Pseudeucoila n. gen., type Eucoila (Cothonaspis) trichopsila Hartig. Brazil. Ashmead, W. H. I.c. (221-223).

Synergus spp., Lebensweise. **Kieffer**, J. J. Allg. Zs. Ent., Neudamm, **8**, 1903, (122-123).

incrassatus, S. heyancus und S. rugulosus. Nielson, J. C. l.c. (35-37). Trissodoutaspis n. gen., type T. rufipes. Brazil. Ashmead, W. H. Washington, D.C., Proc. Ent. Soc., 5, 1903, (221-223).

Tropideucoila n. gen., type T. rufipes. Brazil. Ashmead, W. H. l.c. (221– 223).

Zaeucoila n. gen., type Z. unicarinata. Brazil. Ashmead, W.H. l.c. (221-223).

Zamischus n. gen., type Z. brasiliensis. Brazil. Ashmead, W. H. l.c. (221-223).

## SESSILIVENTRES.

### GENERAL.

**Konow**, Fr. W. Neue Chalastogastra Zs. Hymenopter., Teschendorf, **3**, 1903, (105-109, 166-171).

# SIRICIDAE.

# GENEBAL.

Olivier, E. Note entomologique. Echange, Lyon, 17, 1902, (46).

#### SPECIAL.

Chalinus haugi n. sp. Congo. Du Buysson, R. Bul. Muséum, Paris, 1902, (599-601).

Sirez sp. description of larva, pupa and imago, life-history, attacking spruce in N.W. Himalayas, notes on protection, and points for observation. **Stebbing**, E. P. Departmental notes on Insects that affect Forestry. No. 2. Calcutta, 1903, (151, pl. vii, fig. 1, a-f). 25 cm.

*juvenus*, Parasiten. Schirmer, O. Soc. Entomol., Zürich, 18, 1903, (121–122).

Xiphydria buyseoni n. sp. Japan. Konow, F. W. Zs. Hymenopter., Teschendorf, 3, 1903, (105).

## TENTUREDINIDAE.

#### Genebal.

Bisschop van Tuinen, K. . . . Sägewerkzeuge der Cimbicini. (Holländisch) 's Gravenhage, Tijdschr. Ent., **46**, [1903], (58-64, mit 3 Taf.). Florentin, R. Note sur une larve de Tenthrède du noisetier et du bouleau. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (105–107, av. fig.).

Giard, A. Larve des feuilles du noisetier. *l.c.* (52).

Larve de Tenthrède du noisetier et du bouleau [réponse à M. R. Florentin]. l.c. (133).

Konow, F. W. Ueber neue oder wenig bekannte *Tenthredinidae* des russischen Reiches und Centralasiens. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (115-132).

Ueber die Holmgren'schen Nematiden sowie über Kiaersche und andere Tenthrediniden. Zs. Hymenopter., Teschendorf, **3**, 1903, (154-162).

Einiges über die Subtribus Perreyides. *l.c.* (162-166).

Hyménoptères Tenthrédinides récoltés au Japon par M. J. Harmand. Bul. Muséum, Paris, **1903**, (128).

Marchand, E. Inventaire des Tenthrédinides [sic] ou mouches à scie (Hymenoptera-Chalastogastra) recueillies aux environs de Nantes, suivi de notices sur quelques espèces particulièrement nuisibles. Nantes, Bul. soc. sci. nat., (sér. 2, 2), 12, 1902, (233-296).

Morice, F. D. Help-notes towards the determination of British *Tenthredinidae*. Ent. Mag., London, **39**, 1903, (0-14, 47-54, 114-119, 187-193, 242-245, 275-277).

Tenthredinidae collected by Col. Yerbury in Herefordshire, 1902. *l.e.* (113).

## SPECIAL.

Acorduleceros nn. spp. Konow, F. W. Peru. Zs. Hymenopter., Teschendorf, 3, 1903, (166-169).

Allantus tepidus n. sp. Buchara. Konow, F. W. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (126).

Athalia scapulata n. sp. China. Konow, F. W. *l.c.* (117).

Camptoprium languidum]. n. sp. Konow, F. W. Zs. Hymenopter., Teschendorf, **3**, 1903, (162-166). Corymbas n. gen., C. koreana n. sp. Konow, F. W. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (120).

Dolerus nn. spp. Buchara, Turkestan. Konow, F. W. l.c. (118-119).

Encarsioneura renusta n. sp. W. China. Konow, F. W. *l.c.* (123).

Eriglenum humeratum n. sp. Peru. Konow, F. W. Zs. Hymenopter., Teschendorf, 3, 1903, (106).

Hemidianeura coeliaca n. sp. Brazil. Konow, F. W. l.c. (106).

Labidarge torquata n. sp. Brazil. Konow, F. W. l.c. (106).

Loboceros frater n. sp. Peru. Konow, F. W. l.c. (169).

Lophyrus pini, Eiablage. **Bey**, E. Insektenbörse, Leipzig, **20**, 1903, (268).

Lyda pratensis, Schädlichkeit. Lüke. Zs. Forstw., Berlin, **35**, 1903, (411-417).

rufipes, general development. Fernald, H. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (298-302).

Pamphilius nn. spp. Konow, F. W. Zs. Hymenopter., Teschendorf, 3, 1903, (37-38).

Periclista lenta n. sp. Konow, F. W. l.c. (145-153).

Perreyia nigra n. sp. Konow, F. W. l.c. (162-166).

Pciis n. gen., P. privus n. sp. Konow, F. W. *l.c.* (315-316).

Pteronus spiraeae Zdd. (Holländisch) Rossum, A. J. van. 's Gravenhage, Tijdschr. Ent., **45**, 1903, (246–257, mit 1 Taf.).

Rhagonyz n. gen., R. lituratus n. sp. Ecuador. Konow, F. W. Zs. Hymenopter., Teschendorf, **3**, 1903, (108–109).

Schioceros albiceratus n. sp. Peru. Konow, F. W. l.c. (108).

Scienteryx lactipennis n. sp. Transcaspia and Transcaucasia. Konow, F. W. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (125).

Selandria andeana n. sp. Ecuador, Oameron, P. Entomologist, London. 36, 1903, (161).

Stromboceros nn. spp. Konow, F. W. Zs. Hymenopter., Teschendorf, **35**, 1903, (145-153).

Taxonus procinctus n. sp. W. China. Konow, F. W. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (117).

Tenthredo nn. spp. Caucasus, Mongolia, W. China. Konow, F. W. l.c. (128-130).

Tenthredopsis nn. spp. Crimea, Caucasus, Altai, Siberia. Konow, F. W. *l.c.* (124).

Trichiosoma nn. spp. Siberia, Mongolia. Konow, F. W. l.c. (115-116).

Zarea nn. spp. Konow, F. W. Zs. Hymenopter., Teschendorf, 3, 1903, (145-153).

# LIST OF NEW GENERA AND SPECIES.

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#### TITLES.

Alluaud, Ch. Observations sur divers Cicindélides de Madagascar et descrip-tion d'espèces nouvelles. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (637-642, av. fig.). [4827 fh 4831]. 1

Arrow, Gilbert J. Descriptions of a few new species of Coleoptera from Sapucay, Paraguay. London, Proc. Zool. Soc., **1903**, **2**, (255–258). [4827 hi 4831]. 9

 On the Loparostict Lamellicorn Coleoptera of Grenada and St. Vincent (W. Indies). London, Trans. Ent. Soc., 1903, (500-520). [4827 he 3 4831].

On the affinities and nomenclature of certain genera of Mellonthid and Rutelid Coleoptera. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (303-306). [4831]. 4

v. Gahan, C. J.

Ausoux. Observations sur une apparition de Cantharides. Elbeuf, Bul. soc. étud. sci. nat., 20, 1901, [1902], (42 . [4819 4831].

Baeckmann, Jul. J. Note supplémentaire sur la description de la Grammoptera ingrica Baeckm. et de sa distribugéographique tion (Cerambycidae). (Russ.) St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (VIII-X). [4831]. 6

Ueber Coleoptera, welche auf dem Gute Ploskoje im Kreise Luga gesammelt wurden und die neu oder interessant für die St. Peterburger Käferfauna sind. (Russ.) St. Peterburg. Hor. Soc. Ent. Ross., 36, 1903, (CXXIII-CXXVII). [4827 db].

Malachius rubidus Er. eine Varietäten und sein Verbreitungsgebiet. Rev. Russ. Ent., Jaroslavli, 3. 1903, (92–93, mit 1 Fig.). [4831]. ж

Eine neue Pidonia Serv. aus dem Amur-Gebiet (Cerambyeidae). Rev. Russ. Ent., Jaroslavlí, 8, 1903, (115-9 116). [4831].

vom lssyk-Kul-See. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (311-312). [4831]. 10

Die palaearktischen Vertreter der Gattung Anaesthetis Mulsant. Rev. Russ. Ent., Jaroslavli, 3, 1903, (393-396). [4831]. 11

Barber, H. G. Miscodera arctica Payk [from Mt. Kteadon, Me.]. Philadelphia, Pa., Ent. News Acad. Nat. Sci. 14, 1903, (241). [4827 gy 4831] 12

**Barnard**, T. G. A. Excursion to Launching Place [Victoria]. [14 species]. Vict. Nat., Melbourne, **19**, 1903, (147– 148). [2227 if 2231 2627 if 2631 4827 if 4831]. 14

Belon. Le genre Cortilana Motsch, (Lathridiidae) et synopse de toutes les espèces actuellement connues. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (86-89). [4831]. 15

Petite contribution à la connaissance des longicornes du Congo. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (246-247). [4831 4827 fe]. 16

Description de trois longicornes brésiliens du genre *Ectenessa* Bates. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (13-15). [4831]. 17

Description de plusieurs longicornes de Bolivie appartenant au genre Adetus le C. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (464-472). [**4831**].

Fascicule 4. Coleoptera clavicornia fam. Lathridiidae. In: Wytsman, Genera insectorum, Bruxelles, 1902, (40, av. 1 pl.). fr. 9.60. [4831]. 19

Bernhauer, Max. Die Staphyliniden-Tribus *Leptochirina* nebst analytischen Bestimmungstabellen der Gattungen und Arten. D. ent. Zs., Berlin, **1903**, (113-160). [4831]. 20

Beitrag zur Staphylinidenfauna von Ostindien und den Sundainseln. Stettiner ent. Ztg, **64**, 1903, (21-36). [4827 eg 4831]. 21

Zehnte Folge neuer Staphyliden aus Europe. Wien, Verh. ZoolBot. Ges., **51**, 1901, (651-655). [4831]. 22

Elfte Folge neuer Staphyliniden der paläarktischen Fauna, nebet Bemerkungen. Wien, Verh. ZoolBot. Ges., 52, 1902, (695-705). [4807 4831]. 23

Beutenmüller, William. Notes on some beetles from the Black Mountains (North Carolina), with descriptions of new species. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1503, (511-(x 2-9053) **Blackburn**, T. Further notes on Australian Coleoptera, with descriptions of new geners and species. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (91-182, 261-309). [4803 4827 ic 4831]. 25

Boden. Beschädigung der jungen Kiefernkulturen durch wurzelbrütende Hylesinen im akademischen Lebrrevier Freienwalde a. O., Zs. Forstw., Berlin, **35**, 1903, (551-554). [4819 4831]. 27

Boileau, H. Note sur quelques Lucanides du musée de Bruxelles. Bruxelles, Mém. soc. entom. Belgique, 9, 1903, (33-62). [4831]. 28

Bordas, I. L'appareil digestif des Silphidae. Paris, C.-R. Acad. sci., 137, 1903, (344-346). [4807 4831]. 29

Born, Paul. Ueber Carabus auronitens: cluniensis nov. subspec. und andere Caraben, insbesondere Monilis echeidleri Panz. Insektenbörse, Leipzig, 20, 1903, (51-52). [4831]. 30

Eine neue Form von Carabus adonis Hampe. Insektenbörse, Leipzig, 20, 1903, (98). [4831]. 31

*Coptolabrus pustulifer : guerryi* nov. subspec. Insektenböree, Leipzig, **20**, 1903, (124). [4831]. **32** 

Ueber die Formen von Carabus auronitens Fabr. der Normandie und Bretagne. Insektenbörse, Leipzig, 20, 1903, (172-173). [4831]. 33

*Carabus violaceus provincialis* nov. subspec. Insektenbörse, Leipzig, **20**, 1903, (219–220). [4831]. 35

Bouchard, J. Insectes recueillis par M. le professeur Forster à Bornéo, Java et Sumatra (Palembang). Coléoptères carabiques. Paris, Ann. soc. ent., **72**, 1903, (169–176). [4827 eg 4831]. 36

Contribution à l'étude des Carabiques de Sumatra. Paris, Ann. soc. ent., **72**, 1903, (177–180). [4827 eg 4831]. 37

Boucomont, A. Description de quelques Bolbocerini nouveaux. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (581-587, av. 1 pl.). [4827 hf hh 4831]. 38

3 a 2

Bourgeois, J. Dingnoses de Lycides nouveaux ou peu connus (8° partie). Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (737-750). [4831]. 39

Bouskell, F. A phodius sturmi Harold: a British insect. Ent. Rec., London, 15, 1903, (92). [4827 ds 4831]. 40

Tetropium castaneum I., A species of Longicorn Coleoptera now to Britain. Ent. Rec., London, **15**, 1903, (288). [4827 de 4831]. 41

Bowditch, F. C. Notes on Casey's revision of the American Coccincilidac. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (205-207). [4831]. 42

Collection notes (Coleoptera). 1902. [Massachusetts.] Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (45-47). [4827 gg]. 43

Bradley, J. Chester. [11ndrobius tessellatus Ziegl, at Roberts Chester co., Pa.]. Philadelphia, Pa. Ent. News Acad. Nat. Sci., 13, 1902, 23). [4827 99 4831]. 44

Brauns, H. Cossy; indites Brauns, n. gen. Cossiphodidarum Wasm. Wien, Ann. Nat. Hist. Hofmus, **16**, 1901, (91– 94). [4831]. 45

Breed, Robert S. The changes which occur in the muscles of a beetle, *Thymalus marginicolis* Chevr., during metamorphosis. Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., **40**, 1903, (317-382, with pl.). (Cambridge, Mass., Cont. Zool. Lab. Mus. Comp. Zool. Harvard Coll., No. 145). Separate. 24.5 cm. [4815 4831]. **46** 

Breit, Josef. Eie Neuer Höhlen-Käfer aus Bosnien. Soc. Entomol., Zürich, 17, 1902, (89). [4819 4827 dk 4831]. 47

Cholera doderoi n. sp. Soc. Entomol., Zürich, **17**, 1903, (169). [4827 dh 4831]. 48

Brenske, E. Hapalopus n. gen. Leptopodarum. Soc. Entomol., Zürich, **17**, 1903, (185). [4827 fg 4831]. 49

Veue Melolonthiden aus Usambara aus der Samınlung des Herrn Dr. Julius Schulz. D. ent. Zs., Berlin, **1903**, (295–299). [4827 ff 4831]. 50

Neue Arten der Melolonthiden-Gattung Cyphochilus. I.sektenbörse, I.eipzig, **20**, 1903, (380-381). [4831]. Broun, T. Descriptions of new genera and species of New Zealand Coleoptera. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (450-458, 602-618); 12, 1903. (69-86). [4827 ih 4831]. 53

Brues, Charles Thomas. Notes on some Californian myrmecophiles. [Hetactius tristriatus Horn, and Syrphid larva]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (147-149, with fig. in text). [4231 4831]. 54

Two new Texan ant and termite guests [nn. spp. in *Ecitoxenia* and *Termitogaster*]. "Contributions from the Zoological Laboratory of the University of Texas. No. **32**." Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (184-188, with 1 pl.). [4827 gi 4831]. 55

A contribution to our knowledge of the *Stylopidac*. Zool. Jahrb., Jena, Abt. f. Anat., **18**, 1903, (241-270, mit 2 Taf.). [4815–4819 4831]. 56

Burgess, A. F. Economic notes on the family *Coccinellidac*. Washington, D.C., Bull. U. S. Dept. Agric., Div. Ent., No. 40, 1903, (25-32). [4803–4831]. 57

**Cameron**, M. Coleoptera collected around Constantinople and Gulf of Ismid during the winter 1901–1902. Ent. Mag., London, **39**, 1903, (58–63). [4803 4827 *dl*]. 58

Description of a new European Soronia. Ent. Mag., London, 39, 1903, (97-98). [4831]. 59

**Carret,** A. Notes relatives à l'étude de quelques *Pogonides*. Création d'un sous-genre. Description d'espèces et de varietés nouvelles. Echange, Lyon, **19**, 1903, (133-136, 137-138, 150-152). [4831]. **CO** 

**Champion**, G. C. Some notes on the habits of *Nanophycs durieni* Lucas, as observed in Central Spain, with a description of the larva and pupa by Dr. T. A. Chapman. London, Trans. Ent. Soc., **1903**, (87-91, pl. V). [4819 4831].

An entomological excursion to Bejar, Central Spain. London, Trans. Ent. Soc., **1903**, (165-182). [4027 dg 4827 dg]. 62

Coleoptern. Biol. Centr.-Amer., London, **1903**, IV, pt. **4**, (145– 312, pls. IX-XVI). [4827 hb **4831**].**63**  **Chapman**, T. A. A contribution to the life history of Orina (Chrysochloa) tristes Fabr., var. smaragdina Weise. London, Trans. Ent. Soc., **1903**, (245-261, pls. X, XI). [4819–4831]. 64

821

Chaster, G. W. Two beetles from Roundstone, new to the Irish list. Irish Nat., Dublin, 12, 1903, (167). [4827 de 4831]. 65

Chatanay, J. Orthographe du mot Ceutorrhynchus. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (204). [4831]. 66

<u>Sur</u> le *Carabus* (Megodontus) violaceus. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (37). [4831–4807]. 67

Chittenden, F[rank] H[urlbut]. The pulm and palmetto weevils. [*Hhynchophorus palmarum* and *R. cruentatus.*] Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (23-28). [4819 4831]. 63

Notes on the rhinoceros beetle (*Dynastes tityus* Linn). Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (28-32, with pl.). [4831]. 69

The tobacco stalk weevil (*Trichobaris mucorca* Lee.). Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (66-70). [4819 4831]. 70

The leaf - mining locust beetle [Odontota dorsalis], with notes on related species. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (70-90). [1819 1831].

Notes on the larger sugarbeet leaf-beetle (Monoxia puncticollis Say). Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (111-113). [4819 4831]. 72

Chitty, A. J. Hydroporus bilineatus Sturm. An addition to the British list. Ent. Mag., London, **39**, 1903, (143). [4827 de 4831]. 73

**Ciòerin**, T. Mémoire sur les Cicindélides des voyages de N. Zarudny dans la Perse orientale. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (1-21). [4827 *eb* 4831]. 74

Les Leistus de l'intérieur de la Chine. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (22-37). [4827 eb 4831]. 75 tribu des Platysmatini. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (35-64). [4831]. 76

Observations sur quelques Cicindélides de la collection Semenov. St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (90-107). [4827 e db 4831]. 77

Notice sur divers Notiophilus Dan. St. Peterburg, Hor. Sor. Ent. Ross., **36**, 1903, (108-117). [4831]. 78

Chactodactylini subtribus nova Platysmatinorum. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (157– 163). [4831]. 79

Nouvelle étude sur le genre Eucamptognathus Chaud. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (201-230). [4831]. 89

generis Platysma (Bon.) Tsch. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (21–25). [4827 db 4831]. 81

Zu Dr. K. Daniels kritischen Nachgraben. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (39–40). [4831].

<u>Species caucasica nova</u> generis *Platysma* (Bon.) Tsch. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (107– 108). [4827 db 4831]. 85

Species asiatica nova generis Leiatus Fröl, Rev. Russ. Ent., Jaroslavlĭ, **3**, 1903, (109). [4831 4827 e]. 86

Ueber den Gattungsnamen Platysma (Bon.) Tsch. Rev. Russ. Eut., Jaroslavli, **3**, 1903, (218). [4831]. 87

deserticoles (*Carabidae*). Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (219-222). [4831]. 88

 **Giöerin**, T. Species nova generis Aristochrou Tsch. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (224-225). [4831].

Eine neue Platysma Art aus Centralasien. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (226-227). [4827 eb 4831]. 91

Sur un nom de Carabidae préoccupé. Rev. Russ. Ent., Jaroslavlí, **8**, 1903, (227). [4831]. 92

délides. Rev. Russ. Ent., Jaroslavlí, 8, 1903, (229). [4831]. 93

**Clermont**, J. A. Deux mots sur les mœurs d'Apion pixi Fab. Echange, Lyon, **17**, 1902, (83). [4819 4831]. 94

**Cockerell**, T[heodore] D[ru] A[lison]. Cassida nigripes [on Convolculus incanus]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (207). [4831]. 95

Conte, A. v. Vaney, C.

**Cordley**, A. B. [Notes on injury to apple trees by *Xyleborus dispar*]. Agric. Exp. Sta., Oregon, Corvallis, Rep., **1902**, (60-61). [4819 4831]. 96

Coulon, L. Muséum d'Histoire naturelle d'Elbeuf. Catalogue de la collection de coléoptères longicornes d'Europe. Elbeuf, Bul. soc. étud. sci. nat., 20, 1901, [1902], (pagin. spéc. 1-11). [4803 4831]. 97

Grawshay, L. R. On the life history of Drilus flarescens Rossi. London, Trans. Ent. Soc., **1903**, (39-52, pls.). [4819 4815 4831]. 98

**Csiki**, Ernő. Coleoptera nova ex Hungaria. Budapest. Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (441-446). [4827 dk 4831]. 99

\_\_\_\_\_\_ Die Histeriden Ungarns. (Hung.). Allat. Közlem., Budapest, **2**, 1903, (220–232). [4827 dk 4831]. 100

Die Cicindeliden Ungarns. Math.-natw. Ber. Ungarn, Leipzig, **18**, (1900), 1903, (121–144). [4827 dk 4831]. 101

Czerski, Stanisław. Nouvelles recherches sur la myrmécophilie. (Polonais). Wszechświat, Warszawa, 22, 1903, (308-311). [4619 4819]. 102

Dahl, Friedr. Täuschende Aehnlichkeit zwischen einer deutschen Springspinne (Ballus depressus) und einem am gleichen Orte vorkommenden Rüsselkäfer (Strophosomus capitatus). Berlin, SitzBer. Ges. natf. Frounde, 1903, (273-278). [3019 3031 4819 4831]. 103

Darboux, Gaston et Mingaud, Galien. Les deux formes larvaires de *Laria* obtecta Say. Nimes, Bul. soc. étud. sci. nat., (n. sór.), **29**, 1901, [1902], (25-29). [4815 4831]. 104

Dauphin, L. C. Réponse à M. J. A. Clermont. Echange, Lyon, **19**, 1903, (93–95). [4831 4819]. 105

Davis, C. Abbott. The Cicindelidae of Rhode Island. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (270-273). [4827 gg 4831]. 106

Desbrochers des Loges. Description d'un Curculionide nouveau formant une coupe générique nouvelle. Echange, Lyon, 19, 1903, (188). [4831 4827 fa]. 107

Dierekx, F. Les glandes pygidiennes des coléoptères. Carabides (bombardiers, etc.), Paussides, Cicindélides, Staphylinides. Second memoire. Louvain (A. Uystpruyst), Lierre (J. Van In et Cie), 1901, (58, av. 3 pls. hors texte). 40, 10 fr. [4811]. 108

Donisthorpe. Oviposition in Labidostomes tridentata. Ent. Mag., London, 39, 1903, (205). [4819]. 109

[Myrmecophilous Coleoptera.] Ent. Rec., London, 15, 1903, (11-12). [4831 4819]. 110 Aphanisticus emarginatus

F.: a species of Coleoptera new to Britain. Ent. Rec., London. 15, 1903, (265). [4827 de 4831]. 111

Scymnus limonii n. sp. A species new to science. Ent. Rec., London, 15, 1903, (287). [4831]. 112 Coleoptera in South Kerry. Irish Nat., Dublin, 12, 1903, (69). [4827 de].

Du Buysson, H. Apate capucina I.. Feuille jeunes natural., Paris, (sér. 4), 34, (19). [4831 4819]. 114

Dufour, J. Pyrale et gribouri (Eumolpe). Chron. Agric., Lausanne, 15, 1902. (459-462, av. 2 figs.). [4419 4819]. 114A

Dupont, I. Insectes du Jardin (Mont-Blanc). Elbeuf, Bul. soc. étud. sci. nat., 20, 1901, [1902], (41). [4427 df di 4431 4827 df di 4831]. 115

Dury, Chas. Note on Galeruca [possible identity of G. externa and G. tanaceti.] Philadelphia, Pa, Ent. News Acad. Nat. Sci., 14, 1903, (146). [4831] 116

4803

Edwards, J. On the occurrence in Norfolk of Ordenera virescens Linn., a species not hitherto recorded as British. Ent. Mag., London, 39, 1903, (64-65). [4827 de 4831]. 117

**Ehrman**, George A. Notes on Coleoptera No. 2. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (140–141). [4831]. 118

**Eicheibaum**, F. Die Larven von Xylechinus piloeus Rtzbg. und von Hylastes cunicularius Er. Allg. Ze. Ent., Neudamm, **8**, 1933, (60-70). [4815 4831]. 119

*Omosita colon* L. Allg. Zs. Ent., Neudamm, **8**, 1903, (81-87). [4815 4831]. 120

Ellis, H. W. Criocephalus polonicus Motsch. A genus and species of Longicorn Coleoptera new to Britain. Ent. Rec., London, 15, 1903, (259-261). [4827 de 4831]. 121

Engelhardt, Chr. The Danish species of the genus Apion Herbst. (Danish) Kjöbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (115-179). [4827 da 4831]. 122

Enock, F. The life history of Cicindela campestris. London, Proc. ent. Soc., 1903, (XV-X1X). [4819 4831]. 123

Evans, W. Some more records of Coleoptera taken in Scotland chiefly in the Edinburgh and Forth district. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (89-09). [4827 de 4803]. 124

Everts, Ed. Die Käfer von Niederland und dem angrenzenden Gebiete. (Holländisch) Vol. 2, Lief. 2. 'e Gravenhage (Mart. Nijhoff). 1903. (401-796, 8 Taf.). 27 cm. [4827 d·J. 4831]. 125

 Faces, H[enri].
 Pluie de chenilles.

 [Larves de Téléphores.]
 Arch. Sci.

 Phys., Genève, (sér. 4), 16, 1903, (239).
 1819

 1819
 4831].
 126

Fairmaire, I. Matériaux pour la faune coléoptérique de la région malgache (14° Note). Paris, Ann. soc. ent., 71, (2° semest), 1902, (532-568). [4827 fh 4831]. 127

Matériaux pour la faune coléopterique de la région malgache (16° Note). Paris, Aun. soc. ent., **72**, (2° semest.), 1903, (181-259). [4827 fl 4831]. 128 Fairmaire, L. Descriptions de quelques longicornes du Mexique. Paris, Bul. soc. ent., 1902, (243-246). [4827 ha 4831]. 129

 Description de coléoptères

 nouveaux de Madagascar. Naturaliste,

 Paris, (sér. 2), 23, 1903, (9-11, 35-37).

 [4827 fh 4831].

Description de coléoptères de Madagascar. Naturaliste, Paris. (sér. 2), **24**, 1902, (286-287). [4827 *fh* 4831]. 131

Matériaux pour la faune coléoptérique de la région malgache. *Curculionidae*. Braxelles, Ann. Soc. ent. Belgique, **45**, 1901, (209-244). [4827 *fh* **483**1]. 132

Description de quelques Hetéromères recueillis par M. Fruhstorfer dans le Haut-Tonkin. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (13-20). [4827 ed 4831]. 133

Fenyer, A. Palaeoxenus (Cryptostoma) dohrnii Horn. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (220). [4831]. 134

Fernald, H[enry] T[orrey]. The imported elm-leaf beetle [Galerucella luveolu]. Agric. Fxp. Sta., Massachusetts, Amherst, Bull. No. 76, 1901, (8, with 1 fig.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp., Sta. Rec., 18, 1902, (575). [4819 4831]. 135

**Fletcher**, James. Can the pea-weevil [Bruchus pisi] be exterminated? Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (69-74). [4803 4831].

Fleutiaux, Ed. Contribution à la faune indochinoise (Indo-Chine française). (18° Mémoire). Deuxième addition aux Cicindelidae et Elateridae. Paris, Ann. soc. ent., 71, (2° semest.), 1903, (569–580). [4827 ed 4831]. 137

Description de deux nouvelles espèces d'Elatérides de Madagascar. Naturaliste, Paris, (sér. 2), 25, 1903, (45). [4827 fh 4831]. 138

Florentin, R. Sur le Megodontus violaceus. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (18). [4831 4807]. 139

Forel, F[rançois] A[lphonse]. Pluie de chenilles. Lausanne, Bul. Soc. Sci. Nat., (sér. 4), 39, 1903, (XXXIX-XL); Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (347-348). [4619 4831]. 140

Priederichs, К. Beiträge über paläarktische Coleopteren. Allg. Zs. Ent., Neudamm, 8, 1903, (87-90, 257-**261**). [4831]. 141

Froggatt, Walter W. Some woodboring beetles and their habits. Agric. Gaz., Sydney, N.S.W., 14, 1903, (414-417, with 1 pl.). [4819]. 142

Fuchs, Léon. A propos de Ceutorhyncus, Centorrhynchus, etc. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (224 - 225). [4831]. 143

Gahan, C. J. Nat. Coleoptera. Hist. Sokotra, (263-292, pl.). [4827 ff 144 48311.

- and Arrow, G. J. List of the Coleoptera collected by Mr. A. Robert at Chapada, Matto Grosso (Percy Sladen expedition to Central Brazil), [An appendix by Arrow includes 4 nn. spp. from Paraguay.] London, Proc. Zool. Soc., 1903, 2, (244-256, pl. XXVIII). [4827 hh 4131]. 145

Gangibauer, L. Bemerkungen zu Prof. H. J. Kolbe's Arbeit "Zur Systematik der Coleopteren". Allg. Zs. Ent., Neudamm, 8, 1903, (268-269). [4831]. 146

Beiträge zur Kenntnisder paläarktischen Hydrophiliden. Wien, Verh. ZoolBot. Ges., 51, 1901, (312-**332**). [4831]. 147

Der Artenumfang in der Orinocarabus-gruppe und nomenclatorische Vorschläge. Wien, Verh. ZoulBot. Ges., 51, 1901, (791-798). [4831]. 148

Gerhardt, J. Neuheiten der schlesischen Käferfauna aus dem Jahre 1902. D. ent. Zs., Berlin, 1903, (237). [4827 dc]. 149

Enicmus anthracinus Mnnh. sp. pr. D. ent. Zs., Berlin, **1903**, (238-239). [4831]. 150

Acritus nigricornis E.H. D. ent. Zs., Berlin, 1903, (239-240). [4831]. 151

Giard, A. Bradycellus distinctus. [Réponse partielle à la question de M. F. Picard]. Feuille jeuncs natural., Paris, (sér. 4), 33, 1903, (84). [4819 4827 df 4831]. 152

Giard, A. Sympiczocera laurasi Lucas. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (203). [4819 4827 48311. 153

Les glandes pygidiennes des Carabides. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (222). [4807 4831]. 154

Une altise nuisible aux semis de betteraves (Chactochema tibialis Illig). Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (13-14). [483] 4819]. 155

Giraudeau, Apate capucina. Н. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (223). [4819 4831]. 156

Godon, J. Lytta resicatoria Linn. Feuille jeunes natural., Paris, (sér. 4), 157 **38**, 1903, (50). [4819 4831].

Gorham, H. S. Fam. Cleridae. Four new Pelonia from Brazil. D. ent. Zs., Berlin, **1903**, (169–171). [4831]. 158

Nachtrag Gresser, Franz Joseph. zum Verzeichnis der in Württemberg aufgefundenen Käfer. Stuttgart, Jahreshefte Ver. Natk., 59, 1903, (325-327). [4827 dc]. 159

Grouvelle, A. Supplemént à la liste des coléoptères de la Guadeloupe de MM. Fleutiaux et Sallé. Paris, Ann. soc. ent, 71, (2<sup>e</sup> semest.), 1902, [1903]. (756-769). [4827 he 4831]. 160

Clavicornes de l'Inde septentrionale récoltés par M. Harmand. (Nitidulidae, Colydiidae, Cueujidae, Monotomidae, Dryopidae). Paris, Ann. soc. ent., 72, 1903, (108-124). [4827 ef 4831]. 161

Coléoptères de l'Inde récoltés par MM. H. L. Andrewes et T. R. D. Bell. Paris, Ann. soc. ent., 72, 1903, (125-127). [4827 cf 4831]. 162 Voyage de M. Maurice Maindron dans l'Inde méridionale (mainovembre 1901). 2° Mémoire. Coléo-ptères clavicornes. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (340-347, av. fig.). [4827 ef 4831]. 163 Clavicornes nouveaux du musée royal de Bruxelles (Afrique et Australie). Bruxelles, Ann. Soc. ent., Belgique, 45, 1902, (184-190). [4831]. 164

Guignon, J. Orthographe du mot Ceutorrhynchus. Feuille jeunes natural., Paris, (sér. 4), 88, 1903, (204-205) [4831]. 165

140

Hartmann, F. Vier neue Arten der Gattung Niphades Pase. D. ent. Zs., Berlin, 1903, (109-112). [4831]. 166

Heath, E. A. Description of a new Cetoniid beetle from British East Africa. Entomologist. London, 56, 1903, (98). [4827 ff 4831]. 167

Description of a new Longicorn beetle from British East Africa. Entomologist, London, **36**, 1903, (273). [4827 ff 4831]. 168

**Held.** (Feind der Obstbäume. Prachtkäfer.) Schweiz. Bauer, Bern, **56**, 1902, No. 76, (5). [4819]. 169

Heller, K. M. Eine neue Art der Cetoniden-Gattung *Bothrorrhina* aus Madagascar. D. ent. Zs., Berlin, **1903**, (167-168). [4827 fh 4831]. 170

Sechs neue Käfer aus Deutsch Neu-Guinea. D. ent. Zs., Berlin, **1903**, (305-317). [4827 *ia* 4831]. 171

Dritter Beitrag zur Papuanischen Käferfauna. Dresden, Λbh. zool. Mus., 10, (1902-03), Berlin, 1903, Nr. 2, (11 + 20). [4827 ia 4831]. 172

Un buprestide nouveau de la Nouvelle-Guinée allemande, Irilotaenia vahnesi. Bruxelles, Ann. Soc ent. Belgique, **46**, 1902, (231-235). [4831 4827 ia]. 173

Heydenreich, E. Ueber einige seltenere Käfer Schlesiens. Insektenbörse, Leipzig, 20, 1903, (29). [4827 dc]. 174

Holdhaus, Karl. Ergebnisse einer coleopterologischen Reise in den Kärntner Alpen im Sommer 1900. Carintbia II, Klagenfurt, **91**, 1901, (11-19). [4827 dk]. 175

und **Prossen**, Theodor. Verzeichnis der bisher in Kärnten beobachteten Käfer. (Fortsetzung). Zusammengestellt von Th. Prossen. Carinthia II, Klagenfurt, **91**, 1901, (56-63, 92-106, 164-172, 199-217). [4827 dk]. 176

Verzeichnie der bisher in Kärnten beobachteten Käfer. (Forsetzung, zusammengestellt von Karl Holdhaus.) Carinthia II, Klagenfurt, 92, 1902, (158-177). [4827 dk]. 177

Holts, Martin. Laufkäfer und Skorpione. Insektenbörse, Leipzig, 20, 1903, (339). [4819 4831]. 178 **Hood**, L. E. Notes on certain Coleoptera [collecting in Massachusetts]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (83–84). [4827 gg]. 179

Hopkins, [Andrew Delmar]. [Preliminary notice of *Philocosinus cupressi* n. sp. Ms]. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (135-136). [4831]. 181

Insect enemies of the pine in the Black Hills forest reserve. An account of results of special investigations, with recommendations for preventing losses [new Dendroctonus and Tomicus]. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **32**, 1902, (24 with pl.). 23 cm. [2419 4831]. 182

**Hormuzaki**, Const[antin] *Freik[err*] v[on]. Neue Coleopterenfunde aus der Bukowina. Wien, Verh. ZoolBot. Ges., **51**, 1901, (356-361). [4827 dk]. 183

Horn, Walther. On the Cicindelidae of southern Venezuela, collected by Edward A. Klages 1898–1900. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (331– 334). [4827 htt 4831]. 184

List of the Cicindelidae of Mexico and on their relationship with the species of the United States. New York, N.Y., J. Ent. Soc., **11**, 1903, (213-221). [4827 ha 4831]. 185

Briefe eines reisenden Entomologen. III. D. ent. Zs., Berlin, **1903**, (177–198). [4831]. 186

Ueber die Cicindeliden-Ausbeute von Guy A. K. Marshall aus. Rhodesia, Manica und Gazaland. D. ent. Zs., Berlin, **1903**, (315-317). [4827 ft 4831]. 187

Neue süd-afrikanische Cicindeliden. D. ent. Zs., Berlin, **1903**, (318-320). [4827 fg 4831]. 188 3 neue Cicindeliden vom tropischen Ost-Afrika. 2 neue abessinische Cicindeliden. Eine neue Borneo-Cicindelide. D. ent. Zs., Berlin, **1903**, (421-423). [4827 ff 4831]. 189

Contribution à l'étude de la faune entomologique de Sumatra. Bruxelles, Ann Soc. ent. Belgique, **45**, 1901, (84-85). [4831 4827 eg]. 190

Houghton, C. O. v. Mac Gillivray, A.

Iohes, Lucien, Un insecte géomètre. *Rhynchiles betulae*. Extrait d'un travail de Hermann Muckermann dans Scientific American]. Nature, Paris, **30**, (2\* sen.), 1902, (180–183, av. fig.). [4831–4819].

191 Imhof, O. Le nombre des coléoptères de la Suisse. Arch. Sci. Phys., (tenève, (sér. 4), **16**, 1903, (585). [4827 di 4803]. 192

Jacobson, G. G. Colcoptera Mandsburiae meridionalis et peninsulae Quantungensis, ab A. N. Gudzenko allata. (Russ.) St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (XI-XVI). <sup>-1</sup>4827 eb ea 4831]. 195

Localités de quelques coléoptères présentant un certain intérêt II. (Russ.) St. Peterburg, Ann. Mus. Zool. Ac. Sc., **8**, 1903, (XXII-XXIV). [4827 db ea]. 196

Theressante Neuheiten für die St. Peterburger Coleopterenfauna. II, III. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (CXVIII-(XIX, CXXI-CXXIII). [4827 db].

Jacoby, M. Descriptions of new species of South-American ('oleoptera of the family *Chrysomelidae*. London, Proc. Zool. Soc., **1903**, 2, (30-59). [4827 h 4831]. 198

A further contribution to our knowledge of African phytophagous Coleoptera. Pt. II. London, Trans. Ent. Soc., **1903**, (1-38) [4827 f 4831]. 199

Descriptions of some new species of *Clythridae* (phytophagous Coleoptera). Entomologist, London, **36**, 1903, (62-64, 91-93). [4831]. 200

Descriptions of some new species and a new genus of Chrysomelidae from South America. Entomologist, London, **36**, 1903, (169. 170, 182, 183, 290-211). [4827 h 4831]. 201

Descriptions of some new genera and species of phytophagous Coleoptera from Madagascar. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (287-303). [4831 4827 fh] 202

Descriptions of new genera and species of phytophagous Coleoptera. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (80 128). [4831]. 203 Jacoby, M. Coleoptera phytophaga sect. Eupoda fam. Sagridae. Bruxelles In : Wytsman, P., Genera Insectorum, Bruxelles, 1903, (11, et 1 pl. hors texte. 40 fr. 95. [4831]. 204

Descriptions of new genera and species of phytophagons Coleoptera obtained by Herr Conradt in West-Africa (Cameroons). Stettiner ent. Ztg. **64**, 1903, (292-336). [4827 fd 4831] 205

Jakovlev, V. E. Revision de-Sphenoplera de la région éthiopienae. Supplement. St. Peterburg, Hor. Soc Ent. Ross., 36, 1903, (231-239). [4827 f 4831]. 207

Etude sur los Sphenoptera paléarctiques du sous-genre Chrysoblemma V. Jak. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (248-277). [4831].

Un nouveau *Pentodon* de la Transcaucasie. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (17-18). [4831 4827 db]. 209

Notes coléoptérologiques III, IV. Rev. Russ. Ent., Jaroslavií, **3**, 1903, (33-35, 215-216). [4831]. 210

Notices sur diverses espèces du genre Pentodon Hope. 1. (Russ.) Rev. Russ. Ent., Jaroslavlí, 3. 1903, (304-305). [4831]. 212

Description d'une nouvelle Sphenoptera de la Transcaucasie. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (38) 387). [4831]. 213

Janson, O. E. On the genus Theodosia and other eastern Goliathides, with descriptions of some new species. London. Trans. Ent. Soc., **1903**, (303-310). [4827 4831]. 214

Pentaphyllus testaceus Hellwig, an unrecorded addition to the British Coleoptera. Ent. Rec., London. 15, 1903, (128). [4827 de 4831]. 215

Jensen-Haarup, A. C. The smallest beetles. (Danish) Bergen, Naturen, 27, 1903, (49-53, with fig.). [4831]. 216

Johansen, Joh. P. On the discovery of some Coleoptera new to Denmark and of some new but rare species. (Danish) Kjöbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (180-187). [4827 da]. 2164 Jordan, K. Some new African Anthribidae. Nov. Zool., Tring, 10, 1903, (127-130). [4827 f 4831]. 217 African Ccrambycidae. Nov. Zool., Tring, 10, 1903, (131-191). [4827 f 4831]. 218

Some new Cerambycidae collected by Albert Mocquerys on the island of St. Thomé, Gulf of Guinea, W. Africa. Nov. Zool., Tring, **10**, 1903, (192-195). [4827 fd 4831]. 219

New oriental Anthribidae. Nov. Zool., Tring, **10**, 1903, (415-434). [4827 eg 4831]. 220

Jontel, Louis H. A new species of Saperda. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 18, 1902, (33 34, with pl.). [4831]. 221

Kerremans, C. Considérations sur les Buprestides. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (165-173). [4810]. 222

Fasc. 12—Coleoptera serricornia fam. Buprestidae. [1° partie] In: Wytsman, P. Genera insectorum. Bruxelles, 1902, (48) fr. 9.60. 2° et 3° parties. Ib. (49-240). [480.3] 4831]. 223

Neue oder wenig bekannte Buprestiden des naturhistorischen Museums zu Hanburg, Hamburg, Jahrb. wiss. Anst., **19**, (1901). Beih. 2, 1903, (55-61). [4831]. 224

**Keys.** Black variety of Carabus nemoralis. Ent. Mag., London, **39**, 1903, (174). [4823 4831]. 225

Keys, J. H. Some northern and hillcountry Coleopters of the Plymouth district. Plymouth, Rep. Inst., 13, 1903, (239-245). [4827 dc]. 226

**Elages**, Henry G. Supplement to Dr. John Hamilton's list of the Coleoptera of southwestern Pennsylvania. [Scydmaenidae and Pselaphidae by Rev. Jerome Schmitt]. Pittsburg. Pa., Ann. Carnegie Mus., **1**, 1901. (265–294). [4827 gg 4831]. 227

**Elimson**, Edgar. D.e Käfer des oberen Metuitzales. Carinthia 11, Klagenfurt, 93, 1903, (67-86). [4827 dk]. 228

Knab, Frederick. Beetle prizes at Springfield, Mass. [with notes on Massachusetts beetles]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (89-90). [4827 gg]. 229 Enans, W. Notes on collecting Coleoptera in Wyonning and Utah. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902. (114–115, 147–152). [4827 gi]. 230

The Coleoptera of the Sacramento Mountains of New Mexico. Philadelphia, Pa., Ent. News Acad. Nut. Sci., 14, 1903, (172-180). [4827 gi]. 231

Additions to the list of Kansas coleoptera for the year 1901 and 1902. Topeka, Trans. Kan. Acad. Sci., **18**, 1903, (187–190). [4827 gi 4831]. 232

Kolbe, H. J. Einige Mittheilungen zur Morphologie und Systematik der Chiroscelinen. Arch. Natg., Berlin, 69, Bd 1, 1903, (161-180). [4831]. 233

Zur Systematik der Coleopteren. Allg. Zs. Ent., Neudamm, 8, 1903, (137–145). [4831]. 234

Die Elytren der Coleopteren, speziell die Elytren in der Gattung Tefflus. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (225-237). [4831 4807]. 235

Myrmekophile Insekten, speciell Thorictus foreli Wasm. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (237-253). [4831 4819 4619]. 236

Ueber den einseitigen Polymorphismus im männlichen Geschlecht der Lucaniden. Ein kurzer Entwurf. Insektenbörse, Leipzig, **20**, 1903, (43-45). [4823 4831]. 237

Kraats, G. Nekrolog [F. A. Clemeus Müller]. D. ent. Zs., Berlin, **1903**, (173-174, mit Portr.). [0010 4803]. 238

## --- v. Küster, H. C.

Küster, H. C. und Kraatz, G. Die Käfer Europas. Nach der Natur beschrieben. Fortgesetzt von J. Schilsky. H. 40. Nürnberg (Bauer & Raspe), 1903, (VIII + 270). 15 cm. 3 M. (4803 4831). 239

**Kulwieć** Kazimierz. Parasites des insectes. (Polonais) Wszechświat, Warszawa, **22**, 1903, (213–217, 246 249). [4619 4819 1419 3019]. 240

**Kunstler**, J. Observations sur le Calendra orizae. Bordeaux, Actes soc. linn., (sér. 6), 57, 1902, (17-27). [4819 4831]. 241 Lameere, A. Etude sur la phylogénie des longicornes. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, .314 323). [4831]. 242

Revision des Prionides Anoplodermines. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (59-111, 191-225). [4831]. 243

Nouvelles notes pour la classification des coléoptères. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (155-165). [4831]. 244

Lampa, Sven. The potato beetle in Europe again. (Svedish) Eutomol. Tidskr., Stockholm, 22, 1901, (170-174). [4819 4831]. 245

**Lapouge**, G. Vacher de. Tableau de détermination des formes du genre (*'arabus* (suite). Echange, Lyon, **17**, 1902, (26-27, 36-38, 42-44, 59-60, 65-66, 73-74, 82-83, 94 95, 100-101, 117-118, **131**, 149-150). [4831]. 246

Lauffer, G. Vorläufige Diagnose eines neuen spanischen Dorcadion. Soc. Entomol., Zürich, **17**, 1902, (105). [4827 dg 4831]. 247

Lavagne, H. Description du mâle de *Cryptocephalus mayeti* Mars. Echange, Lyon, **17**, 1902, (81–82). [4831]. 248

Note sur Cacnoptera marmottani Bris. Echange, Lyon, **18**, 1902, (85-86). [4831 4819 4827 d]. 249

Les, Arthur M. Revision of the Australian Curculionidae belonging to the subfamily ("ryptorhynchides. Part VI. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (643–679). [4831]. 250

Leardi-Airaghi, Z. Di una Melolontha mostruosa (Melolontha vulgaris, Fabr.). Milano, Atti Soc. ital. sc. nat., 41, 1902, (353–356, con fig.). [4831]. 251

Lefebvre, A. Résumé d'un mémoire de M. Louis Bureau, directeur du Muséum de Nantes, sur le Lycta canaliculé (*Lyctus canaliculatus* Fabricius) et les ravages qu'il fit dans les parquets et autres bois ouvrés (mœurs, expertises, jugements). (Nantes, Bul. soc. sci. nat., **10**, (2° semest.), 1900). Elbeuf, Bul. soc. sci. nat., **30**, 1901, [1902] (43-46). [4819 4831]. 252

Leng, Charles W. Notes on Coccincllidac. New York, N.Y., J. Ent. Soc., 11, 1903. (35-45, with pl., 193 213, with 2 pls.). [4831]. 255

Leonhardt, Wilh. Ueber das massenhafte Auftreten von Coccinelliden im Alten Londe im Winter 1901-1902 Aus d. Heimat, Bremerhaven, 1901.02, 1903, (53-54). [4819 4831]. 254

Lesne, P. La distribution gégraphique des coléoptères bostrychidedans ses rapports avec le régime alimentaire de ces insectes. Rôle probabldes grandes migrations humaines-Paris, C.-R. Acad. sci., 137, 1903, (133-135). [4827 gh 4831]. 255

*Bostrychus capucinus* I. Feuille jeunes natural., Paris, (sér. 4. **34**, 1903, (38). [4831 4819]. 256

Liste des Bostrychiderecueillis en Birmanie par feu M. G. Q. Corbett. Bruxelles, Ann. S.c. e.t. Belgique, **45**, 1901, (85). [4827 c) 4831].

Lewis, G. On new species of *Histordae* and notices of others. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 190). (417-429). [4831]. 258

Lewis, J. H. On a new species of Odontria. Wellington, Trans. N. Zent Inst., 35, 1903, (272). [4831]. 25.0

**Zomnicki**, A. M[aryan]. Sur la faune de Léopol et de ses environs. I. Coleoptera. Il Partie. (Polonais) Krakow, Spraw. Kom. fizyogr., **37**, 1903, (31-56). [4827 dk]. 260

Zomnicki, Jarosław I. M. Les formes du Notiophilus aquaticus I. de la Galicie. (Polonais) Kosmos, Lwów, 28, 1903, (105-114). [4831 4827 dk]. 261

Luigioni, P. Note ed osservazioni sul l'Anthypna carcelii Laporte. (romana Duponchel). Mon. zool. ital. Firenze, 13, 1902, (Supplemento), (20-22). [4831]. 262

Luze, G. Die Metamorphose von Cantharis abdominalis Fabr. Berliner ent. Zs., 47, 1902, [1903], (239-242) [4831]. 263

Revision der europäischen und sibirischen Arten der Staphyliniden-Gattungen Tachyporus und Lamprinus Heer. Wien, Verh. Zool-Bot. Ges., 51, 1101, (146-185). [4831]. 264

Bolitobiini. Revision der puläarktischen Arten der Staphyliniden-Gattungen Bryocharis Boisd. et Lac., Bolitobius Mannh., Bryoporus Kraatz und Mycetoporus Mannh. Wien, Verh. ZoolBot. Ges., 51, 1901, (662– 746). [4831]. 265

829

Luze, G. Revision der paläarktischen Arten der Staphyliniden-Gattungen Anthophagus Grav. und Hygrogeus Rey. Wien, Verh. ZoolBot. Ges., **52**, 1902, (505-530). [4807 4831]. 266

**MacGillivray**, Alex[ander] D. Aquatic Chrysomelidae and a table of the families of Coleopterous larvae. Albany Univ., N.Y. Bull. St. Mus., No. **68**, 1903, (288-327, with pl.). [4827 gg 4831]. 267

and Houghton, C. O. A list of insects taken in the Adirondack mountains, New York. 1. [Coleoptera]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (247-253). [2427 gg 4827 gg]. 268

Malinvaud, G. Orthographe du mot *Ccutorrhynchus*. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (201). [4831]. 269

Marchal, C. Sur quelques coléoptères peu connus ou nouveaux pour Saône-et-Loire. Autun, Bul. soc. sci. nat., **15**, 1902, (Proc. verb. 263-265). [4827 df 4831]. 270

Marchand, Ernest. Description de deux arthropodes nouveaux provenant du Soudan français. Nantes, Bul. soc. sci. nat., (sér. 2), 2, (2° semest.), 1902, (331-343, av. 1 pl.). [2627 fc. 2631 4827 fc. 4831]. 271

Marlatt, C[harles] I.[ester]. A Chalcidid parasite [Syntomosphyrum csurus] of the Asiatic ladybird [Chilocoris similis] [with note by Dr. L. O. Howard]. Washington, D.C., Proc. Ent. Soc., 5, 1903, (138-139). [4619 4631 4831]. 272

Mazarakij, V. V. Zur Insectenfauna des St. Peterburger Gouvernements. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (X-XXIV). [4827 db]. 273

Ueber den Erbsenkäfer (Bruchus pisi L.). (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (CI-CIII). [4819]. 274

Excursionen in der Umgebung St. Peterburgs im Frühling 1902. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (CXIV-CXVIII). [4827 db]. 275 Masarakij, V. V. Ueber die am meisten interessanten Coleoptera, welcheim Gouv. St. Peterburg (excl. Luza-Kreis) im Laufe der letzten Jahre (1900 incl.) gefunden wurden. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (CAXVIII-CXLII). [4827 db]. 276

Dromius cordicollis Vorbrg. und Acgialia rufa Fbr., zwei für das Gouv. St. Peterburg neue Arten. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (CLVI-CLX). [4827 db]. 277

Méquignon, Auguste. Capture de coléoptères nouveaux pour le bassin de la Scine. l'aris, Bul. soc. ent., **1902**, (238-239). [1827 df]. 278

Meunier, Fernand. Ueber einige Coleopteren - Flügeldecken aus der präglacialen Braunkohle und dem interglacialen Torflager von Lauenburg (Elbe). Berlin, Jahrb. geol. Landesanst., 21, 1901, Abh. auss. st. Pers., (31-38). [1331 4827 dc]. 279

Meyer Darcis, G. Beiträge zur Kenntniss der Gattung (*'optolabrus* Solier. Schaffhausen, Mitt. Schweiz. Entomol. (ies., 10, 1902, (405–410, mit 1 pl.). [4827 eb 4831]. 280

Beschreibung eines neuen Hirschkäfers, Odontolabis fruhstorferi, Meyer-Darcis. Mitt. Schweiz. Entomol. Ges., **10**, 1902, (410-411, 1 pl.). [4827 ed 4831]. 281

Mitchell, J. D. Observations on the habits of two Cicindelidae [Tetracha carolina and Cicinde'a recilatera]. Washington, D.C. Proc. Ent. Soc., 5, 1903, (108-110). [4819 4t 31]. 282

Mjöberg, Eric. A hatthing experiment. Hadrotoma murinata Payk. (Swedish) Entomol. Tid kr., Stockholm, 22, 1901, (189-1.0). [4815 4831]. 282A

Rare Coleoptera. 1. From the environs of Stockholm. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (191-192). [4827 da 4831]. 2828

Möllenkamp, W. Beitrag zur Kenntnis der Lucaniden Fauna. D. ent. Zs., Berlin, 1903, (337-355). [4831]. 283

Mollandin de Boissy, R. Les dégâts causés en France par deux esp'eces de *Capnodis*. Interméd. Bombycult., Paris, **3**, 1903, (36-39). [4819]. 281 Morrill, Austin W. Notes on the early stages of Corylophodes marginicollis Sec. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 4, 1903, (135–138, with pl.). [4831]. 285

Mory, Claude E. Liste der 1898 im Jouxtal gesammelten Coleopteren. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1903, (469–473). [4827 di]. 286

Moser, J. Neue Cetoniden-Arten. Berliner ent. Zs., 47, 1902, [1903], (283-287); 48, 1903, (315-320). [4831]. 287

Zwei neue Cetoniden-Arten. Berliner ent. Zs., **48**, 1903, (145). [4831]. 288

Müller, Jos. Ueber das Männchen von Adozus obscurus L. Zool. Anz., Leipzig, **27**, 1903, (39–41). [4831–4807]. 289

**Müller,** Josef. Lucanidae et Scarabaeidae Dalmatiae. Wien, Verh. Zool-Bot. Ges., **52**, 1902, (438-466). [4827 dk 4831]. 290

Münster, Ths. New Coleoptera from Norway. (Norw.) Nyt. Mag. Naturv., Kristiania, 41, 1903, (239-258). [4827 da]. 291

Murtfeldt, Mary E. Another Yuccafeeding insect [Carpophilus melanopterus]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (293-295). [4819 4831]. 292

Nawa, Yarushi. Life history of Zephyrus taxila, Bremer. (Japanese) Konch. Sek., Gifu, 7, 1903, (317-319). [4831]. 293

Nicéville, Lionel de (the late). Insect pests of forest trees. Calcutta, Ind. Mus. Notes, 5, 1903, (103–117, with pls.). [4019 4419 4819]. 294

 Insect pests of fruit trees.

 ('alcutta, Ind. Mus. Notes, 5, 1903,

 (117-127, with pls.).

 [4019

 4619

 295

Calcutta, Ind. Mus. Notes, **5**, 1903, (127– 130, with pls.). [4019 4419 4819]. 296

Insect pests of vegetables. ('alcutta, Ind. Mus. Notes, 5, 1903, (131-134. with pls.). [4419 4819]. 297

Insect posts of coreals and crops. Calcutta, Ind. Mus. Notes, 5, 1903, (134-143, with pls.). [4019 4219 4419 4819]. 298 Nicéville, Lionel de (the late). Insect pests of indigo. Calcutta, Ind. Mus. Notes, 5, 1903, (144–164, with pls.). [4019 4419 4819]. 299

Insect pests of the sugar cane. Calcutta, Ind. Mus. Notes, 5, 1903, 164–182, with pls.). [4019 4419 4619 4819]. 300

Insect pests of tea. Calcutta, Ind. Mus. Notes, 5, 1903, (185-189, with pls.). [4419 4819]. 301

Nicolas, A. Haploenema (Mesona) curentionoïdes L. var. biboculata n. var. Echange, Lyon, 17, 1902, (28). [483]. 302

Nielsen, J. C. Zur Lebensgeschichte des Haselbockkäfers (*Oberea linearis* Fabr.). Zool. Jahrb., Jena, Abt. f. Syst. **18**, 1503, (659-664, mit 1 Taf.). [4819 4831]. 303

Norman, A. M. Notes on the Natural llistory of East Finmark. [Insecta] Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903. (166-173). [4227 db 4231 4427 db 4431 4627 db 4631 4827 db 4831]. 304

Oertsen, E. von. Ueber einige von Dr. Horn auf Cevlon gesammelte Tenebrioniden. D. ent. Zs., Berlin, 1903. (233-236). [4831 4827 ef]. 305

Ohaus, Fr. Beiträge zur Kenntnis der Ruteliden. D. ent. Zs., Berliu, 1903, (209-228). [4831]. 306

Verzeichnis der von Herrn Richard Haensch in Ecuador gesammelten Ruteliden (Coleoptera lamellicornia). Berliner ent. Zs., **48**, 1903, (215–242). [4831 4827 he]. 307

Olivier, Ernest. Coléoptères Lampyrides capturés à Dardjilling par M. Harmand. Bul. Muséum, Paris, 1903, (19-20). [4827 ef 4831]. 308

**Orbigny**, H. d' Notes sur divers Authophagides de l'Afrique australe. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.). 1903, (289-300). [4827 fg 4831]. **30**9

Perraudière, R. de la. Note sur Coroebus fasciatus Vill.—bifasciatus Ol. et ses parasites. Paris, Bul. soc. ent., 1902, (251-253). [4619 4819 4831]. 310

Petri, Karl. Das Haftorgan von Malthodes spathifer Kicsw. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (410-412). [4807 4831 j. 311 **Peyerimhoff**, I'. de. Coléoptères nouveaux pour la faune française. Description d'une espèce inédite. Paris, Bul. soc. ent., **1902**, (246-247). [4827 *lf* 4831]. 312

Descriptions des larves de trois coléoptères exotiques. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (710-718, av. fig.). [4815 4831]. 313

Sur l'état de la systématique en entomologie, principalement chez les coléoptères. Feuille jennes natural., Paris, (sér. 4), **38**, 1903, (37–42). [2431 4831]. 314

Feuille jeunes natural., Paris, (sér. 4), **33**, (89-95). [2423 2431 4823 4831]. 315

Pic, Maurice. Anthicides de Manille. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (643-648). [4827 eg 4831]. 316

Contribution à l'étude générale des *Hylophilidae*. Paris, Ann. soc. ent., **72**, 1903, (65–107). [4827 4831]. 317

Voyage de M. Maurice Maindron dans l'Inde méridionale (mai à novembre 1901), 3<sup>e</sup> Mémoire.—Anthicides. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (348-352). [4827 ef 4831]. 318

Descriptions de deux Hylophilus d'Océanie appartenant au Musée civique de Gênes. Paris, Bul. soc. ent., **1902**, (227-228). [4827 *ia ig* 4831]. 319

 Note
 sur
 Ernobius
 nor 

 mandi
 Pic.
 Paris, Bul. soc. ent., 1902,
 (250-251).
 (4831).
 320

Anthicides nouveaux des collections du Muséum de Paris. Bul. Muséum, Paris, **1903**, (20-21). [4831].

3201

Diagnoses de coléoptères de l'Ancien et du Nouveau Monde. Echange, Lyon, **17**, 1902, (23-26). [4831]. 321

Deux variétés nouvelles de Purpuricenus Fisch. Echange, Lyon, 17, 1902, (27). [4831]. 322

Nouvelles espèces et variétés de coléoptères paléarctiques. Echange, Lyon, **17**, 1902, (31–33, 33–35, 79–80). [4831 4827 d fa]. 323

quatre nouvelles espèces de Hylophilidae. Echange, Lyon, 17, 1902, (33-34). [4831]. 324 Diagnoses de Sibinia nouvelles. Echange, Lyon, 17, 1902, (39-40). [4831]. 325 Deux notes entomologiques avec synopsis. Echange, Lyon, 17, 1902, (41-42). [4831]. 326 Coléoptères intéressants rares ou nouveaux pour la faune-française. Echange, Lyon, 17, 1902, (46). [4831 4827 df]. 327 et Descriptions notes diverses. Echange, Lyon, 17, 1902, (47-49, 55-57, 71-72). [4831]. 328 Coléoptères nouveanx originaires de la Patagonie. Echange, Lyon, 17, 1902, (49–51). [4831]. 329 Coléoptères intéressants, rares ou nouveaux pour la faunefrançaise (fin). Echange, Lyon, 17, 1902, (51). [4831 4827 df]. 330 Sur quelques Rhagonycha de France. Echange, Lyon, 17, 1902, (53-54). [4831 4827 df]. 331 Sur Trichodes (Clerus) apiarius L. et T. alrearius Fabr. Echange, Lyon, 17, 1902, (61-62). [4831]. 332 Coléoptères présumés. nouveaux de la faune circumméditerranéenne. Echange, Lyon, 17, 1902, (63-65).  $[4831 \ 4827 \ d \ fa]$ . 333 Sur l'identité générique de Gonodera delagrangei. Echange, Lyon, **17**, 1902, (68–69). [4831]. 334 Coléoptères nouveaux del'ile de Ténériffe. Echange, Lyon, 17, 1902, (80-81). [4831 4827 lb] 335- Notes entomologiques diverses et descriptions. Echange. Lyon, **19**, 1903, (89-91). [4831]. 336 Descriptions et notes complémentaires sur divers coléoptères Echange, Lyon, 19, paléarctiques. 337 1903, (97–98). [4831]. Coléoptères exotiques nouveaux. Echange, Lyon, **19**, 1903, (98–100, 105–107). [4831]. 338 338 Diagnoses préliminaires.

Pic, Maurice. Un nouveau genre et

de Longicornes provenant de Chine. Echange, Lyon, 19, 1903, (105). [4831 4827 eb]. 339 Pic, Maurice. Descriptions et habitats de divers coléoptères du Nord de l'Afrique. Echange, Lyon, **19**, 1903, (113-115). [4831 4827 fa]. 240

 Nouveaux
 coléoptères

 d'Europe.
 Echange, Lyon, 19, 1903,

 (115).
 [4831 4827 d].
 341

Coléoptères nouveaux d'Asie et d'Afrique. Echange, Lyon, 19, 1903, (119-120). [4831 4827 e f]. 342

Captures, notes diverses et diagnoses. Echange, Lyon, **19**, 1903, (129-131). [4831]. 343

Quelques coléoptères rares ou nouveaux pour la faune gallo-rhénane. Echange, Lyon, **19**, 1903, (153–155). [**4831** 4827 df]. 344

Malthinides nouveaux. Echange, Lyon, **19**, 1903, (155–158). [483] 4827 fa]. 345

Espèces et variétés nouvelles de coléoptères. Echange, Lvon, 19, 1903, (161-163, 169-171, 177-178). [4831]. 346

 
 Note sur le genre Glaphyrus Latr. Echange, Lyon, 19, 1903, (173-174). [4831].

Anthicides exotiques nouveaux. Naturaliste, Paris, (sér. 1), 25, 1903, (56). [4831]. 349

Coléoptères exotiques nouveaux. Naturaliste, Paris, (sér. 2), 25, 1903, (81). [4831]. 349A

divers Tichyini. Autun, Bul. soc. sci. nat., **15**, 1902, (Proc. verb. 139–148). [4831]. 350

exotiques. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (89-91). [4831]. 351

Contribution à l'étude des Xyletini du Brésil. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (17-18). [4827 hh 4831]. 352

\_\_\_\_\_ Addenda aux Xyletini du Brésil. Bruxelles, Λnn. Soc. ent. Belgique, **46**, 1902, (130-131). [4831]. 353 Pic, Maurice. Essai dichotomique sur 13 genre Gilboxyktinus. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (132-133). [4831]. 353a

Nouveaux Anthicides des collections du Musée Zoologique de l'Ac. Imp. Sc. à St. Peterburg. St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (88-89). [4831]. 354

Plcard, F. Observations coléoptérologiques. Acilius canaliculatus.—Bradycellus distinctus. Feuille jeunes natural., Paris, (sór. 4), **33**, 1903, (64). [4827 df 4831]. 355

Pierre, abbé. Sur l'evolution de Lixus iridis Oliv. et de Chalcidides parasites de l'œuf, de la larve et do l'image. Echange, Lyon, **19**, 1903, (108–110, 116–117, 132–133, 141–144). [4819 4619 4831 4631]. **356** 

Planet, Louis. Description d'un Lucanide nouveau. Naturaliste, Paris, (sér. 2), 25, 1903, (11-12, av. fig.). [4831]. 357

Planta-Ganova, P. C. Revision der Verordnung ueber Vertilgung der Maikäfer und Engerlinge. Volkswirthsch. Bl. Graubünden, Chur, **1903**, No. 11, (1-2), No. 12, (1 2). [4803 4831]. 358

**Pohl**, Robert. Eine Käferernte. Ans d. Heimat, Stuttgart, **15**, 1902, (48–53). [4827 dc 4831]. **359** 

Pomerancev, Dmitrij. Scolytus carpini Rtzb, gefunden auf dem Haselnussstrauch (Corylus avellana L.). (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (118-124, Taf. I). [4819 4831]. **360** 

Notes biologiques sur les coléopteres vivant sous les écorces et utiles dans la silviculture. IV. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (22-23); V. Fam. *Histeridae*, *ib.*, (77-78); VI. Fam. *Cleridae*, *ib.*, (200-202). [4819]. **361** 

——— Beitrag zur Kenntnis der auf der Fichte (*Picea excelsa*) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Lešn. Inst., 8, 1902, (3-25, mit 1 Taf.). [4015 4019 4415 4419 4615 4619 4815 4819]. 362

Portevin, G. Clavicornes nouveaux du groupe des Nécrophages. Paris, Ann. soc. ent., 72, 1903, (156–163, av. pl.). [4831]. 363 Ponjade, G. A. Nouvelle note sur l'Ilydrophilus piceus. Paris, Bul. soc. ent., 1902, (238). [4819 4831]. 364

Prediger, G[eorg]. Zoogeographisches aus Thüringen. Insektenbörse, Leipzig, 20, 1903, (220). [4827 dc]. 365

Zoogeographisches aus Südthüringen. Insektenbörse, Leipzig, 20, 1903, (356-357). [4827 dc]. 366

Preiss, Paul. Cetonidae. (Wissenschafd. Resultate der Reise Carlo Frhrn. v. Erlanger's durch Süd-Schoa, Galla u. Somaliländer). Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (93-111, mit 1 Taf.). [4831 4827 ff]. 367

Prossen, Theodor v. Holdhaus, Karl.

Quittard, J. Contribution à la faune des coléoptères du département du Puyde-Dôme, principalement des environs de Riom (supplément). Echange, Lyon, 19, 1903, (160, 165-166, 173). [4831 4827 df]. 368

Raffray, A. Psélaphides recueillis dans le sud de Madagascar par T. Ch. Alluaud. Paris, Aun. Foc. ent., 72, (2° semest.), 1903, (315 330, av. fig.). [4827 f/h 4831]. 369

Voyage de M. L. Biró dans les possessions allemandes de la Nouvelle-Guinée. Psélaphides. Descriptions d'espèces nouvelles. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (29-106, mit Taf. I-II). [4827 ia 4831]. 370

**Régimbart,** M. Coléoptères aquatiques (Haliplidae, Dytincidae, Gyrinidae et Hydrophilidae), recucillis dans le sud de Madagascar par M. Ch. Alluaud, (juin 1900—mai 1901). Paris, Ann. soc. ent., **72**, 1903, (1-51). [4827 fh 4831]. 371

Contribution à la faune Indo-Chinoise (19<sup>e</sup> Mémoire): Hydrophilidae. Paris, Ann. soc. ent., **72**, 1903, (52-64). [4827 ed 4831]. 372

Vovage de M. Maurice Nuindron dans l'Inde méridionale (mai à aovembre 1901) 1<sup>er</sup> Mémoire. Dytiscides, Gyriaides, Palpicornes. Paris, Ann. soc. ent., **72**, 2<sup>e</sup> semest.), 1903, (331-339). [4827 ef 4831]. 373

**Beichert**, Alex. Die Eier von Sternocera sternicornis I., Ent. Jahrb., J.eipzig, **12**, 1903, (174-175). [4831 **4**815]. 374

(x 2 905**3)** 

**Beitter**, E. Bestimmunge-Tabelle der Tenebrioniden-Abtheilungen: Tentyrini und Adelostomini aus Europa und den angrenzenden Ländern. Brünn, Verh. Natf. Ver., **39**, (1900), 1901, (82-197). [4831]. 375

Analytische Uebersicht der palaearctischen Gattungen und Arten der Celeopteren Familien Byrrh:dae (Anobiidae) und Cioidue. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (3-64). [4831]. 376

Melolonthidae aus der europäischen Fauna und den angrenzenden Ländern, enthaltend die Gruppen der Pachydemini, Sericini, und Melolonthini. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (93-303). [4831]. 377

Riteema, ('zn. C'. A new species of the lucanoid genus Cardanus. Leiden, Notes Mus. Jentink, 28, 1903, (229-230'. [4831]. 378

Rivers, J. J. Myrmecophilous Coleoptera or ant-loving beetles. Los Angeles, Bull. So. Cal. Acad. Sci., 1, 1902, (71). [4819]. 379

Bobinson, H. C. Report on the Tiger beetles (*Cicindelidae*). Fascic. Malay. Zool., 1, (179–183). [4827 ej 4831]. 380

Roman, A[braham]. Ilapalus bimaculatus L. found in Sweden. Entomol. Tidskr., Stockholm, 22, 1901, (166). [4827 da 4831]. 381

**Boon**, G. van. Sobarus vethi, ein neuer Prionide aus Central-Afrika. s' Gravenhage, Tijdschr. Ent., **45**, 1903, (243-245, mit 1 Fig.). [4827 fe 483]]. 382

Rosenberg, E. C. Larvæ of the groups Lebini and Odacanthini, the genera *Lebia* and *Odacantha*. (Danish with an English summary) Kjöbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (1-21, 1 pl.). [4815 4831]. 383

Bybiński, M. Coléoptères nouveaux pour la faune de la Galicie. 11. Liste. (Polonais) Kraków, Spraw. Kom. fizyogr., 37, 1903, (15 · 30). [4827 dk]. 384

Liste des coléoptères trouvés en Podolie galicienne, entre Złoczów et Podwołoczyska, en 1884– 1890. (Polish) Kraków, Spraw. Kom. fizyogr., **37**, 1903, (57–175). [4827 dk]. 385 **Schiberg**, John. Aleocharids collected in the arctic regions by the Swedish expeditions 1883 and 1899. (Swedish) Entomol. Tidskr., Stockholm, **22**, 1901, (167-169). [4827 k 4831]. **386** . Coleopters mediterranea et rosso-asiatica nova et minus cognita II. Helsingfore Oferer E V.

nita II. Helsingfors, Ofvers. F. Vet. Soc., **45**, [No. 10], 1902-1903, (1-40). [4831]. 387

Messis hiemalis Coleopterorum Corcyraeorum. Helsingfors, O vers. F. Vet. Soc., 45, [No. 11], 1902-1903, (1-84). [4831 4827 dl].

Ad cognitionem faunae Coleopterorum Graecae fragmenta. Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 12], 1902-1903, (1-9). [4831 4827 dl]. 389

Ad cognitionem faunae Coleopterorum Italicae frugmenta. Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 13], 1902-1903, (1-14). [4831 4827 dh]. 300

sibus Februario et Martio 1896 in Palaestina et Aegypto inferiore collecta. Helsi.gfore, Ofrers. F. Vet. Soc., 45, [No. 18], 1902-1903, (1-36). [4831 4827 ei fb].

Coleoptera Numido-Punica mensibus Martio, Aprili et Majo 1899 in Tunisia et Algeriu orientali collecta. Helsingfors, Ofvers, F. Vet. Soc., 45, [No. 19], 1902-1903, (1-70). [4831 4827 fa].

Iben:onstration einer Sammlung von Ingenieur Isaac Ericson in Mölndal angefertigter Photographien sehr kleiner Coleopteren. Helsingfora, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenn à Helsingfors du 7 nn 12 juillet 1902, **1903**, VI Section, (18-19). [4803].

393 käfer und Verbreitung der Dytisciden in Finland. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, VI Section, (26-32) [4827 db 4803]. 394

Sainte-Claire Deville, J. Etude sur divers Platysma des Alpes occidentales. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (588-619). [4827 db 4831]. 395

Contribution à la fanne du bassin de la Seine. Paris, Bul. soc. ent., **1902**, (2:17-250). [4827 df]. 397

Remarques sar les llydrophilidae de la faune française. Echange. Lyon, 17, 1902, (75-78, 83-85); 19, 1903, (103-104, 111-112). 4831 4827 df].

Jum détachés des Tibiale Duft. par le Dr. K. Daniel. Echange, Lyou, 19, 1903, (91-93). [4831].

Note complémentaire sur les *Bembidium* du groupe des *Tibiale* Duft. Echange, Lyon, **19**, 1903. (181-182). [4831].

Schaeffer, C. Notes on Derobraches and Acanthorinus. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (235-237). [4831].

Schenkling, Karl. Taschenbuch für Käfersammler. 5. erweit. u. verb. Auf. Leipzig (O. Leiner), [1903], (IV + 314 + XXIV, mit 13 Tal. nebst Erklärungen). 16 cm. Geb. 2,50 M. [4803. 402

Schenkling, Sigm. Einige neu-Cleriden des Stettiner Museums. Stettiner ent. Ztg. 64, 1903, (16-21). [463].

Cleriden. D. ent. Zs., Berlin, **1903**, (9-16). [4831]. 404

Ueber die Gattungsnamen Clerus und Trichodes. Allg. Zs. Ent.. Neudamm, 8, 1903, (202-204). [4831].

Zwei neue Cleriden des National-Museums zu Budapest nebst Bemerkungen zu schon beschriebenen Arten. Budapest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (396-399). [4831].

fam. Cleridae. In: Wytsman, P., Bruxelles, Genera Insectorum, 1903. (124, et 5 pls. hors texte). 4vo. fr. 35. 10. [4831].

Schmidt, R. H. Ueber eine neue Thorictus Art aus Ost-Buchara (Th. kaznakori n. sp.; Coleopt. Thorictidac).

4803

St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (389–391). [4831]. 408

**Sohmitt**, *Rev.* Jerome. [*Scydmaenidae* and *Pselaphidae* of south-western Pennsylvania] [in paper by H. O. Klages]. Pittaburg, Pa., Ann. Carnegie Mus., **1**, 1901, (207-269). [4827 gg 4831].

409

**Schneider**, J. Sparre. Coleoptera gathered by Embr. Strand in the Southern part of Nordlands Amt and in Lofoten and Vesteraalen in 1899 and 1900. (Norw) Trondhjem, kgl. Vidselsk. Skr., **1902**, No. 1, 1903, (30). [4827 da]. 410

**Schneider**, O. Ueber Melanismus korsischer Käfer. Dresden, SitzBer. Isis, **1902**, 1903, (43-60). [4823 4827 df]. 411

Scholz, Richard. Im Nebel und Regen. Insektenbörse, Leipzig, 20, 1903, (19-20, 26-28). [4827 dk]. 412

Eine kleine Käferausbeute aus Gastein. Insektenbörse, Leipzig, 20, 1903, (140). [4827 dc]. 413

Schreiner, J. F. Der Rebenschneider (Lethrus apterus Laxm) und die Mittel zu dessen Bekämpfung. (Eine landwirthschaftliche Monographie). (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, IV, No. 1, 1903, (45, mit 10 Fig. u. 1 Tuf.). [4819 4831]. 414

Ueber den Mais-Rosskäfer (Pentodon mono:lon Fabr). (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, III, No. 9, 1902, (11, mit 3 Fig.). [4819 4831]. 415

Schultze, A. Paläarctische Ceuthorrhynchinen. D. ent. Zs., Berlin, 1903, (241-286). [4831]. 416

Zum Verzeichniss der paläarctischen Ceutborrhynchinen. (D. ent. Zs., Berlin, **1902**, 205-226). D. ent. Zs. Berlin, **1903**, (287-291). [4831 4827]. 417

Zusammenstellung einer Varietäteu-Reihe paläarctischer Ceuthorrhynchinen. D. ent. Zs., Berlin, **1903**, (292-294, 424). [4831]. 418

liaris gudenusi n. sp. Wien, Verh. ZoolBot. Ges., 51, 1901, (212-215). [4807 4831]. 419

Generis Ceuthorhynchi species novae rossicae et transcaspicae. St. Peterburg, Ilor. Soc. Ent. Ross., **36**, 1903, (65-89). [4827 db ea 4831]. 420 (x 2-9053) **Schwarz**, Otto. Sechs neue nordamerikanische Elateriden. J. ent. Zs., Berlin, **1903**, (57-62). [4827 g 4831]. 421

Neue Elateriden ans Südamerika. 1). ent. Zs., Berlin, **1903**, (63– 80). [4827 h 4831]. 422

Aenderung des Gattungsnamens Gastrimargus Schw. (Stett. ent. Zeitg. 1902, p. 309.) D. ent. Zs., Berlin, **1903**, (80). [4831]. 423

Madagaskar. D. ent. Zs., Berlin, **1903**, (357–376). [4827 f 4831]. 424

------ Neue Elateriden aus Neu-Guinea und Australien. D. ent. Zs., Berlin, **1903**,.(377-398). [4827 i 4831]. 425

Zwei neue Arten der Throsciden-Gattung Lissomus Dalm. aus Deutsch Ostafrika. D. ent. Zs., Berlin, **1903**, (399–400). [4827 ff 4831]. 426

**Scriba,** E. Vellcius dilatatus F. Insektenbörse, Leipzig, **20**, 1903, (212). [4831 4819]. 427

**Seelen**, von. Engerling-Vertilgung. Zs. Forstw., Berlin, **35**, 1903, (368–373). [4803 4831]. 428

**Soldlitz**, Georg. [Bericht über die Wissenschaftl. Leistungen im Gebiete d. Entomologie 1901.] Coleeptera. Arch. Natg., B.rlin, **68**, Bd 2, H. 2, 1902, [1903], (45-284); D. ent. Zs., Berlin, **1902**, H. 3, [1903], (45-284). [4803].

429 Somenov, A. P. De genero Nyctiphantus Sem. ejusque speciebus. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (176-182). [483]. 430

Coleoptera nova faunae turanicae. I, II. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (8-13, 353-357). [4827 ea 4831]. 431

Analecta coleopterologica I-V. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (14-15, 99-100, 169-173, 306-307, 390-392). [4831]. 432

Synops:s specierum generis Alermes Rttr. 1891. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (26-28). [4831]. 433

Dune novae Scolytidarum species e Rossia. (Russ.) Rev. Russ. Ent., Jaroslavlī, **3**, 1903, (79–80). [4831].

3 E 2

**Somenov**, A. P. Sur la structure et le rôle du pédoncule mésothoracique chez certains coléoptères. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (85-88, av. 1 fig.). [4807]. 435

Les ailes inférieures des coléoptères, considérées comme caractère systématique. (Russ.) Rev. Russ. Ent, Jaroslavlí, **8**, 1903, (103-106). [4831]. 437

Sur la chasse, au printemps, de quelques coléoptères caractéristiques pour la Russie d'Europe II. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (154-155). [4819].

Synopsis specierum generis Julodella Sem. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (161–165). [4831]. 439

Sur la position systématique du groupe de Céphaloides. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (183-186). [4831]. 441

La position systématique du genre Epactius Schneid = Omophron Istr. et les rapports naturels de la famille des Haliplidae C. G. Thoms. (Russ.) Rev. Russ. Ent., Jaroslavli, **3**, 1903, (187-100). [4831]. 442

Additamentum ad descriptionem Julodis bucharicae San. 1893. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (190). [4831]. 443

Notice sur le Polyanthron (Pogonarthron) tschitscherini Sem. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (203-204). [4831]. 414

Carabus (L.) do la Perse septentrionale. Carabidae. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (230–232). [4827 el. 4831].

Une nouvelle espèce du genre Carabus (L.) du Turkestan. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (297-299). [4827 eh 4831]. 446 Novae species tibetanae generis Carabus (L.). Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (349-352). [4827 eb 4831]. 448

De nova Purpuriceni specie e Persia Austro-orientale. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (358-359). [4827 eh 4831]. 450

ictus Sem. & nondum descriptus.

(Russ.) Rev. Russ. Ent., Jaroslavlí, 8, 1903, (372-376, cum fig.). [4831] 451

Semenov, A. R. De speciebus generis Carabus (L.) subgenus Alipas'er Rttr. formantibus. Rev. Russ. Ent., Jaroslavli, 3, 1903, (381-383). [4831]. 452

Coléoptères nouveaux pour la faune de la Russie IV. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (401– 403). [4827 db ea]. 454

Sempolowski, A. [Un nouveau coléoptère dévastant les betteraves]. (Polonais) Gaz. roln., Warszawa, 43, 1903, (281-282). [4819]. 455

**Sharp**, D. New species of Lamellicorn Coleoptera from the Nilgiri Hills. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (407-473). [4827 ef 4S31]. 456

Some new Coleopters from the Chatham Islands and New Zealand. Eut. Mag., London, **39**, 1903, (105–110). [4827 od ik 4831]. 457

Tetropium fuscum Fabr., a genus and species of Longicorn Coleoptera new to Britain. Ent. Mag., London, 39, 1903, (198-199). [4827 de 4831].

On some Coleoptera from the Faroë Islands. Ent. Mag., London, **39**, 1903, (249-250). [4827 da 4831]. 459

A Coleopterous insect cmbedded in the wall of the human intestine. Cambridge, Proc. Phil. Soc., **12**, 1903, (199, 200). [4819 4831]. 460

*Ileliocopris monhotus* and *dominus.* Fascic. Malay. Zool, 1, (281-287). [4823 4827 eg 5831]. 561

Coleoptera. 111. Coleoptera Caraboidea. Fauna Hawaiiensis, vol. 111, (175-292, pls. VI, VII). [Summary] Entomologist, London, **36**, 1903, (263). [4823 4827 nd 4831]. 462

Description of a new genus and species of Coleoptera (Fam. Hispidae) from New Britain. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (924, 925). [4831]. 463

**Silantjev**, A. A. Der punktbäuchige Hohlrüssler (*Cleonus punctirentris*) und andere Rüsselkäfer, welche der Zuckerrübe in Russland schädlich werden, deren Beschreibung, Lebensweise und Bekämpfung. St. Peterburg, 1903 (167, nit 28 Fig. u. 1 Taf.). 23 cm. (0.50 Rub.). [4815 4819]. 464 silva Tavares, Joaquim da. Bewegungen der Galle des Käfers Nanophyes pallidus Oliv. Insektenbörse, Leipzig, 20, 1903, (60-61). [4831]. 465

Siriajev, N. Un nouveau *Hister* de la Russie méridionale. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (16). [4831]. 466

Skinner, Henry. Coleoptera [from Beulah, New Mexico]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902, (38-41). [4827 gi 4831]. 467

A new variety of Tegrodera. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (168). [4831]. 468

Notes on Buprestidae with descriptions of new species. Philadelphia, Pa., Ent. News Acad. Nat. S i., 14, 1903, (236-239, 1 pl.). [4831]. 469

**Slingerland**, M. V. The elm leaf beetle found at Ithaca, N.Y. [Galerucella lut.ola]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (30). [4827 gg 4831]. 470

Three unusual strawberry pests [Caccecia obsoletana, Harpalus caliginosus and H. pennsylvanicus] and a greenhouse pest [Phlyctaenia rubigalis]. Agric. Exp. Sta., New York, (Cornell Station), Ithaca, Bull. No. **190**, 1901, (143-164, with 15 figs.); [review], Washington, D.C., U. S. Dept. Agric., Off. Exp. Sta., Rec., **13**, 1901, (371-372). [4419 4431 4931].

**Sloane**, Thomas G. Studies in Australian Entomology No. XII. Sydney, N.S.W., Proc. Linn. Soc., N. S. Wales, **28**, 1903, (566-642). [4831]. 472

**Slosson**, Annie Trumbull. Additional list of insects taken in Alpine region of Mt. Washington. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (4-8). [2427 gg 4631 4831]. 473

**Snow**, F[rancis] H[untington]. List of Coleoptera and Lepidoptera collected in Hamilton, Morton and Clark counties, Kansas, 1902 and 1903. Lawrence, Kan. Univ. Sci. Bull., **2**, 1903, (191– 208). Separate. 27.8 cm. [4127 gi 4827 gi]. 474

**Sondermann**, R. Ueber einen Rüsselund einige Borkenkäfer, die sich in neuerer Zeit im Regierungsbezirk Stade an Nadel- und Obstbäumen besonders schädlich erwiesen haben. Aus d. Heimat, Bremerhaven, **1901-1902**, 1903, (38-40). [4819]. 475 **Spacth**, Franz. Zusammenstellung der bisher von Neu-Guines bekannt gewordenen Cassiden mit besonderer Berücksichtigung der Sanmlungen des ungarischen National-Museums und des Museo civico von Genua. Budapest, Ann. Hist.Nat. Mus. Nat. Hung., 1, 1903, (109–160). [4827 in 4831]. 476

Beschreibung neuer Cassididen nebst synonymischen Bemerkungen. Wien, Verh. ZoolBot. Ges., 51, 1901, (333-350). [4831]. 477

Ueber Chelysida und Oxylepus als zwei verschiedene Cassiden-Gattungen. Wien, Verh. ZoolBot. Ges., 51, 1901, (750-756). [4831]. 478.

**Stebbing**, E. P. A note on the discovery of *Thanasimus* sp. prox *nigricollis* in the N. W. Himalayas, with some remarks on its life-history. Calcutta, J. As. Soc. Beng., **72**, pt. 2, 1903, (104–110). [4831 4827 ef].

Insect pests of the sugarcane in India. Calcutta, Ind. Mus. Notes, 5, 1903, (64-91). [2419 3819 4019 4419 4619 4819]. 480

Departmental Notes on Insects that affect Forestry, No. 2. Calcutta, 1903, (V-VII + 151-334, with 13 pls.). 25 cm. [2419 4031 4231 4431 4631 4831]. 481

**Sternberg**, Chr. Zur Gattung Lycomedes de Brême. D. ent. Zs., Berlin, **1903**, (300-304). [4831]. 482

**Stierlin**, G. Beschreibung einiger neuen Species von Coleopteren. Mitt. Schweiz. Entomol. Gos., **10**, 1902, (425– 427). [4827 d 4831]. 483

Beschreibung von zwei neuen europäischen Rüsselkäfern. Mitt. Schweiz. Entomol. Ges., **10**, 1903, (483-484); **11**, 1903, (56-57). [4827 da 4831]. 484

**strand**, Embr. Rhynchophora found in Norway. (Norw.) Kristiania, Forh. Vid. Selsk., **1903**, No. 2, (14). [4827 da]. 485

**Suvorov**, G. L. Notiz über *Clytus* popoui Maunerk. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (XXXII). [4819 4831]. 487 Tower, William Lawrence. The development of colours and colour patterns of Coleoptera, with observations upon the development of colour in other orders of insects [with bibliography]. Chicago, Ill., Dec. Pub. Univ. Chic., (Sor. 1); 10, 1903, ([31]-40, with pl.). [2407 4807]. 488

The origin and development of the wings of Coleopters. Zool. Jahrb., Jens, Abt. f. Anat., **17**, 1903, (517-572, mit 7 Taf.). [4807 4815]. 489

Townsend, C[harles] H[enry] T[yler]. Contribution to a knowledge of the Coleopterons fauna of the lower Rio Grande valley in Texas and Tamaulipas, with biological notes and special reference to geographical distribution. Austin, Trans. Texas Acad. Sci., 5, (1902), 1903, (49-101). [4827 gi ha 4831].

#### Tschitscherine, T. v. Čičerin, T.

Vaney, C. et Conte, A. Sur un diptère (Degeeria functris Meg.) parasite de l'altise de la vigne (Haltica ampelophaga Guer.). Paris, C.-R. Acad. sci., 136, 1903, (1275-1276). [4219 4231 4819 4831]. 491

Vaucher, A. Note sur Taragama (Megasoma) repanda. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (52). [4819 4831]. 492

Verhoeff, Karl W. Ueber die zusammengesetzte Zirpvorrichtung von Geotrupes. Berlin, SitzBer. Ges. natf. Freunde, 1902, (149-155). [4819 493].

Viemeyer, H. Geotrupes typhoeus L. Ent. Jahrb., Leipzig, 12, 1903, (254). [4831]. 494

Kellerbewohner. Ent. Jahrb., Leipzig, **12**, 1903, (255–256). [4819]. 495

Viturat, abbé. Catalogue des coléoptères du département de Saône-et-Loire. Echange, Lyon, **17**, 1902, (1-16, pagin. spéc.), (1-28, pagin. spéc.), **19**, 1903, (29-54, pagin. spéc.). [4831 4827 df]. 496

Relation sur la capture de *Phosphaenus hemipterus* (Gozr. Echange, Lyon, **17**, 1902, (69-70). [4831 4819]. Volgts, Hans. Neue ost- und südafrikanische Zonabris. D. ent. Zs., Berlin, 1903, (101–107). [4827 f 4831]. 498

Nicht Zonabris Har., sondern Mylabris Fabr.! Ein Beitrag zur Kritik der Geoffroy'schen Nomenklatur und zugleich Klarlegung des synonymischen Verhältnisses der Gattungsnamen Bruchus, Laria, Mylabris, Ptinus und Zonabris. Allg. Zs. Ent., Neudamm, 8, 1903, (234-239). [4831 4803]. 499

Vortringer, G. Ueber Cryptocephalus aureolus Suffr. und sericeus L. Insektenbörse, Leipzig, **20**, 1903, (66). [4831]. 500

Wasmann, E[rich]. Zum Mimicrytypus der Dorylinengäste. (135. Beitrag zur Kenntniss der Myrmecophilen und Termitophilen.) Zool. Anz., Leipzig, 26, 1903, (581–590). [4619 4819]. 501

Coléoptères myrmécophiles recueillis par M. le professeur A. Lameere en Algérie. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (159). [4819 4827 fa]. 503

Waterhouse, C. O. Description of a new Coleopterous insect belonging to the *Curculionidae*. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (229-230). [4831].

genus of Heteromerous Coleoptera. Ann. Mag. Nat. Hist., London, (Ser 7), 12, 1903, (563-564). [4831]. 506

Weise, J. Verzeichniss der von. Dr. Horn auf Ceylon gesammelten Chrysomeliden. I: Eupoda et Camptosomata. D. ent. Zs., Berlin, **1903**, (17-34). [4827 ef 4831]. 507

Afrikanische Galerucinen. D. ent. Zs., Berlin, **1903**, (35-56, mit 1 Taf.). [4827 f 4831]. **508** 

------ Paropisterna striata nov. spec. D. ent. Zs., Berlin, **1903**, (108). [4831]. **509** 

Weise, J. Ueber die mit Lichenie Richter verwandten Chrysomelen. D. ent. Zs., Berlin, 1903, (161-163). 510 [4831]. - Bemerkungen über die ersten Entwicklungsstadien der Cocciwella conglobata L. D. ent. Zs., Berlin, **1903,** (164–166). [4815 4831]. 511 Helota pauli n. sp. D. ent. Zs., Berlin, 1903, (171). [4831]. 512 Ueber einige Endomychiden. D. ent. Zs., Berlin, 1903, (199-207). [4831]. 513 - Drei neue Coccinellen. D. ent. Zs., Berlin, 1903, (207-208). [4831]. 514 - Neue Coccinelliden. D. ent. Zs., Berlin, 1903, (229-232). [4831]. 515 Afrikanische Galerucinen. D. ent. Zs., Berlin, 1903, (321-334). [4827 f 4831]. 516- Neue Chrysomeliden aus Neu-Guinea. D. ent. Zs., Berlin, 1903, (335-336). [4827 ia 4831]. 517 Ueber die Gattung Eubrachis Baly. D. ent. Zs., Berlin, 1908, (356). [4831]. 518 Verbesserungen [betr. afrikan. Chrysomeliden, Arch. Natg., Berlin, 1903, I, 2]. D. ent. Zs., Berlin, **1903**, (398). [4831]. 519 Synonymische Bemerkungen [betr. Coccinellidae]. D. ent. Zs., Berlin, 1903, (424). [4831]. 520 Afrikanische Chrysomeliden. Arch. Natg., Berlin, 69, Bd 1, 1903, (197-226). [4831 4827 f]. 521 Coccinellides. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (91-96). [4827 eg 4831]. 522 Neue Coccinelliden. Bruxelles, Ann. Soc. ent. Belgique, 45, 523 1901, (273-286). [4831]. Xambeu. Mœurs et métamorphoses du Magdalius alerrimus, coléoptère du groupe des Rhynchophores. Natura-liste, Paris, (sér. 2), 24, 1902, (271-272). [4815 4819 4831]. 524 Mœurs et métamorphoses de l'Homalium rivulare Payk, coléoptère

de l'*Homalium rivulare* Payk, coléoptère du groupe des Brachélytres. Naturaliste, Paris, (sér. 2), **25**, 1903, (55). [4815 4819 4831]. 525 Xambeu. Mœurs et métamorphoses des coléoptères appartenant au groupe des Erotylides. Naturaliste, Paris, (sér. 2), 25, 1903, (91-92, 407). [4815 4819 4831]. 526

**Zang**, Richard. Vorläufige Diagnosen neuer indoaustralischer Passaliden. Insektenbörse, Leipzig, **20**, 1903, (338– 339). [4831]. 527

Benerkungen zur älteren Passaliden - Litteratur. D. ent. Zs., Berlin, **1903**, (417–420). [4831]. 528

## 4803 COMPREHENSIVE AND GENERAL WORKS.

#### GENERAL.

Blackburn, T. . . Notes on Australian coleoptera. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (91–182, 261– 309).

**Cameron**, M. Coleopters collected around Constantinople and Gulf of Ismid during the winter, 1901-1902. Ent. Mag., London, **39**, 1903, (58-63).

Evans, W. Some more records of Coleoptera taken in Scotland chiefly in the Edinburgh and Forth district. Ann, Scot. Nat. Hist., Edinburgh, 1908, (89-99).

Imhof, O. Le nombre des coléoptères de la Suisse. Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (585).

Kerremans, Ch. Coleopters serricornia fam. Buprestidae [deuxième et troisième parties]. In: Wytsman, Genera Insectorum, Bruxelles, 1903, (49-240). 25.60 fr. 4to.

Seidlitz, Georg. [Bericht über die wissenschaftl. Leistungen im Gebiete d. Entomologie 1901.] Coleopters. Arch. Natg., Berlin, 68, Bd 2, H. 2, 1902, [1903], (45-284); D. ent. Zs., Berlin, 1902, H. 3, [1903], (45-284).

Voigts, Hans. Nicht Zonahris Har., sondern Mylabris Fabr. ! Ein Beitrag zur Kritik der Geoffroy'schen Nomenklatur und zugleich Klarlegung des synonymischen Verhältnisses der Gattungsnamen Bruchus, Laria, Mylabris, Ptinus und Zonahris. Allg. Zs. Ent., Neudamm, 8, 1903, (231-239).

## TREATISES.

Küster, H. C. und Krastz, G. Die Käfer Europas. Nach der Natur beschrieben. Fortgesetzt von J. Schilsky. H. 40. Nürnberg (Bauer & Raspe), 1903, (VIII + 270). 15 cm. 3 M.

#### ECONOMICS.

Burgess, A. F. Economic notes on the family *Coccinellidae*. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (25-32).

Fletcher, James. Can the pea-weevil (Bruchus pisi) be exterminated? l.c. (69-74).

Planta-Ganova, P. C. Revision der Verordnung ueber Vertilgung der Maikäfer and Engerlinge. Volkswirtsch Bl. Graubünden, Chur, **1903**, No. 11, (1-2); No. 12, (1-2).

**Seelen**, von. Engerling - Vertilgung. Zs. Forstw., Berlin, **35**, 1903, (368–373).

#### COLLECTIONS AND TECNIQUE.

**Coulon**, L. Muséum d'Histoire naturelle d'Elbcuf. Catalogue de la collection de coléoptères longicornes d'Europe. Elbeuf, Bul. soc. etud. sci. nat., **20**, 1901, [1902], (pagin. spec. 1-11).

Sahlberg, John. Demonstration einer Sammlung von Ingenieur Isaac Ericson in Mölndal angefertigter Photographien sehr kleiner Coleopteren. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 Juillet, 1902, 1903, VI Section, (18-19).

**Schenkling**, Karl. Taschenbuch für Käfersammler. 5. erweit. u. verb. Aufl. Leipzig (O. Leiner), [1903], (1V + 314 + XXIV, mit 13 Taf. nebst Erklärungen). 16 cm. Geb. 2,50 M.

#### HISTORY.

**Kreats**, G. Nekrolog [F. A. Clemens Müller]. D. ent. Zs., Berlin, **1903**, (173-174, mit Portr.).

### 4807 STRUCTURE.

### GENERAL.

Bernhauer, Max. Elfte Folge neuer Staphyliniden der paläarktischen Fauna, nebst Bemerkungen. Wien, Verh. ZoolBot. Ges., 52, 1902, (695-705).

Chatanay, J. Sur le Carabus (Megodontus) violaceus. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (37).

**Du Buysson**, H. Apate capucina L. l.c. (19).

Florentin, R. Sur le Megodontus violaceus. l.c. (18).

Luze, Gott[fried]. Revision der europäischen und sibirischen Arten der Staphyliniden - Gattungen Tachyporus und Lamprinus Heer. Wien, Verh. ZoolBot. Ges., 51, 1901, (146-185).

Schultze, August. Baris gudenusi n. sp. l.c. 51, 1901, (212-215).

#### SKELETAL STRUCTURE.

Semenov, A. P. Sur la structure et le rôle du pédoncule mésothoracique chez certains coléoptères. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (85-88, av. 1 fig.).

#### ALIMENTARY SYSTEM.

Bordas, L. L'appareil digestif des Silphidae. Paris, C.-R. Acad. sci., 137. 1903, (344-346).

#### SPECIAL GLANDS.

Giard, A. Les glandes pygidiennes des Carabides. Feuille jeunes natural., Paris, (sér. 4), **38**, 1903, (222).

#### REPRODUCTIVE ORGANS.

Müller, Jos. Ueber das Männchen von Adoxus obscurus L. Zool. Anz., Leipzig, 27, 1903, (39–41).

Petri, Karl. Das Haltorgan von Malthodes spathifer Kiesw. Budapest, Ann. Hist. Nat. Mus. Nat. Hung., 1, 1903, (410-412).

#### SPECIAL EXTERNAL CHARACTERS.

Kolbe, H. J. Die Elytren der Coleopteren, speziell die Elytren in der Cattung Teflus. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (225-237).

Tower, W. L. The origin and development of the wings of Coleoptera. Zool. Jahrb., Jena, Abt. f. Anat., 17, 1903, (517-572, mit 7 Taf.).

## COLOUR.

**Tower**, William Lawrence. The development of colors and color patterns of Coleoptera, with observations upon the development of color in other or lers of insects [with bibliography]. Chicago, III., Dec. Pub. Univ. Chic., (ser. 1), **10**, 1903, ([31]–40, with pl.).

## 4811 PHYSIOLOGY.

**Dierckx**, F. Les glandes pygidiennes des coléoptères. Carabides (bombardiers, etc.), Paussides, Cicindélides, Staphylinides. Second mémoire. Louvain ( $\Lambda$ . Uystpruyst), Lierre (J. Van In et Cie), 1901, (758, av. 3 pls. hors texte). 4vo. 10 fr.

#### 4815 DEVELOPMENT.

#### GENERAL.

**Crawshay**, L. R. On the life history of *Drilus flarescens* Rossi. London, Trans. Ent. Soc., **1903**, (39-52, pls. I, II).

#### OVUM.

Retchert, Alex. Die Eier von Sternocera sternicornis L. Ent. Jahrb., Leipzig, 12, 1903, (174-175).

## EMBRYOLOGY.

Brues, Charles Thomas. A contribution to our knowledge of the S'ylopidae. Zool. Jahrb., Jena, Abt. f. Anat., 18, 1903, (241-270, mit 2 Taf.).

Tower, W. L. The origin and development of the wings of Coleoptera. *l.c.* **17**, 1903, (517-572, mit 7 Taf.). Weise, J. Bemerkungen über die ersten Entwicklungsstadien der Coccinella conglobata L. D. ent. Zs., Berlin, 1903, (164-166).

#### METAMORPHOSIS AND LARVAL FORMS.

Breed, Robert S. The changes which occur in the muscles of a beetle, *Thymalus marginicolis* Chevr., during metamorphosis. Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., **40**, 1903, (317-382, with pl.). (Cambridge, Mass., Cont. Zool. Lab. Mus. Comp. Zool. Harvard Coll., No. **145**.) Separate, 24.5 cm.

Darboux, (laston et Mingaud, Galien. Les deux formes larvaires de *Laria* obtecta Say. Nimes, Bul. soc. étud. sci. nat., (n. sér.), **29**, 1901, [1902], (25-29).

**Eichelbaum**, F. Die Larven von *Xylechinus pilosus* Rtzbg. und *Hylastes cunicularius* Er. Allg. Zs. Ent., Neudamm, 8, 1903, (60-70).

Omosita cocon L. l.c. (81-87).

Mjöderg, Eric. A hatching experiment. Hadrotoma marginata Payk. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (189–190).

**Peyerimhoff**, P. de. Descriptions des larves de trois coléoptères exotiques. Paris, Ann. soc. ent., **71**, (2<sup>e</sup> semest.), 1902, [1903], (710-718, av. fig.).

**Bosenberg**, E. C. Larvae of the groups Lebiini and Odacanthini and the genera *Lebia* and *Odacantha*. (Danish with an English summary) Köbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (1-21, 1 pl.).

Xambeu. Mœurs et métamorphoses. du Magdalis aterrimus, coléoptère du groupe des Rhynchophores. Naturaliste, Paris, (sér. 2), 24, 1902, (271-272).

Mœurs et métamorphoses de l'Hamalium rivulare Payk, coléoptère du groupe des Brachélytres. *l.c.* 25, 1903, (55).

Mœurs et métamorphoses des coléoptères appartenant au groupe des Erotylides. *l.c.* (91-92, 407).

#### POSTEMBRYONIC ONTOGENY.

Pomerancev, D[mitrij Vladimirovič]. Beitrag zur Kenntnis der auf der Fichte (Picea excelsa) lebenden schädlichen und nützlichen Insecten. (Russ.) St. Peterburg, Izv. Lösn. Inst., **8**, 1902, (3-25, mit 1 Taf.).

Schreiner, Ja. F. Uber den Mais-Rosskäfer (*Pentodom monodon* Fabr.). (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, III, No. 9, 1902, (11, mit 3 Fig.).

**Silantjev**, A. A. Der punktbäuchige Hohlrüssler (*Cleonus punctiventris* Germ.) und andere Rüsselkäfer, welche der Zuckerrübe in Russland schädlich werden . . St. Peterburg, 1903, (167, mit 28 Fig. u. 1 Taf.), 23 cm. (0.50 Rub.).

Tower, W. L The origin and development of the wings of Coleoptera. Zool. Jahrb., Jena, Abt. f. Anat., 17, 1903, (517-572, mit 7 Taf.).

#### **4819** ETHOLOGY.

#### GENERAL.

**Chapman**, T. A. A contribution to the life history of Orina (Chrysochloa) tristis Fabr., var. smaragdina Weise. London, Trans. Ent. Soc., **1903**, (245-261, pls. IX, X).

**Crawshay**, L. R. On the life history of *Drilus flavescens* Rossi. *l.e.* (39–52, pls. I, Il).

**Dauphin**, L. C. Réponse à M. J. A. Clermont. Echange, Lyon, **19**, 1903, (93-95).

Du Buysson, H. Apate capucina L. Feuille jeunes natural., Paris, (sér. 4), **34**, (19).

Dufour, J. Pyrale et gribouri (Eumolpe). Chron. Agric., Lausanne, 15, 1902, (459-462, 2 fig.).

Enock, F. The life history of Cicindela campestris. London, Proc. Ent. Soc., 1903, (XV-XIX).

Faes, H[enri]. Pluie de chenilles (larves de Téléphores). Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (239).

Forel, F. A. Pluie de chenilles. Lausanne, Bul. Soc. Sci. Nat., (sér. 4), 39, 1903, (XXXIX-XL); Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (347-348). Giard, A. Bradycellus distinctus. [Réponse partielle à la question de M. F. Picard]. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (84).

Giraudeau, H. Apate capucina. l.e. (223).

Godon, J. Lytta vesicatoria Linn. l.c. (50).

Holtz, Martin. Laufkäfer und Skorpione. Insektenborse, Leipzig, 20, 1903, (339).

Iches, Lucien. Un insecte géomètre. [Rhynchites betulae. Extrait d'un travail de Hermann Muckermann dans Scientific American]. Nature, Paris, **30**, (2° som.), 1902, (180–183, av. fig.).

Kunstler, J. Observations sur le Calendra orizae. Bordeaux, Actes soc. linn., (sér. 6), 57, 1902, (17-27).

Lampa, Sven. The potato beetle in Europe again. (Swedish.) Entomol. Tidskr., Stockholm, 22, 1901, (170-174).

Lavagne, H. Note sur Caenoptera marmottani Bris. Echange, Lyon, 17, 1902, (85-86).

Lenne, P. Bostrychus capucinus L. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (38).

**Poujade**, G. A. Nouvelle note sur l'Hydrophilus piceus. Paris, Bul. soc. ent., **1902**, (238).

Silantjev, A. A. Der punktbäuchige Hohlrüssler (Cleonus punctiventris Germ.) und einige andere Rüsselkäfer, welche der Zuckerrübe in Russland schädlich werden, ihre Beschreibung, Lebensweise und Bekämpfung. St. Peterburg, 1903, (167, mit 28 Fig. u. 1 Taf.). 23 cm. (0.50 Rub.).

Vaucher, A. Note sur Taragama (Megasoma) repanda. Feuillo jeunes natural., Paris, (sér. 4), 33, 1903, (52).

Viturat, abbé. Relation sur la capture de *Phosphaenus hemipterus* Gœze. Echange, Lyon, **17**, 1902. (69-70).

#### HABITS.

**Champion**, G. C. Some notes on the habits of Nanophyse durieni Lucas, as observed in Central Spain, with a description of the larva and pupa by Dr. T. A. Chapman. London, Trans. Ent. Soc., **1903**, (87-91, pl. V.):

Chittenden, F[rank] H[urlbut]. The palm and palmetto weevils. [*Rhyn*chophorus palmarum and *R. cruentatus.*] Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (23-28).

The leaf-mining locust beetle [Odontota dorsalis], with notes on related species. *l.c.* (70-90).

**Clermont**, J. A. Deux mots sur les mœurs d'*Apion pisi* Fab. Echange, Lyon, **17**, 1902, (83).

Leonhardt, Wilh. Ueber das massenhafte Auftreten von Coccinelliden im Alten Lande im Winter 1901-02. Aus d. Heimat, Bremerhaven, **1901-02**, 1903, (53-54).

Mitchell, J. D. Observations on the habits of two Cicindelidae. [Tetracha carolina and Cicindela rectilatera.] Washington, D.C., Proc. Ent. Soc., 5, 1903, (108-110).

Semenov, A. P. Sur la chasse, au printemps, de quelques coléoptères caractéristiques pour la Russie d'Europe. II. (Russ.) Rev. Russ. Ent., Jaroslavil, 3, 1903, (154–155).

**Stebbing**, E. P. Insect pests of the sugar cane in India. [Haplosomyz clongatus, Baly; Leptispa pygmaca, Baly; Xyleborus.] Calcutta, Ind. Mus. Notes, 5, 1903, (72-81).

Suvorov, G. L. Notiz über Clytus popori Maunerk. (Russ.). St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (XXXII).

Xambeu. Mœurs et métamorphoses du Magdalis aterrimus, coléoptère du groupe des Rhynchophores. Naturaliste, Paris, (sér. 2), 24, 1902, (271-272).

de l'Homalium rivulare Payk, coléoptère du groupe des Brachélytres. *l.c.* 25, 1903, (55).

#### PARENTAL RELATIONS.

Nielsen, J. C. Zur Lebensgeschichte des Haselbockkäfers (*Oberea linearis* Fabr.). Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (659-664, mit 1 Taf.).

#### OVIPOSITION.

**Donisthorpe.** Oviposition in Labidostomes tridentata. Ent. Mag., London, **39**, 1903, (205).

**Pomerancev**, Pm. Scolytus carpini Rtzb. gefunden auf dem Haselnussetrauch (Corylus aveilana L.) (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (118-124, Taf. I).

#### Sound Production.

Verhoeff, Karl W. Ueber die zusammengesetzte Zirpvorrichtung von Geotrupes. Berlin, SitzBer. Ges. natf. Freunde, 1902, (149–155).

#### HABITAT.

Breit, Josef. Ein neuer Höhlenkäfer aus Bosnien (*Leonhardia reitteri* n. sp.). Soc. Entomol., Zürich, **17**, 1902.

Viehmeyer, H. Kellerbewohner. Ent. Jahrb., Leipzig, 12, 1903, (255-256).

#### SYMBIOSIS.

**Czernki**, Stanisław. Nouvelles recherches sur la myrmécophilie. (Polonaia) Wszechświat, Warszawa, **22**, 1903, (308-311).

**Donisthorpe**. [Myrmecophilous Coleoptera]. Ent. Rec., London, **15**, 1903, (11-12).

Kolbe, H. J. Myrmekophile Insekten, speciell *Thorictus foreli* Wasm. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (237– 253).

**Bivers**, J. J. Myrmecophilous Coleoptera or ant-loving beetles. Los Angeles, Bull. So. Cal. Acad. Sci., **1**, 1902, (71).

Scriba, E. Velleius dilatatus F. Insektenbörse, Leipzig, 20, 1903, (212).

Wasmann, E. Coléoptères nyrmécophiles recueillis par M. le professeur A. Lameere en Algérie. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (159).

des coléoptères appartenant au groupe des Erotylides. *l.c.* (91–92, 407).

Parasitisme des Triangulins dans les nids de Mellifères. Feuille jeunes natural., Paris (sér. 4), 33, 1902, (13-14), [d'après Green, Ern. On some Parasites of Xylocopa tenuiscapa. Ent. Mag., London, 1902, (232-233)].

Brues, Charles Thomas. A contribution to our knowledge of the *Stylopidae*. Zool. Jahrb., Jena, Abt. f. Anat., 18, 1903, (241-270, mit 2 Taf.).

Kulwieć, K. Parasites des insectes. (Polonais) Wszechświat, Warszawa, 22, 1903, (213-217, 276-279).

Murtfeldt, Mary E. Another Yuccafeeding insect [Carpophilus melanop:crue]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., Amer. Ent. Soc., 14, 1903, (293-295).

Perraudière, R. de la. Note sur ('orochus fasciatus Vill.—bifasciatus Ol. et ses parasites. Paris, Bul. soc. ent., 1902, (251-253).

Pierre, abbé. Sur l'évolution de Lixus iridis Oliv. et de Chalcidides parasites de l'œuf, de la larve et de l'image. Echange, Lyon, **19**, 1903, (108-110, 116-117, 132-133, 141-144).

**Sharp**, D. A. Coleopterous insect embedded in the wall of the human intestine. Cambridge, Proc. Phil. Soc., **12**, 1903, (199, 200).

Vaney, C. et Conte, A. Sur un diptère (Degecria funchrin Meg.) parasite de l'allise de la vigne (Hallica ampelophaga Guer.), Paris, C.-R. Acad. sci., 136, 1903, (1275-1276).

### DEFENSIVE PROCESSES.

Dahl, Friedr. Täuschende Aehnlichkeit zwischen einer deutschen Springspinne (*Ballus depressus*) und einem am gleichen Orte vorkommenden Russelkäfer (*Strophosomus capitatus*). Berlin, SitzBer. Ges. natf. Freunde, **1903**, (273-278).

Kerremans, C. Considerations sur les Buprestides. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (165–173).

Wasmann, E[rich]. Zum Mimicrytypus der Dorylinengäste. (135. Beitrag zur Kenntnis der Myrmecophilen und Termitophilen.) Zool. Anz., Leipzig, 26, 1903, (581–590).

# UTILITY AND HARNFULNESS.

. . . Borkenkäfer in den Obstbäumen. Schweiz.-Bauer, Bern, 56, 1902, No. 18, (1-2). [4831].

. . . Engerlingsschaden. l.c. 57, 1903, No. 55, (2). [4831].

. . Maikäfer und Engerlinge. (Flugjahre.) *l.c.* No. 31, (2); No. 32, (2); No. 33, (1-2). [4831].

Ausoux. Observations sur une apparition de cantharides. Elbeuf, Bul. soc. étud. sci. nat., 20, 1901, [1902], (42).

Barbey, Auguste. Ravages des bostriches dans les vergers de la vallée du Rhône. Journ. Soc. Agricult. Suisse Rom., Lausanne, 43, 1902, (139-157, 163-179, 2 pls.).

Boden. Beschädigung der jungen Kiefernkulturen durch wurzelbrütende Hylesinen im akademischen Lehrrevier Freienwalde a. O. Zs. Forstw. Berlin, 35, 1903, (551-554).

**Chittenden**, F[rank] H[urlbut]. The tobacco stalk weevil (*Trichobaris mucorea* Lec.). Washington, D.C., Bull. U. S. Dept. Agric., Div. Ent., (N. Ser.), No. **38**, 1902, (66-70).

beet leaf-beetle. (Monoxia puncticollis Say.). l.c. No. 40, 1903, (111-113).

**Cordley**, A. B. [Note on injury () apple trees by Xyleborus dispar]. Agric. Exp. Sta., Oregon, Corvallis, Rep., **1902**, (60-61).

Fernald, H[enry] T[orrey]. The imported elm-leaf beetle [Galerucella luteola]. Agric. Exp. Stn., Massachusetts, Amhers. Bull. No. 76, 1901 (& with 1 fig.). 23 cm. [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta. Rec., 13, 1902, (575).

**Proggatt**, Walter W. Some woodboring beetles and their habits. Agric. Gaz., Sydney, N.S.W., **14**, 1903, (414-417, with 1 pl.).

Giard, A. Une altise nuisible aux semis de betteraves (*Chaetochema tibialis* Illig). Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (13-14).

Held, A. (Feind der Obsthäume, Prachtkäfer.). Schweiz.-Bauer, Bern, 56, No. 76, 1902, (5). Lefebvre, A. Résumé d'un mémoire de M. Louis Bureau, directeur du Muséum de Nantes, sur le Lycta caualiculé (*Lyctus canaliculatus* Fabricius) et les ravages qu'il fit dans les parquets et autres bois ouvrés (mœurs, expertises, jugements). (In Nantes, Bul. soc. sci. nat., **10**, (2° semest.), 1900). Elbeuf, Bul. soc. sci. nat., **20**, 1901, [1902], (43-46).

Mazarakij, V. V. Ueber den Erbsenkäfer (*Bruchus pisi* L.). (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (CI-CIII).

Mollandin du Boissy, R. Les dégâts causés en France par deux espèces de *Capnolis*. Interméd. Bombycult., Paris, 3, 1903, (36-39).

Nicéville, Lionel de (the latc). Insect pests of forest trees. Baridius sp., Sinoxylon crassum, Lesne. Calcutta, Ind. Mus. Notes, 5, 1903, (103-117, with pls.).

Insect pests of fruit trees. l c. (117-127).

Insect pests of plants. l.c. (127-130, with pls.).

Insect posts of vegetables.

------ Insect pests of cereals and crops. *l.c.* (134-143).

Insect pests of indigo. *l.c.* (144-164, with pls.).

------ Insect pests of the sugar cane. *l.c.* (164-182).

Insect pests of tea. *l.c.* (185–189).

**Pomerancev**, Dm. Notes biologiques sur les coléoptères vivant sous les écorces et utiles dans la sylviculture. IV. (Russ.) Russ., Ent., Jaroslavlí, **3**, 1903, (22-24).

Notes biologiques sur les coléoptères vivant sous les écorces et utiles dans la sylviculture. V. Fam. *Histeridae*. (Russ.). *I.e.* (77-78).

Notes biologiques sur les coléoptères vivant sous les écorces et utiles dans la sylviculture. VI. Fam. Cleridae. (Russ.) l.c. (200-202).

Beitrag zur Kenntnis der auf der Fichte (*Picen czcelsa*) lebenden schädlichen und nützlichen Insecten. (Russ.) st. Peterburg, Izv. Lösn. Inst., **8**, 1002, (3-25, mit 1 Taf.). Schreiner, J. F. Ueber den Mais-Rosskäfer (*Pentodon monodon* F.). (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, III, No. 9, 1902, (11, mit 3 Fig.).

Der Rebenschneider (*Lethrus apterus* Walk.) und die Mittel zu dessen Bekämpfung. (Eine landwirthschaftliche Monographie.) (Russ.) *Le.* **IV**, No. 1, 1903, (45, mit 10 Fig. u. 1 Taf.).

Sempolowski, A. Un nouveau coléoptère [Notozus monoceros L.] dévastant les betteraves. (Polonais) Gaz. roln., Warszawa, 43, 1903, (281– 282).

**Sondermann**, R. Ueter einen Rüsselund einige Borkenkäfer, die sich in neuerer Zeit im Regierungsbezirk Stade an Nadel- und Obstbäumen besonders schädlich erwiesen haben. Aus d. Heimat, Bremerhaven, **1901-02**, 1903, (38-10).

# 4823 VARIATION AND ÆTIO-LOGY.

Keys. Black variety of Carabus nemoralis. Ent. Mag., London, 39, 1903, (174).

**Peyerimhoff**, P. de. Sur la méthode dans les recherches de phylogénie entomologique. Feuille jeunes natural., l'aris, (sér. 4), **33**, (89-95).

Sharp, D. Heliocopris monhotus and 11. dominus. Fascic. Malay. Zool., 2, (281-287).

Coleoptera. III. Coleoptera Caraboidea. Fauna Hawaiiensis, III, (175-292, pls. VI, VII); [summary], Entomologist, London, **36**, 1203, (263).

# SUBSTANTIVE VARIATION.

Kolbe, H. J. Ueber den einseitigen Polymorphismus im männlichen Geschlecht der Lucaniden. Ein kurzer Entwurf. Insektenbörse, Leipzig, 20, 1903, (43-45).

schneider, O. Ueber Melanismus korsischer Käfer. Dresden, SitzPer. Isis, 1902, 1903, (43-60).

# 4827

# 4827 GEOGRAPHICAL DISTRI-BUTION.

Giard, A. Sympiezocera laurasi Lucas. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (203).

Janson, O. E. On the genus *Theodosia* and other eastern *Goliathides*, with descriptions of some new species. London, Trans. Ent. Soc., **1903**, (303-310).

Pic, Maurice. Contribution à l'étude générale des *Hylophilidae*. Paris, Ann. soc. ent., **72**, 1903, (65-107).

Schultze, A. Zum Verzeichniss der paläarctischen Ceuthorrhynchinen. (D. Ent. Zs., Berlin, **1902**, (205–226); *l.e.* **1903**, (287–291).

# d EUROPE.

Lavagne, H. Note sur Caenoptera marmottani Bris. Echange, Lyon, 17, 1902, (85-86).

**Pic, M.** Nouvelles espèces et variétés de Coléoptères paléarctiques. *l.e.* (33-35, 79-80).

------- Coléoptères presumés nouveaux de la faune circumméditerranéenne. *l.e.* (63-65).

d'Europe. l.c. (115).

**Stierlin**, G. Beschreibung einiger neuen Species von Coleopteren. Schaffhausen Mitt. Schweiz. Entomol. Ges., **10**, 1902, (425-427).

# da SCANDINAVIA.

**Engelhardt**, Chr. The Danish species of the genus *Apion*, Herbst. (Danish) Kjöbenhavn, Ent. Medd., (Ser. 2), **2**, 1903, (115-179).

Johansen, Joh. P. On the discovery of several Coleoptera new to Denmark and of some known, but rare, species. (Danish) Kjöbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (180-187).

Mjöberg, Eric. Rare Coleoptera. 1. From the environs of Stockholm. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (191–192). Münster, Ths. New Coleoptera from Norway. (Norw.) Nyt Mag. Naturv., Kristiania, 41, 1903, (255-256).

Roman, A[bruham]. Hapalus bimaculatus I. found in Sweden. Entomol. Tidskr., Stockholm, 22, 1901, (166).

Schneider, J. Sparre. Coleoptera gathered by Embr. Strand in the southern part of Nordlands Amt and in Lofoten and Vesteraalen in 1899 and 1900. (Norw.) Trondhjem, kgl. Vid. selsk. Skr., 1902, No. 1, 1903, (30),

Sharp, D. On some Coleopters from the Faroë Islands. Ent. Mag., London, 39, 1903, (249-250).

**Stierlin**, G. Beschreibung von zwei neuen europäischen Rüsselkäfern. Mitt. Schweiz. Entomol. Ges., **10**, 1903, (483–484); **11**, 1903, (56–57).

**Strand**, Embr. Rhynchophora found in Norway. (Norw.) Kristiania, Forh. Vid. selsk., **1903**, No. 2, (14).

------ Staphylinids and Apions, new for the Norwegian fauna. (Norw.) Entomol. Tidskr., Stockholm, 22, 1901, (143).

### db RUSSIA IN EUROPE.

Baseckmann, Jul. J. Ueber Coleoptera, welche auf dem Gute Ploskoje im Kreise Luga gesammelt wurden und die neu oder interessant für die St. Peterburger Käferfauna sind. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (CXXIII-CXXVII).

Cioèrin, T. Species transcaucasica nova generis *Platysma* (Bon.) Tsch. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (24-25).

generis Platysma (Bon.) Tsch. l.e. (104– 108.

Observations sur quelques Ciciudélides de la collection Semenov. St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (90-107).

Jacobson, G. G. Localités de quelques coléoptères présontant un certain intérêt II. (Russ.) St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (XXII-XXIV).

für die St. Peterburger Coleopteren-

fauna. II, III. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (CXVIII-CXIX, CXXI-CXXIII).

Jakovlev, V. E. Un nouveau *Pentodon* de la Transcaucasie. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (17–18).

Masarakij, V. V. Zur Insectenfauna des St. Peterburger Gouvernements. (Russ.) St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (X-XXIV).

Excursionen in der Umgebung St. Peterburgs im Frühling 1902. (Russ.) *l.c.* (CXIV-CXVIII).

Ueber die am meisten interessanten Coleopteren, welche im Gouv. St. Peterburg (excl. Luga-Kreis) im Laufe der letzten Jahre (1900 incl.) gefunden wurden. (Russ.) *l.e.* (CXXVIII-CXLII).

------ Dromius cordicollis Vorbrg. und Aejialia rufa Fbr., zwei für das Gouv. St. Peterburg neue Arten. (Russ.) l.c. (CLVI-CLX).

Norman, A. M. Notes on the natural history of East Finmark. [Coleoptera] Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (166-173).

Sahlberg, John. Über Fang der Wasserkäfer und Verbreitung der Dytisciden in Finland. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, 1903, VI Section, (26-32).

**Schultze**, August. Genoris *Ceuthothynchi* species novae rossicae et transcaspiae. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (65-89).

Semenov, A. P. Coléoptères nouveaux pour la faune de la Russie IV. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (401-403).

de Gernan Empire.

Gerhardt, J. Neuheiten der schlesischen Käferfauna aus dem Jahre 1902. D. ent. Zs., Berlin, **1903**, (237).

Gresser, Franz Joseph. Nachtrag zum Verzeichnis der in Württemberg aufgefundenen Käfer. Stuttgart, Jahreshefte Ver. Natk., **59**, 1903, (325–327).

**Heydenreich**, E. Ueber einige seltenere Käfer Schlesiens. Insektenbörse, Leipzig, **20**, 1903, (29). Meunier, F. Ueber einige Coleopteren-Flügeldecken aus der präglacialen Braunkohle und dem interglacialen Torflager von Lauenburg (Elbe). Berlin, Jahrb. geol. Landesant., 21, 1901, Abh. auss. St. Pers., (31-38).

Pohl, Robert. Eine Käferernte. Aus d. Heimat, Stuttgart, 15, 1902, (48-53).

Prediger, G[eorg]. Zoogeographisches aus Thüringen. Insektenbörse, Leipzig, 20, 1903, (220).

------ Zoogeographisches aus Südthüringen. l.c. (356-357).

**Schols**, Richard. Eine kleine Käferausbeute aus Gastein. *Lc.* (140).

#### dd Holland.

Everts, Ed. Die Käfer von Niederland und dem angrenzenden Gebiete. (Holländisch) Vol. 2, Lief 2. 's Gravenhage (Mart. Nijhoff), 1903, (401-796, 8 Taf.). 27 cm.

de BRITISH ISLANDS.

**Bouskell**, F. Aphodius sturmi Harold: a British insect. Ent. Rec., London, **15**, 1903, (92).

a species of longicorn Coleoptera new to Britain. *l.c.* (288).

**Chaster**, G. W. Two beetles from Roundstone, new to the Irish list. Irish Nat., Dublin, **12**, 1903, (167).

Chitty, A. J. Hydroporus bilineatus Sturm. An addition to the British list. Ent. Mag., London, **39**, 1903, (143)

**Donisthorpe.** Aphanisticus emarginatus F.: a species of Coleoptera new to Britain. Ent. Rec., London, **15**, 1903, (205).

------ Coleoptera in South Kerry. Irish Nat., Dublin, 12, 1903, (69).

**Edwards**, J. On the occurrence in Norfolk of *Oedemera virescens* Linn., a species not hitherto recorded as British. Ent. Mag., London, **39**, 1903, (64-65).

**Ellis**, H. W. ('riocephalus polonicus Motsch., a genus and species of longicorn Coleopters new to Britain. Ent. Rec., London, **15**, 1903, (259-261). Evans, W. Some more records of Coleoptera taken in Scotland chiefly in the Edinburgh and Forth district. Ann. Scot. Nat. Hist., Edinburgh, **1903**, (89– 39).

Janson, O. E. Pentaphyllus testaceus Hellwig, an unrecorded addition to the British Coleoptera. Ent. Rec., London, 15, 1903, (128).

**Keys**, J. H. Some northern and hillcountry Coleoptera of the Plymouth district. Plymouth, Rep. Inst., **13**, 1903, (239-245).

**sharp**, D. Tetropium fuscum Fabr., a genus and species of Longicorn Coleoptera new to Britain. Ent. Mag., London, **39**, 1903, (198–199).

df FRANCE.

Liste analytique illustré des genera des coléoptères de France. Série scarabéidienne. Naturaliste, Paris, (sér. 2), 24, 1902, (220, 277-278). [4831].

Dupont, L. Insectes du Jardin (Mont-Blanc). Elbeuf, Bul. soc. étud. sci. nat., 20, 1901, [1902], (41).

Giard, A. *Bradycellus distinctus*. [Réponse partielle à la question de M. F. Picard]. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (84).

Marchal, C. Sur quelques coléoptères peu connus ou nouveaux pour Saône-et-Loire. Autun, Bul. soc. sci. nat., 15, 1902, (Proc. verb. 263-265).

**Méquignon**, Augusto. Capture de coléoptères nouveaux pour le bassin de la Seine. Paris, Bul. soc. ent., **1902**, (238-239).

**Peyerimhoff**, P. de. Coléoptères nouveaux pour la faune française. Description d'une espèce inédite. *l.c.* (246-247).

Pic, M. Coléoptères intéressants, rares ou nouveaux pour la faune française. Echange, Lyon, 17, 1902, (46-51).

de France. *l.c.* (53-57).

Quelques coléoptères rares ou nouveaux pour la faune gallo-rhénane. *l.c.* **19**, 1903, (153–155).

gigas F. l.c. (184).

Plcard, F. Observations coléoptérologiques. Acilius canaliculatus.— Bradycellus distinctus. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (64).

Quittard, J. Contribution à la faune des coléoptères du département du Puyde-Dôme, principalement des environs de Riom (supplément). Echange, Lyon, 19, 1903, (160, 165-166, 173).

Sainte-Olaire-Deville, J. Etude sur divers *Platysma* des Alpes occidentales. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, (588-619).

Contribution à la faune du bassin de la Seine. Paris, Bul. soc. ent., **1902**, (247-250).

Remarques sur les Hydrophilidae de la faune française. Echange, Lyon, **17**, 1902, (75-78, 83-85); **19**, 1903, (103-104, 111-112).

Schneider, O. Ueber Melanismus korsischer Käfer. Dresden, SitzBer. Isis, 1902, 1903, (43-60).

Viturat, abbé. Catalogue des coléoptères du département de Saône-et-Loire. Echange, Lyon, 17, 1902. (1-16, pagin. spéc.), (1-28, pagin. spéc.); 19, 1903, (29-54, pagin. spéc.).

dg SPAIN AND POBTUGAL.

Champion, G. C. An entomological excursion to Bejar, Central Spain. London, Trans. Ent. Soc., **1903**, (165– 182).

Laufer, G. Vorläufige Diagnose eines neuen spanischen *Doreadion*. Soc. Entomol., Zürich, **17**, 1902, (105).

# dh ITALY.

Breit, Josef. Choleva doderoi n. sp. Soc. Entomol., Zürich, 17, 1903, (169).

Sahlberg, John. Ad cognitionem faunae Coleopterorum Italicae fragmenta. Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 13], 1902–1903, (1–14).

#### di SWITZEBLAND.

Dupont, L. Insectes du jardin (Mont Blanc). Elbeuf, Bul. soc. étud. sci. nat. 20, 1901, [1902], (41).

Imhof, O. Le nombre des coléqptères de la Suisse. Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (585).

Mory, Claude. Liste der 1898 im Jouxtal gesammelten Coleopteren. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1903, (469-473).

**∢lk** AUSTRIA-HUNGARY.

Breit, Josef. Ein neuer Höhlenkäfer aus Bosnien (Leonhardia reitteri n. sp.). Soc. Entomol., Zürich, 17, 1902, (89).

Die Histeriden Ungarns Csiki, E. (Ungarisch) Állatt. Közlem., Büdapest, **2**, 1903, (220–232).

Coleoptera nova ex Hungaria. (Ungarisch und Lateinisch) Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (441-446).

Die Cicindeliden Ungarns. Math.-natw. Ber. Ungarn, Leipzig, 18, (1900), 1903, (121-144).

Holdhaus, Karl. Ergebnisse einer coleopterologischen Reise in den Kärntner Alpen im Sommer 1900. Carinthia II, Klagenfurt, 91, 1901, (11-19).

und Prossen, Theodor. Verzeichniss der bisher in Kärnten eobachteten Käfer. (Fortsetzung) . . l.e. (56-63, 92-106, 164-172, beobachteten Käfer. 199-217); 92, 1902, (158-177).

Hormuzaki, Const[antin] Freih[err] v[on]. Neue Coleopterenfunde aus der Bukowina. Wien, Verh. ZoolBot. Ges., **51**, 1901, (356–361).

Klimsch, Edgar. Die Käfer des oberen Metnitztales. Carinthia II, Klagenfurt, 93, 1903, (67-86).

**Eomnicki**, Jarosław L. M. Les formes du Notiophilus aquaticus L. de la Galicie. (Polonais) Kosmos, Lwów, 28, 1903, (105-114).

**Lomnicki**, S. M[aryan]. Sur la faune de Léopol et de ses environs. I. Coleoptera. II. Partie. (Polonais) Kraków, Spraw. Kom. fizyogr., 37, 1903, (31-56).

Müller, Josef. Lucanidae et Scara-Wien, baeidae Dalmatiae. Verh. ZoolBot. Ges., 52, 1902, (438-466). (N 2-9053)

Rybiński, M. Coléoptères nouveaux pour la faune de la Galicie. Il Liste. (Polonais) Kraków, Spraw. Kom. fizyogr., 87, 1903, (15-30).

Coléoptères trouvés en Podolie galicienne, entre Złoczów et Podwołoczyska, en 1887 - 1890. (Polonais) *l.c.* (57-175).

Scholz, Richard. Im Nebel und Regen. Insektenbörse, Leipzig, 20, 1903, (19-20, 26-28).

#### dl BALKAN PENINSCLA.

849

Cameron, M. Coleoptera collected around Constantinople and Gulf of Ismid during the winter, 1901-1902. Ent. Mag., London, **39**, 1903, (58-63).

Sahlberg, J. Ad cognitionem faunae Coleopterorum Graecae fragmenta. [No. 12], l.e. (1-9).

[Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien]. (Schwedisch) [No. 9], *l.e.* (1-34); [No. 17] (1-38).

#### dm MEDITEBRANEAN AND ISLANDS.

Sahlberg, John. Messis hiemalis Coleopterorum Corcyraeorum. Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 11], 1902-1903, (1-84).

Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien. (Schwedisch). Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1902-1903, (1-34); [No. 17], (1-38).

#### ASIA. e

**Čičerin**, T. Observations sur quelques Cicindélides de la collection Semenov. St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (90–107).

Species asiatica nova generis Leistus Fröl. Rev. Rüss. Ent., Jaroslavlí, 3, 1903, (109).

Pic, M. Coléoptères nouveaux d'Asie et d'Afrique. Echange, Lyon, 19, 1903, (119-120). ·

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ea ASIATIC RUSSIA.

Jacobson, G. G. Coleoptera Mandshuriae meridionalis et peninsulae Quantungensis ab A. N. Gudzenko allata. (Russ.) St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (XI-XVI).

Localités de quelques coléoptères présentant un certain intérêt II. (Russ.) *l.c.* (XXII-XXIV).

**Schultze**, August. Generis *Ceuthorhynchi* species novae rossicae et transcaspiae. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (65–89).

Semenov, A. P. Coleoptera nova faunae turanicae. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (8–13, 353–357).

La faune de la Russie. 1V. (Russ.) *l.c.* (401-403).

### eb CHINA AND DEFENDENCIES.

**Cicerin**, T. Species thibetana nova generis *Platysma* (Bon.) Tsch. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (223).

Aus Centralasien. l.c. (226-227).

de la Chine. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (22-37).

Jacobson, G. G. Coleoptera Mandshuriae meridionalis et penineulae Quantungensis ab. A. N. Gudzenko allata. (Russ.) St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (X1-XVI).

**Meyer-Darcis**, G. Beiträge zur Kenntnis der Gattung *Coptolabrus* Solier. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1902, (405–410, mit 1 Taf.).

Pto, M. Diagnoses préliminaires de Longicornes provenant de Chine. Echange, Lyon, **19**, 1903, (105).

Semenov, A. P. Novae species tibetanae generis *Carabus* (L.). Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (349– 352).

ed Cochin China, Tonguin, Annan.

Fairmaire, I. Description de quelques hétéromères recueillis par M. Fruhstorfer dans le haut-l'onkin. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (13-20).

**Ploutiaux**, Ed. Contribution à la faune indochinoise (Indo-Chine française). (18° Mémoire). Deuxième addition aux *Cicindelidae* et *Elateridae*. Paris, Ann. soc. ent., **71**, (2° semest.), 1903, (569–580).

Moyer-Darcis, G. Beschreibung eines neuen Hirschkäfers Odontolabis frukstorferi, Meyer-Darcis. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1902, (410-411, 1 pl.).

Régimbart, M. Contribution à la faune Indo-Chinoise (19° Mémoire): Hydrophilidae. Paris, Ann. Soc. ent. 72, (1903), (52-64).

of BRITISH INDIA.

Grouvelle, A. Coléoptères de l'Inde récoltés par MM. H. L. Andrewes et T. R. D. Bell. Paris, Ann. soc. ent., 73, 1903, (125-127).

Maindron dans l'Inde méridionale (mainovembre 1901), 2° Mémoire. Coléoptères clavicornes. *I.e.* (2° semest.). 1903, (340-347, av. fig.).

Clavicornes de l'Inde septentrionale récoltés par M. Harmand. (Nitidulidae, Colydiidae, Cucujidae, Monotomidae, Dryopidae.) I.e. (108-124).

Oertzen, E. von. Ueber einige von Dr. Horn auf Ceylon gesammelte Tenebrioniden. D. ent. Zs., Berlin, 1903, (233-236).

**Olivier,** Ernost. Coléoptères Lampyrides capturés à Dardjilling par M. Harmand. Bul. Muséum, Paris, **1903**, (19-20).

Pic, Maurice. Voyage de M. Maurice Maindron dans l'Inde méridionale (mai à novembre 1901), 3° Mémoire. Anthicides. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (348-352).

**Régimbart**, Maurice. Voyage de M. Maurice Maindron dans l'Inde méridionale (mai à novembre 1901) 1<sup>er</sup> Mémoire. Dytiscides, Gyrinides, Palpicornes. *l.e.* (331-339).

**Sharp**, D. New species of Lamellicorn Coleoptera from the Nilgiri Hills. Ann. Mag. Nat. Hist., London, (Scr. 7), **11**, 1903, (467-473). **Stebbing**, E. P. A note on the discovery of *Thanasimus* sp. prox *nigricollis* in the N. W. Himalayas with some remarks on its life-history. Calcutta, J. As. Soc. Beng., **72**, pt. 2, 1903, (104-110).

Weise, J. Verzeichniss der von Dr. Horn auf Ceylon gesammelten Chrysomeliden. I: Eupoda et Camptosomata. D. ent. Zs., Berlin, **1903**, (17-34).

eg MALAY PENINSULA AND ARCHIPELAGO.

Bernhauer, Max. Beitrag zur Staphylinidenfauna von Ostindien und den Sundainseln. Stettiner ent. Ztg, 64, 1903, (21-36).

Bouchard, J. Insectes recueillis par M. le professeur Forster à Borneo, Java et Sumatra (Palembang). Coléoptères carabiques. Paris, Ann. soc. ent., **72**, 1903, (169–176).

**Horn**, W. Contribution à l'étude de la faune entomologique de Sumatra. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (84-85).

Jordan, K. New Oriental Anthribidae. Nov. Zool., Tring, 10, 1903, (415-434).

Pic, Maurice. Anthicides de Manille. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (643-648).

**Robinson**, H. C. Report on the Tiger beetles (*Cicindelidae*). Fascic. Malay. Zool., **1**, (179–183).

**Sharp**, D. *Heliocopris monhotus* and *H. dominus*. *I.c.* **2**, (281-287).

Weise, J. Coccinellides. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (91-96).

ch PERSIA.

**Čičerin**, T. Mémoire sur les Cicindélides des voyages de N. Zarudny dans la Perse orientale. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (1-21).

Semenov, A. P. Nouvelles formes du genre Carabus (L) de la Perse septentrionale. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (230-232).

(x?-90(3)

Semenov, A. P. Une nouvelle espèce du genre *Carabus* (1.) du Turkestan. (Russ.) *l.e.* (297-299).

De nova Purpuriceni specie e Persia austro-orientale. *l.c.* (358-359).

# ei ASIATIC TURKEY AND ARABIA.

Sahlberg, J. Entomologische Forschungsreisen in den Mittelmeergegenden und Central - Asien. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1902-1903, (1-34); [No. 17] (1-38).

Coleoptera Levantina mensibus Februario et Martio 1896 in Palaestina et Aegypto inferiore collecta. [No. 18]. *l.c.* (1-36).

### f AFRICA.

**Fairmaire**, I. Matériaux pour la faune coléoptérique de la région malgache. *Curculionidae*. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (209-244).

Jacoby, M. A further contribution to our knowledge of African Phytophagous Coleoptera. Pt. II. London, Trans. Ent. Soc., **1903**, (1-38).

Jakovlev, V. E. Revision der Sphenoptera de la region éthiopienne. Supplément. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (231-239).

Jordan, K. Some new African Anthribidae. Nov. Zool., Tring, 10, 1903, (127-130).

(131-191). African Cerambycidae. l.e.

Pic, M. Coléoptères nouveaux d'Asie et d'Afrique. Echange, Lyon, **19**, 1903, (119-120).

Schwarz, Otto. Neue Elateriden aus Afrika und Madagaskar. D. ent. Zs., Berlin, **1903**, (357–376).

Voigts, Hans. Neue Ost-südufrikanische Zonabris. l.c. (101-107).

Weize, J. Afrikanische Galerucinen. l.c. (35-56, mit 1 Taf., 321-334).

# fa MEDITERRANEAN STATES.

Born, Paul. Ueber einige nordafrikanische Caraben. Insekteubörse, Leipzig, 20, 1903, (203-204). **Desbrochers des Loges.** Description d'un Curculionide nouveau formant une coupe générique nouvelle. *l.c.* **19**, **1903**, (188).

Pic, M. Nouvelles espèces et variétés de coléoptères paléarctiques. Echange, Lyon, 17, 1902, (33-35, 79-80).

Coléoptères présumés nouveaux de la faune circumméditerranéenne. *l.c.* (63-65).

Descriptions et habitats de divers coléoptères du Nord de l'Afrique. *l.c.* **19**, 1903, (113–115).

\_\_\_\_\_ Malthinides nouveaux. l.c. (155-158).

Sahlberg, J. Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 9], 1902–1903, (1-34); [No. 17], (1-38).

Coleopters Numido-Punica mensibus Martio, Aprili et Majo 1899 in Tunisia et Algeria orientali collecta. *l.c.* [No. 19], (1-70).

Wasmann, E. Coléoptères myrmécophiles recueillis par M. le Professeur A. Lameere en Algérie. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (159).

fb NORTH EAST AFRICA.

**Sahlberg**, J. Entomologische Forschungsreisen in den Mittelmeergegenden und Central-Asien. (Schwedisch) Helsingfors, Ofvers. F. Vet. Soc., **45**, [No. 9], 1902-1903, (1-34); [No. 17], (1-38).

Coleoptera Levantina mensibus Februario et Martio 1896 in Palestina et Aegypto inferiore collecta. I.e. [No. 18], (1-36).

fc SAHARA AND THE FRENCH SUDAN.

Marchand, Ernest. Description de deux Arthropodes nouveaux provenant du Soudan français. Nantes, Bul. soc. sci. nat., (sér. 2), 2, (2° semest.), 1902, (331-343, av. 1 pl.).

fd WEST AFBICA.

Jacoby, Martin. Descriptions of new genera and species of phytophagous Coleoptera obtained by Herr Conradt in West Africa (Cameroons). Stettiner ent. Ztg, 64, 1903, (292-336).

Jordan, K. Some new Cerambycidae collected by Albert Mocquerys on the island of St. Thomé, Gulf of Guinea, W. Africa. Nov. Zool., Tring, **10**, 1903, (192-195).

fe Congo State and Angola.

Belon. Petite contribution à la connaissance des Longicornes du Congo. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (246-247).

Roon, G. van. Ein nouer Prionide aus Central-Afrika [Stanley-Falls]. 's Gravenhage, Tijdschr. Ent., 45, 1903, (243-245, mit 1 Fig.).

f East Africa.

Brenske, E. Neue Melolonthiden aus Usambara aus der Samınlung des Herrn Dr. Julius Schultz. D. ent. Zs., Berlin, 1903, (295-299).

Gahan, C. J. Coleoptera. Nat. Hist. Sokotra, (263-292, pl. XVII).

Heath, E. A. Description of a new Cetoniid beetle from British East Africa. Entomologist, London, **36**, 1903, (98).

——— Description of a new Longicorn beetle from British East Africa. *l.c.* (273).

Horn, Walther. 3 neue Cicindeliden vom tropischen Ostafrika. 2 neue abessinische Cicindeliden. Eine neue Borneo - Cicindelide. D. Ent. Zs., Berlin, **1903**, (421-423).

Schwarz, Otto. Zwei neue Arten der Throsciden-Gattung Lissomus Dalm. aus Deutsch Ostafrika. *l.c.* (399– 400).

Preiss, Paul. Cetonidae. (Wissenschaftl. Resultate der Reise Carlo Frhm v. Erlanger's durch Süd-Schoa, Galla u. Somaliländer). Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (93-111, mit 1 Taf.).

Weise, J. Afrikanische Chrysomeliden. Arch. Natg., Berlin, 69, Bd 1, 1903, (197-226).

# Coleoptera.

### fg South Africa.

Brenske, E. Napalopus n. gen. Leptopodarum. Soc. Entomol., Zürich, 17, 1903, (185).

**Horn**, Walther. Ueber die Cicindeliden Ausbeute von Guy A. K. Marshall aus Rhodesia, Manica und Gazaland. D. Ent. Zs., Berlin, **1903**, (315-317).

------ Neue süd-afrikanische ('icindeliden. l.c. (318-320).

**Oroigny**, H. d' Notes sur divers Onthophagides de l'Afrique australe. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (289-300).

### fh MADAGASCAR.

Alluand, Ch. Observations sur divers Cicindélides de Madagascar et description d'espèces nouvelles. Paris, Aun. soc. ent., **71**, (2° semest.), 1902, (637-642, av. fig.).

Fairmaire, L. Description de coléopteres de Madagascar. Naturaliste, Paris, (sér. 2), 24, 1902, (286-287).

Description de coléoptères nouveaux de Madagascar. *l.c.* 23, 1903, (9-11, 35-37).

Matériaux pour la faune coléoptérique de la région malgache (14° Note). Paris, Ann. soc. ent., 71, (2° semest.), 1902, (532-568).

Matériaux pour la faune coléoptérique de la région malgache (16° Note). *l.c.* 72, (2° semest.), 1903, (181-259).

**Floutiaux**, Ed. Description de deux. nouvelles espèces d'Elatérides de Madagascar. Naturaliste, Paris, (sér. 2), 25, 1903, (45).

**Heller**, K. M. Eine neue Art der Cetoniden - Gattung *Bothrorrhina* aus Madagascar. D. Ent. Zs., Berlin. **1903**, (167-168).

Jacoby, Martin. Descriptions of some new genera and species of phytophagous Coleoptera from Madagascar. Bruxelles, Ann. Soc. Ent. Belgique; 45, 1901, (287-303).

Raffray, A. Psélaphides recueillis dans le sud de Madagascar par T. Ch. Alluaud. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (315-330, av. fig.). g NORTH AMERICA.

Lenne, P. La distribution géographique des coléoptères bostrychides dans ses rapports avec le régime alimentaire de ces insectes. Rôle probable des grandes migrations humaines. Paris, C.-R. Acad., sci., **137**, 1903, (133–135).

gg North-Eastern United States.

**Barber**, H. G. *Miscodera arctica* Payk [from Mt. Kteadon, Me.]. Philadelphia, Pa. Ent. News Acad. Nat. Sci., **14**, 1903, (241).

Bradley, J. Chester. [Hydrobius tessellatus Ziegh. at Roberts, Chester Co., Pa.]. l.c. 13, 1902, (23).

Rowditch, F. C. Collection notes (Coleoptera).—1902. [Massachusetts.]. I.c. 14, 1903, (45-47).

Davis, C. Abbott. The Cicindelidae of Rhode Island. *l.e.* (270-273).

Hood, L. E. Notes on certain Coleoptera. [Collecting in Massachusetts.] *l.c.* 13, 1902, (83-84).

Klages, Henry G. Supplement to Dr. John Hamilton's list of the Coleoptera of south-western Pennsylvania. [Scydmaanidae and Pselaphidae by Rev. Jerome Schmitt.] Pittsburg, Pa., Ann. Carnegie Mus., 1, 1901, (265-294).

**Enab.** Frederick. Beetle prizes at Springfield, Mass. [with notes on Massachusetts beetles]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (89-90).

**MacGillivray**, Alex[ander] D. Aquatic Chrysomelidae and a table of the families of Coleopterous lavae. Albany Univ., N.Y., Bull. St. Mus., No. **68**, 1903, (288– 327, with pl.).

and **Houghton**, C. O. A list of insects taken in the Adirondack Mountains, New York. 1. [Coleopters]. Philadelphia, Pa., Ent. News. Acad. Nat. Sci., **13**, 1902, (247-253). 3chmitt, Rev. Jerome. [Suydmanidae and Pselaphidae of South-western Pennsylvania] [in paper by II. G. Klages]. Pittsburg, Pa., Ann. Carnegie Mus., 1, 1901, (267-269).

schwarz, Otto. Sechs neue nordamerikanische Elsterideu. D. ent. Zs., Berlin, 1903, (57-62).

Slingerland, M. V. The elm leaf beetle found at Ithaca, N.Y. [Galerucella lutcola]. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (30).

gh South Eastern United States.

**Bentemüller**, William. Notes on some beetles from the Black Mountains [North Carolina] with descriptions of new species. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (511-519, with 2 pl.). Separate. **24**.5 cm.

gi WESTEBN UNITED STATES.

Brues, Charles Thomas. Two new Texan ant and termite guests. [nn. spp. in *Ecitozenia* and *Termitogaster*]. "Contributions from the Zoological Laboratory of the University of Texas. No. 32." Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (184–188, with 1 pl.).

**Kellogg**, V[ernon] L[vman]. Notes on California *Coccidae*, *Aleurolidae*, and *Scolytidae*. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. **40**, 1903, (83-84)

**Enaus**, W. Notes on collecting Coleoptera in Wyoming and Utah. Philadelphia, Pa. Ent. News Acad. Nat. Sci., 13, 1902, (114-115, 147-152).

The Coleoptera of the Sacramento Mountains of New Mexico. *1.e.* **14**, 1903, (172-180).

Additions to the list of Kansas coleopters for the years 1901 and 1902. Topeka, Trans. Kau. Acad. Sci., 18, 1903, (187-190).

Skinner, Henry. Coleoptera [from Beulah, New Mexico]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902, (38-41).

**Snow**, F[rancis] H[untington]. List of Coleoptera and Lapidoptera collected in Hamilton, Morton and Clark counties, Townsend, C[harles] H[enry] T[yler]. Contribution to a knowledge of the Coleopterous fauna of the lower Rio Grands valley in Texas and Tamaulipas, with biological notes and special reference to geographical distribution. Austin, Trans. Texas Acad. Sci., 5, (1902), 1903, (49-101).

# h CENTRAL AND SOUTH AMERICA.

Jacoby, M. Descriptions of new species of South-American Coleoptera of the family *Chrysomeliilae*. London, Proc. Zool Soc., **1903**, 2, (30–59).

Descriptions of some new species and a new genus of Chrysomelidae from South America. Entomologist. London, **36**, 1903, (169, 170, 182, 183, 209-211).

Lesne, P. La distribution géographique des coléoptères bostrychides dans ses rapports avec le régime alimentaire de ces insectes. Rôle probable des grandes migrations humaines. Paris. C.-R. Acad. sci., **137**, 1903, (133-135).

Pic, M. Coléoptères nouveaux originaires de la Patagonie. Echange, Lyon, 17, 1902, (49-51).

Schwarz, Otto. Neue Elateriden aus Südamerika. . . D. ent. Zs., Berlin, 1903, (63-80).

#### ha MEXICO.

Pairmaire, L. Descriptions de quelques longicornes du Mexique. Paris, Bul. soc. ent., 1902, (243-246).

**Horn**, Walther. List of the *Cicinde?i*dae of Mexico and on their relationship with the species of the United States. New York, N.Y., J. Ent. Soc., **11**, 1903, (213-221).

Townsend, C[harles] H[enry] Tyler]. Contribution to a knowledge of the Coleopterous fauna of the lower Rio Grande valley in Texas and Tamaulipas, with biological notes and special reference to geographical distribution. Austin, Trans. Texas Acad. Sci., 5. (1902), 1903. (49-101).

# Coleoptera.

hb CENTRAL AMERICA.

Champion, G. E. Coleoptera. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (145-312, pls. IX-XVI).

# he WEST INDIES.

Arrow, G. J. On the Laparostict Lamellicorn Coleoptera of Grenada and St. Vincent (W. Indies). London, Trans. Ent. Soc., **1903**, (500-520).

Grouvelle, A. Supplément à la liste des coléoptères de la Guadeloupe de MM. Fleutiaux et Sallé. Paris, Anu. soc. ent., 71, (2° semest.), 1902, [1903], (756-769).

### hd VENEZUELA.

Horn, Walther. On the *Cicindelidae* of southern Venezuela, collocted by Edward A. Klages, 1898-1900. Washington, D.C., Proc. Ent. Soc., **5**, 1903, (331-334).

he ECUADOR.

**Ohaus**, Friedr. Verzeichnis der von Herrn Richard Haensch in Ecuador gesammelten Buteliden (Coleoptera lamellicornia). Berliner ent. Zs., **48**, 1903, (215-242).

# hf PERU.

**Boucomont**, A. Description de quelques Bolbocerini nouveaux. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, (581-587, av. 1 pl.).

#### hh BRAZIL.

**Boucomont**, A. Description de quelques Bolbocerini nouveaux. Paris, Ann. soc. ent., **71**, (2<sup>\*</sup> semest.), 1902, (581– 587, av. 1 pl.).

Gahan, C. J. and Arrow, G. J. List of the Coleoptera collected by Mr. A. Robert at Chapada, Matto Grosso (Percy Sladen expedition to Central Brazil). [An appendix by Arrow includes 4 nn. spp. from Paraguay]. London, Proc. Zool. Soc., **1903**, 2, (214-258, pl. XXVIII). Pic, Maurice. Contribution à l'étude des Xyletini du Bresil. Ann. Soc. ent. Belgique, **46**, 1902, (17-18).

#### hi ABGENTINE REPUBLIC.

Arrow, G. T. Descriptions of a few new species of Coleopters from Sapucay, Paraguay. London, Proc. Zool. Soc., 1903, 2, (255-258).

#### i AUSTRALASIA.

Schwarz, Otto. Neue Elateriden aus Neu-Guinea and Australien. D. ent. Zs., Berlin, **1903**, (377-398).

# ia NEW GUINEA AND ISLANDS.

Heller, K. M. Sechs neue Käfer aus Deutsch Neu-Guinea. D. ent. Zs., Berlin, **1903**, (305-317).

Un buprestide nouveau de la Nouvelle-Guinée allemande, Iritotaenia wahnesi. Bruxelles, Ann. Soc. Ent. Belgique, **46**, 1902, (234-235).

Dritter Beitrag zur Papuanischen Käferfauna. Dresden, Abh. zool. Mus., **10**, (1902–03), Berlin, 1903, Nr. 2, (II + 20).

Plc, Maurice. Descriptions de deux *Hylophilus* d'Océanie appartenant au Musée civique de Gênes. Paris, Bul. soc. ent., **1902**, (227-228).

**Baffray**, A. Voyage de M. L. Biró dans les possessions allemandes de la Nouvelle-Guinée. Paélaphides. Descriptions d'espèces nouvelles. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (29-106, av. pl. I-II).

**Spaeth**, Franz. Zusammenstellung der bisher von Neu-Guinea bekanntgewordenen Cassiden mit besonderer Berücksichtigung der Sammlungen des ungarischen National-Museums und des Museo civico von Genua. *1.c.* (109– 160).

Weise, J. Neue Chrysomeliden aus Neu-Guinea. D. ent. Zs., Berlin, 1903, (335-336).

#### ie Australia.

Blackburn, T. . . . Notes on Australian Coleoptera. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (91–182, 261-309). if VICTORIA.

Barnard, F. G. A. Excursion to Launching Place [Victoria]. [Coleoptera, 11 species.] Vict. Nat., Melbourne, 19, 1903, (147).

Best, D. Excursion to Wandong [Victoria]. [Coleoptera, 7 species.] *i.e.* 20, 1903, (103).

# ig South Australia.

Pic, Maurice. Descriptions de deux Hylophilus d'Océanie appartenant au Musée civique de Gênes. Paris, Bul. soc. ent., **1902**, (227-228).

### ik NEW ZEALAND.

Broun, T. Descriptions of new genera and species of New Zealand Coleoptera. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (450-458, 602-618); 12, 1903, (69-86).

Sharp, P. Some new Coleoptera from the Chatham Islands and New Zealand. Ent. Mag., London, **39**, 1903, (105-110).

# k ARCTIC.

**Sahlberg**, John. Aleocharids collected in the Arctic regions by the Swedish expeditions 1883 and 1899. (Swedish) Entomol. Tidskr., Stockholm, **22**, 1901, (167-169).

# I ATLANTIC.

lb Azores.

Pic, M. Coléoptères nouveaux de l'île de Ténériffe. Echange, Lyon, 17, 1902, (80-81).

# n PACIFIC.

# nd SANDWICH ISLANDS.

**Sharp**, D. Coleoptera. III. Coleoptera Caraboides. Fauna Hawaiieusis, III, (175–292, pls. V1, VII); [Summary], Entomologist, London, **36**, 1903, (263). ANTARTIC.

od Islands to Southward and South-East of New Zealand.

**Sharp**, D. Some new Coleoptera from the Chatham Islands and New Zealand. Eut. Mag., London, **39**, 1903, (105-110).

# 4831 TAXONOMY AND SYSTEMATIC.

### GENERAL.

Arrow, G. T. On the Laparostict Lamellicorn Coleoptera of Grenada and St. Vincent (W. Indies). London, Trans-Ent. Soc., **1903**, (509-520).

Barnard, F. G. A. [Coleopters, 1] species]. Excursion to Launching Place. [Victoria.] Vict. Nat., Melbourne, 19, 1903, (147).

Best, D. [Coleoptera; 7 species from-Wandong, Victoria]. *I.e.* 20, 1903, (103).

Belon. Petite contribution à la connaissance des Longicornes du Congo Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (246-247).

Beutenmüller, W. Notes on some beetles from the Black Mountains [North. Carolina] with descriptions of new species. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (511-519, with 2 pls.). Separate. 24.5 cm.

Boden. Beschädigung der jungen Kiefernkulturen durch wurzelbrütende Hylesinen im akademischen Lehrrevier Freienwalde a. O. Zs. Forstw., Berlin, 35, 1903, (551-554).

**Čičerin**, T. Zu Dr. K. Daniels kritischem Nachgraben. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (39-40).

Coulon, L. Muséum d'Histoire naturelle d'Elbeuf. Catalogue de la collection de coléoptères longicornes d'Europe. Elbeuf, Bul. soc. étud. sci. nat., 20, 1901, [1902], (pagin. spéc. 1-11).

**Dupont**, L. Insectes du Jardin (Mont-Blanc). *l.c.* (41).

# Coleoptera.

0

Ehrman, G. A. Notes on Coleoptera No. 2. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (140– 141).

Everts, Ed. Die Käfer von Niederland und dem angrenzenden Gebiete. Vol. 2, Lief. 2. (Holländisch) 's Gravenhage (Mart. Nijhoff), 1903, (401-796, 8 Taf.). 27 cm.

Fairmaire, L. Matériaux pour la fuune coléoptérique de la région malgache (14<sup>\*</sup> Note). Paris, Ann. soc. ent., 71, (2<sup>•</sup> semest.), 1902, (532–568).

Matériaux pour la faune coléoptérique de la région malgache (16° Note). *l.e.* 72, (2° semest.), 1903, (181– 259).

Friedrichs, K. Beiträge über paläarktische Coleopteren. Allg. Zs. Ent., Neudamm, 8, 1903, (87–90, 257–261).

Gahan, C. J. and Arrow, G. J. List of the Coleoptera collected by Mr. A. Robert at Chapada, Matto Grosso, Percy Sladen expedition to Central Brazil. [An appendix by Arrow includes 4 nn. spp. from Paraguay]. London, Proc. Zool. Soc., **1903**, 2, (244-258, pl. XXVIII).

Gangibauer, L. Bemerkungen zu Prof. H. J. Kolbe's Arbeit "Zur Systematik der Coleopteren". Allg. Zs. Ent., Neudamm, 8, 1903, (268-269).

**Grouvelle**, A. Supplément à la liste des coléoptères de la Guadeloupe de MM. Fleutiaux et Sallé. Paris, Ann. soc. ent., **71**, (2<sup>e</sup> semest.), 1902, [1903] (756-769).

Clavicornes de l'Inde septentrionale récoltés par M. Harmand. (Nitidulidae, Colydiidae, Cucujidae, Monotomidae, Dryopidae). l.c. 72, 1903, (108-124).

Coléoptères de l'Inde récoltés par MM. H. L. Andrewes et T. R. D. Bell. *l.c.* (125-127).

Voyage de M. Maurice Maindron dans l'Inde méridionale (mainovembre 1901). 2º Memoire. Coléoptères clavicornes. *l.c.* (2º semest.), 1903, (340-347, av. fig.).

Heller, K. M. Dritter Beitrag zur Papuanischen Käferfauna. Dresden, Abh. zool. Mus., 10, (1902–1903), Berlin, 1903, Nr. 2, (II + 20).

Jacobson, G. G. Coleoptera Mandshuriae meridionalis et peninsulae Quantungensis, ab A. N. Gudzenko allata Jacoby, M. A further contribution to our knowledge of African phytophagous Coleoptera. Pt. II. London, Trans. ent. Soc., **1903**, (1-38).

Janson, O. E. On the genus *Theo*dosia and other eastern *Goliathides*, with descriptions of some new species. *l.c.* (303-310).

Klages, H. G. Supplement to Dr. John Hamilton's list of the Coleoptera of south-western Penneylvania. [Scydmaenidae and Pselophidae by Rev. Jerome Schmitt.] Pittsburg, Pa., Ann. Carnegie Mus., 1, 1901, (265-294).

**Enaus**, W. Additions to the list of Kansas Coleoptera for the years 1901 and 1902. Topeka, Trans. Kan. Acad. Sci., **18**, 1903, (187-190).

Kolbe, H. J. Zur Systematik der Coleopteren. Allg. Zs. Ent.,-Neudamm, 8, 1903, (137–145).

Küster, H. C. und Kraats, G. Die Käfer Europas. Nach der-Natur beschrieben. Fortgesetzt von J. Schilsky. H. 40. Nürnberg (Bauer & Raspe), 1903, (VIII + 270). 15 cm. 3 M.

Lameere, A. Nouvelles notes pour la classification des coléoptères. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (155-165).

Marchal, C. Sur quelques coléoptères peu connus ou nouveaux pour Saône-et-Loire. Autun, Bul. soc. sci. nat., 15, 1902, (Proc. verb. 263-265).

Mjöberg, E. Rare Coleoptera. 1. From the surroundings of Stockholm. (Swedish) Entomol. Tidskr., Stockholm, 22, 1901, (191-192).

Norman, A. M. [Coleopters in :] Notes on the Natural History of East Finmark. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (166).

Peyerimhoff, P. de. Coléoptères nouveaux pour la faune française. Description d'une espèce inédite. Paris, Bul. soc. ent., **1902**, (246-247).

Sur l'état de la systématique en entomologie, principalement chez les coléoptères. Feuille jeunes natural., Paris, (sér 4), **33**, 1903, (37-42).

Sur la méthode dans les recherches de phylogénie entomologique. Feuille jeunes natural. *I.e.* (89-95). Peyerimhoff, P. de. Descriptions des larves de trois coléoptères exotiques. Paris, Ann. soc. ent., **71**, (2<sup>e</sup> semest.), 1902, [1903], (710-718, av. fig.).

Pic, M. Diagnoses de coléoptères de l'Ancien et du Nouveau Monde. Echange, Lyon, 17, 1902, (23-26).

avec synopsis. *l.c.* (41-42).

------ Coléoptères intéressants, rares ou nouveaux pour la faune françuise. *l.c.* (46).

------- Coléoptères intéressants, rares ou nouveaux pour la faune française (fin). *l.c.* (51).

------- Notes entomologiques diverses et descriptions. *l.e.* **19**, 1903, (89-91).

plémentaires sur divers coléoptères paléarctiques. l.c. (97-98).

------ Descriptions et habitats de divers coléoptères du Nord de l'Afrique. J.c. (113-115).

diagnoses. *l.c.* (129-131).

------ Quelques coléoptères rares ou nouveaux pour la faune gallo-rhénane. *l.c.* (153-155).

Pohl, Robert. Eine Käferernte. Aus d. Heimat, Stuttgart, 15, 1902, (48-53).

Quittard, J. Contribution à la faune des coléoptères du département du Puyde-Dôme, principalement des environs de Riom (supplément). Echange, Lyon, 19, 1903, (160, 165-166, 173).

**Eógimbart**, M. Voyage de M. Maurice Maindron dans l'Inde méridionale (mai à novembre 1901) 1<sup>er</sup> Mémoire. Dytiscides, Gyrinides, Palpicornes. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> ·semest.), 1903, (331-339).

Bettter, E. Analytische Uebersicht der palaearctischen Gattungen und Arten der Coleopteren-Familien Byrrhidae (Anobiidae) und Cioidae. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (3-64).

Sahlberg, J. Coleoptera mediterranea et rosso-asiatica nova et minus cognita.
II. Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 10], 1902-1903, (1-40). **Sahlberg**, J. Messis hiemalis Coleopterorum Corcyraeorum. *l.e.* [No. 11], (1-84).

------ Ad cognitionem faunae Coleopterorum Graecae fragmenta. l.c. [No. 12], (1-9).

------ Ad cognitionem faunse Coleopterorum Italicae fragmenta. *l.c.* [No. 13], (1-14).

Coleoptera Levantina mensibus Februario et Martio 1896 in Palaestina et Aegypto inferiore collecta. *lc.* [No. 18], (1-36).

Coleoptern Numido-Punica mensibus Martio, Aprili et Majo 1899 in Tunisia et Algeria orientali collecta. *l.c.* [No. 19], (1-70).

Aleocharids collected in the arctic regions by the Swedish expeditions 1883 and 1899. (Swedish Entomol. Tidskr., Stockholm, 22, 1901. (167-169).

Sainte-Claire Deville, J. Exploration entomologique des grottes des Alpes-Maritimes. Paris, Ann. soc. ent., 71, 1902, [1903], (085-709, av. fig.).

Schmitt, Rev. J. [Scydmaenidae and Pselaphidae of south-western Pennsylvania] [in paper by H. G. Klages! Pittsburg, Pa., Ann. Carnegie Mus., 1, 1901, (267-269).

**Semenov**, A. P. Analecta coleopterologica I-IV. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (14-15, 99-100, 169-175, 306-307, 390-392).

Ics ailes inférieures des coléoptères, considerées comme caractère systématique. (Russ.) *l.c.* (103-106).

**sharp**, D. On some Coleopters from the Faeroe Islands. Ent. Mag., London, **39**, 1903, (249-250).

Skinner, H. Coleoptera [from Beulah, New Mexico]. Philadelphia, Pa., Acad. Nat. Sci., Trans. Amer. Ent. Soc., 29, 1902, (38-41).

**Strand**, E. Staphylinids and Apions. new for the Norwegian fauna. (Norw.) Entomol. Tidskr., Stockholm, **32**, 1901, (143).

Townsend, C. H. T. Contribution to a knowledge of the Coleopterous fauna of the Rio Grande Valley in Texas and Tumaulipas, with biological notes and special reference to geographical distribution. Austin, Trans. Texas Acad. Sci., 5, (1902), 1903, (49–101).

Viturat, abbé. Catalogue des coléoptères du département de Saône-et-Loire. Echange, Lyon, **17**, 1902, (1-16, pagin. spéc.), (1-28, pagin. spéc.); **19**, 1903, (29-54, pagin. spéc.).

### PASSALIDAE.

#### GENERAL.

Zang. R. Bemerkungen zur älteren Passaliden-Litteratur. D. ent. Zs., Berlin, 1903, (417-420).

#### SPECIAL.

Alceraius nn. spp. Zang, R. Insektenbörse, Leipzig, 20, 1903, (338-339).

Epilaches nn. spp. **Zang**, R. *l.c.* (338-339).

Plesthenus scutellopunctatus n. sp. Zang, R. l.c. (338-339).

#### LUCANIDAE.

#### GENERAL.

Boileau, H. Note sur quelques Lucanides du musée de Bruxelles. Bruxelles, Mém. Soc. entom. Belgique, 9, 1903, (33-62).

Kolbe, H. J. Ueber den einseitigen Polymorphismus im männlichen Geschlecht der Lucaniden. Ein kurzer Entwurf. Insektenbörse, Leipzig, 20, 1903, (43-45).

**Mäller**, J. *Lucanidae* Dalmatiae. Wien, Verh. ZoolBot. Ges., **52**, 1902, (438-466).

#### SPECIAL.

Aegus nn. spp. **Möllenkamp**, W. D. ent. Zs., Berlin, **1903**, (352-354).

Cardanus costatus n. sp. Ritsems, ('zn, C. Leiden, Notes Mus. Jentink, 23, 1903, (229-230).

Cyclommatus nn. spp. **Möllenkamp**, W. D. ent. Zs., Berlin, **1903**, (337-340).

Dorcus thoracica n. sp. Möllenkamp, W. l.c. (346). Eurytrachelus praecellens n. sp. Möllemkamp, W. l.c. (344).

Leptinopterus consimilis n. sp. **Möl**lenkamp, W. l.c. (350).

Lissoles auriculatus n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (615-616).

Lucanus singularis n. sp. Planet, I. Naturaliste, Paris, (sér. 2), 25, 1903, (11-12, av. fig.).

Mctopodontus claphus n. sp. Möllenkamp, W. D. ent. Zs., Berlin, 1903, (343).

Mitophyllus comognathus n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (616-617).

Neolucanus celebensis n. sp. **Möllenkamp**, W. D. ent. Zs., Berlin, **1903**, (349).

Nigidius gigas n. sp. Möllenkamp, W. l.e. (346).

Odontolab's nn. spp. Möllenkamp, W. l.c. (341-351).

*fruhstorferi* n. sp. **Meyer-Darcts**, G. Mitt. Schweiz. Entomol. Ges., **10**, 1902, (410-411, 1 pl.).

Prosopocoelus mandibularis n. sp. Möllenkamp, W. D. ent. Zs., Berlin, 1903, (345).

#### SCARABAEIDAE.

#### GENERAL.

Liste analytique illustré des genera des coléoptères de France. Série scarabéidienne. Naturaliste, Paris, (sér. 2), 24, 1902, (220, 277-278).

Arrow, G. T. On the affinities and nomenclature of certain genera of Melolonthid and Rutelid Coleoptera. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (303-306).

Müller, J. Scarabaeidas dalmatiae. Wien, Verh. Zool.Bot. Ges., 52, 1902, (438-466).

**Ohaus**, F. Verzeichnis der von Herrn Richard Haensch in Ecuador gesammelten Ruteliden (Coleoptera lamellicornia). Berliner ent. Zs., **48**, 1903, (215-242). , Orbigny, H. d'. Notes sur divers Onthophagides de l'Afrique australe. Paris, Aun. soc. ent., 72, (2° semest.), 1903, (289-300).

Preiss, P. Cetonidae. (Wissenschaftl. Resultate der Reise Carlo Frhm. v. Erlanger's durch Süd-Schoa, Galla u. Somaliländer). Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (93-111, mit 1 Taf.).

**Reitter**, E. Bestimmunge-Tabelle der Melolonthidae aus der europäischen Fauna und den angrenzenden Ländern, enthaltend die Gruppen der Pachydemini, Sericiui, und Melolonthini. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (93– 303).

Sohreiner, Ja. F. Der Rebenschneider (Lethrus apterus Walk) und die Mittel zu dessen Bekämpfung. (Eine landwirthschaftliche Monographie) (Russ.) Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg. TV, No. 1, 1903, (45, mit 10 Fig. u. 1 Taf.).

#### SPECIAL.

Achranoxia planipalpisn.sp. **Beitter**, Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (278).

Adoretus oedipus n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (9).

Acgidium vincentiae n. sp. St. Vincent. Arrow, G. T. London, Trans. Ent. Soc., **1903**, (515).

Ahermes Rttr. 1891 synopsis specierum; 2 nn. spp. Mongolia austr. Semenov, A. P. Rev. Russ. Ent. Jaroslavli, 3, 1903, (26-28).

ahngeri n. sp. Transcaspia. **Semenov, A.** P. *l.e.* (8-13).

Aleucolomus n. subgen. (Chioneosema) for C. subporosa n. sp. **Bettter**, E. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (192).

Amadotrogus n. subgen. (Amphimallus). Retter, E. l.c. (248).

Amaurina viridipennis n. sp. Moser, J. Berliner ent. Zs., 48, 1903, (319). Amblonoxia n. gen. Reitter. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (276).

Amphimallus nn. spp. Reitter. l.e. (238-245).

Anacamptorhina concolor n. sp. Papua. Heller, K. M. Dresden, Abh. Zool. Mus., 10, (1902–03), Berlin, 1903, Nr, 2, (11 + 20).

Anisoplia reitteriana n. nom. = Ascytha Rttr. 1889. Semenov, A. P. Rev. Russ. Ent., Jaroslavli, 3, 1903, (99).

Anochilia punctulicollis n. sp. Madagascar. Fairmaire, L. Naturaliste, Faris, (sér. 2), 23, 1903, (36).

Anodon conicifrons n sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>\*</sup> somest.), 1903, (188).

Anomala nn. spp. India. **Sharp**, D. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (471-472).

gudzenkoi n. sp.-Mandshuria mer. Jacobson, G. S. St. Peterburg, Ann. Mus. Zool. Ac. Sc., 8, 1903, (XI-XVI).

Anoxiella n. subgen. (Brahmina)-Bettter, E. Brünn, Verh. Natf. Ver.. 40, (1901), 1902, (178).

Anthypna carcelii: note ed osservazioni. Luigioni, P. Mon. zool. ital, Firenze, 13, 1902, (Supplemento, (20-22).

Aphodius nn. spp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (186–187).

sturmi Harold: a British insect. Bouskell, F. Ent. Rec., London. 15, 1903, (92).

Aplaster pagenstecherin. sp. Afrika. Pretas, P. Wiesbeden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (93-111).

Aposchiza n. gen. (~ Homoeoschiza Kolbe), A. schulzi n. sp. Usambara. Brenske, E. D. ent. Zs., Berlin, 1903. (296-297).

Apterodema paraguayensis n. sp. Paraguay. Arrow, G. J. London, Proc. Zool. Soc., 1903, 2, (255-256).

Arachnopus patronoides n. sp. Deutsch Neu-Guinea. Heller, K. M. D. ent. Zs., Berlin, **1903**, (305–317). Ataenius nn. spp. Grenada. Arrow, G. J. London, Trans. Ent. Soc., 1903, (512-513).

Athyreus nn. spp. Boucomont, A. Paris, Ann. soc. ent., 71, (2<sup>e</sup> semest.), 1903, (581-587, av. 1 pl.).

Bolaz oberthüri n. sp. Ecuador. Ohans, F. Berliner ent. Zs., 48, 1903, (235).

Bolboceras nn. spp. Boncomont, A. Paris, Ann. soc. ent., 71, (2<sup>e</sup> semest.), 1902, (581-587, av. 1 pl.).

Bothrorrhina nickerli n. sp. Madagascar. Heller, K. M. D. ent. Zs., Berlin, **1903**, (167–168).

gascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 24, 1902, (286-287).

Brahmina nn. spp. **Reitter.** Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (181).

Caccobius schreberi n. varr. Müller, J. Wien, Verh. ZoolBot. Ges., 52, 1902, (454).

Callistethus pterygophorus n. sp. Ohaus, F. D. ent. Zs., Berlin, 1903, (217).

Canthidium sladeni n. sp. Brazil. Gahan, C. J. and Arrow, G. J. London, Proc. Zool. Soc., 1903, 2, (249–250, pl. XXVIII, fig. 1).

Chalcocrates n. gen., C. felschein. sp. Deutsch Neu-Guinea. **Heller**, K. M. D. ent. Zs., Berlin, **1903**, (305-306).

Chalcopharis n. gen., C. nigroachea n. sp. Papua. **Heller**, K. M. Dresden, Abh. Zool. Mus., **10**, (1902-03), Berlin, 1903, Nr. 2, (11 + 20).

Chioneosema nn. spp. **Reitter.** Brünn, Vorh. Natf. Ver., **40**, (1901), 1902, (192-194).

Chionotrogus n. subgen. (Chioncosema) for Chioneosema molaris n. sp. and C. sequensi n. sp. **Reitter**, E. l.c. (190).

Chromoptilua nn. spp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 24, 1902, (286-287).

*nickerli* n. sp. **Moser**, J. Berliner ent. Zs., **47**, 1902, [1903], (283-287).

Clavipalpus tenuin n. sp. Brazil. Gahan, C. J. and Arrow, G. J. London, Proc. Zool. Soc., 1903, 2, (251, pl. XXVIII, fig. 2). *Clocotus* nn. spp. **Arrow**, G. J. London, Trans. Ent. Soc., **1903**, (517–520).

Clypearia n. gen., C. pruinosa n. sp. **Pairmaire**, L. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (194).

Cnemargulus n. gen., C. krulikovskii, C. pusio nn. spp. Transcaspia. Semenov, A. Rev. Russ. Ent., Jaroslavh, 3, 1903, (354-355).

Coelodes nigripennis n. sp. St. Vincent. Arrow, G. J. London, Trans. Ent. Soc., 1903, (516).

Coptodactyla ducalis n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (263).

Coptomia discipennis n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2e semest.), 1903, (199).

Cosmiomorpha tonkinensis n. sp. Moser, J. Berliner ent. Zs., 48, 1903, (145).

Crepischiza n. gen., (~Homoeoschiza), C. usambarae n. sp. Usambara. Brenske, E. D. ent. Zs., Berlin, **1903**, (297).

Cyclocephula paraguayensis n. sp. Paraguay. Arrow, (H. J. London, Proc. Zool. Soc., 1903, 2, (257).

Cyphochilus nn. spp. Brenske, E. Insektenbörse, Leipzig, 20, 1903, (380–381).

Cyphonotus integriceps n. sp. Reitter. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (292).

Dasytrogus n. gen. Beitter, l.c. (230).

Dilochrosis parvula n. sp. Moser, J. Berliner ent. Zs., 47, 1902, [1903], (283-287).

Disticha marginata n. sp. Moser, J. l.c. 48, 1903, (145).

Dynastes tityus, notes . . . Chittendon, F. H. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 38, 1902, (28 32, with pl.).

*Elaphocera* nn. spp. **Reitter.** Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (97 -105).

Elaphocerida n. subgen. (Elaphocera). **Beitter**, E. *l.c.* (98). Enaria nn. spp. Madagascar. Fairmaire, I.. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (195).

mn. spp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (35).

Encya denserestita n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (194).

Entelesthes similis n. sp. Moser, J. Berliner ent. Zs., 47, 1902, [1903], (283-287).

Epilissus xarabaeoides n. sp.. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903 (35).

Epixanthus nigriceps n. sp. Madagascar. Fairmaire, L. I.c. (36).

Eretusa n. subgen. (Holotrichia). Bettter, E. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (174).

Eriotrogus n. subgen. (Amphimallus) for Amphimallus erivanicus n. sp. Better, E. l.c. (252).

Erlangeria n. gen. (~ Somalibia), E. schoana n. sp. Afrika. **Preiss**, P. Wiesbaden, Jahrb. Ver. Natk., **55**, 1902, Abt. II, (93-111).

Exolontha n. gen. **Beitter**. Brüna, Verh. Natf Ver., **40**, (1901), 1902, (269).

Faula insularis n. sp. St. Vincent. Arrow, G. J. London, Trans. Ent. Soc., 1903, (520).

Fruhstorferia anthracina n. sp. Ohaus, F. D. ent. Zs., Berlin, 1903, (225).

Geniates schmidti n. sp. Ohaus, F. Berliner ent. Zs., 48, 1903, (236).

Geotrogus rectibasis n. sp. **Reitter.** Brünn, Verh. Natf. Ver. **40**, (1901), 1902, (229).

Geotrupes. Müller, J. Wien, Verh. ZoolBot. Ges., 52, 1902, (438-466).

vorrichtung. Verhoeff. Berlin, SitzBer. (les. natf. Freu. de, 1902, (149-155).

typhoeus L. Viemeyer, H. Ent. Jahrb., Leipzig **12**, 1903, (254).

Glaphyrus Latr., note sur le genre. Pic, M. Echange, Lyon, **19**, 1903, (173-174).

Gnorimus albomaculatus n. sp. Moser, J. Berliner ent. Zs., 47, 1902, [1903], (283-287). *Gymnopleurus.* **Müller**, J. Wien, Verli. ZoolBot. Ges., 52, 1902, (438-466).

Hapalopus n. gen. Leptopodarum. Brenske, E. Soc. Entomol., Zürich, 17, 1903, (185).

Haplidia nn. spp. **Rettter**. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (185 187).

Helicopris mouhotus, and H. dominus. Sharp, D. Fascic. Malay. Zool., 2, (281– 287).

*Hemictenius* nn. spp. **Reitter.** Brünn, Verh. Natf. Ver. **40**, (1901), 1902, (134– 136).

Heterophana dissimilis n. sp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (197).

Ileterosoma suturale n. sp. Madagascar. **Fairmaire**, L. Naturali-te, Paris, (sér. 2), **24**, 1902, (286-287).

Holochelus lineolatus u. sp. Asia Minor. **Beitter.** Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (195).

Holotrichia nn. spp. Beitter. l.c. (93-303).

D. Ann. Mag. Nat. Hist., I.ondon, (Ser. 7), **11**, 1903, (467, 468).

*Hoplia* nn. spp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2\* semest.), 1903, (189-193).

Hoplochelus nn. spp. Fairmaire, L. l.c. (196-197).

*Hymenoplia clypealis* n. sp. **Retter.** Brünn, Verh. Natf. Ver., **40**, (1901, 1902, (157).

Ingrisma nn. spp. India. Janson, A. O. London, Trans. Ent. Soc., 1903, (308-310).

Lagochile nn. spp. Ecuador. Ohaus, F. Berliner ent. Zs., 48, 1903, (220-227).

Laciopsis nn. spp. **Reitter**, Brüne. Verh. Natf. Ver., **40**, (1901), 1902, (168-169).

Liatongus politicollis n. sp. Madagacar. Fairmaire, L. Naturaliste, Pari-, (sér. 2), 24, 1902, (286-287).

Linotarsia cincticollis n. sp. Fairmaire, J. Paris, Ann. soc. ent., 72, (\* semost.), 1903, (197). Liostraca semistriata n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (9).

Lomaptera iridescens n. sp. Deutsch Neu-Guines. Heller, K. M. D. ent. Zs., Berlin, **1903**, (308).

*eatanas* n. sp. Papua. **Heller**, K. M. Dresden, Abh. Zool. Mus. 10, (1902–03), Berlin, 1903, Nr. 2, (II + 20).

Lycomedes, Bemerkungen. **Sternberg**, C. D. ent. Zs., Berlin, **1903**, (300-304).

Lycus nn. spp. **Bourgeois**, J. Paris, Ann. s.c. ent., **71**, (2<sup>e</sup> semest.), 1902, [1903], (737-750).

Macraspis brasiliensis n. sp. Paraguay. Arrow, G. J. London, Proc. Zool. Soc., 1903, 2, (256-257).

Madotrogue n. subgen. (4mplinnalles). Reitter, E. Brünn, Verh. Verh. Natf. Ver., 40, (1901), 1902, (251)

Meganozia n. gen., Meganozia orita n. sp. **Beitter**. l.c. (280-281).

Melanocamenta nn. spp. Usambara. Brenake, E. D. ent. Zs., Berlin, 1903, (295).

Melaserica ? barberi n. sp. India. Sharp, D. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (469).

Melolontha anita n. sp. Beitter. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (263).

(Flugjahre) Schweiz-Bauer, Bern, 57, 1903, No. 31, (2); No. 32, (2); No. 33, (1-2).

schaden. *l.e.* No. 55, (2).

Leardi-Airaghi, Z. Milano, Atti Soc. ital. sc. nat., **41**, 1902, (353-356, con. fig.).

var. *Müller*, J. Wien, Verh. Zool-Bot. Ges., **52**, 1902, (438-466).

Verordnung ueber Vertilgung. **Planta-Canova**, P. C. Volkswirtsch. Bl., Graubünden, Chur, **1903**, No. 11, (1-2); No. 12, (1-2)

**Seelen**, von. Zs. Forstw., Berlin, **35**, 1903 (368–373).

Miltotrogus n. subgen (Rhizotrogus) for R. mimicus and R. ectirentris nn. spp. Syria. **Beitter**, E. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (196-201).

Miridiba n. gen. Reitter. I.c. (170).

Mitracamenta n. gen. (~ Hemicamenta), M. lineella n. sp. Usambara. Brenske, E. D. ent. Zs., Berlin, **1903**, (295-299).

Mycteristes inermis n. sp. Borneo. Janson, O. E. London, Trans. Ent. Soc., 1903, (306-307).

J. Berliner ent. Zs., 48, 1903, (315).

Noanda n. sub. (*Holotrichia*). Reitter, E. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (174).

Odontria epomeas n. sp. Lewis, J. H. Weilington, Trans. N. Zeal. Inst., 35, 1903, (272).

Onthophagus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (272-299).

*antillarum* n. sp. St. Vincent and Grenada. **Arrow**, G. J. London, Trans. Ent. Soc., **1903**, (510– 511).

Pachnoda usambarica n. sp. Moser, J. Berliner ent. Zs., 48, 1903, (318).

Pachydema nn. spp. **Beitter**. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (110– 118).

------- letourneuxi n. sp. (Chob. m.s.). Afrique. Pic, M. Echange, Lyon, 19, 1903, (113).

Pachydemocera n. gen., P. pubicarula, P. pubimargo nn. spp. **Boitter.** Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (105– 107).

Panotrogus n. gen. **Beitter.** *l.c.* (164-182).

Pantolia subcostata n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (36).

Parastasia nn. spp. Ohaus, F. D. ent. Zs., Berlin, 1903, (223-225).

Pectinichelus bucharicus n. sp. **Beitter.** Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (172).

Pentodon Hope, notices sur diverses espèces. I. (Russ.) **Jakovlev**, V. E. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (304-305). Pentodon foveipennis n. sp., de la Transcaucasie. Jakovlev, V. E. l.c. (17-18).

J. F. Trd. B. entom. Učen. Kom. M. Zeml., St. Peterburg, III, No. 9, 1902, (11, mit 3 Fig.).

Philarmostes nn. spp. Fairmaire, L. Paris, Ann. soc. eut., 72, (2<sup>e</sup> semest.), 1903, (188).

Pinotus roberti n. sp. Brazil. Gahan, C. J. and Arrow, G. J. London, Proc. Zool. Soc., 1903, 2, (250).

Placeiorrhina ugandensis n. sp. British East Africa. Heath, E. A. Entomologist, London, **36**, 1903, (98).

Plediana n. subgen. (Holotrichia). Rettter, E. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (173).

Prougosternus rubigineus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2\* semest.), 1903, (196).

Pseudomacraspis n. gen. Ecuador. Ohaus, F. Berliner ent. Zs., 48, 1903, (229).

Pygora nn. spp. **Pairmaire**, L. **Paris**, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), **1903**, (198-199).

melanura n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (36).

Pyrrhopoda rufovaria n. sp. Madagascar. Fairmaire, L. I.c. (36).

Rhizoproctus usambarae n. sp. Usambara. Brenske, E. D. ent. Zs., Berlin, 1903, (298).

Rhizotrogus nn. spp. Reitter. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (200-223).

Rhomborrhina gestroi n. sp. Moser, J. Berliner ent. Zs., 48, 1903, (317).

Rutela dimorpha n. sp. Ecuador. Ohaus, F. l.c. (234).

Saprosites grenadensis n. sp. Grenada. Arrow, G. J. London, Trans. Ent. Soc., .1903, (514).

Serica nn. spp. India. Sharp, D. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (469-471).

Smaragdesthes cinctipennis n. sp. Moser, J. Berliner ent. Zs., 48, 1903, (316). Somalibia heydeni n. sp. Afrika. Preiss, P. Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. 11, (93-111).

Sparophysa (Physopalpus subgeu) nn. spp. **Beitter**. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (93-303).

Spileuchlora n. gen., S. waterstraati, S. hauschildti nn. spp. Ohans, F. D. ent. Zs., Berlin, **1903**, (209-228).

Spodistes grandis n. sp. Sternberg, C. *l.c.* (300-304).

Systellorhina nn. spp. Afrika. Preise, P. Wiesbaden, Jahrb. Ver. Natk., 55, 1902, Abt. II, (93-111).

Tanyproctocera n. subgen (Tanyproctus) for Tanyproctus portusus n. sp. Beitter, E. Brünn, Vorh. Natf. Ver., 40, (1901), 1902, (119-120).

Tanyproctus nn. spp. **Beitter.** *l.c.* (122-132).

Taragama (Megasoma) repanda, note. Vaucher, A. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (52).

Theodosia nn. spp. Borneo. Janson, O. E. London, Trans. Ent. Soc., 1903, (305-306).

*Tresorrhina viridicyanea* n. -p. **Moser**, J. Berliner ent. Zs., **47**, 1902, [1903], (318).

Tocama n. subgen (Melolontha . Beitter, E. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (265).

Trichius oberthuri n. sp. **Moser**, J. Berliner ent. Zs., **47**, 1902, [1903], (283-286).

Trochaloschema medusa n. sp. **Beitter**. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (141).

Trox borgognoi n. sp. Soudan francais. Marchand, E. Nantes, Bul. Soc. Sci. Nat., (sér. 2), 2, (2° semest.), 1902, (331-343, av. 1 pl.).

Uroxys vincentiae n. sp. St. Vincent. Arrow, G. J. London, Trans. Ent. Soc., 1903, (510).

Xanthotrogus n. subgen (Rhizotrogus) for R. fortis. Turkestan. Better, E. Brünn, Verh. Natf. Ver., 40, (1901). 1902, (212).

Xestotrogus n. subgen (Rhizotropus). Reitter, E. l.c. (211). Xorema n. subgen (Anomalophylla) for Anomalophylla thibetana n. sp. Beitter, E. l.c. (296).

#### CICINDELIDAE.

#### GENERAL.

Allnand, Ch. Observations sur divers Cicindélides de Madagaacar et description d'espèces nouvelles. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (637-642, av. fig.).

**Čičerin**, T. Mémoire sur los Cicindélides des voyages de N. Zarudny dans la Perse orientale. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (1-21).

delidae. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (229).

Observations sur quelques Cicindélides de la collection Semenov. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (90-107).

Catiri, E. Die Cicindeliden Ungarns. Math-natw. Ber. Ungarn, Leipzig, 18, (1900), 1903, (121-144).

Davis, C. A. The Cicindelidae of Rhode Island. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (270-273).

Horn, W. List of the *Cicindelidae* of Mexico and on their relationship with the species of the United States. New York, N.Y., J. Ent. Soc., **11**, 1903, (213– 221).

Cicindélides . . . Sumatra. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (84-85).

Ueber die Cicindeliden-Ausbeute von Guy A. K. Marshall aus Rhodesia, Manica und Gazaland. D. ent. Zs., Berlin, **1903**, (315-317).

On the Cicindelidae of southern Venezuela, collected by Edward A. Klages, 1898-1900. Washington, D.C., Proc. Ent. Soc., 5, 1903, (331-334).

Robinson, H. C. Report on the tiger beetles (*Cicindelidae*) from Malay peninsula. Fasic. Malay. Zool., 1, (179-183).

(N 2-9053)

#### SPECIAL.

Cicindela nn. spp. Madagascar. Alluaud, C. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (637-642, av. fig.).

nn. spp. Persia. Öićerin, T. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (5, 16).

ent. Zs., Berlin, 1903, (421-423).

Enock, F. London, Proc. Ent. Soc., 1903, (XV-XIX).

------ 4-guttata n. var. Davis, Ö. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (270-273).

hentsii, note. Hood, L. E. l.c. (113-116).

**chell**, J. D. Washington, D.C., Proc. Ent. Soc., 5, 1903, (108–110).

W. New York, N.Y., J. Ent. Soc., 11, 1903, (213).

Collyris tonkinensis n. sp. Indo-Chine française. Fleutiaux, E. Paris, Arn. soc. ent., 71, (2<sup>e</sup> semest.), 1903, (569-580).

Dromica (Cosmema) nn. spp. Afrika. Horn, W. l.c. (316-320).

n. sp. Horn, W. l.c. (421).

Megalomma punctipenna n. sp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 72, (1<sup>•</sup> semest.), 1903, (181).

Paridexia fulvipes: australis n. subsp. Alluaud, C. l.c. 71, (2° semest.), 1902, (637-642).

Tetracha carolina, habits. Mitchell, J. D. Washington, D.C., Proc. Ent. Soc., 5, 1903, (108-110).

Horn, W. l.c. (332).

### CARABIDAE.

# GENERAL.

Bouchard, J. Contribution à l'étude des Carabiques de Sumatra. Paris, Ann. soc. ent., 72, 1903, (177-180).

3 x

**Carret**, A. Notes relatives à l'étude de quelques *Pogonides*. Création d'un sousgenre. Description d'espèces et de variétés nouvelles. Echange, Lyon, **19**, 1903, (133-136, 137-138, 150-152).

**Čičerin**, T. Chaetodactylini subtribus nova Platysmatinorum. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (157– 163).

Giard, A. Les glandes pygidiennes des Carabides. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (222).

Holtz, M. Laufkäfer und Skorpione. Insektenbörse, Leipzig, 20, 1903, (339).

**Bosenberg**, E. C. Larvæ of the groups Lebini and Odacanthini the genera *Lebia* and *Odacantha*. (Danish with an English summary) Kjöbenhavn, Ent. Medd., (Ser. 2), 2, 1903, (1-21, 1 pl.).

**Sharp**, D. Coleoptera III. Coleoptera Caraboidea. Fauna Hawaiiensis, vol. III. (175-292, pls. VI-VII); [Summary], Entomologist, London, **36**, 1903, (263).

**Stoane, T.** G. Studies in Australian Entomology No. XII. New Carabidae. Sydney, N.S.W., Prcc. Linn. Soc. N. S. Wales, **28**, 1903, (566-642).

#### SPECIAL.

Abacetus nn. spp. Madagnscar, Annam, Sumatra. Čiteriu, T. St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (46-50).

Adrimus uruguaicus n. sp. Uruguay. **Čičerin, T.** *l.c.* (59).

Allocinopus n. gen., A. sculpticollis n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (607-609).

Amara, notice sur quelques espèces déserticoles; 1 n. subgen., 2 nn. spp. Transcaspia, Mongolia. **Čičerin**, T. Rev. Rus. Ent., Jaroslavlí, **3**, 1903, (219-222).

Anchomenus ucalkeri n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (456– 457).

Anchonymus n. gen., A. agonoides n. sp. Sharp, D. Fauna Hawaiiensis, III, 1903, (199, pl. vi).

Anchotefflus n. gen., A. gracilis, A. elegans nn. spp. **Sharp**, D. l.c. (195–196).

And. oyna n. gen., A. alluaudi, A. decoreci nn. spp. Madagascar. čičarin, T. St. Peterburg, Hor. Soc. Ent. Ross, **36**, 1903, (160-161).

Anophthalmus nn. spp. Calki, E. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (441-443).

Apteromesus n. gen., A. macukutus n. sp. Sharp, D. Fauna Hawaiiensis, III, 1903, (211).

Aptinus creticus n. sp. Pic, M. Echange, Lyon, 19, 1903, (161).

Archotefflus n. subgen. (Tefflus). Kolbe, H. J. Berlin, SitzBer. Ges. natf. Freunde, 1903, (225-237).

Aristochroa Tsch. Kaznakovi n. sp. Ötöerin, T. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (224-225).

Atelidium n. gen., A. munroi n. sp. Sharp, D. Fauna Hawaiiensis, III, 1903, (284-285).

Atelothorax n. gen., A. optatus n. sp. Sharp, D. l.c. (269).

Atelothrus n. gen., A. politus, A. limbatus, A. longicollis, A. constrictus, A. longulus, A. stenopus, A. filires, A haucaiiensis, A. gracilis, A. dyscoleus, A. depressus, A. platynoides, A. transiens nn. spp. Sharp, D. l.c. (216-221).

Atrachycnenus nn. spp. Sharp, D. l.c. (194).

Baryneus n. gen. for Anchomenus sharpi Blackb. **Sharp**, D. l.e. (209, pl. VI).

Bembidium nn. spp. **Sharp**, D. *l.c.* (278-279).

du groupe des Tibiale Duftschm. **Sainte-Claire Deville**, J. Echange, Lyon, **19**, 1903, (181–182).

Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (611).

Blackburnia insignis var. kaalensis n. var. **Sharp**, D. Fauna Hawaiiensis, 111, 1903, (191).

Bradycellus distinctus, réponse partielle à la question de M. F. Picard. Gtard, A. Feuille jeunes natural., Paris. (sér. 4), **33**, 1903, (84).

distinctus, observations. Picard, F. l.c. (64). Brosconymus n. gen., B. optatus n. sp. Sharp, D. Fauna Hawaiiensis, 111, 1903, (198).

Caletor n. nom. pour Microcarenus Tsch. 1903. Öičerin, T. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (227).

Carabus, tableau de détermination des formes du genre (suite). **Lapouge**, G. V. de. Echange, Lyon, **17**, 1902, (26-27, 36-38, 42-44, 59-60, 65-66, 73-74, 82-83, 94-95, 100-101, 117-118, 131, 149-150).

aus Nordafrika. Born, P. l.c. (203-204).

nn. spp. (Russ.) **Semenov**, A. P. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (230-232).

**Semenov**, A. P. *l.c.* (349–352).

subg. Alipaster Rttr. de speciebus formantibus, C. wilkinsi n. sp. Kuldsha. (Russ.) **Semenov**, A. P. *l.c.* (381-383).

donis, eine neue Form. Born, P. Insektenbörse, Leipzig, 20, 1903, (98).

subsp. Born, P. I.c. (51-52).

Normandie und Bretagne. Born, l'. *l.c.* (172–173).

minusculus n. sp. Turkestan. (Russ.) **Semenov**, A. P. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (297-299).

*nemoralis*, black variety. **Eeys**. Ent. Mag., London, **39**, 1903, (174).

riolaceus : provincialis n. subsp. Born, P. Insektenbörse, Leipzig, 20, 1903, (219-220).

chatanay, J. Feuille jeunes natural., Paris. (sér. 4), **34**, 1903, (37).

Castelnaudia obesa Casteln., notes, C. latipennis n. sp., C. subrirens Chaud., notes, C. porphyriaca Sl., notes. **Sloane**, T. G. Sydney, N.S.W., Proc. Linn. Soc., N. S. Wales, **28**, 1903, (596-599).

Celanida montana Casteln., notes. Sloane, T. G. I.c. (586).

Celoenephes försteri n. sp. Malay Archipelago. Bouchard, J. Paris, Ann, Soc. ent., 72, 1903, (176).

(N 2 - 9053)

Chalcomenus n. gen, C. molokaiensis, n. sp. Sharp, D. Fauna Hawaiiensis, 111, 1903, (206-207).

Chilotomus tschitscherini n. sp. Turkestan. Semenov, A. Rev. Russ. Ent., Jaroslavli, 3, 1903, (8-13).

Chlaeminus annamensis n. sp. Annam. Citerin, T. St. Peterburg, Hor. Soc. Ent. Russ., **36**, 1903, (58).

Chlaenioidius prolizus Erichs. = Poecilus funebris Casteln. = P. sulcatulus Mad. = Chlaenioidius planipernis Mad. Ch. herbaceus = Poecilus resplendens Casteln. = P. chlaenioides Mad. **Stoane**, T. G. Sydney, N.S.W., Proc. Linn. Soc., N. S. Wales, **28**, 1903, (624-625).

Chlaenius me'anel.olicus n. sp. Gahan, C. J. Nat. Hist. Sokotra, (264).

Cillenum alborirens n. sp. Sloane, T. G. Sydney, N.S.W., Proc. Linn. Soc., N. S. Wales, 28, 1903, (575).

Clirina lignicola n. sp. Malay Archipelago. Bouchard, J. Paris, Ann. soc. ent., 72, 1903, (169).

Colpocaccus n. gon., C. haucaiiensis, C. lanaiensis, C. apicalis, C. posticatus, C. marjinatus nn. spp. **Sharp**, D. Fauna Hawaiiensis, 111, 1903, (214-215).

Colpoles nn. spp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 24, 1902, (286-287).

Colpodiscus lahainens's n. sp. **Sharp**, D. Fauna Hawaiiensis, 111, 1903. (210).

Cop'olabrus, Beiträge zur Kenntnis der Gattung. Meyer Darcis, G. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1002, (405-410, mit 1 Taf.).

pustulifer: guerryi n. subsp. Born, P. Insektenbörse, Leipzig, 20, 1903, (124).

Cychrus aenicollis n. sp. et n. varr. N. Carolina. Beutenmüller, W. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (511-519, with 2 pls.).

Cyphotrachelus n. nom. = Cyrtoderus Hope. Čičerin, T. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (40).

3 ĸ 2

Derobroscus n. gen., D. micans, D. politus, D. solitarius nn. spp. Sharp, D. Fauna Hawaiiensis, III, 1903, (172, 197, pl. VII).

Deropristus n. gen., D. puncticeps, D. deroderus nn. spp. **Sharp**, D. *l.e.* (192).

Dichrochile cordicolle n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (455– 456).

Disenochus nn. spp. Sharp, D. Fauna Hawaiiensis, 111, 1903, (201– 206).

Drimostoma nn. spp. Madagascar. Ötöerin, T. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (38-64).

Epactius Schneid. = Omophron Latr. (Russ.) Semenov, A. P. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (187-190).

Epicosmus macleayi n. sp. = Eudema nobile Macl.; Epicosmus nn. spp.; E. rockhamptonensis Castelnau, E. comptus Laferté, E. froggatti, E. alternans Castelnau, E. elongatus Castelnau, notes: Stoane, T. G. Sydney, N.S.W., Proc. Linn. Soc., N. S. Wales, 28, 1903, (568– .575).

Eucalyptocola marcida n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (91).

Eucamptognathus Chaud., nouvelle étude, 5 nn. spp. Madagascar. Čičerin, T. St. Peterburg, Hor. Soc. Ent. Ross., **35**, 1903, (201-230).

Eudromus perrieri n. sp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (181-182).

Glycia caerulescens n. sp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest), 1903, (181-259).

*Eumara dolens* n. sp. Uruguay. **Ciderin**, T. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (63).

Harpalus caliginosus, H. pennsylvanicus, strawberry pests. Slingerland, M. V. Agric. Exp. Sta., New York, (Cornell Station), Ithaca, Bull., No. 190, 1901, (143-164, with 15 figs.). [Review], Washington, D.C., U. S. Dept. Agric. Off. Exp. Sta., Rec., 13, 1901, (371-372).

(Harpalobius) soginoides n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902– 1903, (1-40). Hoploprion n. nom. = Prionophorus Chaud. Ötöerin, T. Rev. Russ. Ent., Jaroslavli, **31**, 1903, (40).

Ilypogeobium n. nom. = Hypogium Tsch. **Čičerin**, T. *l.e.* (40).

Lebia acutangula n. sp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (182).

Leistus de l'intérieur de la Chine. 5 nn. spp. **Čicerin**, T. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (22-37).

. \_\_\_\_\_ indus n. sp. Sikkim. čičerin, T. Rev. Rus. Ent., Jaroslavlí, 3, 1903, (109).

Licinus submarginatus n. sp. Sahlberg, J. Öfvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902-1903, (3).

Lozandrus nn. spp. Cuba, Uruguay. Čičerin, T. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (60 61).

nn. spp.; L. subiridescens Macl. = Poecilus atronitens Macl. = Platynus nitidipennis Macl., L. rufilabris Casteln, L. lævigatus Macl., notes. Sloane, T. G. Sydney, N.S.W., Proc. Linn. Soc., N.S.W., 28, 1903, (626-630).

micantior n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (262).

Macranillus n. gen., M. coecus n. sp. Sharp, D. Fauna Hawaiiensis, III, 1903, (287).

Mecodema nn. spp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (451-454).

Mecomenus n. gen., M. koebelei n. sp. Sharp, D. Fauna Hawaiiensis, III, 1903, (230).

Mecostomus n. gen., M. perkinsi u. sp. Sharp, D. l.c. (229, pl. VI).

Mecyclothoraz n. gen., M. pusillus, M. rusticus, M. microps, M. obscuricornis, M. bicolor, M. bradycellinus, M. lactus, M. konanus, M. cymindicus, M. daptinus, M. ovipennis, M. iteratus, M. oculatus, M. longulus, M. interruptus, M. sobrinus, M. occultus, M. cognatus, M. robustus, M. occultus, M. amaroides nn. spp. Sharp, D. l.c. (243-256, pl. VII).

Megodontus violaceus. Florentin, R. Feuille jeunes natural., Paris, (sér. 4), 34, 1903, (18).

# Coleoptera.

Melisodera picipennis Westw. -Morio piceus Casteln., notes. Sloane, T. G. Sydney, N.S.W., Proc. Linn. Soc., N. S. Wales, 28, 1903, (586).

Mesotefflus n. subgen. (Tefflus). Kolbe, H. J. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (225-237).

Mesothriscus n. gen., M. vagans, M. prognathus, M. lanaiensis, M. tricolor, M. hawaiiensis, M. truncatus, M. collaris, M. microps, M. abax, M. kauaiensis, M. optimus, M. opacus, M. alternans nn. spp. Sharp, D. Fauna Hawaiiensis, III, 1903, (222-228).

Metaglymma nn. spp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (454–455).

Metrocidium n. gen., M. brevicolle, M. admirandum nn. spp. **Sharp**, D. Fauna Hawaiiensis, III, 1903, (285-286).

Metromenus nn. spp. Sharp, D. l.c. (233-242).

Metrothoraz n. gen., M. molops, M. macrops, M. perkinsianus, M. halsakalae, M. laticollis, M. blackburni, M. rotundicollis, M. curtipes, M. extimus, M. crassus, M. debilis, M. discedens nn. spp. **Sharp**, D. l.c. (269-275).

Microcarenus n. nom = Microcephalus Dej. Ötöerin, T. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (40).

Miscodera artica, Maine. Barber, H. G. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (241).

Moriodema macoyei Casteln. = M. paramattensis Casteln., notes. Sloane, T. G. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (587).

Moriomorpha adelaidae Casteln., notes. **Sloane**, T. G. *I.c.* (588).

Mysticomenus n. gen., M. tibialis n. sp. **Sharp**, D. Fauna Hawaiiensis, III, 1903, (212).

Nebria lafresnayei var. ferruginipes n. var. Pic, M. Echange, Lyon, 19, 1903, (129).

Nesocidium n. gen., N. laeticulum, N. lahainense, N. smaragdinum, N. fulgens, N. koebelei, N. perkinsi, N. rude, N. corticarium, N. atomarium, N. scydmaenoides nn. spp. **Sharp**, D. Fauna Hawaiiensis, III, 1903, (280-284).

Nesolymnaeum n. gen. for Bembidium spurcum Blackb. Sharp, D. I.c. (277). Nesomicrops n. gen., N. kaudiensis n. sp. **Sharp**, D. *I.*c. (286).

Nomaretus debilis var. alpinus n. var. N. Carolina. Beutenmüller, W. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (511-519, with 2 pls). Separate. 24.5 cm.

Notiophilus Dum., notes sur divers espèces; 2 nn. spp. Altai and Central Asia. **Člčerin**, T. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (108–117).

*hilaris* n. sp. **Friederichs**, K. Allg. Zs. Ent., Neudamm, **8**, 1903, (89).

Notonomus kingi Chaud = N. excisipennis SI.; N. satrapa Casteln. notes, notonomus nn. spp. **Sloane**, T. G. Sydney, N.S.W., Proc Linn. Soc. N. S. Wales, **28**, 1903, (600-608).

Oopterus nn. spp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (609-611).

Ophionea forsteri n. sp. Malay Archipelago. **Bouchard**, J. Paris, Ann. Soc. ent., **72**, 1903, (172).

Ophonus nigripennis n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902-1903, (2).

Orinocarabus. Ganglbauer, L. Wien, Verh., ZoolBot. Ges., 51, 1901, (791-798).

Paranurus dilaticeps Chaud., notes. Sloane, T. G. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (594).

Peutagonica dichroa n. sp. Sloane, T. G. I.c. (636).

Penthophonus (Reitt. 1900) Tsch. 1901; *P. astutus* n. sp. Syris. **Čičerin**, T. Rev. Russ. Ent., Jaroslavii, **3**, 1903, (44-45).

Perigona tricolor Casteln. = Siltopia id. Casteln., P. rufilabris Macl. = Trechus id. Macl. = P. basalis, Putz; P. australica n. sp. **Sloane.** T. G. Sydney, N.S.W., Proc. Linn. Soc. N.S. Wales, **28**, 1903, (635).

Phersita n. gen. = Teraphis castelnau (nom. praeoc.), Ph. melbournensis Casteln., notes. **Bloane**, T. G. *I.c.* (591).

Phorticosomus calcaratus n. sp. Australis. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (261). Platynus nn. spp. N. Carolina. Beutenmüller, W. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (516-517).

Fauna Hawaiiensis, III, 1903, (228-229).

marginellus Erichs. = Anchomenus nigro-aeneus Newm.; P. queenslandicus n. sp. **Bloane**, T. G. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (632-633).

Platysma, etude sur divers espèces des Alpes occidentales. Sainte-Chaire-Deville, J. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (588-619).

Platysma (Bon.) Tsch., ueber den Gattungsnamen. Ölöerin, T. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (218).

Thibet. Čičerin, T. *l.c.* (223).

**Ćičerin**, T. *l.c.* (107-108). Caucasia.

jazartis n. sp. Turkestan. čičerin, T. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (226-227).

caucasis. **Čičerin**, T. *l.c.* (24-25).

Pogonoglossus nn. spp. Sumatra. Bouchard, J. Paris, Ann. soc. ent., 72, 1903, (180).

Pogonoidius n. subgen. Carret, A. Echange, Lyon, 19, 1903, (133).

Pogonus nn. spp., n. var. Carret, A. l.c. (135-137).

Prodisenochus n. gen. for Dissenochus terebratus Blackb. **Sharp**, D. Fauna Huwaiiensis, III, 1903, (210).

Pscudobroschus n. gen., P. lentus n. sp. Sharp, D. l.c. (pl. vi).

Pseudoceneus iridipennis Casteln., notes. **Sloane**, T. G. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (623).

Pterostichus nn. spp. New Zealand. Broun, T. Ann. Mag. Nat. Hist, London, (Ser. 7), 11, 1903, (604-607).

Lyon, 19, 1903, (153-155).

Pyrrotachys constricticeps. Sl. (emend. -P. constrictipes, Sl.) notes. **Sloans**, T. G. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (583). Rhaebolcates n. gen., R. walkeri n. sp. Sloans, T. G. I.c. (589).

Sarticus sulcatus Macl. = Coronocanthus sulcatus, Macl. = S. quadrisulcatur Chaud, notes; S. blackburni SL, S. cyaneocinctus Chaud = Feronia aurcomarginata Casteln. = F. saphyreomarginata Casteln., S. obesulur Chaud., S. esmeraldipennis Casteln., S. habitans SL, S. macleayi SL, notes: Sarticus nn. spp. Sloane, T. G. L. (613-620).

Scopoles nn. spp. Sloane, T. G. I.c. (639-640).

land. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (612).

Stenotelus n. gen., S. opacus n. sp. Malay Archipelago. Bouchard, J. Paris, Ann. Soc. ent., 72, 1903, (174-175).

Strictotefflus n. subgen. (Tefflus.) Kolbe, H. J. Berlin, SitzBer. Ges. natf. Freunde, 1903, (225-237).

Tachys amplipennis Macl., T. sezstriatus Macl., notes. Tachys nn. spp. **Sloane**, T. G. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (576-641).

Tarastethus nn. spp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (457-458).

Tefflus nn. spp. Kolbe, H. J. Berlin, SitzBer. Ges. natf. Freunde, 1903, (225-237).

Thriscothoraz n. gen., T. filipes, T. gracilis, T. palustris, T. modestus, T. subconstrictus, T. molokaiae, T. perstriatus, T. mundanus, T. constrictus, T. insolitus, T. discedens, T. chalcosus, T. apicalis, T. perkinsi, T. variipes, T. ducalis, T. laticollis, T. bradyderus, T. platysminus, T. argulor nn. spp. Sharp, D. Fauna Hawaiiensis III, 1903. (257-268).

Trechus (Anophthalmus) callti n. sp. Alpes-Maritimes. **Sainte-Claire Deville**, J. Ann. soc. entol., Paris, **71**, 1902, [1903], (695-709).

Trichosternus nn. spp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (602-601). ł

# HALIPLIDAE.

#### GENERAL.

**Semenov**, A. P. Les rapports naturels des *Haliplidae*. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (187– 190).

#### SPECIAL.

Haliplus alluaudi n. sp. Madagascar. Régimbart, M. Paris, Ann. soc. ent., 72, 1903, (1).

#### DYTISCIDAE.

Acilius canaliculatus, observations. Picard, F. Feuille jeunes naturul., Paris, (sér. 4), 33, 1903, (64).

Bidessus nn. spp. Madagascar. Régimbart, M. Paris, Ann. soc. out., 72, 1903, (8-9).

nn. spp. Inde méridionale. **Régimbart**, M. *l.c.* (2° semest.), 1903, (331-332).

Canthydrus flavosignatus n. sp. Madagascar. **Bźgimbart**, M. *l.c.* 1903, (13).

Clypeodytes sordidipennis n. sp. Madagascar. **Bégimbart**, M. *l* c. (6).

Copelatus unguieularis n. nom. and n. sp. Madagascar. **Régimbart**, M. *l.c.* (17, 19)

*Herophydrus* nn. spp. Madaguscar. **Régimbart**, M. *l.c.* (3-5).

Hydroratus nn. spp. Madagascar Régimbart, M. *l.e.* (11–12).

Ilychoporus nilghiricus n. sp. Inde méridionale. **Esgimbart**, M. l.c. (2<sup>e</sup> semest.), 1903, (331).

Ilyphydrus minutissimus n. sp. Madagascar. Bígimbart, M. I.c. 1903, (5).

Laccophilus nn. spp. Madagascar. Régimbart, M. l.c. (14-15).

Neptosternus nn. spp. Madagascar. Régimbart, M. I.c. (15-16).

Pachynectis n. gen., P ventricosus n. sp. Madagascar. Régimbart, M. I.c. (7-8).

# GYRINIDAE.

Aulonogyrus cristatus n. sp. Madagascar. **Bégimbart**. M. Paris, Ann. soc. ent., **72**, 1903, (21). Orec. ogyrus purpureus var. meridionalis n. var. and O. attenuatus n. sp. Madagascar. **Bégimbart**, M. l.c. 23-24).

#### HYDROPHILIDAE.

### GENERAL.

**Bégimbart**, M. Contribution à la faune Indo-Chinoise (19<sup>o</sup> Mé.or.): *Hydrophilidae*. Paris, Ann. soc. ent., **72**, 1903, (52-64).

Sainte Claire Deville, J. Remarques sur les Hydrophilidae de la faune française. Echange, Lyon, 17, 1902, (75-78, 83-85); 19, 1903, (103-104, 111-112).

# SPECIAL.

Agraphydrus n. gen., A. punctatellus n. sp. Madagascar. **Bégimbart**, M. Paris, Ann. soc. ent., **72**, 1903, (33-34).

Amphiops nn. spp. Madagascar. Bégimbart, M. *l.e.* (43-44).

**Bégimbart,** M. *l.e.* (61-62).

*lateritius* n. sp. **Fair**maire, L. *l.c.* (2° semest.), 1903, (185).

Berosus nn. spp., B. rillosulus var. dilutus n. var. Madagascar. **Régimbart**, M. l.c. 1903, (37-39).

------ nigropictus n. sp. Indo-Chine. **Bégimbart**, M. *l.*c. (60).

Cercyon nn. spp. Inde méridicaale. **Régimbart, M**. *l.c.* (2° semest.), 1903, (337-338).

\_\_\_\_\_ nn. spp. Madagascar. Bedel, in litt. **Eśgimbart**, M. *l.c.* 1903, (47-50).

Coelostoma acneolum n. sp. Inde méridionale. **Régimbart, M.** *l.c.* (2° semest.), 1903, (237).

gascar. **Régimbart**, M. *l.c.* 1903, (44).

Cyclonotum muelleri† n. sp. Elbe. Meunier, F. Berlin, Jahrb. geol. Landesanst., 21, 1901, Abh. auss. St. Pers., (31-38).

Cylomissus n. gen., C. glabratus n. sp. New Zealand. **Broun**, T. Ann. Mag. Nat. Hist., London (Ser 7) 11 1933. (613).

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Dactylosternum pyguraeum n. sp. Madagascar. Régimbart, M. Paris, Ann. soc. ent., 72, 1903, (45).

Epimetopus maindrom n. sp. Inde méridionale. Régimbart, M. *l.e.* (2° semest.), 1903, (338).

Globaria subopaca n. sp. Madagascar. Bégimbart, M. *l.c.* 1903, (41).

Helochares nn. spp. Indo-Chine. **Eégimbart**, M. *l.c.* (53-54).

spp. Madagascar. Régimbart, M. l.c. (25-28).

Helophorus nn. spp. Gangibaner, L. Wien, Verh. ZoolBot. Ges., 51, 1901, (312-332).

Hydraena nn. spp. Ganglbauer, L. I.e. (312-332).

decolor n. sp. Ste. Claire-Deville, J. Echange, Lyon, 19, 1903, (111-112).

marginicollis n. sp. Madagascar. **Régimbart**, M. Paris, Ann. soc. ent., **72**, 1903, (51).

Hydrobius atriceps n. sp. Madagascar. Bégimbart, M. *l.c.* (1-51).

tessellatus in Pennsylvania. Bradley, J. C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (23).

Hydrochus annamita n. sp. Indo-Chine. **Régimbart**, M. Paris, Ann. soc. ent., **72**, 1903, (64).

L. I.c. (2° semest.), 1903, (185).

Hydrophilus cambodiensis n. sp. Indo-Chine. Régimbart, M. l.e. 1903, (53).

car. **Bégimbart**, M. *l.c.* (25).

G. A. Paris, Bul. soc. ent., 1902, (238).

Hydroporus bilineatus Sturm., an addition to the British list. Chitty, A. J. Ent. Mag., London, **39**, 1903, (43).

Laccobius nn. spp. Madagascar. Bégimbart, M. Paris, Ann. soc. ent., 72, 1903, (34–35).

**nn.** spp. Indo-Chine. **Bégimbart,** M. *l.c.* (58-59).

discicollis n. sp. Inde méridionale. Régimbart, M. l.c. (2° semest.), 1903, (336). Limnobius rufipennis n. sp. Inde méridionale. **Régimbart, M.** I.c. (336).

Ochthebius nn. spp. GangThuer, I. Wien, Verh. ZoolBot. Ges., 51, 1901, (312-332).

(Cheiloctebius) nn. spp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902-1903, (5-6).

alluaudi n. sp. Madagascar. Régimbart, M. Paris, Ann. soc. ent. 72, 1903, (50).

Paracymus nn. spp. Madagascer. Bégimbart, M. Paris, Ann. soc. ent., 72, 1903, (32-33).

Philydrus nn. spp. Madagascar. Régimbart, M. I.c. (28-32).

Régimbart, M. l.c. (55-58).

Régimbart, M. I.c. (2<sup>e</sup> semest.), 1903. (335).

hamifer n. sp. GangThaner, L. Wien, Verh. ZoolBot. Ges., 51, 1901, (312-332).

Rygmodus nigripennis n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (612-613).

Spercheus horanus n. sp. Pairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (186).

Zeadolopus n. gen. Z. spinipes n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (614).

#### SILPHIDAE.

# GENERAL.

Bordas, L. L'appareil digestif des Silphidae. Paris, C. R. Acad. sci., 137, 1903, (344-346).

#### Special.

Aclypea sculpturata n. sp. l'Inde. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (125).

Catops nn. spp. Portevin, G. l.c. (166-167).

Choleva doderoi n. sp. Breit, J. Soc. Entomol., Zürich, 17, 1903, (169).

*macleayi* n. sp. Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (94).

Cholevomorpha nn. spp. Australia. Blackburn, T. *l.e.* (95-96).

Clambus tropicus n. sp. Australia. Blackburn, T. l.c. (97).

Dissochaetus nn. spp. S. America. Portevin, G. Paris, Ann. soc. ent., 72, 1903, (159–162).

Estadia n. gen., E. capito n. sp. Madagascar. Fairmaire, L. *l.c.* (2° semest.), 1903, (183-184).

Eucatops n. gen., E. curripes, E. ater, E. grourellei, E. rufescens, E. oblongus nn. spp. S. America. **Portevin**, G. *l.c.* 1903, (162–164).

*Hydnobius tibialis* n. sp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902-1903, (9).

Leonhardia reitteri n. sp. Bosnien. Brett, J. Soc. Entomol., Zürich, 17, 1902, (89).

Liodes bruneicollis Mann. in litt., 3 nn. spp. Sahlberg, J. Öfvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902– 1903, (10–14).

Nargus nn. spp. Portevin, G. Paris, Ann. soc. ent., 72, 1903, (157).

Spathosternum n. gen., S. haemorrhoidale n. sp. Bolivia. Portevin, G. *l.e.* (165).

#### SCYDMAENIDAE.

Cyrtoscydmus apulicus n. sp. Pic, M. Echange, Lyon, 17, 1902, (23).

#### PSELAPHIDAE.

#### GENERAL.

**Raffray**, A. Psélaphides recueillis dans le sud de Madagascar par T. Ch. Alluaud. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (315–330, av. fig.).

#### Special.

Acylopselaphus nn. spp. Madagascar. Raffray, A. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (327-329). Alozomidus n. gen. verwandt mit Calarus Roffr., A. variolosus n. sp. **Raffray**, A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (34-35, Taf. I).

Apoterus lucidus n. sp. **Baffray**, A. l.c. (31-32).

Articerus nitidicollis n. sp. **Baffray**, A. I.c. (97, Taf. 11).

Batrazis nn. spp. Raffray, A. l.c. (57-59).

Batrisocenus n. gen. verwandt mit Batrisodes. B. iridescens, B. serraticornis, B. birónis, B. irregularis, B. incertus, B. chloroticus, B. trivialis, B. validicornis, B. mucronatus, B. armaticornis, B. carernosus nn. spp. **Raffray**, A. I.c. (48-56, Taf. I-II).

Batrisodes nn. spp. Raffray, A. l.c. (45-47, Taf. II).

Batrisomina n. gen., B. strigicollis n. sp. Madagascar. Raffray, A. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (316).

Birónia n. gen. verwandt mit Claviger. B. cavernosa n. sp. **Raffray**, A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (99-100, Taf. II).

Brachygluta trochalis n. sp. Madagascar. Raffray, A. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (320).

Bryazella n. gen., B. spectralis n. sp. Madagascar. **Raffray**, A. *l.c.* (319).

Bythinus cythereias n. sp. Pic, M. Echange, Lyon, 19, 1903, (161).

Calarus n. gen. verwandt mit Amudrocerus Raffr. C. puncticeps, C. dubius, C. semipunctatus nn. spp. Raffray, A. Budapest. Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (32-34).

Comatopselaphus puncticollis Raffr., Beschreibung. 3 nn. spp. **Raffray**, A. *l.e.* (59-61).

Cratna variabilis n. sp. **Raffray**, A. *l.c.* (56-57).

Ctenisophus papuanus n. sp. **Baffray**, A. I.c. (93-94).

Cyathiger nn. spp. Raffray, A. l.c. (89-92, Taf. II).

Diarrogus n. gen. verwandt mit Trimiodytes Raffr. D. pubescens n. s<sub>j</sub>. Raffray, A. l.c. (36-37, Taf. I). Elasmatus n. gen., E. lamellipes n. sp. Raffray, A. *l.c.* (97-98, 'Taf. II).

Epithematus n. gen. verwandt mit Pteroplectus Raffr., E. nitidus n. sp. Raffray, A. l.c. (39-40, Taf. 1).

Euplectus nn. spp. Madagascar. Rafiray, A. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (315).

A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (37-38).

Exedrus n. gen. verwandt mit Ozarthrius. E. caviceps n. sp. **Baffray**, A. I.c. (47-48, Taf. II).

Filiger batavianus n. sp. **Baffray**, A. l.c. (92).

Glapharsenus n. gen. verwandt mit Nedarassus Raffr. G. asperatus, G. punctatus, G. microphthalmus var. sublaecis, G. latus nn. spp. **Baffray**, A. Lc. (86-89, Taf. 1).

Mechanicus papuanus n. sp. **Baff.ay**, A. *l.c.* (31).

Mesoplatus cribricollis n. sp. **Baffrey**, A. *l.c.* (44).

Microplectus nn. spp. **Raffray**, A. *l.c.* (40-44, Taf. II).

Philiopsis tuberculiceps n. sp. Raffray, A. I.c. (35-36).

Philonthus coracion n. sp. Peyerimhoff, P. de. France. Paris, Bull. sec. ent., 1902, (246-247).

Pselaphophus sulciceps n. sp. **Baffray**, A. Budapest, Ann. Hist-Nat. Mus. Nat. Hung., **1**, 1903, (92-03).

Pyridicerus nn. spp. Baffray, A. L.c. (29-30).

Rabyzisnn. spp. Madagascar. **Baūray**, A. Paris, Ann. soc. ent., **73**, (2<sup>e</sup> semest.), 1903, (317–318).

Reichenbachia nn. spp. **Baffray**, A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (61-75, 1 Taf.).

nn. spp. Madagascar. Raffray, A. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (321-325).

Rytus nn. spp. Raffray, A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (95-96).

Stictus corrugatus n. sp. Buffray, A. J.c. (144).

Sunorfa nn. spp. **Baffra**7, A. l.c. (76 86, Taf. 1).

Syrraphesina n. gen., S. plicitentris n. sp. Baffray, A. I.c. (100-101, Taf. II).

Taphrostethus longi n ina n. sp. Ballray, A. I.c. (95).

Thesiastes elegantulus Raffr., famistisch, 2 nn. spp. **Baffray**, A. *l.e.* (38-39).

Tyromorphus cribricollis n. sp. **Baff**ray, A. *l.c.* (94).

Zethopsus papuanus n. sp. **Raffrey**, A. I.c. (30-31).

## STAPHYLINIDAE.

Alcochara gracilicornis (nom. nud.) **Fauvel MSS. in Slosson**, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (4-8).

Ancaeus försteri n. sp. Ostindien. Bernhauer, M. Stettiner ent. Ztg., 64, 1903, (36).

Anthobium nn. spp. Bernhauer, M. Wien, Verh. ZoolBot. Ges., **52**, 1902, (695-705).

*pulcherrimum* n. sp. Bernhauer, M. *l.e.* 51, 1901, (651–655).

An'hophagus nn. spp. Luse, G. l.e. (505-530).

Arpedium nn. spp. Bernhauer, M. l.c. (695-705).

Atheta (Thirobaena) cephalotes n. sp. l.c. 51, 1901, (651-655).

islandica = smolkai Ryb. Bernhauer, M. *l.c.* (695-705).

Bledius bosnicus n. sp. Bernhauer, M. *l.c.* 52, 1902, (695-705).

fischeri n. sp. Ostindien. Bernhauer, M. Stettiner eut. Ztg., 64, 1903, (35).

*Bolitobius*, Revision der paläarktischen Arten, nn. spp. **Luze**, G. Wien, Verh. ZoolBot. Ges., **51**, 1901, (662-746).

Borolinus n. gen., B. bornesnsis n. sp. Bernhauer, M. D. ent. Zs., Berlin, 1903, (133-134). Bryocharis, Revision der paläarktischen Arten. Luze, G. Wien, Verh. ZoolBot. Ges., 51, 1901, (662-746).

Bryoporus, Revision der paläarktischen Arten, nn. spp. Luze, G. l.c. (662-746).

Callopsenius n. gen. – Eupsenius Wasmann. Wasmann, E. D. ent. Zs., Berlin, **1903**, (236).

Conosoma pictum n. sp. Ostindien. Fauvel in Bernhauer, M. Stettiner ent. Ztg., 64, 1903, (26).

Cryptobium frukstorferin. sp. Ostindien. Bernhauer, M. l.c. (30).

Ecilozenia breripes n. sp. Texas. Brues, C. T. "Contributions from the Zoological Laboratory of the University of Texas. No. 32." Philadelphia. Pa., Ent. News Acad. Nat. Sci., 13, 1902, (184-188, with 1 pl.).

Heterosoma n. gen. (~ Achennium), H. clohrni n. sp. Ostindien. Bernhauer, M. Stettiner ent. Ztg., **74**, 1903, (33).

Homalota alpigrada nom. nud. Fauvel MSS. in **Slosson**, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (4-8).

Homalium rinulare, mœurs et métamorphoses. **Xambeu**. Naturaliste, Paris, (sér. 2), **25**, 1903, (55).

Hygrogeus. Luze, G. Wien, Verh. ZoolBot. Ges., 52, 1902, (505-530).

Ilyobates. Bernhauer, M. l.c. (695-705).

Lamprinodes u. gen., L. hammarstroemi n. sp. Luze, G. l.c. 51, 1901, (181-182).

Lathrobium rodii n. sp. Bernhauer, M. l.c. 52, 1902, (695-705).

hauer, M. Stettiner ent. Ztg., 64, 1903, (31).

Leptochirus nn. spp. Bernhauer, M. D. ent. Zs., Berlin, 1903, (126-132).

Medon granulicollis n. sp. Ostindien. Bernhauer, M. Stettiner ent. Zig., 64, 1903, (32).

*Mycetoporus* nn. spp. **Luze**, G. Wien, Verh. ZoolBot. Ges., **51**, 1901, (662-746).

zeithammeri n. sp. Bernhauer, M. l.c. 52, 1902, (695-705). Myrmedonia nn. spp. Ostindien. Bernhauer, M. Stettiner ent. Ztg., 64, 1903, (21-24).

**Omalium italicum** n. sp. **Bernhauer**, M. Wien, Verh. Zo. 1Bot. Gcs., **52**, 1902, (695-705).

Oxytelus lucens n. sp. Ostindien. Fauvel in Bernhauer, M. Stettiner ent. Ztg., 64, 1903, (34).

Philonthus nn. spp. Ostindien. Fauvel and Bernhauer, M. l.c. (26-29).

glenelqi n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc.. 27, 1903, (91-182).

ustulatus (= ornatipennis Reitt.), Synonymie. Bernhauer, M. Wien, Vorh. ZoolBot. Ges., 52, 1902, (699).

Phyllodrepa devillei n. sp. Bernhauer, M. l.c. (695-705).

Priochirus nn. spp. Bernhauer, M. D. ent. Zs., Berlin, **1903**, (146-153).

Quedius lederi n. spp. Reitter in Bernhauer, M. Wien, Verh. ZoolBot. Ges., 52, 1902, (695-705).

nelsoneneis n. sp. Australis. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (93).

*rubripennis* n. sp. **Bernhauer, M.** Wien, Verh. ZoolBot. Ges., **51**, 1901, (651-655).

Sipalia (Geostiba) solarii n. sp. Bernhauer, M. *l.c.* 52, 1902, (695-705).

Tachinus sahlbergi = (furcatus Luze = luzei Bernh.), T. bicuspidatus = (absconditus Luze). Bernhauer, M. l.c. (697).

Tachyporus n. spp. Luze, G. l.c. 51, 1901, (146-185).

Termitogaster texana n. sp. Texns. Brues, C. T. "Contributions from the Zoological Laboratory of the University of Texas. No. 32." Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (184-188, with 1 pl.).

*Thinobius klimai* n. sp. **Bernhauer**, M. Wien, Verh. ZoolBot. Ges., **52**, 1902, (695-705).

Thoracochirus n. gen. (~Priochirus), T. foersteri n. sp. Bernhauer. M. D. ent. Zs., Berlin, **1903**, (155-156). Trogophloeus nn. spp. Bernhauer, M. Wien, Verh. ZoolBot. Ges., 51, 1901, (651-655).

bodemeyeri n. sp. Bernhauer, M. *l.c.* 52, 1902, (695-705).

(Carpalimus) corcyreus n. sp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902-1903, (8).

Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (615).

Velleius dilatatus F., Symbiose. Scriba, E. Insektenbörse, Leipzig, 20, 1903, (212).

# TRICHOPTERYGIDAE.

Sahlberg, J. Demonstration einer Sammlung von Ingenieur Isaac Ericson in Mölndal angefertigter Photographien sehr kleiner Coleopteren. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, **1903**, VI Section, (18-19).

Jensen-Haarup, A. C. The smallest beetles. (Danisb) Bergen, Naturen, 27, 1903, (49-53, with fig.).

# CORYLOPHIDAE.

Corylophodes marginicollis Lee, early stages. Morrill, A. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 4, 1903, (135-138, with pl.).

# SCAPHIDIIDAE.

Scaphisoma nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (98-99).

Sciatrophes n. gen., S. latens n. sp. Australia. **Blackburn**, T. l.c. (100).

# HISTERIDAE.

#### GENERAL.

Lewis, G. On new species of *Histe*ridae and notices of others. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1003, (417-429).

# SPECIAL.

Acritus nigricornis E. H. Gerhardt, J. D. ent. Zs., Berlin, **1903**, (23)-240).

Althanus n. gen., A. teretrioides n. -; Lewis, G. Ann. Mag. Nat. Hist., Ludon, (Ser. 7), 12, 1903, (420-421).

Carcinops, synoptische Tabelle der Arten. Csiki, E. Allatt. Közlem., Budapest, 2, 1903, (127).

Chlamydopsis Westwood, type (). striatella. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (428).

Dendrophilus, synoptische Tabelle der Arten. Outet, E. Állatt. Közlen. Budapest, 2, 1903, (126–127).

Eblisia nn. spp. New Guinea. Samatra. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (422-423).

Epieus, synoptische Tabelle der Arten. Ostiki, E. Allatt. Közlem., Endapest., 2, 1903, (126).

Eutidium n. gen., E. pacale n. sp. Lewis, G. Ann. Mag. Nat. Hist., LEndon, (Ser. 7), 12, 1903, (419).

Hetaerius ferrugineus, Beschreibung. Osild, E. Allatt. Közlem., Budapest, 2, 1903, (127-128).

tristriatus. Brues, C. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (147-149, with fig. in text).

Hister, synoptische Tabelle der Arten. Osiki, E. Allatt. Közlem., Budapest, 2, 1903, (119-126).

m. spp. Lowis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (423-425).

eilantjeri n. sp. Russie méridionale. **Širiajev**, N. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (16).

Holopolta plana, Beschreibung. Callet, E. Állatt. Közlem., Budapest, 2, 1903, (117).

Hypocaecus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (108).

Niponius canalicollis Lewis, United Provinces and N. W. Himalayas, predaceous upon Tomicus sp. Polygraphus major and P. minor; description, life history, relations to the forest. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2. Calcutta, 1903, (248, pl. XIII, fig. 6).

Notodoma orientale n. sp. Birma. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (425-426).

Notolister sanguinosus n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (9).

Orectoscelis n. gen., O. humeralis n. sp. Queensland. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser 7), 12, 1903, (426-427).

Orphinium n. gen. Lewis, G. l.c. (419).

Paromalus, synoptische Tabelle der Arten. Ostiki, E. Állatt. Közlem., Budapest, **2**, 1903, (127).

nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (103).

Petalosoma n. gen. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (418-419).

Platysoma, synoptische Tabelle der Arten. Cathel, E. Állatt. Közlem., Budapest, 2, 1903, (118-119).

Saprinus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (106–107).

Satrapes sartorii, Beschreibung. Ostlich, E. Allatt. Közlem., Budapest, 2, 1903, (128).

Teretriosoma nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1902, (110–111).

Teretrius doddi n. sp. Australia. Blackburn, T. *l.c.* (109).

Tribalus, synoptische Tabelle der Arten. **Catlei**, E. 'Allatt. Közlem, Budapest, **2**, 1903, (126).

# PHALACRIDAE.

Litocrus maritimus n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (111).

#### NITIDULIDAE.

Aelhina nn. spp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (115–116).

Carpophilus melanopterus, parasitism, color. Murtfeldt, M. E. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (293-295).

*titraci* n. sp. Guadeloupe. **Grouvelle**, A. *l.c.* **71**, (2° semest.), 1902, [1903], (756–769).

Cryptarcha nn. spp. Australis. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (116-117).

*leenei* n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., **72**, 1902, (118).

Epuraea nn. spp. Inde septentrionale. Grouvelle, A. *I.c.* (109-111).

*Europs* nn. spp. Guadeloupe. **Grouvelle**, A. *l.c.* **71**, (2<sup>e</sup> semest.), 1902, [1903], (756-769).

nn. spp. Inde septeutrionale. Grouvelle, A. *l.c.* 72, 1902, (123-124).

Haptoneura nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (112).

Heterelus kraatzi n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (108).

Macrostola etraminea var. vitraci n. var. Guadeloupe. Grouvelle, A. l.c. 71, (2° semest.), 1902, [1903], (756-759).

Meligethes anatolicus n. sp. Konia. Schilsky, J. Küster, die Käfer Europas, 40, (94).

(Odontogethes) castanescens n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (114).

*circularis* n. sp. Siberia. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902–1903, (18).

*rubricollis* n. sp. Inde. Grouvelle, Λ. Paris, Ann. soc. ent., **72**, 1903, (125).

Omosiphora sibirica n. sp. **Sahlberg**, J. Öfvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902-1903, (17).

# 4931

Omosita co'on, Larve und Puppe. Eichelbaum, F. All. Zs. Ent., Neudamm, 8, 1903, (81-87).

discoidea Er., new for Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (201-309).

tentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (12).

Pallodes nn. spp. Inde septentrionale. Grouvelle, A. *l.c.* (117).

Pocadius harman i n. sp. Inde septentrionale. Grouvelle, A. l.c. (114).

Pseudocamptodes blackburni n. sp. Grouvelle, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1902, (184).

**Grouvelle**, A. Paris, Ann. Soc. ent., **72**, 1903, (126).

Soronia nn. spp. Inde septentrionale. Grouvelle, A. *l.c.* (113).

*elonjata* n. sp. **Cameron**, M. Ent. Mag., London, **39**, 1903, (97– 98).

### TROGOSITIDAE.

Thymalus marginicollis, metamorphosis. Breed, R. S. Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., 40, 1903, (317-332, with pl.); (Cambridge, Mass., Cont. Zool. Lab. Mus. Comp. Zool. Harvard Coll., No. 145). Separate. 24.5 cm.

#### COLYDIIDAE.

# GENERAL.

Wasmann, E. Gattungstabelle der *Cossyphodidae*. Wien, Ann. NatHist. Hofmus., **16**, 1901, (95–96).

### SPECIAL.

Ablabus blackburni n. sp. Grouvelle, A. Bruxelles, Ann. Soc. cnt. Belgique, 45, 1902, (184).

Bothridcres picipes n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (618). Catolaemus multimaculatus n. sr. Guadeloupe. **Grouvelle**, A. Par-Ann. Soc. ent., **71**, (2° sensest.), 1947. [1903], (756-769).

Cerylon alienigenum n. sp. Atstralit. Blackburn, T. Adelaide, S. Austa Trans. R. Soc., 27, 1903, (91-182).

------ hirtum n. sp. Grouvelle, Λ. Bruxelles, Ann. Soc. Ent. Belgique. 45, 1902, (186).

humeridus n. sp. Inseptentrionale. Grouvelle, A. Paris, Ann. soc. ent., 73, 1903, (121-124).

Colyclodes bostrychoides n. sp. Guadeloupe. Grouvelle, A. l.c. 71, (2° semest., 1902, [1903], (756-769).

Consyphodites n. gen. for Cossyphodites troodroofei (Pér.) Brauns. Brauns, H. Wien, Ann. NatHist. Hofmus., 16, 1901. (91-94).

Deretaphrus nn. spp. Australia Blackburn, T. Adelaide, S. Aust. Trans. R. Soc., 27, 1903, (122–128).

Labroninus harmandi n. sp. Infe septentrionale. Grouvelle, A. Paris. Ann. soc. ent., 72, 1903, (120).

*Lennis lherminieri* n. sp. Guadeloupe. Grouvalle, A. *l.c.* 71, (2\* semest., 1902, [1903], (756-769).

Metopiestes indicus n. sp. l'Inde. Grouvelle, A. l.c. 72, 1903, (126).

Microvonus montanus n. sp. Indeseptentrionale. Grouvelle, A. l.c. (121).

Neotrichus guadalupensis n. sp. Guadeloupe. **Grouvelle**, A. *I.e.* 71, (2° semest.), 1902, [1903], (756-769).

Philothermus guadalurensis n. sp. Guadeloupe. Grouvelle, A. I.e. (756-769).

Phormesa carpentaria n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (118).

Preuleba n. gen., P. novica n. sp. Australia. **Blackburn**, T. *l.c.* (119-120).

Pubala n. gen., P. squamifera n. sp. Grouvelle, Λ. Bruxelles, Ann. Soc. ent. Belgique, 45, 1902, (184–185).

Pycnomerus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (131–132).

Zealand. Broun, T. Ann. Mag. Nat.

Hist., London, (Ser. 7), 11, 1903, (617-618).

Tadima lateralis n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (118).

Tarphiosoma bouvieri n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (119).

Xylobaenus indicus n. sp. Inde septentrionale. Grouvelle, A. l.c. (119).

#### CUCUJIDAE.

Cathartus (?) cairnensis n. sp. Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (91–182).

Crypta nn. spp. **Pairmaire**, L. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (181-259).

Cryptamorpha peregrina n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (153).

Cucujus sp. N. W. Ilimalayas, predaceous upon Tomicus sp. Polygraphus major and P. minor, Pityogenes coniferae, Scolytus major and S. minor; desciption, life history, relations to the Forest. **Stabbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2, Calcutta, 1003, (249, pl. xii, fig. 7). 25 cm.

Laemophloeus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (140-146, 182).

dufani n. sp. Guadeloupo. Grouvelle, A. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (756-769).

harmandi n. sp. Inde septentrionale. Grouvelle, A. l.c. 72, 1903, (122).

Lathropus brightensis n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (147).

*costatus* n. sp. Guadeloupe. **Grouvelle**, A. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (756– 769). Myrabolia nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (148–149).

Platamus dufani n. sp. Guadeloupe. Grouvelle, A. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (756-769).

Platycotylus coloratus n. sp.' Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (147).

Prostomis gladiator n. sp. Australia. Blackburn, T. I.c. (135).

Psammoecus nn. spp. Australia. Blackburn, T. *l.c.* (154-155).

Silvanus aridulus n. sp. Australia. Blackburn, T. *l.e.* (151).

*Telephanus guadalupensis* n. sp. Guadeloupe. **Grouvelle**, A. Paris, Ann. soc. ent., **71**, (2<sup>\*</sup> semest.), 1902, [1903]. (756-769).

#### CRYPTOPHAGIDAE.

Cryptophagus nn. spp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902-1903, (15-16).

nigro - apicalis n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (156).

Hapalips guadalupensis n. sp. Guadeloupe. Grouville, A. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (756-769].

Loberus ritraci n. sp. Guadeloupe. Grouvelle, A. I.c. (756-769).

Pharaxonota indica n. sp. Inde. Grouvelle, A. *l.c.* 72, 1903, (127).

Telmatophilus sublautus n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (158).

Tomarops n. gen., T. punctatus n. sp. Inde méridionale. Grouvelle, A. Paris, Ann. soc. ent., (2° semest.), 1903, (343).

#### THORICTIDAE.

Thorictus foreli, Symbiose. Kolbe. H. J. Berlin, SitzBer. Ues. natf. Freunde, 1903, (237-253).

kaznakori n. sp. Ost-Buchara. Schmidt, R. H. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (389-391). Platynus nn. spp. N. Carolina. Beutenmüller, W. New York, N.Y., Bull. Amer. Mus. Nat. Hist., **19**, 1903, (516-517).

Fauna Hawaiiensis, III, 1903, (228-229).

Anchomenus nigro-aeneus Newm.; P. queenslandicus n. sp. **Bloane**, T. G. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (632-633).

Platyema, etude sur divers espèces des Alpes occidentales. **Sainte-Claire-**Deville, J. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, (588-619).

Platysma (Bon.) Tsch., ueber den Gattungsnamen. Ötöerin, T. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (218).

Thibet. Čičerin, T. l.c. (223).

čičerin, T. l.c. (107-108).

jazartis n. sp. Turkestan. čičerin, T. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (226-227).

caucasia. Čičerin, T. *l.c.* (24–25).

Pogonoglossus nn. spp. Sumatra. Bonchard, J. Paris, Ann. soc. ent., 72, 1903, (180).

Pogonoidius n. subgen. Carret, A. Echange, Lyon, 19, 1903, (133).

Pogonus nn. spp., n. var. Carret, A. l.c. (135-137).

Prodisenochus n. gen. for Dissenochus terebratus Blackb. **Sharp**, D. Fauna Huwaiiensis, III, 1903, (210).

Pseudobroschus n. gen., P. lentus n. sp. **Sharp**, D. *l.c.* (pl. vi).

Pseudoceneus iridipennis Casteln., notes. **Sloane**, T. G. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (623).

Pterostichus nn. spp. New Zealand. Broun, T. Ann. Mag. Nat. Hist, London, (Ser. 7), 11, 1903, (604-607).

Lyon, **19**, 1903, (153-155).

Pyrrotachys constricticeps. Sl. (emend. -P. constrictipes, Sl.) notes. **Sloans**, T. G. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (583). Rhaebolestes n. gen., R. walkeri n. sp. Sloans, T. G. I.c. (589).

Sarticus sulcatus Macl. = Coronocanthus sulcatus, Macl. = S. quadrisulcatus Chaud, notes; S. blackburni SL, S. cyaneocinetus Chaud = Feronia aureomarginata Casteln. = F. saphyreomarginata Casteln., S. obesulur Chaud., S. esmeraldipennis Casteln., S. habitans SL, S. mac'eagi SL, notes; Sarticus nn. spp. **Sloane**, T. G. I.c. (613-620).

Scopoles nn. spp. **Sloane**, T. G. *l.c.* (639-640).

land. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (612).

Stenote'us n. gen., S. opacus n. sp. Malay Archipelago. Bouchard, J. Paris, Ann. Soc. ent., 72, 1903, (174–175).

Strictotefflus n. subgen. (Tefflus.) Kolbe, H. J. Berlin, SitzBer. Ges. natf. Freunde, 1903, (225-237).

Tachys amplipennis Macl., T. sezetriatus Macl., notes. Tachys nn. spp. **Sloane**, T. G. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (576-641).

Tarastethus nn. spp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (457-458).

*Tefflus* nn. spp. **Kolbe**, H. J. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (225-237).

Thriscothoraz n. gen., T. filipes, T. gracilis, T. palustris, T. modestus, T. subconstrictus, T. molokaiae, T. perstriatus, T. mundanus, T. constrictus, T. insolitus, T. discedens, T. chalcosus, T. apicalis, T. perkinsi, T. tariipes, T. ducalis, T. laticollis, T. bradyderus, T. platysminus, T. argutor nn. spp. Sharp, D. Fauns Hawaiiensis III, 1903, (257-268).

Trechus (Anophthalmus) callti n. sp. Alpes-Maritimes. Sainte-Claire Deville, J. Ann. soc. entol., Paris, 71, 1902, [1903], (695-709).

Trichosternus nn. spp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (602-601).

# HALIPLIDAE.

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### GENERAL.

Semenov, A. P. Les rapports naturels des *Haliplidae*. (Russ.) Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (187– 190).

### SPECIAL.

Haliplus alluaudi n. sp. Mudagascar. **Régimbart**, M. Paris, Ann. soc. ent., **72**, 1903, (1).

### DYTISCIDAE.

Acilius canaliculatus, observations. **Picard**, F. Feuille jeunes natural., Paris, (sér. 4), **33**, 1903, (64).

Bidessus nn. spp. Madagascar. Régimbart, M. Paris, Ann. soc. cut., 72, 1903, (8-9).

**Régimbart**, M. *l.c.* (2° semest.), 1903, (331–332).

Canthydrus flavosignatus n. sp. Madagascar. **Bźgimbart**, M. *l.c.* 1903, (13).

Clypeodytes sordidipennis n. sp. Madagascar. **Bégimbart**, M. *l* c. (6).

Copelatus unguieularis n. nom. and n. sp. Madagascar. **Régimbart**, M. *l.c.* (17, 19)

Herophydrus nn. spp. Madagascar. Régimbart, M. l.c. (3-5).

Hydroratus nn. spp. Madagascar Régimbart, M. *l.*c. (11–12).

*Hyphoporus nilghiricus* n. sp. Inde méridionale. **Bégimbart**, M. *l.e.* (2<sup>e</sup> semest.), 1903, (331).

Hyphydrus minutissimus n. sp. Madagascar. Rígimbart, M. I.c. 1903, (5).

Laccophilus nn. spp. Madagascar. Régimbart, M. *l.c.* (14-15).

Neptosternus nn. spp. Madagascur. Régimbart, M. I.c. (15-16).

Pachynectis n. gen., P ventricosus n. sp. Madagascar. **Régimbart**, M. *l.c.* (7-8).

### GYRINIDAE.

Aulonogyrus cristatus n. sp. Madagascar. **Bégimbart**. M. Paris, Ann. soc. ent., **72**, 1903, (21).

### HYDROPHILIDAE.

### GENERAL.

**Bégimbart**, M. Contribution à la faune Indo-Chinoise (19<sup>a</sup> Mé.or.): *Hydrophilidae*. Paris, Ann. soc. ent., **72**, 1903, (52-64).

Sainte Olaire Deville, J. Remarques sur les Hydrophilidae de la faune française. Echange, Lyon, 17, 1902, (75-78, 83-85); 19, 1903, (103-104, 111-112).

#### SPECIAL.

Agraphydrus n. gen., A. punctatellus n. sp. Madagascar. **Régimbart**, M. Paris, Ann. soc. ent., **72**, 1903, (33-34).

Amphiops nn. spp. Madagascar. **Bégimbart, M.** *l.c.* (43-44).

**Régimbart,** M. *l.c.* (61-62).

*lateritius* n. sp. **Fair**maire, L. *l.c.* (2° semest.), 1903, (185).

Berosus nn. spp., B. tillosulus var. dilutus n. var. Madagascar. Régimbart, M. l.c. 1903, (37-39).

------ nigropictus n. sp. Indo-Chine. **Bégimbart**, M. *l.c.* (60).

Cercyon nn. spp. Inde méridicanle. Régimbart, M. *l.c.* (2° semest.), 1903, (337-338).

\_\_\_\_\_ nn. spp. Madagascar. Bedel, in litt. **Bégimbart**, M. *l.e.* 1903, (47-50).

Coelostoma acneolum n. sp. Inde méridionale. **Régimbart**, M. *l.c.* (2° semest.), 1903, (237).

phalacroides n. sp. Madagascar. **Bégimbart**, M. *l.c.* 1903, (44).

Cyclonotum muelleriț n. sp. Elbe. Meunier, F. Berlin, Jahrb. geol. Landesanst., 21, 1901, Abh. auss. St. Pers., (31-38).

Cylomissus n. gen., C. glabratus n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London (Ser 7) 11 1903. (613). Dactylosternum pyguraeum n. sp. Madagascar. **Bégimbart**, M. Paris, Ann. soc. ent., **72**, 1903, (45).

Epimetopus maindrom n. sp. Inde méridionale. **Bégimbart, M. l.**c. (2<sup>e</sup> semest.), 1903, (338).

Globaria subopaca n. sp. Madagascar. Régimbart, M. *l.c.* 1903, (41).

Helochares nn. spp. Indo-Chine. **Régimbart**, M. *l.c.* (53-54).

spp. Madagascar. Régimbart, M. l.c. (25-28).

*Helophorus* nn. spp. **Gangibauer**, L. Wien, Verh. ZoolBot. Ges., **51**, 1901, (312-332).

Hydraena nn. spp. Ganglbauer, L. I.c. (312-332).

<u>decolor n. sp.</u> **Ste. Claire-Deville**, J. Echange, Lyon, **19**, 1903, (111-112).

marginicollis n. sp. Madagascar. **Bégimbart**, M. Paris, Ann. soc. ent., **72**, 1903, (51).

Hydrobius atriceps n. sp. Madagascar. Régimbart, M. *l.c.* (1-51).

tessellatus in Pennsylvania. Bradley, J. C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (23).

Hydrochus annamita n. sp. Indo-Chine. Régimbart, M. Paris, Ann. soc. ent., 72, 1903, (64).

L. l.c. (2° semest.), 1903, (185).

Hydrophilus cambodiensis n. sp. Indo-Chine. Régimbart, M. l.e. 1903, (53).

car. **Bégimbart**, M. *l.c.* (25).

G. A. Paris, Bul. soc. ent., 1902, (238).

Hydroporus bilineatus Sturm., an addition to the British list. **Chitty**, A. J. Ent. Mag., London, **39**, 1903, (43).

Laccobius nn. spp. Madagascar. Bégimbart, M. Paris, Ann. soc. ent., 72, 1903, (34-35).

\_\_\_\_\_ nn. spp. Indo-Chine. Régimbart, M. *l.c.* (58–59).

discicollis n. sp. Inde méridionale. Bégimbart, M. l.c. (2° semest.), 1903, (336). Limnobius rufipennis n. sp. Inde méridionale. **Béginbart**, M. l.e. (336).

Ochthebius nn. spp. Gangibaser, I. Wien, Verh. ZoolBot. Ges., 51, 1901, (312-332).

(Cheiloctebius) nn. spp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902-1903, (5-6).

**Edgimbart**, M. Paris, Ann. soc. ent. **72**, 1903, (50).

Paracymus nn. spp. Madagasezr. Bégimbart, M. Paris, Ann. soc. ent., 72, 1903, (32-33).

Philydrus nn. spp. Madagascar. Bégimbart, M. I.c. (28-32).

nn. spp. Inde méridionale. Régimbart, M. *l.c.* (2<sup>e</sup> semest.), 1903. (335).

*hamifer* n. sp. **Gangibaur**, L. Wien, Verh. ZoolBot. Ges., **51**, 1901, (312-332).

Rygmodus nigripennis n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (612-613).

Spercheus horanus n. sp. **Fairmain**, L. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (186).

Zeadolopus n. gen. Z. spinipes n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1900. (614).

### SILPHIDAE.

### GENERAL.

Bordas, L. L'appareil digestif des Silphidae. Paris, C. R. Acad. sci., 137. 1903, (344-346).

### SPECIAL.

Aclypea sculpturata n. sp. l'Inde. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (125).

Catops nn. spp. Portevin, G. 1.e. (166-167).

# Coleoptera.

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Choleva doderoi n. sp. Breit, J. Soc.

Entomol., Zürich, 17, 1903. (169).

macleayi n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (94).

Cholevomorpha nn. spp. Australia. Blackburn, T. l.c. (95-96).

Clambus tropicus n. sp. Australia. Blackburn, T. l.c. (97).

Diesochaetus nn. spp. S. America. Portevin, G. Paris, Ann. soc. ent., 72, 1903, (159–162).

Estadia n. gen., E. capito n. sp. Madagascar. Fairmaire, L. *l.c.* (2° semest.), 1903, (183-184).

Eucatops n. gen., E. curvipes, E. ater, E. grourellei, E. rufescens, E. oblongus nn. spp. S. America. **Portevin**, G. *l.c.* 1903, (162–164).

Ilydnobius tibialis n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902-1903, (9).

Leonhardia reitteri n. sp. Bosnien. Brett, J. Soc. Entomol., Zürich, 17, 1902, (89).

Liodes bruneicollis Mann. in litt., 3 nn. spp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902– 1903, (10–14).

Nargus nn. spp. Portevin, G. Paris, Ann. soc. ent., 72, 1903, (157).

Spathosternum n. gen., S. haemorrhoidale n. sp. Bolivia. Portevin, G. *l.c.* (165).

### SCYDMAENIDAE.

Cyrtoscydmus apulicus n. sp. Pic, M. Echange, Lyon, 17, 1902, (23).

### PSELAPHIDAE.

#### GENERAL.

Raffray, A. Psélaphides recueillis dans le sud de Madagascar par T. Ch. Alluaud. Paris, Ann. soc. ent., **72**, (2<sup>\*</sup> semest.), 1903, (315–330, av. fig.).

#### SPECIAL.

Acylopselaphus nn. spp. Madagascar. Raffray, A. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (327-329). Aloxomidus n. gen. verwandt mit Calarus Roffr., A. variolosus n. sp. **Baffray**, A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (34-35, Taf. I).

Apoterus lucidus n. sp. **Baffray**, A. l.c. (31-32).

Articerus nitidicollis n. sp. Raffray, A. I.c. (97, Taf. II).

Batraxis nn. spp. Raffray, A. l.c. (57-59).

Batrisocenus n. gen. verwandt mit Batrisodes. B. iridescens, B. serraticornis, B. birónis, B. irregularis, B. incertus, B. chloroticus, B. trivialis, B. validicornis, B. mucronatus, B. armaticornis, B. carernosus nn. spp. **Baffray**, A. l.c. (48-56, Taf. I-II).

Batrisodes nn. spp. Raffray, A. l.c. (45-47, Taf. II).

Batrisomina n. gen., B. strigicollis n. sp. Madagascar. **Raffray**, A. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (316).

Birónia n. gen. verwandt mit Claviger. B. cavernosa n. sp. Raffray, A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (99-100, Taf. II).

Brachygluta trochalis n. sp. Madagascar. **Baffray**, A. Paris, Ann. soc: ent., **72**, (2° semest.), 1903, (320).

Bryazella n. gen., B. spectralis n. sp. Madagascar. **Rafiray**, A. *l.e.* (319).

Bythinus cythereias n. sp. Pic, M. Echange, Lyon, 19, 1903, (161).

Calarus n. gen. verwandt mit Amudrocerus Raffr. C. puncticeps, C. dubius, C. semipunctatus nn. spp. Raffray, A. Budapest. Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (32-34).

Comatopselaphus puncticollis Raffr., Beschreibung. 3 nn. spp. Raffray, A. *U.e.* (59-61).

Cratna variabilis n. sp. **Raffray**, A. *l.c.* (56-57).

Ctenisophus papuanus n. sp. Raffray, A. l.c. (93-94).

Cyathiger nn. spp. Raffray, A. l.e. (89-92, Taf. II).

Diarrogus n. gen. verwandt mit Trimiodytes Rafir. D. pubescens n. sp. Raffray, A. l.c. (36-37, Taf. I). 4831

Elasmatus n. gen., E. lamellipes n. sp. **Baffray**, A. *l.c.* (97-98, 'Taf. II).

Epithematus n. gen. verwandt mit Pteroplectus Raffr., E. nitidus n. sp. Raffray, A. l.c. (39-40, Taf. 1).

Euplectus nn. spp. Madagascar. Rafiray, A. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (315).

A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (37-38).

Exedrus n. gen. verwandt mit Oxarthrius. E. caviceps n. sp. **Baffray**, A. I.c. (47-48, Taf. II).

Filiger batavianus n. sp. **Baffray**,  $\Lambda$ . *l.c.* (92).

Glapharsenus n. gen. verwandt mit Nedarassus Raffr. G. asperatus, G. punctatus, G. microphthalmus var. sublaceis, G. latus nn. spp. **Baffray**, A. I.c. (86-89, Taf. 1).

Mechanicus papuanus n. sp. **Baff.ay**, A. *l.c.* (31).

Mesoplatus cribricollis n. sp. Raffray, A. l.c. (44).

Microplectus nn. spp. Baffray, A. l.c. (40-44, Taf. II).

Philiopsis tuberculiceps n. sp. Raffray, A. l.c. (35-36).

Philonthus coracion n. sp. Peyerimhoff, P. de. France. Paris, Bull. scc. ent., 1902, (246-247).

Pselaphophus sulciceps n. sp. **Baffray**, A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (92-93).

Рухідісегив nn. врр. **Вабгау,** А. *L.*c. (29-30).

Rabyzisnn. spp. Madagascar. Rafiray, A. Paris, Ann. soc. ent., 72, (2\* semest.), 1903, (317-318).

Reichenbachia nn. spp. **Baffcay**, A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (61-75, 1 Taf.).

nn. spp. Madagascar. Raffray, A. Paris, Ann. soc. ent., 72, (2\* semest.), 1903, (321-325).

Rytus nn. spp. **Baffray**, A. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (95-96).

Stictus corrugatus n. sp. Ruffray, A. J.c. (144).

Sunorfa nn. spp. **Baffra**7, Λ. l.c. (76 86, Taf. I).

Syrraphesina n. gen., S. plicitentris n. sp. **Baffray**, A. *i.*c. (100-101, Taf. II).

Taphrostethus longing ina n. sp. Baffray, A. l.c. (95).

Thesiastes elegantulus Raffr., faunistisch, 2 nn. spp. Raffray, A. l.c. (38-39).

Tyromorphus cribricollis n. sp. **Baff**ray, A. l.c. (94).

Zethopsus papuanus n. sp. **Baffray**, A. I.c. (30-31).

### STAPHYLINIDAE.

Aleochara gracilicornis (nom. nud.) **Pauvel** MSS. in **Slosson**, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (4-8).

*opacicollis* n. sp. Bernhauer, M. Wien, Verh. ZoolBot. Ges., 52, 1902, (695-705).

Ancaeus försteri n. sp. Ostindien. Bernhauer, M. Stettiner ent. Ztg., 64, 1903, (36).

Anthobium nn. spp. Bernhauer, M. Wien, Verh. ZoolBot. Ges., 52, 1902, (695-705).

pulcherrimum n. sp. Bernhauer, M. l.c. 51, 1901, (651-655).

An'hophagus nn. spp. Luze, G. *l.e.* (505-530).

Arpedium nn. spp. Bernhauer, M. I.c. (695-705).

Atheta (Thirobaena) ccphalotes n. sp. l.c. 51, 1901, (651-655).

islandica = smolkai Ryb. Bernhauer, M. *l.c.* (695-705).

Bledius bosnicus n. sp. Bernhauer, M. l.c. 52, 1902, (695-705).

fischeri n. sp. Ostindien. Bernhauer, M. Stettiner eut. Ztg., 64, 1903, (35).

*Bolitobius*, Revision der paläarktischen Arten, nn. spp. Luse, G. Wien, Verh. ZoolBot. Ges., **51**, 1901, (662-746).

Borolinus n. gen., B. borneensis n. sp. Bernhauer, M. D. ent. Zs., Berlin, **1903**, (133-134). Bryocharis, Revision der paläarktischen Arten. Luze, G. Wien, Verh. ZoolBot. Ges., 51, 1901, (662-746).

Bryoporus, Revision der paläarktischen Arten, nn. spp. Luze, G. l.c. (662-746).

Callopsenius n. gen. = Eupsenius Wasmann. Wasmann, E. D. ent. Zs., Berlin, 1903, (236).

Conosoma pictum n. sp. Ostindien. Fauvel in Bernhauer, M. Stettiner ent. Ztg., 64, 1903, (26).

Cryptobium fruhetorferin. sp. Ostindien. Bernhauer, M. l.c. (30).

Ecilorenia breripes n. sp. Texas. Brues, C. T. "Contributions from the Zoological Laboratory of the University of Texas. No. 32." Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (184-188, with 1 pl.).

Heterosoma n. gen. (~ Achennium), II. clohrni n. sp. Ostindien. Bernhauer, M. Stettiner ent. Ztg., 74, 1903, (33).

Homalota alpigrada nom. nud. **Fauvel** MSS. in **Slosson**, A. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (4-8).

Homalium rinulare, mœurs et métanorphoses. **Xambeu**. Naturaliste, Paris, (sér. 2), **25**, 1903, (55).

Hygrogeus. Luze, G. Wien, Verh. ZoolBot. Ges., 52, 1902, (505-530).

Ilyobates. Bernhauer, M. l.c. (695-705).

Lamprinodes n. gen., L. hammarstroemi n. sp. Luze, G. l.c. 51, 1901, (181-182).

Lathrobium rodti n. sp. Bernhauer, M. L.c. 52, 1902, (695-705).

*sumatrense* n. sp. Bernhauer, M. Stettiner ent. Ztg., **64**, 1903, (31).

Leptochirus nn. spp. Bernhauer, M. D. ent. Zs., Berlin, 1903, (126-132).

Medon granulicollis n. sp. Ostindien. Bernhauer, M. Stettiner ent. Ztg., 64, 1903, (32).

*Mycetoporus* nn. spp. **Luze**, (†. Wien, Verh. ZoolBot. Ges., **51**, 1901, (662-746).

<u>zeithammeri</u> n. sp. Bernhauer, M. *l.c.* 52, 1902, (695-705). Mylloena kraatzi Sharp., new to Ireland. **Chaster**, G. W. Irish Nat., Dublin, **12**, 1903, (167).

Myrmedonia nn. spp. Ostindien. Bernhauer, M. Stettiner ent. Ztg., 64, 1903, (21-24).

**Omalium italicum** n. sp. **Bernhauer**, M. Wien, Verh. ZollBot. Ges., **52**, 1902, (695-705).

Oxytelus lucens n. sp. Ostindien. Fauvel in Bernhauer, M. Stettiner ent. Ztg., 64, 1903, (34).

Philonthus nn. spp. Ostindien. Fauvel and Bernhauer, M. l.c. (26-29).

*glenelgi* n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc.. 27, 1903, (91–182).

ustulatus (= ornatipennis Reitt.), Synonymie. Bernhauer, M. Wien, Vorh. ZoolBot. Ges., 52, 1902, (699).

Phyl!odrepa devillei n. sp. Bernhauer, M. l.c. (695-705).

Priochirus nn. spp. Bernhauer, M. D. ent. Zs., Berlin, **1903**, (146-153).

Quedius lederi n. spp. **Reltter** in Bernhauer, M. Wien, Verh. ZoolBot. Ges., 52, 1902, (695-705).

nelsonensis n. sp. Australis. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (93).

*rubripennis* n. sp. **Bern**hauer, M. Wien, Verh. ZoolBot. Ges., **51**, 1901, (651-655).

Sipalia (Geostiba) solarii n. sp. Bernhauer, M. *l.c.* 52, 1902, (695-705).

Tachinus sahlbergi = (furcatus Luze = luzei Bernh.), T. bicuspidatus = (absconditus Luze). Bernhauer, M. l.c. (697).

Tachyporus n. spp. Luze, G. l.c. 51, 1901, (146-185).

Termitogaster texana n. sp. Texns. Brues, C. T. "Contributions from the Zoological Laboratory of the University of Texas. No. 32." Philadelphia, Pa., Ent. News Acad. Nnt. Sci., 13, 1902, (184-188, with 1 pl.).

*Thinobius klimai* n. sp. **Bernhauer**, M. Wien, Verh. ZoolBot. Ges., **52**, 1902, (695-705).

Thoracochirus n. gen. (~Priochirus), T. foersteri n. sp. Bernhauer. M. D. ent. Zs., Berlin, **1903**, (155-156). Trogophloeue nn. spp. Bernhauer, M. Wien, Verh. ZoolBot. Ges., 51, 1901, (651-655).

bodemeyeri n. sp. Bernhauer, M. *l.c.* 52, 1902, (695-705).

(Carpalimus) corcyreus n. sp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902-1903, (8).

*maritimus* n. sp. New Zealand. **Broun**, T. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (615).

Velleius dilatatus F., Symbiose. scriba, E. Insektenbörse, Leipzig, 20, 1903, (212).

### TRICHOPTERYGIDAE.

Sahlberg, J. Demonstration einer Sammlung von Ingenieur Isaac Ericson in Mölndal angefertigter Photographien sehr kleiner Coleopteren. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, 1903, VI Section, (18-19).

Jensen-Haarup, A. C. The smallest beetles. (Danish) Bergen, Naturen, 27, 1903, (49-53, with fig.).

### CORYLOPHIDAE.

Corylophodes marginicollis Lee, early stages. Morrill, A. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 4, 1903, (135-138, with pl.).

### SCAPHIDIIDAE.

Scaphisoma nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (98-99).

Sciatrophes n. gen., S. latens n. sp. Australia. Blackburn, T. l.c. (100).

### HISTERIDAE.

#### GENERAL.

Lowis, G. On new species of *Histeridae* and notices of others. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (417-429).

#### SPECIAL.

Acritus nigricornis E. H. Gerhardt, J. D. ent. Zs., Berlin, 1903, (239-240).

Althanus n. gen., A. teretrioides n. sp. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (420-421).

Carcinops, synoptische Tabelle der Arten. Csiki, E. Allatt. Közlem., Budapest, 2, 1903, (127).

Chlamydopsis Westwood, type C. striatella. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (428).

Dendrophilus, synoptische Tabelle der Arten. Ostlit, E. Állatt. Közlem., Budapest, 2, 1903, (126-127).

*Eblisia* nn. spp. New Guinea. Sumatra. **Lewis**, G. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (422-423).

Epieus, synoptische Tabelle der Arten. Oslici, E. Állatt. Közlem., Budapest., 2, 1903, (126).

Eutidium n. gen., E. pacale n. sp. Lewis, G. Anu. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (419).

Hetaerius ferrugineus, Beschreibung. Ostki, E. Allatt. Közlem., Budapest, 2, 1903, (127–128).

tristriatus. Brues, C. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (147-149, with fig. in text).

Hister, synoptische Tabelle der Arten. Ostiki, E. Allatt. Közlem., Budapest, 2, 1903, (119–126).

mn. spp. Lewis, G. Aun. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (423-425).

méridionale. **Širlajev**, N. Rev. Russie Ent., Jaroslavli, **3**, 1903, (16).

Holopolta plana, Beschreibung. Catki, E. Állatt. Közlem., Budapest, 2, 1903, (117).

Hypocaecus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (108).

Niponius canalicollis Lewis, United Provinces and N. W. Himalayas, predaceous upon Tomicus sp. Polygraphus major and P. minor; description, life history, relations to the forest. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2. Calcutta, 1903, (248, pl. XIII, fig. 6).

Notodoma orientale n. sp. Birma. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (425-426).

Notolister sanguinosus n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (9).

Orectoscelis n. gen., O. humeralis n. sp. Queensland. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser 7), 12, 1903, (426-427).

Orphinium n. gen. Lewis, G. l.c. (419).

Paromalus, synoptische Tabelle der Arten. **Catici**, E. Állatt. Közlem., Budapest, **2**, 1903, (127).

nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (103).

Petalosoma n. gen. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (418-419).

Platysoma, synoptische Tabelle der Arten. Ostiki, E. Állatt. Közlem., Budapest, 2, 1903, (118-119).

Saprinus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (106-107).

*pygidialis* n. sp. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (428–429).

Satrapes sartorii, Beschreibung. Oslici, E. Allatt. Közlem., Budapest, 2, 1903, (128).

Teretriosoma nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1902, (110-111).

Teretrius doddi n. sp. Australia. Blackburn, T. l.c. (109).

Tribalus, synoptische Tabelle der Arten. **Calici**, E. 'Allatt. Közlem, Budapest, **2**, 1903, (126).

### PHALACRIDAE.

Litocrus maritimus n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (111).

### NITIDULIDAE.

Aethina nn. spp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (115–116).

Carpophilus melanopterus, parasitism, color. Murtfeldt, M. E. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (293-295).

oblongopunctatus n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 82, 1903, (108).

*vitraci* n. sp. Guadeloupe. **Grouvelle**, A. *l.c.* **71**, (2° semest.), 1902, [1903], (756-769).

Cryptarcha nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (116-117).

*lesnei* n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., **72**, 1902, (118).

Epuraea nn. spp. Inde septentrionale. Grouvelle, A. *l.c.* (109-111).

*Europs* nn. spp. Guadeloupe. **Grouvelle**, A. *l.c.* **71**, (2° semest.), 1902, [1903], (756-769).

\_\_\_\_\_ nn. spp. Inde septeutrionale. **Grouvelle**, Λ. *l.c.* **72**, 1902, (123-124).

Haptoneura nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (112).

*Heterelus kraatzi* n. sp. Inde septentrionale. **Grouvelle**, A. Paris, Ann. soc. ent., **72**, 1903, (108).

Macrostola straminea var. vitraci n. var. Guadeloupe. Grouvelle, A. l.c. 71, (2° semest.), 1902, [1903], (756-759).

Meligethes anatolicus n. sp. Konia. Schilsky, J. Küster, die Käfer Europas, 40, (94).

(Odontogethes) castanescens n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903; (114).

*circularis* n. sp. Siberia. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902–1903, (18).

*rubricollis* n. sp. Inde. **Grouvelle**, A. Paris, Ann. soc. ent., **72**, 1903, (125).

*Omosiphora sibirica* n. sp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902-1903, (17). Omosita co'on, Larve und Puppe. Eichelbaum, F. All. Zs. Ent., Neudamm, 8, 1903, (81-87).

discoidea Er., new for Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (201-309).

ornata n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (12).

Pallodes nn. spp. Inde septentrionale. Grouvelle, A. *l.c.* (117).

Pocadius harman li n. sp. Inde septentrionale. Grouvelle, A. l.c. (114).

Pseudocamptodes blackburni n. sp. Grouvelle, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1902, (184).

**Grouvelle**, A. Paris, Ann. Soc. ent., **72**, 1903, (126).

Soronia nn. spp. Inde septentrionale. Grouvelle, A. *l.c.* (113).

elonjata n. sp. **Cameron**, M. Ent. Mag., London, **39**, 1903, (97-98).

### TROGOSITIDAE.

Thymalus marginicollis, metamorphosis. Breed, R. S. Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., 40, 1903, (317-332, with pl.); (Cambridge, Mass., Cont. Zool. Lab. Mus. Comp. Zool. Harvard Coll., No. 145). Separate. 24.5 cm.

### COLYDIIDAE.

### GENERAL.

Wasmann, E. Gattungstabelle der *Consyphodidae*. Wien, Ann. NatHist. Hofmus., **16**, 1901, (95–96).

### SPECIAL.

Ablabus blackburni n. sp. Grouvelle, A. Bruxelles, Ann. Soc. cnt. Belgique, 45, 1902, (184).

Bothrideres picipes n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), **11**, 1903, (618). Catolacmus multimaculatus n. sp. Guadeloupe. Grouvelle, A. Paris. Anu. Soc. ent., 71, (2° semest.), 1902, [1903], (756-769).

Cerylon alienigenum n. sp. Arstralia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., **37**, 1903, (91-182).

hirtum n. sp. Grouvelle,
 A. Bruxelles, Ann. Soc. Ent. Belgique,
 45, 1902, (186).

humeridus n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (121–124).

Colyclodes bostrychoides n. sp. Guadeloupe. Grouvelle, A. l.c. 71, (2" semest.), 1902, [1903], (756-769).

Consyphodi'es n. gen. for Cossyphodites woodroofei (Pér.) Brauns. Brauns, H. Wien, Ann. NatHist. Hofmus., 16, 1901, (91-94).

Deretaphrus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (122–128).

Labromimus harmandi n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (120).

*Lennis lherminieri* n. sp. Guadeloupe. Grouvelle, A. *l.e.* 71, (2<sup>e</sup> semest.), 1902, [1903], (756-769).

Mctopiestes indicus n. sp. l'Inde. Grouvelle, A. l.c. 72, 1903, (126).

Microvonus montanus n. sp. Inde septentrionale. Grouvelle, A. l.c. (121).

Neotrichus guadalupensis n. sp. Guadeloupe. **Grouvelle**, A. *l.c.* **71**, (2° semest.), 1902, [1903], (756–769).

Philothermus guadalupensis n. sp. Guadeloupe. Grouvelle, A. l.e. (756-769).

Phormesa carpentaria n. sp. Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (118).

Pseudeba n. gen., P. novica n. sp. Australia. Blackburn, T. l.c. (119– 120).

Pubala n. gen., P. squamifera n. sp. Grouvelle, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1902, (184–185).

Pycnomerus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (131-132).

Zealand. Broun, T. Ann. Mag. Nat.

Hist., London, (Ser. 7), 11, 1903, (617-618).

Tadima lateralis n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (118).

Tarphiosoma bouvieri n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (119).

Xylobaenus indicus n. sp. Inde septentrionale. Grouvelle, A. l.c. (119).

#### CUCUJIDAE.

Cathartus (?) cairnensis n. sp. Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (91–182).

*Crypta* nn. spp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2<sup>•</sup> semest.), 1903, (181-259).

Cryptamorpha peregrina n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (153).

Cucujus sp. N. W. Himalayas, predaceous upon Tomicus sp. Polygraphus major and P. minor, Pityogenes coniferae, Scolytus major and S. minor; desciption, life history, relations to the Forest. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2, Calcutta, 1903, (249, pl. xii, fig. 7). 25 cm.

Laemophloeus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (140-146. 182).

*dufani* n. sp. Guadeloup3. **Grouvelle**, A. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (756– 769).

harmandi n. sp. Inde septentrionale. Grouvelle, A. l.c. 72, 1903, (122).

Lathropus brightensis n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (147).

costatus n. sp. Guadeloupe. Grouvelle, A. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (756– 769). Myrabolia nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (148-149).

Platamus dufani n. sp. Guadeloupe. Grouvelle, A. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (756-769).

Platycotylus coloratus n. sp. Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (147).

Prostomis gladiator n. sp. Australia. Blackburn, T. *l.c.* (135).

Psammoecus nn. spp. Australia. Blackburn, T. *l.c.* (154–155).

Silvanus aridulus n. sp. Australia. Blackburn, T. I.c. (151).

Telephanus guadalupensis n. sp. (Juadeloupe. **Grouvelle**, A. Paris. Ann. soc. ent., **71**, (2° semest.), 1902, [1903]. (756-769).

#### CRYPTOPHAGIDAE.

*Cryptophagus* nn. spp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902–1903, (15–16).

nigro - apicalis n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (156).

Hapalips guadalupensis n. sp. Guadeloupe. **Grouville**, A. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (756– 769].

Loberus ritraci n. sp. Guadeloupe. Grouvelle, A. I.c. (756-769).

Pharazonota indica n. sp. Inde. Grouvelle, A. I.c. 72, 1903, (127).

Telmatophilus sublautus n. sp. Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (158).

Tomarops n. gen., T. punctatus n. sp. Inde méridionale. **Grouvelle**, A. Paris, Ann. soc. ent., (2° semest.), 1903, (343).

### THORICTIDAE.

Thorictus foreli, Symbiose. Kolbe, H. J. Berlin, SitzBer. Ges. natf. Freunde, 1903, (237-253).

kaznakozi n. sp. Ost-Buchara. Schmidt, R. H. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (389-391). Thorictus ruzskii n. sp. Transcaspia. Semenov, A. P. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (353-357).

### EROTYLIDAE.

### GENERAL.

Xambeu. Mœurs et métamorphoses des coléoptères appartenant au groupe des Erotylides. Naturaliste, Paris, (sér. 2), 25, 1903, (91-92, 407).

### SPECIAL.

Helota pauli n. sp. Weise, J. D. ent. Zs., Berlin, 1903, (171).

Titubaea peyerimhoffi n. var. (var. de 13 punctata Desh.?) Pic, M. Echange, Lyon, 17, 1902, (48).

### MYCETOPHAGIDAE.

Berginus ritraci n. sp. Guadeloupe. Grouvelle, A. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (1903), (756-769).

Diphyllus maindroni n. sp. Inde méridionale. Grouvelle, A. l.c. 72, (2<sup>e</sup> semest.), 1903, (342).

ia. Blackburn, T. Adelaide, S. Austra-Trans. R. Soc., 27, 1903, (91–182).

Diplocoelus opacior n. sp. Australia. Blackburn, T. *l.e.* (158).

### COCCINELLIDAE.

### General.

Bowditch, F. C. Notes on Casey's revision of the American *Coccinellidae*. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **13**, 1902, (205-207).

Burgess, A. F. Economic notes on the family *Coccinellidae*. Washington, D.C., Bull. U.S. Dept. Agric., Div. Ent., No. 40, 1903, (25-32).

Long, C. W. Notes on *Coccinellidae*. New York, N.Y., J. Ent. Soc., **11**, 1903, (35-45, with pl.).

Coccinellidac, notes. I.c. (193-213, with 2 pls.).

Leonhardt, W. Ueber das massenhafte Auftreten von Coccinelliden im Alten Lande im Winter 1901-02. Ans d. Heimat, Bremerhaven, 1901-02, 1903, (53-54).

Weise, J. Synonymische Bemerkungen [betr. Coccinellidae]. D. ent. Zs., Berlin, 1903, (424).

#### SPECIAL.

Brachyacantha aperta n. sp. Weise, J. D. ent. Zs., Berlin, 1903, (208).

Chilocorus similis, parasite of. Marlatt, C. L. Washington, D.C., Proc. Ent. Soc., 5, 1903, (138-139).

Cleothera staudingeri n. sp. Weise, J. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (284).

Coccinella sp. United Provinces, predaceous upon Monophlebus stebbingi, description, life history, relations to the forest, protection, points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2. Calcutta, 1903, (324, pl. XIX, fig. 5, a, b, c, d). 25 cm.

*conglobata*, Bemerkungen über die ersten Entwicklungsstadien. Wetse, J. D. ent. Zs., Berlin, **1903**, (164-166).

Coelophora femorata n. sp. Weise, J. Bruxelles, Ann. Soc, ent. Belgique, 45, 1901, (91).

Corystes carifrons n. sp. Weise, J. D. ent. Zs., Berlin, 1903, (208).

Cycloneda pomacea n. sp. Weise, J. I.c. (207).

*Epilachna* nn. spp. **Weise**, J. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (280-281); D. ent. Zs., Berlin, **1903**, (229-232).

Epiphylaz nn. spp. Madagascar. Pairmaire, L. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (339); Paris, Ann. soc. ent., 72, (2° semest), 1903, (242-243).

Hippodamia rickmersi n. sp. Weter, J. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (281).

Lithophilus minutus n. sp., L. cribratellus Frm. var. limbatus n. var. Pic, M. Echange, Lyon, 19, 1903, (170).

# Coleoptera.

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Megilla maculata var. floridana n. var. Leng, C. W. New York, N.Y., J. Ent. Soc., 11, 1903, (35-45, with pl.).

Ortalia pectoralis n. sp. Weise, J. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (284).

Pelina geometrica n. sp. Weise, J. l.c. (282).

Platynaspis weyersi n. sp. Weise, J. l.c. (92).

Propiptus n. gen., P. subopacus n. sp. Weise, J. l.c. (95-96).

Pullus nn. spp. Weise, J. I.c. (94).

saginatus n. sp. Weise, J. *l.c.* (285-286).

Rodolia punctigera n. sp. Weise, J. I.e. (93).

Scymnus limonii n. sp. Isle of Wight. Donisthorpe, H. Ent. Rec., London, 15, 1903, (287).

Sidis relictus n. sp. Weise, J. Bruxelles, Ann. soc. ent. Belgique, 45, 1901, (96).

Solanophila nn spp. Weise, J. l.c. (273-279).

Sticholotis melanaria n. sp. Weise, J. D. ent. Zs., Berlin, 1903, (232).

Tozotoma rugulosa n. sp. Weise, J. Bruxelles, Ann. Soc. ent. Belgique, 46, 1901, (273).

Verania bennigseni n. sp. Weise, J. D. ent. Zs., Berlin, 1903, (231).

### ENDOMYCHIDAE.

Danaë nn. spp. Africa. Weize, J. D. ent. Zs., Berlin, 1903, (201-202)

Dapsa graeca n. sp. Pic, M. Echange Lyon, 17, 1903, (71-72).

------ syriaca n. sp. Pic, M. l.c. (33).

*Rhymbus* nn. spp. **Weise**, J. D. ent. Zs., Berlin, **1903**, (204-206).

Stenotarsus nn. spp. Africa. Weise, J. *l.c.* (202-203). (N 2-9053)

# LATHRIDIIDAE.

#### GENERAL.

Belon, O. P. Fascicule 4. Coleoptera clavicornia, fam. *Lathridiidae*. In : Wytsman, Genera insectorum. Bruxelles 1902, (40, av. 1 pl.). fr. 9.60.

#### SPECIAL.

Cortilena Motsch, note sur le genre, et synopse de toutes les espèces actuellement connues. Belon. Bruxelles, Anu. Soc. ent. Belgique, 45, 1901, (86-89).

Enicmus anthracinus Mnnh. sp. pr. Gerhardt, L. D. ent. Zs., Berlin, 1903, (238-239).

Isidus letourneuxi n. sp. Pic, M. Echange, Lyon, 17, 1903, (64).

#### DERMESTIDAE.

Brachysphyrus n. gen., B. inornatus n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (160).

Cryptorhopalum nn. spp. Australia. Blackburn, T. *l.c.* (169–170).

Dermestes luganensis n. sp. Stierlin, G. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1902, (425-427).

Hadrotoma marginata Payk., a hatching experiment. (Swedish) Mjöberg, E. Entomol. Tidskr., Stockholm, 22, 1901, (189-190).

Megatoma innotata n. sp., M. graeseri Reitt var. latenotata n. var. Pic, M. Echange, Lyon, 17, 1902, (48).

Trogoderma un. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc. 27, 1903, (163-165).

*aegyptiaca* n. sp. Assuan. **Pic**, M. Echange, Lyon, **17**, 1901, (33).

#### BYRRHIDAE.

Curimus abbreviatus n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902–1903, (19).

Microchaetes nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 1903, (175–176). Pedilophoros speciosus n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902-1903, (20).

Simplocaria nn. spp. Sahlberg, J. l.c. (22-23).

# HETEROCERIDAE.

Heterocerus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (178-179).

nn. spp. Inde meridionale. **Grouvelle**, A. Paris, Ann. Soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (345-346).

## PARNIDAE.

Helmis illustris n. sp. Grouvelle, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1902, (190).

Sostea nn. spp. Inde méridionale. Grouvelle, A. Paris, Ann. Soc. ent., 72, (2<sup>e</sup> semest.), 1903, (344-345).

### CIOIDAE.

Cis nn. spp. Reitter. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (51-55).

Lyctus canaliculatus, résumé d'un mémoire de M. Louis Bureau (in Nantes, Bul. soc. sci. nat., **10**, (2° semest.), (1900). Lefebvre, A. Elbeuf, Bul. soc. sci. nat., **20**, 1901, [1902], (43-46).

Rhopalodontus nororossicus n. ep. Reitter. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (38).

Xylographus tomicoides n. sp. Reitter. l.c. (47).

### BOSTRICHIDAE.

#### GENERAL.

Borkenkäfer in den Obstbäumen. Schweiz. Bauer, Bern, 56, 1902, No. 18, (1-2).

**Barbey**, A. Ravages des tostriches dans les vergers de la vallée du Rhône. Journ. Soc. Agricult. Suisse Rom., Lausanne, **43**, 1902, (139-157, 163-179, av. 2 pls.). Lenne, P. Liste des Bostrychides recueillis en Birmanie par feu M. G. Q. Corbett. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (85).

La distribution géographique des coléoptères bostrychides dans ses rapports avec le régime alimentaire de ces insectes. Ròle probable des grandes migrations humaines. Paris, C.-R. Acad. sci., **137**, 1903, (133-135).

### SPECIAL.

Apate capucina L. Du Buysson, H. Feuille jeunes natural., l'aris, (sér. 4), 34, 1903, (19).

Giraudeau, H. *l.e.* 33, 1903, (223).

Bostrichus, Der Fichtenborkenkäfer J. W. A. Schweiz. Landw. Zeitschr., Aarau, **30**, 1902, (702-705, mit 3 Fig.).

*capucinus* I. Lesse, P. Feuille jeunes natural., Paris, (sér. 4), **34**, 1903, (38).

*parallelus* Lesne, Certral Provinces, attacking bambco, description, life history, relations to the forest, points for observation. **Stebbing**, E. P. Departmental notes on Insects that affect Forestry, No. 2. Calcutta, 1903, (174, pl. viii, fig. 2). 25 cm.

Dinoderus pilifrons Lesne, attacking bamboo in Mysore and Dehra Dun; *D. minutus*, Fabr. attacking bamboo in tropical regions, description, life, history, relations to the forest, protection, points for observation. **Stebbing**, E. P. Departmental notes on Insects that affect Forestry, No. 2. Calcutta, 1903, (168, pl. viii, fig. 1a, b 172). 25 cm.

Sinoxylon crassum Lesne, attacking "Sal" and Terminalia tomentosa trees in United Provinces, description, life history, protection and remedies. S. anale Lesne, attacking hamlco (tent poles) in United Provinces. Note ca protection. Stebbing, E. P. I.e. (164, 166). 25 cm.

### PTINIDAE.

Anobium albonotatum n. sp. Pic, M. Echange, Lyon, 19, 1903, (100). Dorcatoma pilosella n. sp. **Bettter.** Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (44).

Dryophilus pusillus var. semipallidus n. var. Pic, M. Echange, Lyon, 17, 1903, (79).

*Episernus henschi* n. sp. **Beitter**, E. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (12).

Ernobius nn. spp. Pic, M. Echange, Lyon, 17, 1902, (79-80).

normandi, note. Pic, M. Paris, Bul. soc. ent., **1902**, (250-251).

*schilskyi* n. sp. **Beitter**, E. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (15).

Gibboxyletinus, essai dichotomique snr le genre. Pic, M. Bruxelles, Ann. Soc. eut. Belgique, **46**, 1902, (132-133).

Hedobia maxima n. sp. Pic, M. Echange, Lyon, 19, 1903, (106).

Lasioderma turkestanicum n. sp. Retter, E. Brünn, Verh. Nat. Ver., 40, (1901), 1902, (36).

Microptinus melitensis n. sp. Pic, M. Echange, Lyon, 19, 1903, (162).

Niptomezium n. gen., N. patagonicum, N. sparsepilosum nn. spp. Sibérie. Pto, M. l.c. 17, 1902, (50).

Ochina bicolor n. sp. Calki, E. Budapest, Anu. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (445-446).

Paranobium forbesii n. sp. Gahan, C. J. Nat. Hist. Sokotra, (290).

Priartobium n. gen., P. serrifune n. sp. **Beitter**, E. Brünn, Verh. Natf. Ver., **40**, (1901), 1902, (24).

Ptinus, synonymisches Verhältniss. Volgts, A. Allg. Zs. Ent., Neudamm, 8, 1903, (234–239).

Tunisie. Pic, M. Echange, Lyon, 17, 1901, (79).

(Eutaphrus) atticus n. sp. Pic, M. l.c. (32).

rytherias n. var. Pic, M. l.c. 19, 1903, (170).

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Santiagonus n. gen., S. gorhami n. sp. Pic, M. J.c. 19, 1903, (107).

Theca nn. spp. Pic, M. *l.c.* 17, 1902, (80).

Trichodesma lateritia n. sp. Pic, M. l.e. 19, 1903, (106-107).

\_\_\_\_\_ pu!chra n. sp. Pic, M. l.e. (119).

Trigonogenius perurianus n. sp. Pic, M. I.c. (99).

Tryptopithys dendrobiformis n. sp. Retter. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (25).

Xestobium ernobiforme n. sp. Reitter. l.c. (13).

Xyletinus nn. spp. Beitter. l.c. (28-33).

Echange, Lyon, 17, 1902, (72).

Xyletominus n. subgen. of Xyletinus. Retter, E. Brünn, Verh. Natf. Ver., 40, (1901), 1902, (28).

Xystrophorus barbarus n. sp. Pic, M. Echange, Lyon, 19, 1903, (97-98).

*mouhoti* n. sp. **Pic**, M. *l.c.* **19**, 1903, (99-100).

# MALACODERMIDAE.

# [INCL. MELYRIDAE.]

Generai..

olivier, E. Coléoptères Lampyrides capturés à Dardjilling par M. Harmand. Bul. Muséum, Paris, **1903**, (19-20).

### Special.

Anthocomus (? Paremballus) abdominalis n. sp. Pic, M. Echange, Lyon, 19, 1903, (106).

Astylus nn. spp. Pic, M. l.c. (105).

Attalus nn. spp. Afrique. Pic, M. l.c. (113-115).

<u>guerryi</u> n. sp. Pic, M. Naturaliste, Paris, (sér. 2), 25, 1903, (81).

*meitensis* Poyr. var., testaceipes n. var. **Pic, M.** Echange, Lyon, **19**, 1903, (169).

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Cautires np. spp. Bourgeois, J. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (737-750).

Cladophorus nn. spp. Bourgeois, J. I.e. (737-750).

Conderis foersteri n. sp. - Bourgeois, J. l.c. (737-750).

Danacaea nn. spp., n. var. Pic, M. Echange, Lyon, 17, 1903, (31, 56, 79).

\_\_\_\_\_ nn. spp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902-1903, (29-31).

Dasytes nn. spp. Danube, Sämarcand. Schilsky, J. von. Küster, die Käfer Euroras, 40, (95-96).

. sp. Pic, M. Echange, Lyon, 17, 1903, (129).

*minimus* n. sp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902-1903, (32).

Divales densepunctatus n. sp. Pic, M. Echange, Lyon, **19**, 1903, (177).

Drilus flarescens Rossi, life history. Crawshay, I. R. London, Trans, Ent. Soc., 1903, (39-52, pls. I-II).

*latithorax* n. sp. **Pic**, M. Echange, Lyon, **17**, 1902, (24).

Hapalochrous nn. spp. Pic, M. Naturaliste, Paris, (sér. 2), 25, 1903, (81).

flavolimbatus Muls. var. cretica n. var. Pic, M. Echange, Lyon, 19, 1903, (177).

Haplocnemus nn. spp., II. pertusus var. elongatior n. var. Pic, M. Echange, Lyon, 17, 1902, (32).

J. Küster, die Käfer Europas, 40, (97– 98).

Hypebaeus cameroni. Pic, M. Echange, Lyon, 19, 1903, (177).

thoraz n. var. **Pic**, M. *l.c.* (129).

Laius jucundus var. maculithorax n. var. Pic, M. Naturaliste, Paris, (ser. 2), 25, 1903, (81). Luciola nitescens n. sp. Darjeeling. 011v1er, E. Bul. Muséum, Paris, 1903, (19-30).

*perrieri* n. sp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (205).

Lygistopterus (Adoceta) barkeri n. sp. Bourgeois, J. *l.c.* **71**, (2° somest.), 1902, [1903], (737-750).

Malachius atticus n. sp., M. sponsus var. cypriacus n. var. Pic, M. Echange, Lyon, 17, 1902, (24).

rubidus Er., seine Varietäten und sein Verbreitungsgebiet. Baeekmann, J. J. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (92–93, mit 1 Fig.).

Malchinus tokatensis n. sp. Plc, M. Echange, Lyon, 19, 1903, (97).

Malthinus pallidipes Frm. var. biinterruptus n. var. Pic, M. l.c. (169).

taygctanus n. sp., M. turcicus var. dalmatinus n. var. Pic, M. l.c. 17, 1902, (63-64).

Malthodes nn. spp. Pic, M. I.c. 19, 1903, (155-158).

(Podistrina) bugnioni n. sp. Pic, M. *l.c.* 17, 1902, (71).

n. var. Pic, M. *l.c.* (153-155).

M. l.c. (90).

Osphia cylindromorpha var. dclagrangei n. var. Plc, M. l.c. 17, 1902, (64).

Phosphaenus hemipterus Goeze, capture. Viturat, abbé. I.c. (69-70).

Plateros dispallens Wik. attacking teak in the Central Provinces; *P.* sp. attacking teak in Central Provinces, description, life history, relations to the forest, points for observation. **Stebbing**, E. P. Departmental notes on **Insects** that affect Forestry. No. 2. Calcutta, 1903, (176, 178, pl. VIII, fig. 3). **Podabuus luteonolatus** n. sp., nn. varr. **Pic, M.** Echange, Lyon, **17**, 1903, (47, 55).

*procerulus* var. *bosnicus* n. var. **Pic**, M. *l.c.* **19**, 1903, (115).

Podistrina impennis n. sp. 3 Tunisia. Pic, M. *l.c.* 17, 1902, (35).

notaticollis Brg. sp., P. latepallida, P. viturati nn. spp. Pic, M. l.c. (48).

*cameroni* n. sp. **Pic**, M. *l.e.* **19**, 1903, (155–158).

Psilocladus harmandi n. sp. Darjeeling. Olivier, E. Bul. Muséum, Paris, 1903, (19-20).

Rhagonycha de France. Pic, M. Echange, Lyon, 17, 1902, (53-54).

sp., nn. spp. Pic, M. l.c. (55-58).

Silis nn. spp. Fairmaire, L. Paris, Ann. soc. ent., 73, (2<sup>e</sup> semest.), 1903, (205-208).

*Telephorus*, pluie de chenilles. **Porel**, F. Lausanne, Bul. Soc. Sci. Nat., (sór. 4), **39**, 1903, (XXXIX-XL); Arch. Sci. Phys., Genève, (sór. 4), **16**, 1903, (347-348).

larves. Pluie de chenilles. **Paes**, H. Arch. Sci. Phys., Genève, (sér. 4), 16, 1903, (239).

Troglops palaestinus n. sp. Pic, M. Echange, Lyon, 17, 1902, (31).

Urodactylus uncipennis n. sp. Pic, M. l.c. 19, 1903, (106).

Xylobanus nn. spp. Bourgeois, J. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (737-750).

### CLERIDAE.

### GENERAL.

**Schenkling**, S. Coleoptera malacodermaea fam. *Cleridae*. In : Wytsman, P., Genera Insectorum. Bruxelles, 1903, (124, et 5 pls. hors texte). 4to. fr. 35,10.

den. D. ent. Zs., Berlin, **1903**, (9-16).

### SPECIAL.

Apopempsis n. gen. (~ Cardiostichus), A. pulchra n. sp. Schenkling, S. Stettiner ent. Ztg, 64, 1903, (17). Archalius n. gen., A. densegranatus n. sp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (532–568).

Aulicus? saturatus n. sp. Madagascar. Pairmaire, L. l.c. (532-568).

Blaceiophthalmus n. nom. for Metabasis Gorh. Schenkling, S. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (47).

Cladiscus perrieri n. sp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (532-568).

Clerus, der Gattungename. Schenkling, S. Allg. Zs. Ent., Neudamm, 8, 1903, (202-204).

Clerus sp. predaceous on bark and wood borers, description, life history, relations to the forest, protection, points for observation. **Stebbing**, E. P. Departmental notes on Insects that affect Forestry: No. 2. Calcutta, 1903, (213, pl. x, figs. 4, a-b). 25 cm.

scitulus n. sp. Schenkling, S. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (396).

Cylidrus cyaneus Fabr., faunistische Bemerkungen. <u>Schenkling</u>, S. *l.c.* (397-399).

Damiricus n. gen., D. cribripennis n. sp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 71, (2<sup>e</sup> semest.), 1902, (532-568).

Evenus nn. spp. Madagascar. Fairmaire, L. l.c. (532-568).

Eburifa nn. spp., E. kingi nn. varr. Madagascar. Fairmaire, L. l.c. (532-568).

Lemidia malthinus Newm., L. hilaris Newm., faunistische Bemerkungen. Schenkling, S. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (399).

Lyostylus nn. spp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (532-568).

Myrmecomaea nn. spp. Madagascar. Fairmaire, L. *l.c.* (532-568).

Opilo nn. spp. Madagascar. Fairmaire, L. l.c. (532-568).

Pallenis nn. spp. Madagascar. **Fairmaire**, L. Paris, Ann. soc. ent., **71**, (2<sup>e</sup> semest.), 1902, (532-568).

Patulcius n. gen., P. ovulum, P. rufonitens, P. terminatus, P. ustukatus nu. spp. Madagascar. Fairmaire, L. l.c. (532-568).

Pelonium nn. spp. Brazil. Gorham, H. S. D. ent. Zs., Berlin, **1903**, (169-171).

Rhopaloclerus nn. spp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 71, (2<sup>e</sup> semest.), 1902, (532-568).

Salarium n. gen., S. mirum n. sp. Madagascar. **Fairmaire**, L. l.e. (532-568).

Stenocylidrus nn. spp. Madagascar. Fairmaire, L. l.c. (532-568).

Stenoplicum n. gen., S. perrière n. sp. Madagescar. Fairmaire, L. l.c. (532-568).

Synellapus n. gen., S. indigaceus n. sp. Madagascar. **Fairmairs**, L. l.c. (532– 568).

Teloclerus n. gen. Schenkling, S. in Wtysman P., Genera Inse ctorum, Bruxelles, 1903, (9).

Tencrus tittipennis n. sp. Schenkling, S. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (396–397).

Thanasimus sp. prox. nigricollis from N.W. Himalayas. Description of beetle, larva, and life history and food. A note on the discovery of Thanasimus sp. prox nigricollis. **Stebbing**, E. P. Calcutta, J. As. Soc. Beng., **72**, pt. ii, 1903, (104–110).

Tilloclerus griseocau.latus n. sp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (532– 568).

Tillus apicolis n. sp. Madagascar. Fairmaire, L. l.c. (532-568).

Trichodes, der Gattungsname. Schenkling, S. Allg. Zs. Ent., Neudamm, 8, 1903, (202-204).

Tricladus n. gen., T. allunudi n. sp. Madagascar. **Fairmaire**, L. Faris, Ann. soc. ent., **71**, (2° semest.), 1902, (532– 568).

Trogodendron aurotomentosum n. sp. Schonkling, S. Stettiner ent. Ztg., 64, 1903, (17).

Nenorthrius simplex n. sp. Schenkling, S. l.c. (16).

### ELATERIDAE.

Ade'ocera angustata n. sp. Sahlberg, J. Helsingfors, Ofvers. F. Vet. Soc., 45, [No. 10], 1902-1903, (25).

Aeolus nn. spp. Südamerika. Schwarz, O. D. ent. Zs., Berlin, 1903, (65-69).

Agonischius nn. spp. Indo-Chine française. Floutiaux, E. Paris, Ann. soc. ent., 71, (2° semest.), 1903, (569– 580).

Agrypnus moscri n. sp. Schwarz, O. D. ent. Zs., Berlin, 1903, (357).

Athous exclamationis n. sp. Nordamerika. Schwarz, O. l.c. (58).

Campylus acutongulus n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902-1903, (26).

Cardiophorus nn. spp. Fairmaire, I.. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (204).

nn. spp. Schwarz, O. D. ent. Zs., Berlin, 1903, (370-372).

Cebrio gigas F., nouvel habitat. Pic, M. Echange, Lyon, 19, 1603, (184).

Chrosis coledonica n. sp. Schwarz, O. D. ent. Zs., Berlin, 1903, (390).

Corymbites trapezicollis n. sp. Nordamerika. Schwarz, O. l.c. (59).

Cosmesus flavus n. sp. Südamerika. Schwarz, O. *l.c.* (77).

Crepidomenus nn. spp. Schwarz, O. I.c. (391-392).

Cryptohypnus parculus n. sp. Indo-Chine française. Fleutiaux, E. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (575).

*tristis* n. sp. **Fairmaire**, I. *l.c.* **72**, (2° semest.), 1903, (203–204).

Ctenicera fairmairei n. sp. Madagascar. Fleutiaux, E. Naturaliste, Paris, (sér. 2), 25, 1903, (45).

Dicronychus ambiguus n. sp. Schwarz, O. D. ent. Zs., Berlin, 1903, (365).

Dicteniophorus nn. spp. Schwarz, O. I.e. (396-397).

Diploconus nigerrimus n. sp. Indo-Chine française. Floutiaux, E. Paris, Ann. Soc. ent., 71, (2<sup>e</sup> semest.), 1903, (569-580).

Dorygonus holomelas n. sp. Fairmaire, L. l.c. 72, (2° semest.), 1903, (203).

# Goleoptera.

887

Drasterius nn. spp. Nordamerika. Schwarz, O. D. ent. Zs., Berlin, 1903, (57-58).

Elater ruficeps var. semiobscurus n. var. Pic, M. Echange, I.yon, 17, 1902, (72).

Esthesopus nn. spp. Südamerika. Schwarz, O. D. ent. Zs., Berlin, 1903, (75-76).

Euplastius n. gen. (~Aplastus Lec.), E. athoiformis, E. athoides nn. spp. Nordamerika. Schwarz, O. I.c. (60-62).

Glyphonyz nn. spp. Indo-Chine francaise. Fleutiaux, E. Paris, Ann. Soc. ent., 71, (2° semest.), 1903, (569–580).

Hapatesus minutus n. sp. Schwarz, O. D. ent. Zs., Berlin, 1903, (395).

Hemicleus minutus n. sp. Schwarz, O. L.c. (358).

Hemiops substriata n. sp. Indo-Chine française. Floutiaux, E. Paris, Ann. Soc. ent., 71, (2<sup>e</sup> semest.), 1903, (569-580).

Horistonotus cinctipennis n. sp. Südamerika. Schwarz, O. D. ent. Zs., Berlin, 1903, (74).

Hypnoidus monadicoides n. sp. Schwarz, O. I.c. (369).

Idiotropia capensis n. sp. Schwarz, O. I.c. (375).

Lacon nn. spp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (181-259).

\_\_\_\_\_ nn. spp. Indo-Chine francaise. Fleutiaux, E. l.c. 71, (2<sup>e</sup> semest.), 1903, (569–580).

D. ent. Zs., Berlin, **1903**, (377-381).

Lobotarsus nn. spp. Schwarz, O. *L.c.* (360-362).

Lissomus nn. spp. Deutsch Ostafrika. Schwarz, O. *l.c.* (399-400).

Ludius (Metanomus) atriceps n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902–1903, (24).

*akbesiana* n. var. **Pic**, M. Echange, Lyon, **19**, 1903, (129).

Lycoreus decorsei n. sp. Madagascar. Fleutiaux, E. Naturaliste, Paris, (sér. 2), 25, 1903, (45). Lycoreus oculipsnnis n. sp. Madagascar. Fairmaire, L. *l.e.* 23, 1903, (36).

Margogastrius n. nom. = Gastrimargus Schw. Schwarz, O. Stettiner. ent. Ztg, 1902, (309); D. ent. Zs., Berlin, 1903, (80).

Megapenthes nn. spp. Indo-Chine française. **Fleutiaux**, E. Paris, Ann. Soc. ent., **71**, (2° semest.), 1903, (569– 580).

nn. spp. Schwars, O. D. ent. Zs., Berlin, 1903, (367-368).

Metablax nn. spp. Schwarz, O. l.c. (393-395).

Monocrepidius nn. spp. Südamerika. Schwarz, O. *I.c.* (63-64, 383-389).

jobiti n. sp. Indo-Chine française. **Fleutiaux**, E. Paris, Ann. Soc. ent., **71**, (2° semest.), 1903, (569– 580).

Nomopleus flavus n. sp. Schwarz, O. D. ent. Zs., Berlin, 1903, (374).

Odontonychus sambesianus n. sp. Schwarz, O. I.c. (366).

Palaeoxenus (Cryptostoma) dohrnii. Fenyes, A. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (220).

Paracardiophorus dissimilis n. sp. Schwarz, O. D. ent. Zs., Berlin, 1903, (390).

jenissecnsis n. sp. Sahlberg, J. Öfvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902-1903, (27).

Paracosmesus nn. spp. Südamerika. Schwarz, O. D. ent. Zs., Berlin, 1903, (79).

Parapomachilius brunnipennis n. sp. Südamerika. Schwarz, O. I.c. (73).

Parhemiopinus n. gen., P. nigripennis n. sp. Schwarz, O. I.c. (357-378).

Pectocera sulcata n. sp. Indo-Chine française. **Fleutiaux**, E. Paris, Ann. Soc. ent., **71**, (2<sup>\*</sup> semest.), 1903, (573).

Pomachilius nn. spp. Südamerika. Schwarz, O. D. ent. Zs., Berlin, 1903, (70-72).

Silesis difficilis n. sp. Indo-Chine française. **Floutiaux**, E. Paris, Anr. Soc. ent., **71**, (2° semest.), 1903, (569– 580). Steatoderus nn. spp. Schwarz, O. D. ent. Zs., Berlin, 1903, (373).

O. l.c. (63-80).

Symphostethus n. gen., S. collaris n. sp. Schwarz, O. l.c. (382).

*Tetralobus* nn. spp. **Schwarz**, O. *l.c.* (363-364).

Tilotarsus nn. spp. Schwarz, O. l.e. 358-359).

#### BUPRESTIDAE.

#### GENERAL.

Kerremans, C. Considérations sur les Buprestides. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (165-173).

Fasc. 12. Coleoptera serricornia. Pts. 1-3 fam. Buprestidae. In : Wytsman, P., Genera insectorum, Bruxelles, 1902-1903, (1-240). fr. 9.60.

**Skinner**, H. Notes on *Buprestidae* (Coleoptera), with descriptions of new species. Philadelphia, Pa., Ent. News Acad. Nat. Sci., **14**, 1903, (236–239, with 1 pl.).

#### SPECIAL.

Acmaeodera biedermani n. sp. Skinner, H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (239).

falli n. nom. for subcyanea Fall; nn. spp. Mexico, Colorado, Chili. Kerremans, C. in : Wytsman, P., Genera insectorum, Bruxelles, 1902, (28-29, 34).

Actenodes pyropyga n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (200).

Agaeocera fenyesi n. sp. Mexico. Kerremans, C. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (60).

Agrilaxia n. gen., A. gounellei, A. bella, A. saturalis, A. lata, A. rugosa nn. spp. S. America. Kerremans, C. In: Wytsman, P. l.c. (177-179). Anilara tasmanica n. sp. Kerremans, C. In: Wytsman, P. l.e. (170).

*viridula* n. sp. Kerremans, C. Hamburg, Jahrb. Wies. Anst., **19**, (1901), Beih. 2, 1903, (60).

Anthazia nn. spp. Kerremans, C. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (172-174).

Aphanisticus emarginatus F., new to Britain. Donisthorpe, H. Ent. Rec., London, 15, 1903, (265).

Brachycoraebus n. gen. Kerremans, C. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (234).

Brissis curta n. sp. Kerremans, C. In: Wytsman, P. I.c. (162).

Chalcophorella n. gen. Kerremans, C. In: Wytsman, P. l.c. (79).

Chalcoplia thoracica n. sp. Kerremans, C. In : Wytsman, P. l.c. (79).

Chrysobothris nn. spp. Kerremans, C. In: Wytsman, P. *l.c.* (184-188).

*platensis* n. sp. Kerremans, C. Hamburg, Jahrb. wiss. Anst., **19**, (1901), Beih. 2, 1903, (60).

Chrysochroa fulvipes n. nom. for kerremansi Weyers. Kerremans, C. in: Wytsman, P., Genera Insectorum, Bruxelles, 1902, (48).

Chrysodema roseiventris n. sp. Kerremans, C. In: Wytsman, P. I.e. (75).

Cisseis nn. spp. Kerremans, C. In: Wytsman, P. l.c. (228-229).

Coroebus fasciatus Vill. — bifasciatus Ol. et ses parasites. Perraudière, R. de la. Paris, Bul. soc. ent., **1902**, (251-253).

Corydon nn. spp. Kerremans, C. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (225).

Cryptodactylus usyersi n. sp. Kerremans, C. In: Wytsman, P. l.c. (225).

Cyphogastra nn. spp. Kerremans, C. In: Wytsman, P. *l.c.* (87).

Dactylozodes nn. spp. Kerremans, C. In : Wytsman, P. l.c. (215).

Discoderes nn. spp. Kerremans, C. In: Wytsman, P. *l.c.* (223).

Ectinogonia intermedia n. sp. Karremans, C. In : Wytsman, P. I.c. (129). Entomogaster cyanipennis n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (201).

Euamyia n. nom. for Eumerus. Kerremans, C. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (238).

Halecia fulvipes n. sp. Kerremans, C. In: Wytsman, P. *l.c.* (70).

Haplotrinchus n. gen., H. australicus n. sp. Kerremans, C. In: Wytsman, P. l.c. (126-127).

Hyperantha nn. spp. Kerremans, C. In: Wytsman, P. *l.c.* (216).

Iritotaenia wahnesi n. sp. Nouvelle-Guinée allemande. Heller, K. M. Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (234-235).

Isaniris cribripennis n. sp. Madagascar. Fairmaire, L. l.c. 45, 1901, (227-228).

Julodella Sem., synopsis specierum, 2 nn. spp. **Semenov**, A. P. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (161–165).

Julodis bucharica Sem. 1893, additamentum ad descriptionem. Semenov, A. P. *l.c.* (190).

*Lacteola* n. sp. S. Africa. **Kerremans**, C. in : Wytsman, P., Genera Insectorum, Bruxelles, 1902, (12).

Madecassia n. gen. Kerremans, C. In: Wytsman, P. *l.c.* 1903, (82).

Megalozantha n. subgen. (Chrysochroa) for bicolor Fabr., &c. Kerremans, C. in : Wytsman, P. l.c. 1902, (47).

Melanophila australasiae n. sp. Kerremans, C. Hamburg, Jahrb. wiss. Anst., 19, (1901), Beih. 2, 1903, (59).

Melobasis nn. spp. Kerremans, C. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (158-159).

Metasambus n. gen. Kerremans, C. In: Wytsman, P. *l.c.* (237).

Nasciodes n. gen. Kerremans, C. In: Wytsman, P. *l.c.* (147).

Neobuprestis n. gen. Kerremans, C. In: Wytsman, P. I.c. (136).

Neocoraebus n. gen. Kerremans, C. In : Wytsman, P. *l.c.* (230).

Neojulodis n. subgen. (Julodis) for J. picta. Thunb. Kerremans, C. in : Wytsman, P. l.c. 1902, (6-13). Nisibia n. gen., N. boopis n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (9–11, 35–37).

Paracastalia n. gen. for P. playiata, P. duvivieri. Kerremans, C. in : Wytsman, P., Genera Insectorum, Bruxelles, 1902, (17, 22).

Paraeupta bellicosa n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (181).

mans, C. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (84).

mans, C. Hamburg, Jahrb. wiss. Anst., 19, (1901), Beih. 2, 1903, (58).

Pithiscus nn. spp. Kerremans, C. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (201-202).

Polybothris nn. spp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (200).

Polycestella n. gen., for Polycesta curta Kerr. Kerremans, C. in : Wytsman, P., Genera Insectorum, Bruxelles, 1902, (17, 25).

Polycestoides n. gen., P. chrysis n. sp. Borneo. Kerremans, C. in : Wytsman, P. l.c. (17, 27).

Pseudotaenia n. gen. Kerremans, C. In: Wytsman, P. *l.c.* 1903, (81).

Psiloptera nn. spp. Kerremans, C. In: Wytsman, P. *l.c.* (95-102).

Ptosima-maculata Herb var. brevinotata n. var. Pic, M. Echange, Lyon, 19, 1903, (169).

Pygicera n. gen. Kerremans, C. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (145).

Sphenoptera, revision des espèces de la region éthiopienne. 5 nn. spp. Supplément. Jakovlev, V. E. St. Peterburg, Hor. Soc. Ent. Ross., **36**, 1903, (231-239).

subgen., Chrysoblemma Jak. paléarctiques, 5 nn. spp. from Transcaucasia, Persia, Algeria. Jakovlev, V. *l.c.* (248-277).

In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (112-123).

Sphenoptera fallaciosa n. nom. = S. dianthi Gory 1841. Notes coléoptérologiques IV. Jakovlev, V. E. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (215-.216).

caucasie. Jakovlev, V. E. l.c. (386-.387).

Jakovlev, V. E. *l.c.* (33-35).

Sponsor oblongus n. sp. Mauritius. Kerremans, C. in : Wytaman, P., Genera Insectorum. Bruxelles, 1902.

Steraspis fischeri n. sp. Kerremans, -C. Hamburg, Jahrb. Wiss. Anst., 19, (1901), Beih. 2, 1903, (57).

Sternocera eternicornis L., Eier. Beichert, A. Ent. Jahrb., Leipzig, 12, 1903, (174-175).

Stigmodera nn. spp. Blackburn, T. Australia. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (306-307).

In : Wytsman, P., Genera Insectorum, Bruxelles, 1903, (207-210).

Strigula coerulea n. sp. Kerremans, C. In: Wytsman, P. l.c. (224).

Trachys pustulosa n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (201).

Tyndaris nn. spp. Schwarz ms. in Skinner, H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (236– 239, with pl.).

skinner, H. *l.c.* (236–239, with pl.).

Yanima n. gen. Kerremans, C. In: Wytsman, P., Genera Insectorum, Bruxelles, 1903, (143).

### TENEBRIONIDAE.

#### GENERAL.

Reitter, E. Bestimmungs-Tabelle der Tenebrioniden - Abtheilungen: Tentyrini und Adelostomini aus Europa und den angrenzenden Ländern. Brünn, Verh. Natf. Ver., **39**, (1900), 1901, 4(82-197).

### SPECIAL.

Adarius perrieri n. sp. Madagascar. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest), 1903, (200).

Adelostoma subtile n. sp. **Bettter**. Brünn, Verh. Natf. Ver., **39**, (1900), 1901, (82-197).

Anatolia nn. spp. Reitter. I.e. (110-127).

Asida hispidula n. sp. Afrique. Pic, M. Echange, Lyon, 19, 1903, (113-115).

Caedius breris n. sp. **Fairmaire**, I.. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (207).

Calyptopois escherichi n. sp. **Reitte**r. Brünn, Verh. Natf. Ver., **39**, (1900, 1901, (82-197).

Camaria nn. spp. Tonkin. **Pairmaire**, L. Bruxelles, Ann. Soc. ent. Belgique, **47**, 1903, (15–17).

Camar'odes suturatus n. sp. Pairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (209).

Cedrosius caerulans n. sp. Fairmaire, L. l.c. (209).

Chirocharis n. gen. = Chiroscelis australis Westw. Kolbe, H. J. Arch. Natg., Berlin, 69, Bd 1, 1903, (179).

Cilibe nn. spp. Chatham Islands and New Zealand. **Sharp**, D. Ent. Mag., London, **39**, 1903, (105-109).

Colposcelis nn. spp. Reitter. Brünn, Verh. Natf. Ver., **39**, (1900), 1901, (82-197).

Corticeus rufithorax n. sp. **Pic**, M. Echange, Lyon, **19**, 1903, (162–163).

Cyriogeton nn. spp. Tonkin. Pairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (13-20).

Dendarus latiesimus n. sp. **Stierlin**, G. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **10**, 1902, (425–427).

Derosphaerus crassicrus n. sp. Tonkin. Fairmaire, I. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (13).

Earophanta n. subgen. for Earophila preocc. Semenov, A. Rev. Russ. Ent, Jaroslavlĭ, 3, 1903, (172).

Earophila n. subgen. for Platyope autumnalis n. sp. Semenov, A. P. l.c. (8-13). Erulipus n. gen., E. fr:hetorferi n. sp. Tonkin. Fairmaire, I. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (14).

Eucyrtus nn. spp. Ceylon. Oertzen, E. von. D. ent. Zs., Berlin, 1903, (234).

*Eulipus punctidorsis* n. sp. **Reitter**. Brünn, Verh. **Natf. Ver.**, **39**, (1900), 1901, (82–197).

Eutagenia minutissima n. sp. Pic, M. Echange, Lyon, 19, 1903, (162).

Eutochia nn. spp. **Fairmaire**, I. Paris, Ann. soc. eut., **72**, (2° semest.), 1903, (208).

Exangeltus gracilior n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. B. Soc., 27, 1903, (303).

Gerandryus spadix var., hymettensis n. var. Pic, M. Echauge, Lyon, 17, 1902, (64).

Gnathosia nn. spp. Reitter. Brünn, Verh. Natf. Ver., 39, (1900), 1901, (82-197).

Gonodera bicolor Reitt var., obscuripes n. var. Pic, M. Echange, Lyon, 17, 1902, (56-57).

\_\_\_\_\_ delagrangeri, l'identité générique. **Pic, M**. *l.c.* (68–69).

macrophthalma Reth. var. latior n. var. Pic, M. l.c. 19, 1903, (163).

Habrobates n. gen., H. vernalis n. sp. Transcaspia. Somenov, A. P. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (11–12).

Hegeterocara n. gen., H. arabica n. sp. Reitter. Brünn, Verh. Natf. Ver., 39, (1900), 1901, (190).

Helops (Nalassus) phaecus n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902–1903, (33).

Hemipristis n. gen., H. ukamia n. sp. Kolbe, H. J. Arch. Natg., Berlin, 69, Bd 1, 1903, (177-178).

Hyonthis nn. spp. **Beitter**. Brünn, Verh. Natf. Ver., **39**, (1900), 1901, (139).

Hypophloeus flatipennis Mots. found in Pinus gerardiana in birk beetle galleries; description and note. Stebbing, E. P. Departmental Notes on Insects that affect forestry No. 2 Calcutta, 1903, (274, pl. XIII, fig. 5). 25 cm. Melusmocara n. gen. **Beitter**. Brünn, Verh. Natf. Ver., **39**, (1900), 1901, (82-197).

Mesostenopa brevicornis n. sp. Beitter. l.c. (142).

Micipsina n. gen. Beitter. I.c. (188).

Microdera strigirentris n sp. Chinese Turkestan. **Better**. l.c. (157).

Neocisha n. subgen. (Pachychile). Beitter, E. l.c. (147).

Nesojena nn. spp. **Fairmaire**, I.. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (211-212).

Oterophloeus deflexangulus n. sp. Reitter. Brünn, Verh. Nalf. Ver., 39, (1900), 1901, (82-197).

Oxycara deronectina n. sp. Reitter. l.e. (82-197).

Oxycarops n. gen. Reitter. l.c. (82-197).

Pachychile nn. spp. **Reitter**. l.c. (148-152).

Pachychilina n. gen., P. oxyophthalmus n. sp. **Beitter**. l.c. (145-146).

Parecatus dorsoplicatus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest), 1903, (206).

Pentaphyllus testaceus Hellwig, an unrecorded addition to the British Coleoptera. Janson, O. E. Ent. Rec., London, 15, 1903, (128).

Phaleria provincialis var., puelin. var. Pic, M. Echange, Lyon, 17, 1902, (64).

*Plastica* n. gen., *P. polita* n. sp. Bolivia. **Waterhouse**, C. O. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (563-564).

Platyope (Earochila) nn. spp. Transcaspia. **Semenov**, A. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (9–10).

Plesiophthalmus nn. spp. Tonkin. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, **1903**, (17).

Prioproctus n. gen., P. oertzeni n. sp. Kolbe, H. J. Arch. Natg., Berlin, 69, Bd 1, 1903, (174-176).

Prioscelis nn. spp. Kolbe, H. J. lc. (169-173).

Pristophilus n. gen. = Chiroscelis passaloides Westw. Kolbe, H. J. l.c. (174). ----

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# Coleoptera.

Anthicus jacobsonin. sp. Transcaspia. Pic, M. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (88-89).

gonie. Pic, M. Echange, Lyon, 17, 1902, (49-51).

\_\_\_\_\_ peragalloi n. sp.; A. (Aulacoderus) sefrensis var. zizyphi n. var. Pic, M. l.e. (65).

(Ichyropalpus) tenax n. sp., A. (Mierohoria) tumidipes var. jurjurensis n. var. Pic, M. l.c. (24).

? Copobaenus bicolor var. atriceps n. var. Pic, M. I.c. (24).

. Formicomus nn. spp. Inde méridionale. Pic, M. Paris, Ann. soc. Ent., 72, (2° semest.), 1903, (348–352).

*albipes* n. sp. **Fairmaire**, I. *I.c.*, **72**, (2° semest.), 1903, (181-259).

------ annamitus n. sp. Pic, M. Echange, Lyon, 19, 1903, (107).

(Antelephilus) ruficollis var. annamitus n. var. Pic, M. Naturaliste, Paris, (sér. 1), 25, 1903, (56).

thomsoni n. sp. E. Indies. **Pic, M.** Bruxelles, Ann. Soc. Ent. Belgique, **45**, 1901, (90).

Hylobaenus n. gen., H. notaticollis n. sp. **Pic**, M. Echange, Lyon, **17**, 1902, (33-34).

Hylophilus nn. spp. Océanie. Pic, M. Paris, Bul. soc. ent., 1902, (227-228).

nn. spp. Pic, M. Echange, Lyon, 17, 1902, (33-34); 19, 1903, (98-99).

raffrayi var. chevreuxi n. var. Pic, M. l.c. (119).

Hypsogenia centroasiatica var. obscuripes n. var. Pic, M. I.c. (98).

Leptaleus geayi n. sp. Pio, M. Bul. Muséum, Paris, 1903, (20-21). Macratria strictula n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (181-259).

<u>rubroapicata</u> n. sp. **Pic,** M. Echange, Lyon, **19**, 1903, (120).

<u>tecumanensis</u> n. sp. Pic. M. Naturaliste, Paris, (sér. 2), **25**, 1903, (81).

Mecynolarsus nn. spp. Manille. Pio, M. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (643-648).

notatus n. sp. Inde méridionale. Pic, M. *l.c.*, 72, (2<sup>e</sup> semest.), 1903, (348-352).

Melos trapeziderus n. sp. Gahan, C. J. Nat. Hist. Sokotra, 2.

Notoxus dugesi n. sp. Mexico. Pic, M. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (89).

monoceros L. dóvastant les betteraves. **Sempolovski**, A. Gaz. roln., Warszawa, **43**, 1903, (281–282).

raddei n. sp. Sibiria orient, (Amur). Pic, M. St. Peterburg, Ann. Mus. zool. Ac. Sc., **8**, 1903, (88– 89).

Ochthenomus baeri n. sp., var., and O. nigrobinnurus n. var. Manille. Pic, M. Paris, Ann. Soc. ent., 71, (2<sup>e</sup> semest.), 1902, (643-648).

Scraptia nn. spp. Pic, M. Echange, Lyon, 19, 1903, (119–120).

Steriphodon indicum n. sp. **Pic**, M. l.c. (120).

Telesinus n. gen., T. griseus n. sp. Madagascar. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (181-259).

Tomoderus arcuatoceps n. sp. Pic, M. Naturaliste, Paris, (sér. 2), 25, 1902, (81).

Latipennis n. sp. Pic, M. Bul, Muséum, Paris, 1908, (20-21).

Trotomma nn. spp. **Pic**, M. Echange, Lyon, **17**, 1902, (32-33, 80).

### OEDEMERIDAE.

Exocalopus antennalis n. sp. New Zealand, Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (70-71).

Trogophloeus nn. spp. Bernhauer, M. Wien, Verh. ZoolBot. Ges., 51, 1901, (651-655).

bodemeyeri n. sp. Bernhauer, M. *l.c.* 52, 1902, (695-705).

(Carpalimus) corcyreus n. sp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902–1903, (8).

*maritimus* n. sp. New Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (615).

Velleius dilatatus F., Symbiose. Scriba, E. Insektenbörse, Leipzig, 20, 1903, (212).

### TRICHOPTERYGIDAE.

Sahlberg, J. Demonstration einer Sammlung von Ingenieur Isaac Ericson in Mölndal angefertigter Photographien sehr kleiner Coleopteren. Helsingfors, Comptes rendus du Congrès des Naturalistes et Médecins du Nord tenu à Helsingfors du 7 au 12 juillet 1902, 1903, VI Section, (18-19).

Jonsen-Haarup, A. C. The smallest beetles. (Danish) Bergen, Naturen, 27, 1903, (49-53, with fig.).

# CORYLOPHIDAE.

Corylophodes marginicollis Lee, early stages. Morrill, A. W. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 4, 1903, (135-138, with pl.).

## SCAPHIDIIDAE.

Scaphisoma nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (98-99).

Sciatrophes n. gen., S. latens n. sp. Australia. Blackburn, T. l.c. (100).

### HISTERIDAE.

#### GENERAL.

Lewis, G. On new species of *Histeridae* and notices of others. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (417-429).

## SPECIAL.

Acritus nigricornis E. H. Gerhardt, J. D. ent. Zs., Berlin, 1903, (239-240).

Althanus n. gen., A. teretrioides n. sp. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (420-421).

Carcinops, synoptische Tabelle der Arten. Csiki, E. Allstt. Közlem., Budapest, 2, 1903, (127).

Chlamydopsis Westwood, type C. striatella. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (428).

Dendrophilus, synoptische Tabelle der Arten. **Gsikt**, E. Állatt. Közlem., Budapest, **2**, 1903, (126–127).

*Eblisia* nn. spp. New Guinea. Sumatra. **Lewis**, G. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (422-423).

Epieus, synoptische Tabelle der Arten. Ostki, E. Állatt. Közlem., Budapest., 2, 1903, (126).

Eutidium n. gen., E. pacale n. sp. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (419).

Hetaerius ferrugineus, Beschreibung. Osilci, E. Allatt. Közlem., Budapest, 2, 1903, (127-128).

tristriatus. Brues, C. T. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (147-149, with fig. in text).

Hister, synoptische Tabelle der Arten. Osiki, E. Állatt. Közlem., Budapest, 2, 1903, (119-126).

<u>— nn. spp.</u> Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (423–425).

Holopolta plana, Beschreibung. Cuilti, E. Állatt. Közlem., Budapest, 2, 1903, (117).

Hypocaecus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (108).

Niponius canalicollis Lewis, United Provinces and N. W. Himalayas, predaceous upon Tomicus sp. Polygraphus major and P. minor; description, life history, relations to the forest. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2. Calcutta, 1903, (248, pl. XIII, fig. 6).

Notodoma orientale n. sp. Birma. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (425-426).

Notolister sanguinosus n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (9).

Orectoscelis n. gen., O. humeralis n. sp. Queensland. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser 7), 12, 1903, (426-427).

Orphinium n. gen. Lewis, G. l.c. (419).

Paromalus, synoptische Tabelle der Arten. Osiki, E. Állatt. Közlem., Budapest, 2, 1903, (127).

nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (103).

Petalosoma n. gen. Lewis, G. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (418-419).

Platysoma, synoptische Tabelle der Arten. Ostiki, E. Állatt. Közlem., Budapest, 2, 1903, (118-119).

Saprinus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (106-107).

*pygidialis* n. sp. Lewis, G. Ann. Mag. Nst. Hist., London, (Ser. 7), **12**, 1903, (428-429).

Satrapes sartorii, Beschreibung. Cstiki, E. Allatt. Közlem., Budapest, 2, 1903, (128).

Teretriosoma nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1902, (110-111).

Teretrius doddi n. sp. Australia. Blackburn, T. *l.c.* (109).

Tribalus, synoptische Tabelle der Arten. **Calici**, E. 'Allatt. Közlem, Budapest, **2**, 1903, (126).

### PHALACRIDAE.

Litocrus maritimus n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (111).

#### NITIDULIDAE.

Aethina nn. spp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (115-116).

Carpophilus melanopterus, parasitism, color. Murtfeldt, M. E. Philadelphis, Pa., Ent. News Acad. Nat. Sci., 14, 1903, (293-295).

*oblongopunctatus* n. sp. Inde septentrionale. **Grouvelle**, A. Paris, Ann. soc. ent., **82**, 1903, (108).

*vitraci* n. sp. Guadeloupe. Grouvelle, A. *l.c.* 71, (2<sup>e</sup> semest.), 1902, [1903], (756-769).

Cryptarcha nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (116-117).

*lesnei* n. sp. Inde septentrionale. **Grouvelle**, A. Paris, Ann. soc. ent., **72**, 1902, (118).

Epuraea nn. spp. Inde septentrionale. Grouvelle, A. *I.c.* (109-111).

*Europs* nn. spp. Guadeloupe. **Grou**velle, A. *l.c.* **71**, (2° semest.), 1902, [1903], (756-769).

nn. spp. Inde septentrionale. **Grouvelle**, A. *l.c.* **72**, 1902, (123-124).

Haptoneura nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (112).

Heterelus kraatzi n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (108).

Macrostola straminea var. vitraci n. var. Guadeloupe. Grouvelle, A. l.c. 71, (2° semest.), 1902, [1903], (756-759).

Meligethes anatolicus n. sp. Konia. Schilaky, J. Küster, die Käfer Europas, 40, (94).

*circularis* n. sp. Siberia. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902-1903, (18).

*rubricollis* n. sp. Inde. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (125).

Omosiphora sibirica n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902-1903. 17. Omosita co'on, Larve und Puppe. Eichelbaum, F. All. Zs. Ent., Neudamm, 8, 1903, (81-87).

discoidea Er., new for Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (261-309).

ornata n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (12).

Pallodes nn. spp. Inde septentrionale. Grouvelle, A. l.c. (117).

Pocadius harman li n. sp. Inde septentrionale. Grouvelle, A. l.c. (114).

Pseudocamptodes blackburni n. sp. Grouvelle, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1902, (184).

**Grouvelle**, A. Paris, Ann. Soc. ent., **72**, 1903, (126).

Soronia nn. spp. Inde septentrionale. Grouvelle, A. *l.c.* (113).

elonjata n. sp. Cameron, M. Ent. Mag., London, **39**, 1903, (97-98).

### TROGOSITIDAE.

Thymalus marginicollis, metamorphosis. Breed, R. S. Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., 40, 1903, (317-332, with pl.); (Cambridge, Mass., Cont. Zool. Lab. Mus. Comp. Zool. Harvard Coll., No. 145). Separate. 24.5 cm.

### COLYDIIDAE.

### GENERAL.

Wasmann, E. Gattungstabelle der Cossyphodidae. Wien, Ann. NatHist. Hofmus., 16, 1901, (95-96).

### SPECIAL.

Ablabus blackburni n. sp. Grouvelle, A. Bruxelles, Ann. Soc. cnt. Belgique, 45, 1902, (184).

Bothrideres picipes n. sp. New Zesland. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (618). Catolaemus multimaeulatus n. sp. Guadeloupe. **Grouvelle**, A. Pari-. Ann. Soc. ent., **71**, (2° semest.), 1902. [1903], (756-769).

Cerylon alienigenum n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (91-182).

A. Bruxelles, Ann. Soc. Ent. Belgique. 45, 1902, (186).

humeridus n. sp. Indeseptentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (121-124).

Colyclodes bostrychoides n. sp. Guadeloupe. Grouvelle, A. I.c. 71, (2° semest., 1902, [1903], (756-769).

Consyphodi'es n. gen. for Cossyphodites woodroofei (Pér.) Brauns. Brauns, H. Wien, Ann. NatHist. Hofmus., 16, 1901, (91-94).

Deretaphrus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust. Trans. R. Soc., 27, 1903, (122–128).

Labromimus harmandi n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (120).

*Lemnis lherminieri* n. sp. Guadeloupe. Grouvelle, A. *l.c.* 71, (2° somest.), 1902, [1903], (756-769).

Metopiestes indicus n. sp. l'Inde. Grouvelle, A. *l.c.* 72, 1903, (126).

Microvonus montanus n. sp. Inde septentrionale. Grouvelle, A. l.c. (121).

Neotrichus guadalupensis n. sp. Guadeloupe. **Grouvelle**, A. *I.e.* 71, (2° semest.), 1902, [1903], (756-769).

Philothermus guadalupensis n. sp. Guadeloupe. Grouvelle, A. I.c. (756-769).

Phormesa carpentaria n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (118).

Pseudeba n. gen., P. novici n. sp. Australia. Blackburn, T. I.e. (119-120).

Pubala n. gen., P. squamifera p. sp. Grouvelle, A. Bruxelles, Ann. Soc. ent. Belgique, 45, 1902, (184–185).

Pycnomerus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (131–132).

Zealand. Broun, T. Ann. Mag. Nat.

Hist., London, (Ser. 7), 11, 1903, (617-618).

Tadima lateralis n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (118).

Tarphiosoma bouvieri n. sp. Inde septentrionale. Grouvelle, A. Paris, Ann. soc. ent., 72, 1903, (119).

Xylobaenus indicus n. sp. Inde septentrionale. Grouvelle, A. l.c. (119).

### CUCUJIDAE.

Cathartus (?) cairnensis n. sp. Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (91-182).

Crypta nn. spp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (181-259).

Cryptamorpha peregrina n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (153).

Cucujus sp. N. W. Himalnyas, predaceous upon Tomicus sp. Polygraphus major and P. minor, Pityogenes coniferae, Scolytus major and S. minor; desciption, life history, relations to the Forest. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2, Calcutta, 1903, (249, pl. xii, fig. 7). 25 cm.

Laemophloeus nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (140-146, 182).

\_\_\_\_\_ nn. spp. **Grouvelle**, Λ. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1902, (186-189).

*dufani* n. sp. Guadeloupo. **Grouvelle**, A. Paris, Ann. soc. ent., **71**, (2° semest.), 1902, [1903], (756– 769).

——— harmandi n. sp. Inde septentrionale. Grouvelle, Λ. l.c. 72, 1903, (122).

Lathropus brightensis n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (147).

costatus n. sp. Guadeloupe. Grouvelle, A. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (756-769). Myrabolia nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (148–149).

Platamus dufani n. sp. Guadeloupe. Grouvelle, A. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (756-769).

Platycotylus coloratus n. sp. Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (147).

Prostomis gladiator n. sp. Australia. Blackburn, T. *l.e.* (135).

Psammoecus nn. spp. Australia. Blackburn, T. I.c. (154-155).

Silvanus aridulus n. sp. Australia. Blackburn, T. I.c. (151).

Telephanus guadalupensis n. sp. Guadeloupe. Grouvelle, A. Paris. Ann. soc. ent., 71, (2° semest.), 1902, [1903]. (756-769).

### CRYPTOPHAGIDAE.

(*ryptophague* nn. spp. **Sahlberg**, J. Ofvers. F. Vet. Soc., Helsingfors, **45**, [No. 10], 1902-1903, (15-16).

nigro - apicalis n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (156).

Hapalipe guadalupensis n. sp. Guadeloupe. Grouville, A. Paris, Ann. soc. ent., 71, (2° semest.), 1902, [1903], (756– 769.

Loberus ritraci n. sp. Guadeloupe. Grouvelle, A. I.c. (756-769).

Pharazonota indica n. sp. Inde. Grouvelle, A. I.c. 72, 1903, (127).

Telmatophilus sublautus n.sp. Australia. **Blackburn**, T. Adelaide, S. Aust., Trans. R. Soc., **27**, 1903, (158).

Tomarops n. gen., T. punctatus n. sp. Inde méridionale. Grouvelle, A. Paris, Ann. soc. ent., (2<sup>e</sup> semest.), 1903, (343).

#### THORICTIDAE.

Thorictus foreli, Symbiose. **Kolbe.** H. J. Berlin, SitzBer. Ges. natf. Freunde, **1903**, (237–253).

kaznakori n. sp. Ost-Buchars. Schmidt, R. H. St. Peterburg, Ann. Mus. zool. Ac. Sc., 8, 1903, (389-391). Thorictus ruzskii n. sp. Transcaspia. Semenov, A. P. Rev. Russ. Ent., Jarcslavlí, 3, 1903, (353-357).

### EROTYLIDAE.

### GENERAL.

Xambeu. Mœurs et métamorphoses des coléoptères appartenant au groupe des Erotylides. Naturaliste, Paris, (sér. 2), 25, 1903, (91-92, 407).

### SPECIAL.

*Helota pauli* n. sp. **Weise**, J. D. ent. Zs., Berlin, **1903**, (171).

Titubaea peyerinhoffi n. var. (var. de 13 punetata Desh.?) **Pic, M. Echange**, Lyon, **17**, 1902, (48).

### MYCETOPHAGIDAE.

Berginus ritraci n. sp. Guadeloupe. Grouvelle, A. Paris, Ann. soc. ent., 71, (2° semest.), 1902, (1903), (756-769).

Diphyllus maindroni n. sp. Inde méridionale. Grouvelle, A. l.c. 72, (2<sup>e</sup> semest.), 1903, (342).

ia. Blackburn, T. Adelaide, S. Austrafrans. R. Soc., 27, 1903, (91–182).

Diplocoelus opacior n. sp. Australia. Blackburn, T. *l.e.* (158).

### COCCINELLIDAE.

#### GENERAL.

Bowditch, F. C. Notes on Casey's rovision of the American Coccinellidae. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (205-207).

Burgess, A. F. Economic notes on the family *Coccinellidae*. Washington, D.C., Bull. U.S. Dept. Agric., Div. Ent., No. 40, 1903, (25-32).

Long, C. W. Notes on *Coccinellidae*. New York, N.Y., J. Ent. Soc., **11**, 1903, (35-45, with pl.).

Coccinellidac, notes. l.c. (193-213, with 2 pls.).

Leonhardt, W. Ueber das massenhafte Auftreten von Coccinelliden im Alten Lande im Winter 1901-02. Aus d. Heimat, Bremerhaven, 1901-02, 1903, (53-54).

Weise, J. Synonymische Bemerkungen [betr. Coccinellidae]. D. ent. Zs., Berlin, 1903, (424).

### SPECIAL.

Brachyacantha aperta n. sp. Wein, J. D. ent. Zs., Berlin, 1903, (208).

Chilocorus similis, parasite of. Marlatt, C. L. Washington, D.C., Proc. Ent. Soc., 5, 1903, (138-139).

Cleothera staudingeri n. sp. Weise, J. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (284).

Coccinella sp. United Provinces, predaceous upon Monophlebus stebbingi, description, life history, relations to the forest, protection, points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry. No. 2. Calcutta, 1903, (324, pl. XIX, fig. 5, a. b, c, d). 25 cm.

*conglobata*, Bemerkungen über die ersten Entwicklungestadien. Weise, J. D. ent. Zs., Berlin, 1903, (164-166).

Coelophora femorata n. sp. Weim, J. Bruxelles, Ann. Soc, ent. Belgique, 45, 1901, (91).

Corystes cavifrons n. sp. Weise, J. D. ent. Zs., Berlin, 1903, (208).

Cycloneda pomacea n. sp. Weise, J. I.c. (207).

*Epilachna* nn. spp. Wetse, J. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (280–281); D. ent. Zs., Berlin, 1903, (229–232).

Epiphylaz nn. spp. Madagascar. Pairmaire, L. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (339); Paris, Ann. soc. ent., 72, (2° semest), 1903, (242-243).

Hippodamia rickmersi n. sp. Welle, J. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (281).

Lithophilus minutus n. sp., L. eribratellus Frm. var. limbatus n. var. Pie, M. Echange, Lyon, **19**, 1903, (170).

M. l.c. (89-90).

881

Macrolateia n. gen., M. arcula n. sp. Weise, J. D. ent. Zs., Berlin, 1903, (230-231).

Megilla maculata var. floridana n. var. Long, C. W. New York, N.Y., J. Ent. Soc., 11, 1903, (35-45, with pl.).

Ortalia pectoralis n. sp. Weise, J. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (284).

Pelina geometrica n. sp. Weise, J. l.c. (282).

Platynaspis weyersi n. sp. Weise, J. l.c. (92).

Propiptus n. gen., P. subopacus n. sp. Weise, J. l.c. (95-96).

Pullus nn. spp. Weise, J. I.c. (94).

saginatus n. sp. Weise, J. l.c. (285-286).

Rodolia punctigera n. sp. Weise, J. I.c. (93).

Scymnus limonii n. sp. Isle of Wight. Donisthorpe, H. Ent. Rec., London, 15, 1903, (287).

Sidis relictus n. sp. Weise, J. Bruxelles, Ann. soc. ent. Belgique, 45, 1901, (96).

Solanophila nn spp. Weise, J. l.c. (273-279).

Sticholotis melanaria n. sp. Weise, J. D. ent. Zs., Borlin, 1903, (232).

Tozotoma rugulosa n. sp. Weise, J. Bruxelles, Ann. Soc. ent. Belgique, 46, 1901, (273).

Verania bennigseni n. sp. Weise, J. D. ent. Zs., Berlin, 1903, (231).

### ENDOMYCHIDAE.

Danaë nn. spp. Africa. Weise, J. D. ent. Zs., Berlin, 1903, (201-202).

Dapsa graeca n. sp. Pic, M. Echange Lyon, 17, 1903, (71-72).

------ syriaca n. sp. Pic, M. l.e. (33).

*Rhymbus* nn. spp. **Weise**, J. D. ent. Zs., Berlin, **1903**, (204-206).

Stenotarsus nn. spp. Africa. Weise, J. l.c. (202-203). (N 2-9053)

# LATHRIDIIDAE.

#### GENERAL.

Belon, O. P. Fascicule 4. Coleoptera clavicornia, fam. *Lathridiidae*. In : Wytsman, Genera insectorum. Bruxelles 1902, (40, av. 1 pl.). fr. 9.60.

#### SPECIAL.

Cortilena Motsch, note sur le genre, et synopse de toutes les espèces actuellement connues. **Belon**. Bruxelles, Anu. Soc. ent. Belgique, **45**, 1901, (86-89).

Enicmus anthracinus Mnnh. sp. pr. Gerhardt, L. D. ent. Zs., Berlin, 1903, (238-239).

Isidus letourneuxi n. sp. Pic, M. Echange, Lyon, 17, 1903, (64).

### DERMESTIDAE.

Brachysphyrus n. gen., B. inornatus n. sp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 27, 1903, (160).

Cryptorhopalum nn. spp. Australia. Blackburn, T. I.c. (169–170).

Dermestes luganensis n. sp. Stierlin, G. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1902, (425-427).

Hadrotoma marginata Payk., a hatching experiment. (Swedish) Mjöberg, E. Entomol. Tidskr., Stockholm, 22, 1901, (189–190).

Megatoma innotata n. sp., M. graeseri Reitt var. latenotata n. var. Pic, M. Echange, Lyon, 17, 1902, (48).

Trogoderma un. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc. 27, 1903, (163-165).

*aegyptiaca* n. sp. Assuan. **Pic**, M. Echange, Lyon, **17**, 1901, (33).

### BYRRHIDAE.

Curimus abbreviatus n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902–1903, (19).

Microchaetes nn. spp. Australia. Blackburn, T. Adelaide, S. Aust., Trans. R. Soc., 1903, (175-176). Meniellus n. gen., M. kohlschütteri n. sp. Afrika. Weise, J. Arch. Natg., Berlin, 69, Bd. 1, 1903, (202).

Menius nn. spp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (292-336).

Meroscalsis n. gen verwandt mit Thlaspida Weise. M. radiata Boh., M. pulcherrima, M. selecta nn. spp Spacth, F. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., 1, 1903, (113-118).

Mesomphalia nudoplagiata n. sp. Brazil. **Spacth**, F. Wien, Verh. Zool. Bot. Ges., **51**, 1901, (333–350).

Mesopa n. gen., M. fulvipes n. sp. India. Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (112-113).

Mesotoma n. gen., M. viridipennis n. sp. Cameroons. Jacoby, M. Stettiner, ent. Ztg., 64, 1903, (327-328).

Metriona 6-guttata Boisd., Systematisch, M. holmgreni Boh., System. Beschreibung, M. diomma Boisd., M. circumdata Herbst., Beschreibung; 6 nn. spp. **Spacth**, F. Budapest, Ann. Hist.-Nat. Mus. Nat. Hung., **1**, 1903, (121– 136).

Metriopepla obscuricollis n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (10).

Micropyga n. gen., M. transvalense n. sp. Transvasl. Jacoby, M. Entomologist, London, 36, 1903, (92-93).

Mimastra costatipennis n. sp. India. Jacoby, M. Bruxelles, Ann. Soc. Ent. Belgique, 47, 1903, (123).

Mimastracella n. gen., M. hirsuta n. sp. India. Jacoby, M. l.c. (119-120).

Monocida thoracica n. sp. Natal. Jacoby, M. London, Trans. Ent. Soc., 1903, (26).

Monolepta nn. spp. S. Africa. Jacoby, M. l.c. (33-34).

nn. spp. Afrika. Weise, J. Arch. Natg., Berlin, 69, Bd. 1, 1903, (211-214).

M. Bruxelles, Ann. Soc. Ent. Belgique, 47, 1903, (126–127). Monolepta nn. spp. Cameroons. Jacoby, M. Stettiner Ent. Ztg, 64, 1903, (335).

Monoxia puncticollis, notes. Chittenden, F. H. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (111-113).

Morphosphaeroides n. gen., M. africana n. sp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (318).

Myrcinella n. gen., M. minor n. sp. Madagascar. Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (300-301).

Nephrella nn. spp. India. Jacoby, M. l.c. 47, 1903, (100-102).

Nerissidius rugulosus n. sp. Afrika. Weise, J. Arch. Natgr., Berlin, 69, Bd. 1, 1903, (203).

Nicea nn. spp. Neu-Guinea. Weise, J. D. ent. Zs., Berlin, 1903, (335-336).

Nirinoides n. gen., N. staudingeri, N. abdominalis nn. spp. Cameroons. Jacoby, M. Stettiner ent. Ztg, **64**, 1903, (322-323).

Nisotra nn. spp. Madagascar. Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (297).

Jacoby, M. Stettiner ent. Ztg, 64, 1903, (306).

Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (109).

Nodostonopa n. gen., N. subcostata n. sp. Madagascar, Jacoby, M. l.c. 45, 1901, (293-294).

**17.** 1903, (96–98).

Notomela fulvofasciata n. sp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (308).

Nyctiphantus Sem. ejusque speciebus. N. custos n. sp. Turkestan. (Russ.) Semenov, A. P. St. Peterburg, Hor. Soc. Ent. Ross., 36, 1903, (176–182).

Odontota dorealis, habits, with notes on related species. Onittenden, F. H. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 38, 1902, (70-90).

Oedionychis nilgiriensis n. sp. India. Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (110).

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# Coleoptera.

901

Oides nn. spp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (310-311).

Orina (Chrysochloa) tristis Fabr., var. smaragdina Weise. Chapman, T. A. Trans. Ent. Soc., London, 1903, (245– 261, pls. X, X1).

Orthaea fulva n. sp. India. Jacoby, M. Bruxelles, Ann. Soc. Ent. Belgique, 47, 1903, (107).

Orthaulaca limbatipennis n. sp. Jacoby, M. l.c. (80–128).

Otilea nn. spp. Peru. Jacoby, M. Entomologist, London, 36, 1903, (183, 210-211).

Oxylepus kassmati n. sp. **Spacth**, F. Wien, Verh. ZoolBot. Ges., **51**, 1901, (750-756).

Pachnephorus graecus n. sp. Greece. Pic, M. Echange, Lyon, 17, 1901, (35).

Palaeophyla n. gen., P. granulosa, P. semiregosa nn. spp. Natal. Jacoby, M. London, Trans. Ent. Soc., 1903, (23-25).

Pantocometis horni n. sp. Ceylon. Welse, J. D. ent. Zs., Berlin, 1903, (27).

Parnops atriceps n. sp. Pic, M. Echange, Lyon, 19, 1903, (163).

Paropisterna striata n. sp. Weise, J. D. ent. Zs., Berlin, 1903, (108).

Patrisma. **Spacth**, F. Wien, Verh. ZoolBot. Ges., **51**, 1901, (333-350).

Peploptera braunsi n. sp. South Africa. Jacoby, M. Entomologist, London, 36, 1903, (92).

Pheloticus nn. spp. Madagascar. Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (291-292).

gascar. Fairmaire, L. Paris, Ann. eoc. ent., 72, (2° semest.), 1903, (258).

Philopona n. gen., P. tibialis, P. parvula nn. spp. Afrika. Wetse, J. Arch. Natg., Berlin, 69, Bd. 1, 1903, (216-217).

Phygasia basalis n. sp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (304).

Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (103). Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (334).

Phyllotreta nn. spp. Afrika. Weise, J. Arch. Natg., Berlin, 69, Bd. 1, 1903, (217-218).

*hispanica* n. sp. **Pic**, M. Echange, Lyon, **17**, 1903, (115).

Physodactyla gerstaeckeri n. sp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (292-336).

Physoma klugi n. sp. Madagascar. Jacoby, M. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (299).

Physonychis dohrnin. sp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (309).

Plagiasma n. gen., P. sublineata n. sp. Afrika. Weise, J. Arch. Natg., Berlin, 69, Bd. 1, 1903, (209).

Plagiodera nn. spp. Africa. Weise, J. Arch. Natg., Berlin, **69**, Bd. 1, 1903, (204-205).

*nigrita* n. sp. Madagascar. Jacoby, M. Bruxelles, Ann. Soc. Ent. Belgique, **45**, 1901, (295).

Platyxantha nn. spp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (328-333).

\_\_\_\_\_ nn. spp. Afrika. Weise, J. D. ent. Zs., Berlin, 1903, (324-331).

Jacoby, M. London, Trans. Ent. Soc., 1903, (33).

Podagrica impressipennis n. sp. Natal. Jacoby, M. l.c. (11-12).

(Nisotra) nigripennis n. sp. Jacoby, M. Bruxelles, Ann. Soc. Ent. Belgique, 47, 1903, (109).

Porphyraspis nn. spp Columbia. . **Spacth**, F. Wien, Verh. ZoolBot. Ges., **51**, 1901, (333-350).

Porphytoma n. gen. ~ Pachytoma. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (319).

Prasocuris varendorffi n. sp. Afrika. Weise, J. Arch. Natg., Berlin, 69, Bd. 1, 1903, (205). 4831

Pseudaphthona n. gen., P. humeralis n. sp. Indis. Jacoby, M. Bruxelles, Aun. Soc. Ent. Belgique, 47, 1903, (104-105).

Pseudocolaspis nn. spp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (297).

Pseudapophylia n. gen. Jacoby, M. London, Trans. Ent. Soc., 1903, (23).

Pseudocrania assimilis n. sp. Afrika. Weise, J. D. ent. Zs., Borlin, 1903, (321).

Pseudolema n. gen., P. saturalis n. sp. Jacoby, M. Bruxelles, Ann. Soc. Ent. Belgique, 47, 1903, (82-83).

Pseudolognatha n. gen. type P. immaculata Jac., P. salisburiensis n. sp. Mashonaland. Jacoby, M. London, Trans. Ent. Soc., 1903, (31-32).

Pseudomesomphalia nn. spp. S. America. **Spaeth**, F. Wien, Verh. ZoolBot. Gee., **51**, 1901, (333-350).

Pseudoscelida nn. spp. India. Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (124).

Pseudostonopa n. gen., P. bicolor n. sp. Jacoby, M. l.c. (98-99).

Rhaphidopalpa africana n. sp. E. Africa. Weise, J. D. ent. Zs., Berlin, 1903, (36).

Rhembastus subaeneus n. sp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (302).

\_\_\_\_\_ nn. spp. Madagascar. Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (290-291).

Sardoides transcalensis n. sp. Transvaal. Jacoby, M. London, Trans. Ent. Soc., 1903, (26-27).

Sebaethe nn. spp. India. Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (105-107).

*pallidicornis* n. sp. Cameroons. Jacoby, M. Stettiner ent. Ztg, 64, 1903, (304).

Sikkimia metallica n. sp. India. Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 47, 1903, (122).

Stilodes nn. spp. South America. Jacoby, M. London, Proc. Zool. Soc., 1903, 2, (47-50). Stratioderes minor n. sp. Afrika. Welse, J. Arch. Natg., Berlin, 69, Bd. 1, 1903, (204).

Stromatium barbatum Fabr., from Central Provinces attacking bamboo, description, life history, relations to the forest, points for observation. **Stebbing**, E. P. Departmental notes on Insects that affect Forestry No. 2. Calcutta, 1903, (182).

Syagrus lefevrei n. sp. Madagascar. Jacoby, M. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (289).

Thlaspidula. **Spacth**, F. Wien, Verh. ZoolBot. Ges., **51**, 1901, (333-350).

Tituboea (Anomoea) insularis n. sp. Trinidad. Jacoby, M. Entomologist, London, 36, 1903, (209-210).

Tozaria n. gen. Afrika. Weise, J. Arch. Natg., Berlin, 69, Bd. 1, 1903, (215).

Weiseana barkeri n. sp. Natal. Jacoby, M. London, Trans. Ent. Soc., 1903, (16-17).

Zeugophora nn. spp. Jacoby, M. Bruxelles, Ann. Soc. Ent. Belgique, 47, 1903, (81-82).

Zygogramma nn. spp. South America. Jacoby, M. London, Proc. Zool. Soc., 1903, 2, (55–58).

### CERAMBYCIDAE.

### GENERAL.

Fairmaire, L. Descriptions de quelques longicornes du Mexique. Paris, Bul. soc. ent., 1902, (243-246).

Lameere, A. Etude sur la phylogénie des longicornes. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (314-323).

Pic, M. Diagnoses préliminaires de longicornes provenant de Chine. Echange, Lyon, **19**, 1903, (105).

### SPECIAL.

Abareus n. gen., A. cuneatus n. sp. Cameroons. Jordan, K. Nov. Zool., Tring, 10, 1903, (185-186).

Acanthocinus, note. Schaeffer, C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (235-237). Jordan, K. l.c. (195).

Acridocephala nn. spp. Africa. Jordan, K. l.c. (153–154).

Acridocera n. gen., A. siczae n. sp. Congo. Jordan, K. l.c. (180).

Acridoschema atricollis n. sp. Congo. Jordan, K. l.c. (178).

Africa. Jordan, K. l.c. (195).

Adetus nn. spp. Bolivia. Belon, Bruxelles, Ann. Soc. ent. Belgique, 46, 1902, (464-472).

Aedeus marginatus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (248).

Agapanthia subflavida n. sp. Pic, M. Echange, Lyon, 19, 1903, (163).

Aliturus griseopubescens n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (252).

Alphitopola nn. spp. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (160– 162).

Anaesthetis Mulsant, Die palaearktischen Vertreter; 3 nn spp. 1 n. var. Transcaspia, Altai, Amur, and Ussuri. **Basekmann**, I. 1. Rev. Russ. Ent., Jaroslavli, **3**, 1903, (393-396).

Ancylistes nigrozonatus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (255).

Anisogaster nigroclaratus n. sp. Fairmaire, L. l.c. (251).

Anoploderma, old and new species. Lameere, A. Bruxelles, Ann. Soc. ent. Belgique, **46**, 1902, (210-212).

Anthophilax hoffmanii n. sp. N. Carolina. Beutenmäller, W. New York, N.Y., Bull. Amer. Mus. Nat. Hist., 19, 1903, (518).

Anthribola nivigutta:a n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 24, 1902, (286-287).

Aphrodisium saxosicolle n. sp. Mexique. Fairmaire, L. Paris, Bul. soc. ent., 1902, (243-246).

Apiogaster nn. spp. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (140– 141). Arianida n. gen., A. mactata n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (256-257).

Arrhythomus perrieri n. sp. Fairmaire, L. l.c. (249).

Artelida nn. spp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 24, 1902, (286-287).

Bangalaia nn. spp. Africs. Jordan, K. Nov. Zool., Tring, 10, 1903, (162– 164).

Bizadus aparus n. sp. Cameroons. Jordan, K. *l.c.* (152).

Brachytatus obliquepictus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (256).

Caenoptera marmottani Bris., note. Lavagne, H. Echange, Lyon, 18, 1902, (85-86).

Calanthemis nn. spp. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (142-143).

Callichroma rhodoscelis n. sp. W. Africa. Jordan, K. l.c. (193).

Callipogon (Eoxenus) relictus Sem. 3 nondum descriptus. (Russ.) Semenov, A. P. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (372-376, cum fig.).

Calobrium n. gen., C. perrieri n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (251).

Caloclytus syriacus n. sp. Pic, M. Echange, Lyon, 17, 1902, (25).

Cerambyz sp. attacking blue pine and spruce, note on its occurrence and points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry, No. 2. Calcutta, 1903, (246). 25 cm.

Chariesthes affinis n. sp. Congo. Jordan, K. Nov. Zool., Tring, 10, 1903, (173).

Chelidones africalis n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 24, 1902, (280-287).

Clytanthus nn. spp. German East Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (144-145).

Clytus popoui Maunerk. Suvorov, G. L. St. Peterburg, Hor. Soc. Ent. Russ., 36, 1903, (XXXII).

Cnemolia n. gen., C. mina, C. guttata nn. spp. Africa. Jordan, K. Nov. Zool., Tring, **10**, 1903, (154–155). 4831

Cordylomera vittata n. sp. German East Africa. Jordan, K. l.c. (138).

Criocephalus polonicus Motech., genus and species new to Britain. Eilis, W. H. Ent. Rec., London, 15, 1903, (259-261).

Cubilia nn. spp. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (181–182).

Cyclotaenia n. gen., C. discus n. sp. West Africa. Jordan, K. l.e. (176-177).

Cyrtognathus nn. spp. Mexico. Fairmaire, L. Paris, Bul. soc. ent., 1903, (243-246).

Derobrachus, note. Schaeffer, C. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (235–237).

Derolus nn. spp. Africs. Jordan, K. Nov. Zool., Tring, 10, 1903, (136-138).

Diadelia laterilia n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (255).

Diaspila n. gen., D. periscelis n. sp. West Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (192).

Discoceps nn. spp. Congo. Jordan, K. l.c. (179-180).

Dolomicus n. gen., D. perrieri n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (250).

Dorcadion abulense n. sp. Spain. Lauffer, G. Soc. Entomol., Zürich, 17, 1902, (105).

**Pic**, M. Echange, Lyon, **19**, 1903, (170– 171, 178).

Drototelus n. gen., D. politus n. sp. N. Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (81-82).

Ectenessa nn. spp. Brazil. Belon. Bruxelles, Ann. soc. ent. Belgique, 46, 1902, (13-18).

Eunidia mimica n. sp. Congo. Jordan, K. Nov. Zool., Tring, 10, 1903, (186).

Exocentrus nn. spp. Cameroons. Jordan, K. l.c. (189-190).

Frea cineta n. sp. West Africa. Jordan, K. l.c. (178).

Jordan, K. l.c. (194).

. Glenea nn. spp. Africa. Jordan, K. l.c. (190-191).

------- langana n. sp. Pie, M. Echange, Lyon, 19, 1903, (107).

Gnathoenia congoana n. sp. Congo belge. Belon. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (246).

Graciella nn. spp. Cameroons. Jerdan, K. Nov. Zool., Tring, 10, 1903, (174).

Grammoptera ingrica Baeckmann, note supplémentaire sur la description et la distribution géographique. (Russ.) **Baeckmann**, I. I. St. Peterburg, Ann Mus. zool. Ac. Sci., **8**, 1903, (VIII-X).

Hapheniastus nn. spp. Africa. Jerdan, K. Nov. Zool., Tring, 10, 1903, (174–175).

Hippopsicon pleuricum n. sp. Congo. Jordan, K. l.c. (186-187).

Hybolasius nn. spp. N. Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (82–85).

Hyllisia loloa n. sp. Cameroons. Jordan, K. Nov. Zool., Tring, 10, 1903, (187).

Hypsideres n. gen., H. curvinucha n. sp. Ashanti. Jordan, K. l.c. (177-178).

Idiocalla n. gen., I. postica n. sp. German East Africa. Jordan, K. l.e. (139–140).

Ischnia n. gen., I. picta n. sp. Cameroons. Jordan, K. I.c. (184-185).

Latisternum macropus n. sp. Congo. Jordan, K. l.c. (155).

Leiopus nn. spp. Africa. Jordan, K. l.c. (188–189).

Leptocera cyanipennis n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (36).

Leptoeme n. gen., L. rantha, L. acme nn. spp. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (134-135).

Linopodius longicollis n. sp. Fairmaire, L. Paris, Ann. soc. ent., 71, (2° semest.), 1903, (252).

Lygrus bicinctus n. sp. N. Cameroons. Jordan, K. Nov. Zool., Tring, **10**, 1903, (139).

Macrochia n. gen., M. lutosa n. sp. Congo. Jordan, K. l.c. (176).

Mallonia pauper n. sp. Congo. Jordan, K. l.c. (182).

# Coleoptera.

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Margites sulcifrons n. sp. Angola. Jordan, K. l.c. (135).

Mastodera nn. spp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 24, 1902, (286-287).

Melanopolia nn. spp. Africs. Jordan, K. Nov. Zool., Tring, 10, (151-152).

Micurus obliquatus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (181-259).

Miocris n. gen., M. nigroscutatus n. sp. Mexique. Fairmaire, L. Paris, Bul. soc. ent., 1902, (243-246).

Monochamus nn. spp. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (145– 149).

Musius fuscicornis n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (249).

Nitocris nn. spp. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (191).

Nyctopais tripuncta n. sp. Cameroons. Jordan, K. l.c. (170-171).

Oberea linearis, Lebensgeschichte. Nielsen, J. C. Zool. Jahrb., Jena, Abt. f. Syst., 18, 1903, (659-664, mit 1 Taf.).

. Obriaceum gazella n. sp. German East Africa. Jordan, K. Nov. Zool., Tring, **10**, 1903, (138–139).

Oeax nn. spp. Congo. Jordan, K. l.c. (156-157).

Oncideres sladeni n. sp. Brazil. Gahan, C. J. and Arrow, G. T. London, Proc. Zool. Soc., 1903, 2, (254, pl. XXVIII, fig. 9).

Opeamates piceonitens n. sp. Madagascar. **Fairmaire**, L. Naturaliste, Paris, (sér. 2), **23**, 1903, (10).

Oxyeaula n. gen., O. verruca n. sp. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (133).

Oxyhammus nn. spp. Africa. Jordan, K. l.c. (150-151).

Pachycytes n. gen., P. ruforestitus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° somest.), 1903, (253).

Pachystola trituberculata thomensis n. sp. W. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (194). Paralocus brevipennis n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (249).

Parandra nn. spp. Lameere, A. Bruxelles, Ann. soc. ent. Belgique, 46, 1902, (69–100).

Paratoxotus inexpectatus n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (10).

Parocaz n. gen. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (157).

Paroeme nn. spp. Africs. Jordan, K. l.c. (134).

Phloeus n. gen., P. brevis n. sp. Sierra Leone. Jordan, K. l.c. (157).

*Phryneta crassa* n. sp. Congo. Jordan, K. *l.c.* (175–176).

Phymasterna annulata n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (10).

Pidonia suvorovi n. sp. Amur-Gebiet. Bacckmann, I. I. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (115–116).

*Pinacosterna* nn. spp. Africa. Jordan, K. Nov. Zool., Tring, **10**, 1903, (164– 165).

Plagionus nn. spp. Africa. Jordan, K. l.c. (171).

Planodema unicolor n. sp. Congo. Jordan, K. l.c. (183).

Plectonarthron microps n. sp. W. Africa. Jordan, K. l.c. (194).

Poimenesperus callimus n. sp. Congo. Jordan, K. l.c. (168-170).

Polyarthron (Pogonarthron) tschitscherini Sem., notice. (Russ.) Semenov, A. P. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (203-204).

Polyrrhaphis africanus n. sp. Congo. Jordan, K. Nov. Zool., Tring, 10, 1903, (187).

Praonetha apicata n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (254).

Prosopocera nn. spp. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (158– 159).

Purpuricenus budensis nn. varr. Pic, T. Echange, Lyon, 17, 1902, (27).

sia austro-orientali. **Semenov.** A. P. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (358-359). Rhamnusium anatolicum Pic var., obscuriceps n. var. Pic, M. Echange, Lyon, 19, 1903, (163).

· Saperda hornii n. sp. Joutel, L. H. Philadelphia, Pa., Ent. News Acad. Nat. Sci., 13, 1902, (33-34, with pl.).

Saphanidus nn. spp. Africa. Jordan, K. Nov. Zool., Tring, **10**, 1903, (131– 133).

Sobarus vethi n. sp. Central-Afrika. Boon, G. van. 's Gravenhage, Tijdschr. Ent., 45, 1903, (243-245, mit 1 Fig.).

Sphaerion sladeni n. sp. Brazil. Gahan, C. T. and Arrow, G. T. Loudon, Proc. Zool. Soc., 1903, 2, (253-254, pl. XXVIII, fig. 7).

Spilotragus n. gen., S. zanthus n. sp. Nyassaland. Jordan, K. Nov. Zool., Tring, 10, 1903, (173).

Sternotomis nn. spp. Africa. Jordan, K. l.c. (165–166).

Strangalia quadrizona n. sp. Mexique. Fairmaire, L. Paris, Bul. soc. ent., 1902, (243-246).

Sybrinus simonyi n. sp. Gahan, C. T. Nat. Hist., Sokotra, (287).

Sympiezocera laurasi Lucas. Glard, A. Feuille jounes natural., Paris, (sér. 4), **33**, 1903, (203).

Syndere nn. spp. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (140).

Tetraulax n. gen., T. lateralis n. sp. Congo. Jordan, K. l.c. (182-183).

Tetropium castaneum L., new to Britain. Bouskell, F. Ent. Mag., London, **39**, 1903, (288).

fuscum Fabr., a genus and species of Longicorn Coleoptera new to Britain. **Sharp**, D. *l.c.* (198– 199).

Tetrops Steph., Art vom Issyk-Kul-See. Baeckmann, I. I. Rev. Russ. Ent., Jaroslavlí, 3, 1903, (311-312).

Theocris nn. spp. Congo. Jordan, K. Nov. Zool., Tring, 10, 1903, (184).

Tragiscoschema venus n. sp. British East Africa. Jordan, K. l.c. (172).

Tragocephala nn. spp. Africa. Jordan, K. l.c. (166–168).

Trichodes (Clerus) apiarius L., T. alvearius Fabr. Pic, M. Echange, Lyon, 17, 1902, (61-62).

Trichophorus electus n. sp. Brazil. Gahan, C. T. and Arrow, G. T. London, Proc. Zool. Soc., 1903, 2, (254, pl. XXVIII, fig. 8).

Xylotoles nn. spp. Chatham Islands. Sharp, D. Ent. Mag., London, 39, 1903, (109-110).

Xylotrechus aedon.n. sp. W. Africa. Jordan, K. Nov. Zool., Tring, 10, 1903, (193).

Xystrocera interrupta n. sp. W. Africa. Jordan, K. I.c. (192–193).

Jordan, K. l.c. (135).

Zographus balteatus n. sp. British East Africa. **Heath**, E. A. Entomologist, London, **36**, 1903, (273-274).

Zorion opacum n. sp. Chatham Ielands. Sharp, D. Ent., Mag., London, 39, 1903, (109).

#### ANTHRIBIDAE.

Acorynus nn. spp. Jordan, K. Nov. Zool., Tring, 10, 1903, (420-424).

Apatenia nn. spp. Jordan, K. l.c. (417-420).

Aulodina n. gen., A. unicolor n. sp. Jordan, K. l.c. (128).

Basitropis nn. spp. Jordan, K. l.c. (431-434).

Decataphanes posticatus n. sp. Congo. Jordan, K. l.c. (127).

Derographium n. gen., D. fulrum n. sp. Sierra Leone. Jordan, K. l.e. (129).

Gulamentus fasciatus n. sp. Congo. Jordan, K. l.c. (130).

Habrissus nn. spp. Jordan, K. l.c. (420).

Haplocnema (Mesosa) curculionoides L. var. biboculata n. var. Nicholas, A. Echange, Lyon, **17**, 1902, (28).

Hucus nn. spp. Jordan, K. Nov. Zool., Tring, 10, 1903, (426-427).

Litocerus nn. spp. Congo. Jordan, K. l.c. (130).

(424-426). nn. spp. Jordan, K. l.e.

Mecocerina nn. spp. Jordan, K. l.c. (427).

Mecocerus clathratus n. sp. Congo. Jordan, K. l.c. (127-128).

Mecotropis nn. spp. Malay Archipelago. Jordan, K. lc. (415).

Messalius n. gen., M. albidosparsus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° somest.), 1903, (247).

Mucronianus (?) khasianus n. sp. Assam. Jordan, K. Nov. Zool., Tring, 10, 1903, (427–428).

Phloeotragus longicollis n. sp. German East Africa. Jordan, K. l.c. (127).

Protomerus n. gen., P. longitarsis n. sp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2° semest.), 1901, (181-259).

Rawasia nn. spp. Congo. Jordan, K. Nov. Zool., Tring, 10, 1903, (128-129).

Sintor, nn. spp. Jordan, K. l.c. (415-417).

Xenocerus nn. spp. Jordan, K. l.c. (428-431).

#### CURCULIONIDAE.

#### GENERAL.

**Desbrochers des Loges.** Description d'un Curculionide nouveau formant une coupe générique nouvelle. Echange, Lyon, **19**, 1903, (188).

Fairmaire, L. Matériaux pour la faune coléoptérique de la région malgache: *Curculionidae*. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (209– 244).

Les, A. M. Revision of the Australian Curcelionidae. Part. VI. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (643-679).

Pic, Maurice. Notes et diagnoses sur divers Tichyini. Autun, Bul. soc. sci. nat., 15, 1902, (Proc. verb. 139-148).

Schultze, A. Zum Verzeichniss der paläarctischen Ceuthorrhynchinen. (D. ent. Zs., Berlin, 1902, 205-226). D. ent. Zs., Berlin, 1903, (287-291). Schultse, A. Zusammenstellung einer Varietäten-Reihe paläarctischer Ceuthorrhynchinen. D. ent. Zs., Berlin, **1903**, (292-294, 424).

#### SPECIAL.

Achia n. gen., A. rhombifera, A. adusta, A. discifera nn. spp. America. Champion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (149-150).

Adisius n. gen., A. rufinus, A. piceolus, A. perrieri nn. spp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (230-231).

Alcides biornatus n. sp. Fairmaire, L. l.e. (231).

Aldonus chathamensis n. sp. Chatham Islands. Sharp, D. Ent. Mag., London, 39, 1903, (110).

Alophinus n. gen., A. triangulifer n. sp. Desbrochers des Loges. Echange, Lyon, 19, 1903, (188).

Alphitodes n. gen., A. indutus n. sp. Madagascar. Fairmaire, L, Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (215).

Alsirhinus nn. spp. Fairmaire, L. Madagascar. l.c. (232-233).

Anagotus pallescens n. sp. N. Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (76-77).

Anaptolus n. gen., A. cottae, A. concerifrons nn. spp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (222).

Anthonomus nn. spp. Champion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (159-192).

------ nn. spp. **Pic**, M. Autun, Bul. soc. sci. nat., **15**, 1902, (139–148).

strandi n. sp. Norway. Stierlin, G. Schaffhausen, Mitt. Schweiz. Entomol. Ges., 10, 1903, (484).

Antillia n. gen., A. horridipes n. sp. Deutsch Neu-Guines. Heller, K. M. D. ent. Zs., Berlin, **1903**, (309-310).

Aphela pictipes n. sp. N. Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (75-76).

Aphiocephalus planicollis n. sp. Madagascar. Fairmairs, L. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (240). *pisi* Fab. Clermont, J. A. Echange, Lyon, **17**, 1902, (83).

Apoderus coeruleipennis n. sp. N. China. Schilsky, J. Küster, Die Käfer Europas, 40, (75).

incana MS., N. W. India, attacking *Quercus incana* and *Q. dilatata*, description, life history, relations to the forest, protection and remedies, points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry No. 2. Calcutta, 1903, (189, pl. viii, fig. 7, a-c). 25 cm.

Aroaphila n. gen., A. cyphothorax n. sp. Papua. **Heller**, K. M. Dreeden, Abh. zool. Mus., **10**, (1902/03), Berlin, 1903, Nr. 2, (II + 20).

Asytesta ypsilon n. sp. Deutsch Neu-Guinea. Heiler, K. M. D. ent. Zs., Berlin, **1903**, (312).

Aviranus apicatus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (240).

Axionicus insignis Pasc, description. Lea. A. M. Sydney, N.S.W., Proc Linn. Soc. N. S. Wales, 28, 1903, (657).

Balaninus spp., B. tropicalis n. sp. Panama. **Champion**, G. C. Biol. Centr.-Amer., London, **1903**, IV, pt. 4., (279-280).

Barianus scabrosus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (221).

Baris nn. spp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (236-238).

*gudenusi* n. sp. **Schultze**, A. Wien, Verh. ZoolBot. Ges., **51**, 1901, (212-215).

Baryssus n. gen., B. callypygus n. sp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (238).

Belopacus niger n. sp. Brazil. Gahan, C. T. and Arrow, G. T. London, Proc. Zool. Soc., 1903, 2, (252-253, XXVIII, fig. 5). Belus viridimetallicus n. sp. Papaa. Heller, K. M. Dresden, Abh. zool. Mus., 10, (1902–03), Berlin, 1903, Nr. 2, (II + 20).

Brachycyrtus nn. spp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (220).

Brachyolus nn. spp. N. Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (74-75).

Brachonyz indigena var. obscurella (Tourn) n. var. **Pic, M.** Echange, Lyon, 17, 1903, (80).

Bradybatus carbonarius var. apicalis n. var. Pic, M. Autun, Bul. soc. sci. nat., 15, 1902, (139–148).

Calendra orizae, observations. **Kunstler**, J. Bordeaux, Actes soc. linn., (sér. 6), **57**, 1902, (17-27).

Camarotus nn. spp. America. Champton, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (289-290).

Camptochirus nn. spp. America. Champion, G. C. *l.c.* (218-220).

Camptorhinus nn. spp. Madagascar. Fairmaire, L. Braxelles, Ann. Soc. ent. Belgique, 45, 1901, (231).

Carterorhinus n. gen., C. perrieri, C. major nn. spp. Madagascar. **Pair**maire, L. *l.c.* (222-223).

Cataphractus elongatus n. sp. Papua. Heller, K. M. Dresden, Abh. zool. Mus, 10, (1902–03), Berlin, 1903, Nr. 2, (II + 20).

Cecyropa nn. spp. N. Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (72-73).

Ceuthorrhynchidius nn. spp. Schultze, A. D. ent. Zs., Berlin, 1903, (244-245).

Ceutorrhynchus, orthographe du mot. Chatanay, J. Feuille jeunes natural., Paris, (sér. 4), 33, 1903, (204).

Guignon, J. l.e. (204-205).

Malinvaud, G. *l.c.* (204).

Ceutorrhynchus nn. spp. Schultz, A. D. ent. Zs., Berlin, 1903, (241-286).

*poncyi* n. sp. Roumania. **Stierlin**, G. Schaffhausen, Mitt. Schweiz. Entomol. Ges., **11**, 1903, (56).

Chalcocybebus massutei n. sp. Papua. Heller, K. M. Dresden, Abh. zool. Mus., 10, (1902–03), Berlin, 1903, Nr. 2, (II + 20).

Chazarius n. gen., C. inaequalis n. sp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (230).

Chlorastus n. gen., C. perrieri n sp. Madagascar. Fairmaire, L. l.c. (209).

Cholus nn. spp. America. Champion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (291-310).

Cionistes brevis n. sp. America. Champion, G. C. *l.c.* (148-149).

Cionopsis n. gen., C. palliatus n. sp. America. Champion, G. C. l.c. (150– 151).

Cionus nn. spp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (241-242).

Coelosternus sturio n. sp. Brazil. Gahan, C. J. and Arrow, G. J. London, Proc. Zool. Soc., 1903, 2, (252, pl. XXVIII, fig. 4).

Corecaulus n. gen., C. breviceps n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (222).

Cratopopeis nn. sup. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (219).

Critomerus n. gen., C. emblematicus n. sp. Lea, A. M. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (663).

Cyclobarus hipponensis n. sp. Pic, M. Echange, Lyon, 17, 1903, (33).

Cyclopterus tuniseus n. sp. Pic, M. l.e. 19, 1903, (129-130).

Cycloteres paleatus n. sp. Madagascar. Fairmaire, L. Bruxelles, Ann. soc. ent. Belgique, **45**, 1901, (224).

Cyphicerus sp. Central Provinces, attacking teak, description, life history, relations to the forest, protection and remedies points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry No. 2. Calcutta, 1903, (186, pl. viii, fig. 6). 25 cm. Cyphogonus nn. spp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (234-235).

Cyrtotrachelus longipes (Fabr.). Chittagong, attacking Muli bamboo, description, life history, relations to the forest, protection and remedies points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry No. 2. Calcutta, 1903, (193, pl. ix, fig. a-h). 25 cm.

Desmidophorus nn. spp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (10); Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (225-226).

Dietzia n. gen., D. bifasciata n. sp. America. **Champion**, G. C. Biol. Centr.-Amer., London, **1903**, IV, pt. **4**, (193-194).

Dorytomus dorsalis Herbet. var. basithoraz n. var. Pic, M. Echange, Lyon, 17, 1901, (80).

Drongie n. gen., D. perrieri n. sp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, (228).

Dryophthorus laticauda n. sp. Madagascar. Fairmaire, L. l.c. (241).

Dysopirhinus grandis n. sp. Les, A. M. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (674).

*Ectyrsus* nn. spp. America. **Ohampion**, G. C. Biol. Centr.-Amer., London, **1903**, IV, pt. 4, (221-222).

Elleschus scanicus var. austriacus n. var. Pic, M. Autun, Bul. soc. sci. nat., 15, 1902, (139-148).

Eremiarhinus subalbidus n. sp. Pic, M. Echange, Lyon, 19, 1903, (130).

Eremnus nn. spp. Madagascar. Pairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (223-224).

Erethistes nn. spp. and many old species. America. **Champion**, G. C. Biol. Centr.-Amer., London, **1903**, IV, pt. 4, (311-312).

Erodiscus nn. spp. America. Champion, G. C. *l.c.* (275–277).

Flamingor.hynchus n. gen., F. weiskei n. sp. Papus. **Heller**, K. M. Dresden, Abh. zool. Mus., **10**, (1902–03), Berlin, 1903, Nr. 2, (II + 20). Gymnetron (Aprinus) saladense n. sp. Pie, M. Echange, Lyon, 17, 1902, (24-25).

*Gymnopholus* n. gen., *G. uciekci* n. sp. Papua. **Heller**, K. M. Dresden, Abh. zool. Mus., **10**, (1902–03), Berlin, 1903, Nr. 2, (II + 20).

Hammatostylus n. nom. for Hammacerus Chevr., H. eriniger n. sp. Nicaragua. **Champion**, G. C. Biol. Centr.-Amer., London, **1903**, IV, pt. 4, (272).

Heliocarus marmoratus n. sp. Spain. Stierlin, G. Schaffbausen, Mitt. Schweiz. Entomol. Ges., 10, 1903, (483).

Heteronus elegans n. sp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (240).

Holonychus lutosus n. sp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (36).

Homaeonychus nn. spp. Fairmaire, L. Paris, Ann. soc. ont., 72, (2<sup>e</sup> semest.), 1903, (228-229).

llomaleptops nn. spp. Madagascar. Fairmaire, L. Naturaliste, Paris, (sér. 2), 23, 1903, (9).

*duplicatus* n. sp. **Pair**maire, L. Paris, Ann. soc. ent., **72**, (2° semest.), 1903, (229).

Hoplopactus luteralis n. sp. Brazil. Gahan, C. J. and Arrow, G. T. London, Proc. Zool. Soc., 1903, 2, (251-252, pl. XXVIII, fig. 3).

Hoplorrhinus nn. spp. America. Champion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (278).

Hylobius graecus n. sp. Pic, M. Echange, Lyon, 17, 1902, (57).

M. l.c. (25). mesopotamicus n. sp. Pic,

Idernus n. gen., I. plagiatus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° somest.), 1903, (234).

Iphisomus nn. spp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (226-227).

Laemorchestes n. gen., L. fasciatus n. sp. America. **Champion**, G. C. Biol. Centr.-Amer., London, **1903**, IV, pt. 4, (201-202).

Laemosaccus old and new species. America. **Ohampion**, G. C. *l.c.* (282-288). Lagocaulus n. gen., L. femoratu, J. latifrons nn. spp. **Pairmaire**, L. Pars, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1995 (223-224).

Liosthenus n. gen., L. latritute n. sp. Madagascar. Fairmaire, . Bruxelles, Ann. Soc. ent. Belgique, 43, 1901, (244).

Listrorrhynchus n. gen., L. subuits n. sp. America. Champion, G. ( Biol. Centr.-Amer., London, 1903, iv pt. 4, (193).

Lizius iridis Oliv., évolution e parasites. **Pierre**, abbé. Echa... Lyon, **19**, 1903, (108–110, 116–117 132–133, 141–144).

Lonchophorus nn. spp. America. Champion, G. C. Biol. Centr.-Aret London, 1903, IV, pt. 4, (152-154).

Ludorix bifasciatus n. sp. Paratu. Champion, G. C. I.e. (273).

Macrobrachonyz n. gen., M. 5004 V. n. sp. Pic, M. Echange, Lyon, 11. 1902, (80-81).

Macrorhoptus mexicanus n. 8 America. Champion, O. C. L. Centr.-Amer., London, 1903, IV, p. 4 (200).

Magdalis aterrimus, mœurs et neumorphoses. Xambeu. Naturaliste. Paris, (sér. 2), 24, 1902, (271-272).

*Mataxus* nn. spp. **Fairmaire**, L Paris, Ann. soc. ent., **72**, (2<sup>e</sup> secret. 1903, (235-237).

Megamastus apicatus n. sp. Inmaire, L. l.c. (233).

Mesitinus n. gen., M. sulcirostris n. sp. Fairmaire, L. Paris, Ann. Eoc. eu. 72, (2° semest.), 1903, (246).

Metialma nn. spp. Madagascu Fairmaire, L. Bruxelles, Ann. Soc. ett Belgique, 45, 1901, (233-234).

Metraniomorpha n. gen., M. min n. sp. Lea, A. M. Sydney, N.S.W. Proc. Linn. Soc. N. S. Wales, 28, 1903, (658).

Miccotrogus nn. spp. Pic, M. Antan. Bul. soc. sc. nat., 15, 1902, (139-148).

Myllocerus nn. spp. Pic, M. Echange. Lyon, 19, 1903, (163).

acaciae MS. Western India, attacking Acacia catechu, description, life history, relations to the forst. 2.

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M. sp. (footnote) attacking Acacia catechu, note. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry No. 2. Calcutta, 1903, (184, pl. VIII, fig. 5, 185). 25 cm.

Minyops lacunosus n. sp. Sahlberg, J. Ofvers. F. Vet. Soc., Helsingfors, 45, [No. 10], 1902-1903, (1-40).

Mustelinus n. gen., M. perrieri n. sp. Madagascar. **Pairmaire**, L. Bruxelles, Ann. Soc. Ent. Belgique, **45**, 1901, (215-216).

Nanophyes nn. spp. Madagascar. Fairmaire, L. l.c. (242-243).

nn. spp. **Pairmaire**, I.. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (241).

durieni Lucas, notes on the habits as observed in Central Spain, with a description of the larva and pupa by Dr. T. A. Chapman. **Champion**, G. C. London, Trans. Ent. Soc., **1903**, (87-91, pl. V).

der Galle. **Silva Tavares**, J. da. Insektenbörse, Leipzig, **20**, 1903, (60-61).

Naupactus tuberculatus n. sp. Paraguay. Arrow, G. J. London, Proc. Zool. Soc., 1903, 2, (257–258).

Nemes n. gen., N. rufirostris n. sp. N. Zealand. **Broun**, T. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (78-79).

Neomastix nn. spp. America. Champion, G. C. Biol. Centr.-Amer., London, **1903**, IV, pt. 4, (199).

Niphades nn. spp. Hartmann, F. D. ent. Zs., Berlin, **1903**, (109-112).

Nosorhinus n. gen., N. cuncatus, N. gabonicus, N. orientalis nn. spp. Madagascar. **Pairmaire**, L. Bruxelles, Ann. Soc. Ent. Belgique, **45**, 1901, (235-237).

Notiophilus aquaticus L. in Galicia (Austrian Poland). Zomnicki, J. L. M. Kosmos, Lwów, 28, 1903, (105-114).

Notocryptorhynchus n. gen., N. sinuatus n. sp. Les, A. M. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (675-676).

Ocladius sereiforiatus n. sp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (229). Oliabus n. gen., O. grandicollis n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (244-245).

Oopterinus nn. spp. America. Champion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (268-271).

Orphanistes eustictus Pasc., description. Les, A. M. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (678).

Otidocephalus old and new species. America. Champion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (236-266).

Otiorrhynchus nn. spp. Stierlin, G. Schaffhausen, Mitt. Schweiz. Entemol. Ges., 10, 1902, (425-427); 11, 1003, (56-57).

cephalonicus n. sp. Pic, M. Echange, Lyon, 17, 1902, (57).

tenebricosus, embedded in the wall of a human intestine. Sharp, D. Cambridge, Proc. Phil. Soc., 12, 1903, (199, 200).

Oxyonyz nn. spp. Schultze, A. D. ent. Zs., Berlin, 1903, (241-242).

Pachyonyz nn. spp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (231-232).

inaequalis n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (233).

Pantorhytes nn. spp. Papua. Heller, K. M. Dresden, Abh. zool. Mus., 10, (1902-03), Berlin, 1903, Nr. 2, (II + 20).

Parasphenogaster n. gen., P. gracilicollis n. sp. Papua. **Heller**, K. M. l.c. (II + 20).

Paryonychus n. gen., P. setosulus n. sp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (239).

Perissops ocellatus Redt., description. nn. spp. Lea, A. M. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (645-656).

Phellocaulus n. gen., P. gibbicollis n. sp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (213-214).

Phrystanus n. gen., P. tribulus n. sp. Madagascar. Fairmaire, L. l.c. (218-219).

Phyllobius nn. varr. Pic, M. Echange, Lyon, 17, 1902, (65). Phyllotroz nn. spp. America. Ohampion, G. C. Biol. Central.-Amer., London, 1903, IV, pt. 4, (145-146).

Piazocaulus n. gen., P. nossibianus n. sp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (217-218).

Piazorrhinus nn. spp. America. Champion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (224-230).

Pleropus dentatus n. sp. Madagascar. **Fairmaire**, L. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (229).

Prionomerus nn. spp. America. Champion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (214-215).

Proictes nn. spp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (210-212).

*pictus* n. sp. **Fairmaire**, L. **Paris**, Ann. soc. ent., **72**, (2° semest.), 1903, (220).

Proictidius n. gen., P. maculosus n. sp. Madagascar. **Pairmaire**, L. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (212-213).

Protopulus schoenherri Waterh., description, var. antennarius n. var., P. dromedarius Boisd., P. cristatus Pasc., description; P. tectus n. sp. Lea, A. M. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (645-672).

Pseudanthonomus nn. spp. America. Ohampion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (196–198).

Pseudobalaminus metasternalis n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (240).

Pseudotepperia n. gen., P. compta n. sp. Les, A. M. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 23, 1903, (662).

Queenslandica n. gen., Q. posticalis, Q. munda nn. spp. Les, A. M. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, 28, 1903, (664-666).

Rhadinocyba nn. spp. Papua. Heller, K. M. Dresden, Abh. zool. Mus., 10, (1902-03), Berlin, 1903, Nr 2, (II + 20).

Rhinoscapha nn. spp. Papus. Heller, K. M. l.c. (II + 20). Rhynchites betulae. Extrait d'un travail de Hermann Muckrrmann dans Scientific american. Iches, L. Nature, Paris, **30**, (2° sem.), 1902, (180–183, av. fig.).

m. var. Pic, M. Echange, Lyon, 19, 1903, (131).

Rhyncholus sp. N.-W. Himalayas, attacking blue pine, spruce and deodar, description, life history, relations to the forest points for observation. **Stebbing**, E. P. Departmental notes on Insects that affect Forestry No. 2. Calcutta, 1903, (198, pl. X, figs. 1, a, b). 25 cm.

Rhynchomys n. gen., R. longicornis n. sp. **Pairmaire**, L. Paris, Ann. soc. ent., **72**, (2<sup>e</sup> semest.), 1903, (221-222).

Rhynchophorus palmarum and R. cruentatus, habits. **Chittenden**, F. H. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **38**, 1902, (23-28).

Rhytirrhinus caroli Frm.: tuniscus n. subsp. Pio, M. Echange, Lyon, 19, 1903, (130).

Rosenbergia weiskei n. sp. Papua. Heller, K. M. Dresden, Abh. zool. Mus., 10, (1902–03), Berlin, 1903, Nr 2, (11 + 20).

Sargon n. gen., S. carinatus n. sp. N. Zealand. Brown, T. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (77-78).

Saurophthalmus n. gen., S. ozyope n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (224).

Scythropus variabilis var. logesi n. var. Pic, M. Echange, Lyon, 17, 1902, (65).

Secania n. gen., S. cruralis n. sp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (240-241).

matre, L. Paris, Ann. soc. ent., 73, (2° semest.), 1903, (244).

Sibinia nn. spp. America. Champica, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (209-212).

\_\_\_\_\_ nn. spp., n. var. **Pic, M.** Echange, Lyon, 17, 1902, (39-40).

nn. spp. Pic, M. Autun, Bul. soc. sci. nst., 15, 1902, (139–148). Sipalus madecassus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2° semest.), 1903, (245).

Sitarie canariensis n. sp. Ténériffe. Pic, M. Echange, Lyon, 17, 1902, (80-81).

Sphenophorus subcostatus n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (245).

Stenophylax n. gen., S. hylastoides n. sp. Fairmaire, L. l.c. (243-244).

Stephanorhynchus pygmaeus n. sp. N. Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), **12**, 1903, (80–81).

Stigmatrachelus nn. spp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2e semest.), 1903, (225-226).

Strophosomus capitatus, Mimikry von Ballus dopressus. Dahl, F. Berlin, SitzBer. Ges. nitf. Freunde, **1903**, (273– 278).

Syagrius intrudens n. sp. Australia, Waterhouse, C. O. Ann. Mag. Nat. Hist., London, (Ser. 7), 11, 1903, (229-230).

Symplezopus alboniger n. sp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2<sup>e</sup> semest.), 1903, (233).

Syzygops nn. spp. Fairmaire, L. l.c. (219).

Talanthia papuana n. sp. Deutsch Neu-Guines. Heller, K. M. D. ent. Zs., Berlin, 1903, (312).

Tanymecus nn. spp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. Ent. Belgique, 45, 1901, (216-217).

Taphronhinus n. gen., T. brezicornis n. sp. **Fairmaire**, L. Paris, Ann. soc. ent., **72**, (2e semest.), 1903, (181-259, 220-221).

*Tepperia* n. gen., *T. sterculiae*, *T. major* nn. spp. **Lea**, A. M. Sydney, N.S.W., Proc. Linn. Soc. N. S. Wales, **28**, 1903, (660-661).

Teridates n. gen., T. seriatus, T. confusus nn. spp. America. Champion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (202-203).

Terioltes n. gen., T. circumdatus, T. nigripennis nn. spp. **Champion**, G. C. l c. (146-147).

Themeropis binodosa n. sp. America. Champion, G. C. *l.c.* (220). (x 2-9053) Throgonius n. gen., T. paleatus n. sp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, **45**, 1901, (214).

Thysanocnemis nn. spp. America. Ohampion, G. C. Biol. Centr.-Amer., London, 1903, IV, pt. 4, (204-208).

Trachyphlaeus nn. spp. Pic, M. Echange, Lyon, 19, 1903, (130).

Traphecorynus inflatus n. sp. Fairmairs, L. Paris, Anu. soc. ent., 72, (2° semest.), 1903, (232).

Trichobaris mucorea, economics. Ohittenden, F. H. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. 33, 1902, (66-70).

*Tychius* nn. spp. **Pic**, M. Autun, Bul. soc. sci. nst., **15**, 1902, (139–148).

*modestus* Trn. var. subinterruptus n. var. **Pic**, M. Echange, Lyon, 17, 1902, (80).

Ursidius n. gen., U. halticoides n. sp. America. **Ohampion**, G. C. Biol. Centr.-Amer., London, **1903**, IV, pt. **4**, (200– 201).

Xerostygnus n. gen., X. binodulus n. sp. N. Zealand. Broun, T. Ann. Mag. Nat. Hist., London, (Ser. 7), 12, 1903, (79-80).

Zantes nn. spp. Madagascar. Fairmaire, L. Bruxelles, Ann. Soc. ent. Belgique, 45, 1901, (224-225).

#### SCOLYTIDAE.

#### GENEBAL.

Scolytidae, California notes. Kellogg, V. L. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent., No. 40, 1903, (83-84).

#### SPECIAL.

Cryphalus bosicelliae MS., Poona, attacking Bosicellia serrata; C. tectonae MS., Berar, attacking teak; C. morinda MS., Punjab, attacking spruce; C. longifolia MS. and C. (?) major MS., N.W. Himalaya, attacking Pinus longifolia; C. (?) deodara MS., attacking deodar in N.W. Himalayas; descriptions, life histories, relations to the forest, protection and remedies, points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry, No. 2. Calcutta, 1903, (261, 265-267, 274, with pls.) 25 cm. Dendroctonus ponderosa n. sp. Hopkins, A. D. Washington, D.C., Bull. U. S. Dept. Agric. Div. Ent. (N. Ser.), No. 32, 1902, (24, with pl.). 23 cm.

Eccoptoptera sexdentata Mots., N.W. Himalayas, attacking silver fir, description, life history, relations to the forest, protection and remedies, points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry, No. 2. Calcutta, 1903, (284, pl. xvii, fig. 5.). 25 cm.

Hylastes sp. N.W. Himalayas, attacking blue pine and spruce; description, life history, relations to the forest, points for observation. **Stebbing**, E. P. *i.e.* (201, pl. x, figs. 2, a b.).

cunicularius, Larven. Eichelbaum, F. Allg. Zs. Ent., Neudam, 8, 1903, (60-70).

Hylcsinus (?) sp. N.W. Himalayas, attacking blue pine; description, life history, relations to the forest, points for observation. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry, No. 2, Calcutta, 1903, (258, pl. xvi, fig. 3, a, b.). 25 cm.

Hypoborus (?) sp., attacking deodar trees in the N.W. Himalayas; description, life history, relation to and protection from its attacks on forest trees, points for observation. **Stebbing**, E. P. *l.c.* (278, pl. xvii, fig. 3 s, d). 25 cm.

Liparthrum colchicum n. sp. Caucasus occ. (Russ.) **Semenov**, A. P. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (79-80).

Phloeosinus cupressi n. sp. Hopkins, A. D. Washington, D.C., Proc. Ent. Soc., 5, 1903, (135–136).

caspia. **Semenov**, A. P. Rev. Russ. Ent., Jaroslavlí, **3**, 1903, (79-80).

Pityogenes coniferae MS., Punjab and N.W. Himalayas, attacking blue pine, deodar and Pinus Gerardiana; description, life history. relations to the forest, points for observation, protection and remedies. **Stebbing**, E. P. Departmental Notes on Insects that affect Forestry, No. 2. Calcutta, 1903, (242, pl. xiii, fig. 4, a, b, c, d, fl. 25 cm.

Polygraphus major MS., P. minor MS., P. minimus MS., attacking deodar, blue pine and spruce. P. longifolia MS., attacking Pinus longifolia; description, life history, points for observation. **Stebbing**, E. P. *l.e.* (224-239, 252-255, with pls. and figs.). 25 cm.

Scolytus carpine Rizb, gefunden auf dem Haselnussstrauch (Corylus aveilana L.). Pomerancev, D. St. Peterburg, Hor. Soc. Ent. Ross., 26, 1903, (118-124, mit Taf.).

major MS., attacking deodar, S. minor and S. deodara MS. from United Provinces and N.W. Himalayas, attacking deodar; description, life history, relations to the forest, protection, points for observation. **Stabbing**, E. P. Departmental Notes on Insects that affect Forestry, No. 2. Calcutta, 1903, (203, 267, 220). 25 cm.

Tomicus sp., attacking blue pine and spruce; description, life history, relations to the forest, protection and remedies, points for observation. T. lowfolia MS. attacking Pinus longifolia; description, life history, points for observation. **Biebbing**, E. P. Le. (225, pl. xiii, f. 1 a-d, xiv, pl. xv, fig. 1, 282, pl. xvii, fig. 4). 25 cm.

*calligraphus* var. ocidentalis n. var. Hopkins, A. D. Washington, D.C. Bull. U. S. Dept. Agric. Div. Ent., (N. Ser.), No. **32**, 1902, (24, with pl.). 23 cm.

Triplaz nn. spp. Fairmaire, L. Paris, Ann. soc. ent., 72, (2e semest.), 1903, (181-259).

Xyleborus dispar. Cordley, A. B. Agric. Exp. Sta., Oregon, Corvallis, Ref. 1902, (60-61).

Xylechinus pilosus, Larven. Eichel baum, F. Allg. Zs. Ent., Neudamm. 8. 1903, (60-70).

#### UNCLASSIFIED BY THE SLIP-MAKER.

Pelochrous scutellaris Ab. var. flar ceps n. var. Pic, M. Echange, İ.y.c. 19, 1903, (162).

### LIST OF NEW GENERA AND SPECIES

ABACETUS [Carabidae].

	acutangulus.	
	androyanus.	Čičerin. 76.
·	annamensis.	, Čičerin. 76.
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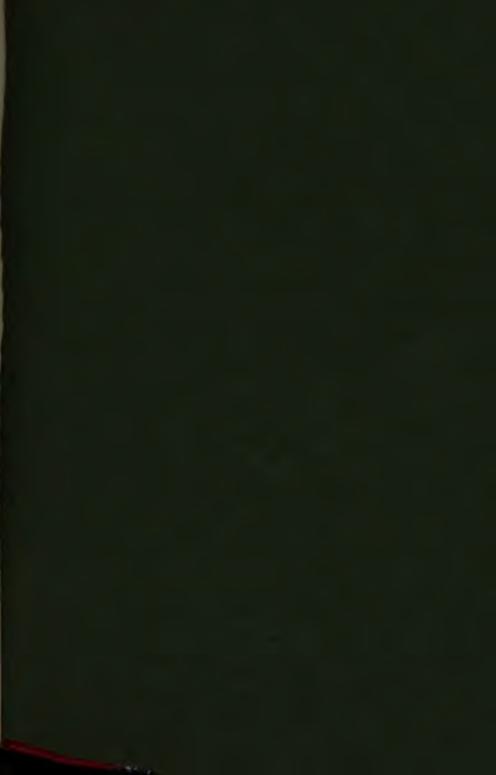
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