

ANNUAL REPORT
OF THE DIRECTOR
OF THE
MUSEUM OF COMPARATIVE
ZOOLOGY
AT HARVARD COLLEGE
TO THE
PROVOST OF HARVARD UNIVERSITY
FOR
1951—1952

LIBRARY
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PUBLICATIONS ISSUED BY OR IN CONNECTION
WITH THE
MUSEUM OF COMPARATIVE ZOOLOGY
AT HARVARD COLLEGE

BULLETIN (octavo) 1863 — The current volume is Vol. 110.

BREVIORA (octavo) 1952 — No. 17 is current.

MEMOIRS (quarto) 1864-1938 — Publication was terminated with Vol. 55.

JOHNSONIA (quarto) 1941 — A publication of the Department of Mollusks. Vol. 2, no. 30 is current.

OCCASIONAL PAPERS OF THE DEPARTMENT OF MOLLUSKS (octavo) 1945 — Vol. 1, no. 16 is current.

PROCEEDINGS OF THE NEW ENGLAND ZOÖLOGICAL CLUB (octavo) 1899-1948 — Published in connection with the Museum. Publication terminated with Vol. 24.

These publications issued at irregular intervals in numbers which may be purchased separately. Prices and lists may be obtained on application to the Director of the Museum of Comparative Zoology, Cambridge 38, Massachusetts.

Museum of Comparative Zoology

To the Provost of the University:

Sir, — Due to the generosity of the late George R. Agassiz, the Museum during the past year has been able to operate on a balanced budget for the first time in two decades. At Mr. Agassiz' death there became available to us the substantial income of the George R. Agassiz Memorial Fund. This new income exactly balances the amount of the annual deficit which the University authorities had generously allowed us in our recent years of extreme financial stringency. The University has thereby been relieved of a considerable financial burden and those responsible for the Museum of a very considerable burden of anxiety. There is, of course, no immediate budgetary advantage in this situation, but it is expected that further funds which will fall to us on the settlement of Mr. Agassiz' estate will aid in relieving numerous difficulties caused by the inflation of the past decade.

The Museum, and particularly the bird department, suffered a major loss on April 19 in the death of James Lee Peters, curator since 1932 and assistant curator for years previously. During the forty-odd years he was connected with the Museum his main efforts were directed to a broad study of the avifauna of the world, based in great measure on the Museum's extensive collections. Resulting from this study there began, in 1931, the publication of the "Check-list of Birds of the World." At his death seven volumes — somewhat less than half the projected total — had been published, and two further volumes were in preparation. It will be a definite item of Museum policy to see that this important work, of high value to every scientific student of birds, is pushed through to completion.

Percy Edward Raymond, Professor of Paleontology, Emeritus, and Curator of Invertebrate Paleontology, Emeritus, died on May 10. Professor Raymond had been an inspiring and well-loved teacher of courses in paleontology and stratigraphy since coming to Harvard in 1912, and had directed research on Museum collections by many students. His best-known works are his

outstanding contributions to knowledge of trilobite morphology and classification; toward the end of his career he summarized his paleontological knowledge in delightful fashion in his book "Prehistoric Life."

The death of William Frederick Clapp on December 28 deprived the Museum of one of its most active and enthusiastic Visiting Committee members. Dr. Clapp was from 1911 to 1923 Acting Curator of Mollusks here. In 1923 he left the Museum and went to the Massachusetts Institute of Technology to work on the destructive boring mollusks, the Teredinidae, for the National Research Council. Later he established a laboratory at Duxbury to continue work on control measures for these destructive animals. In 1928 he donated his collection of Teredinidae to the Museum and since that time added a great deal of new material received from test stations throughout the world.

STAFF

We are fortunate in having with us, as an Alexander Agassiz Professor of Zoology for the calendar year 1952, Professor D. M. S. Watson, distinguished English zoologist and paleontologist. As had been expected, he found in the Museum collections excellent materials to further his research, and his presence has been a great stimulus to staff and students.

Dr. Darlington has accepted appointment as Curator of Entomology. Dr. William L. Brown, Jr. returned from Australia in January to enter energetically into his duties as assistant curator in this department.

As of July 1, 1952, Miss Barbara Lawrence, who had since Dr. Allen's death carried the burden of curatorial care in the department of mammals, is advanced to full curatorship.

Dr. J. C. Dickinson, Jr., of the University of Florida, was enabled by a grant from the General Education Board to spend the academic year with us as Research Fellow working in ornithology and ecology.

Dr. James W. Chapman, who has retired from Siliman University, Dumaguete, The Philippines, spent the greater portion of the year here working on Philippine ants, as a Research Fellow.

In the preparation department, Mr. Arnold D. Lewis of Vernal, Utah, joined us in March, 1952. Mr. F. Russell Olsen, after 16

years of service with the Museum, resigned at the close of the year.

As has been true for many years, a considerable number of staff members supervised the work of graduate students and several offered formal courses of instruction. Dr. Carpenter gave a course in the Biology of Insects; the writer, assisted by Dr. Ernest Williams, gave courses in comparative anatomy and in organic evolution; Dr. Whittington gave courses in invertebrate paleontology and Mr. Stetson in sedimentation. For the first time since the death of Glover Allen in 1942 the Department of Biology offered a course in mammalogy, given by Dr. Lyman; judging from the large enrollment it appears that the course will prove to be a valuable and profitable one. It is gratifying to report that a steadily increasing number of students in the departments of biology and geology are pursuing advanced work with Museum staff members, and it is pleasing rather than vexatious to find that in some areas it is becoming difficult to find working space for additional students.

At the meeting of the National Academy of Sciences last April Dr. Bigelow was awarded the Daniel Giraud Elliot Medal (for 1948) for his senior authorship of "Fishes of the Western North Atlantic, Part I." Last June Amherst College conferred on the writer an honorary Doctor of Science degree.

RESEARCH

Under the auspices of the Woods Hole Oceanographic Institution and the Office of Naval Research, Mr. Schevill has been investigating sound production and hearing in both toothed and baleen whales. When time has permitted, Miss Lawrence has assisted with this work, going on two field trips, one to study *Megaptera* south of Bermuda, the other to study *Tursiops* at the Marine Studios in Florida; she has, further, dissected and studied the nasal passages of *Stenella* and *Delphinus*. A report by Miss Lawrence on Nyasaland mammals is almost completed.

Dr. Lyman has continued his studies of hibernation in collaboration with various colleagues, chiefly from the Harvard Medical School. With Dr. Chatfield he has expanded the work to include rodents other than the hamster, thus giving comparative information helpful toward discovering the fundamental phe-

nomena of hibernation; it is apparent that hibernation, even within the same order of mammals, is not identical. Dr. Leduc and Dr. Lyman have completed work on stored carbohydrates in hibernating hamsters. Investigations with Dr. Deane indicate that animals which hibernate and those which do not hibernate show a different response of the adrenal and thyroid when exposed to cold, and that tumor growth is greatly slowed during hibernation. Through the support of an Air Force contract and a grant from the American Cancer Society, Dr. Chatfield and Dr. Lyman, with Dr. Laurence Irving of the Arctic Health Research Center, have been able to show that the nerve in the bare, cold portion of the legs of seagulls functions at a much lower temperature than the same nerve in the warm, feathered portion of the leg. This study of adaptive change is now being extended to mammalian nerve.

Mr. Griscom continued work on Part II of the "Distributional Check-list of the Birds of Mexico." In spite of the great progress made with the manuscript this year, it will probably take at least two more years to bring it into final shape. In addition to carrying on active field work on New England birds, Mr. Griscom has collected virtually all the necessary data for his projected work on the birds of Cape Cod. Mr. Greenway almost completed the manuscript of the extinct birds of the world. Dr. Dickinson completed a study of the birds of British Columbia in the McCabe collection.

Mr. Loveridge's major research during the year was the study of Nyasaland amphibians and the integration of his studies with those of colleagues on other vertebrates from that area, the whole to be published as a series in the Bulletin.

Dr. Bigelow and Mr. Schroeder completed the revision of Fishes of the Gulf of Maine which will be published by the Government Printing Office, probably in the spring of 1953.

Mr. Clench and Miss Turner have continued their research on the marine mollusks of the Western Atlantic; a study of the family Epitoniidae has been completed and published in Johnsonia. In association with Dr. C. G. Aguayo of the Universidad de la Habana, Mr. Clench published two reports on Cuban mollusks. He has also continued studies on the land mollusks of the Bahama Islands and published a report of the land mollusks of Eleuthera in the Revista de la Sociedad Malacologica. Miss

Turner's work on the Teredinidae is going forward and her work on the Pholadidae will be published in the early part of 1953. Mr. Foster continued the revision of several of the pelecypod genera, mainly those that are rich in species from the West Indian region.

Dr. Bequaert, in addition to research on African fresh-water mollusks, completed the first part of his monograph of the Hippoboscidae (*alias* louse-flies). Dr. Brown began a reclassification of the genera of ants, a major project which will take about six years to complete, and has continued his more detailed revision of the ant tribe Dacetini. Dr. Darlington devoted much of his time to his book on zoogeography. Dr. Carpenter, with Dr. Brues and Dr. Melander, completed the manuscript of the revised "Classification of Insects," which will include keys to the extinct as well as the living orders and families of insects. Dr. Carpenter also brought to completion a revisional study of the neuropterous family Coniopterygidae. Miss Bryant worked extensively on Jamaican and other spiders.

Miss Deichmann's current studies on echinoderms include completion of papers on the littoral holothurians of the Bahama Islands and on long-lost species of Lesson from Peru, and preparation of a paper on South African holothurians.

In the area of vertebrate paleontology, Professor Watson has been actively working on our Permian materials and has completed studies on the problematical reptile *Bolosaurus* and on the evolution of the auditory apparatus of mammal-like reptiles. Dr. Edinger has continued work on her general study of paleoneurology; during the year she devoted her main attention to the skull foramina of mammals in relation to the enclosed cranial nerves. Dr. Williams completed a series of studies of various fossil and recent chelonians before leaving for study in Europe on a Guggenheim Fellowship. The writer devoted all of his available time to a general work on the osteology of reptiles, which should be completed the coming winter.

Dr. Whittington completed a study of trilobites from the Arctic as well as an account of the trilobite family Bathyruridae which is to appear in the "Treatise on Invertebrate Paleontology." Dr. Shrock has completed the re-writing of the work on "Invertebrate Paleontology," of which the first edition, by Twenhofel and Shrock, was published in 1935.

Mr. Stetson has completed his report on surface sediments of the western part of the Gulf of Mexico; analyses of the eastern Gulf surface samples are nearly completed.

LIBRARY

One of the Museum's most valued possessions is its library. This includes the University's main collections in zoology and much of the field of geology. It is, however, almost entirely supported from the Museum's funds and hence has been forced to suffer, equally with other departments, from lack of adequate support. Despite the resulting handicaps Miss Mackenzie, who assumed the librarianship in the spring of 1951, has made excellent progress on several useful and necessary projects. Most important of these was that of exchanges; these were seriously interrupted by the war and in numerous cases contacts had never been reestablished. Work on these is nearly completed; at the present writing we are in contact with some 402 institutions from which 822 publications are received, in contrast with 295 institutions and but 503 journals last autumn. Progress in other library areas is handicapped by lack of funds and (as one consequence of this) by lack of sufficient personnel. Some 637 volumes were bound during the year, but binding is still far in arrears. There are large and valuable collections which are uncatalogued, including those from the libraries formerly at the Boston Society of Natural History and the American Academy of Arts and Sciences as well as a number of large reprint collections. During the year some 632 volumes and 507 titles were catalogued, as well as about 1400 pamphlets, bringing the catalogued holdings of the library up to 98,723 volumes and 117,615 pamphlets.

PUBLICATIONS

Miss Wright has taken on the work of editor with energy and efficiency. Owing to a bottleneck at the printers, only 321 pages of Bulletin material were published during the year. However, the back-log of manuscripts on hand which was mentioned in the last report has vanished; as this is written, every article submitted to date has been treated editorially and sent to the printers.

A considerable volume of publication is thus expected this autumn and winter, most notably the volume constituting the "Classification of Insects." The editor's care in insuring proper preparation of manuscripts has resulted in a notable decrease in our bills for "author's corrections" — items often of considerable magnitude.

For many years the Proceedings of the New England Zoological Club, under the competent editorship of Mr. Batchelder, furnished an outlet for prompt publication of short papers by the Museum staff. The termination of that series in 1948 left many areas of the Museum without any appropriate place of publication for papers of this type. This gap has been filled by the establishment of a new Museum publication, *Breviora*. Papers are limited to 16 pages; they are separately paged and consecutively numbered. There will be no formal division into volumes but, for binding purposes, title and contents pages will be printed for series of papers of about 500 pages each. Four numbers have already appeared.

One number of *Johnsonia* and two *Occasional Papers* were published by the department of mollusks. As customary, the Museum subsidized a number of entomological papers in *Psyche*.

COLLECTIONS

The bird department is greatly indebted to Dr. Dickinson for his gift of 140 beautifully-prepared specimens from the southern United States and Honduras. Mr. Robert Jasse, during his trip to Cornwallis Island, collected 46 specimens which he has kindly presented to the Museum. Besides a most welcome gift of three New England birds from Mr. Allen H. Morgan, he, together with Messrs. William H. Drury, Jr. and Richard Stackpole, was able to secure the first specimen of *Bulbulcus ibis* ever collected on this continent. This bird is a native of Africa and southern Asia which reached South America by some unknown means and has continued on its errant way into North America.

The fish department was fortunate in receiving from the U. S. National Museum, through Dr. Leonard P. Schultz, 94 different paratypes in exchange for a lesser number from our collection. Among the donations received during the year the most notable is a collection from Stewart Springer of rare elasmobranchs,

chimaeras and cyclostomes from the Gulf of Mexico resulting from the explorations of the U. S. Fish and Wildlife vessel "Oregon." A very pleasant arrangement with Mr. Springer and Dr. Schultz is making it possible for Dr. Bigelow and Mr. Schroeder to study and describe this material with the understanding that the Museum will be able to retain a representative series.

The entomology department reports the following noteworthy accessions: about 1,000 species of ants and smaller numbers of other insects from Dr. Brown, collected by him in Australia; types and other material of Central American and North Carolinian spiders from Professor A. M. Chickering; types or type material of 25 species of scorpion-flies and other fine material from eastern Asia from Dr. Fung Ying Cheng; Philippine and Australian ants, including types of published species, from Dr. Chapman; the first installment of a fine set of South African Tenebrionidae, including paratypes, from Dr. C. Koch (by arrangements made through Mr. L. K. Marshall and the Peabody Museum); about 600 insects of various orders from the northeastern United States, including relatively rare species, from Mr. C. B. Lewis, and a collection, including paratypes, of muscid flies from Dr. F. M. Snyder.

Mr. Loveridge reports that 106 specimens, mostly North American amphibia, were presented to the Museum by Mr. Henry Field and that a large collection of African snakes was received from Major C. J. P. Ionides.

EXPEDITIONS AND TRAVEL

In June, 1952, Mr. Schroeder made the first of a series of three projected cruises to the 150-550 fathom zone off the New England coast on the dragger *Cap'n Bill II*, chartered by the Woods Hole Oceanographic Institution. A large amount of interesting material was preserved from this first cruise, invertebrates as well as fishes.

Dr. Carpenter made two field trips during the year. One, during July and August of 1951, was confined chiefly to the southwestern states and was made to obtain Permian fossils in Oklahoma and living neuropterous insects, especially Coniopterygidae, at as many western localities as possible. The second trip, in company with graduate student Fung Ying Cheng, dur-

ing part of May and June, 1952, was to the Black Mountains, North Carolina, to secure the immature stages of a scorpion fly, *Brachypanorpa carolinensis*.

Miss Deichmann, after attending the meetings of the American Society of Mammalogists at Charleston, spent a few days at Beaufort, North Carolina, where a series of experiments on growth of barnacles were in progress.

The Museum's reference and study collections of Eocene mammals are quite inadequate; as a start toward remedying this deficiency Mr. S. J. Olsen, accompanied by graduate students Peter P. Vaughn and Prentiss Shepherd, Jr., was sent to the Bighorn and Bridger Basins of Wyoming for July and August, 1951. Mr. Seton, who had not been in the field for a number of years, joined them for almost the entire season and rendered valuable assistance. A useful collection was obtained. We wish to thank Sheriff Ed Shaffer of Basin, Bighorn County, Sheriff Brown of Lusk, Niobrara County, and Deputy Sheriff Clare Harvey of Mountain View, Uinta County, for the hospitality afforded members of the party in edifices under their control.

Mr. and Mrs. S. J. Olsen collected in Florida, mainly at the Thomas Farm "bone hole" during the latter part of the winter. Dr. T. E. White, who had conducted the early work at the site, spent two weeks with them and gave valuable assistance. Mr. and Mrs. Buddy Vaughn have been granted a lease of the farm, insuring proper care of the property. After finishing their Florida work, the Olsens proceeded to Texas, where they were joined for a month's work in the Texas redbeds by Mr. L. I. Price and the writer. Mr. Price, a former member of the Museum staff and now in charge of vertebrate work for the Brazilian Geological Survey, is an old Texas hand with a remarkably keen eye for a fossil. With his aid, an interesting collection was gathered despite the generally barren nature of the beds in which much of the month was spent. We were greatly aided by Mr. Adolph Witte of Henrietta, who gave us the results of his experiences in the area and accompanied us on many occasions. As always, we were greatly aided by local friends in gaining access to prospecting territory — this year especially by Mr. John Kay, of Wichita Falls, and Mr. Burford Scaling, of Henrietta.

Dr. Whittington spent six weeks in the field in the Cincinnati region, in southern Montana, and in northern Utah during the

summer of 1951. In each of these areas large collections of invertebrate fossils of research interest were made.

ACKNOWLEDGEMENTS

We are deeply indebted to the volunteer workers in the various departments; notably to Mr. Herbert Athearn, Mr. Richard I. Johnson and Mr. Arthur Soper in the department of mollusks.

In addition to gifts acknowledged elsewhere in this report we extend our thanks and appreciation to the following for specimens:

Entomology: G. Ball, M. Banninger, C. S. Bambart, P. F. Bellingier, E. B. Britton, J. G. Brook, A. E. Brower, W. J. Brown, L. F. Byars, S. Camras, M. Cazier, P. J. Christian, W. J. Cloyd, A. C. Cole, Jr., K. W. Cooper, W. S. Creighton, A. Douglas, J. G. Edwards, A. G. B. Fairchild, Mrs. H. E. Frizzell, C. A. Frost, B. B. Given, M. H. Hatch, H. Hoogstraal, W. W. Kempf, N. L. H. Krauss, K. V. Krombein, N. Kusnezov, H. Levi, D. T. McCabe, P. S. Nathan, W. L. Nutting, E. Reitter, E. S. Ross, V. Roth, G. Salt, M. R. Smith, N. A. Weber, L. H. Weld, E. O. Wilson, F. E. Wilson, T. E. Woodward, P. Wygodzinsky, K. Yasumatsu, E. C. Zimmerman.

Invertebrate Fossils: T. C. Barr, Jr., W. E. Ham.

Marine Invertebrates: J. Butler, G. E. Gates, H. H. Humm, Dr. Libbie Hyman, B. Porter, E. L. Puffin, L. Rossi, R. I. Smith.

Reptiles and Amphibians: T. C. Barr, Jr., O. Barton, C. S. Cansdale, J. L. Chamberlin, P. M. Daniel, E. R. Dunn, C. J. Goin, N. Hale, J. H. Hoofien, A. Johnston, R. F. Lawrence, P. W. Longnecker, D. T. McCabe, G. Nelson, J. F. Paulson, T. E. Pulley, R. Ritland, J. D. Romer, O. Sanders, W. P. Sights, P. W. Smith, G. Underwood.

Respectfully submitted,
ALFRED S. ROMER
Director

Museum of Comparative Zoology

FACULTY, 1952-1953

- James Bryant Conant, Ph.D., LL.D., S.D., L.H.D., D.C.L., D.Sc. (hon.), Dr. (hon.), Litt.D., President.
Henry Bryant Bigelow, Ph.D., S.D. (hon.), Ph.D. (hon.).
Alfred Sherwood Romer, Ph.D., S.D. (hon.).
George Cheever Shattuck, M.D., A.M. (hon.).
George Bernays Wislocki, A.B., M.D.

STAFF, 1952-1953

- Alfred Sherwood Romer, Ph.D., S.D. (hon.), Director, Alexander Agassiz Professor of Zoology, and Curator of Vertebrate Paleontology.
Nathan Banks, A.M., Head Curator of Recent Insects, Emeritus.
Henry Bryant Bigelow, Ph.D., S.D. (hon.), Ph.D. (hon.), Research Oceanographer, Retired.
Elizabeth Bangs Bryant, Assistant Curator of Insects, Retired.
Reginald Aldworth Daly, Ph.D., D.Sc. (hon.), S.D. (hon.), Sturgis Hooper Professor of Geology, Emeritus.
Louis Caryl Graton, Ph.D., Sturgis Hooper Professor of Geology, Emeritus.
Joseph Charles Bequaert, Dr.Phil., Alexander Agassiz Professor of Zoology.
Francis Birch, S.B., Ph.D., Sturgis Hooper Professor of Geology.
Frank Morton Carpenter, S.D., Alexander Agassiz Professor of Zoology and Curator of Fossil Insects.
David Meredith Seares Watson, M.Sc., D.Sc. (hon), LL.D. (hon.), Alexander Agassiz Professor of Zoology through December 31, 1952.
Charles Thomas Brues, S.M., Honorary Curator of Parasitic Hymenoptera.
William James Clench, S.M., Curator of Mollusks.
Philip Jackson Darlington, Jr., Ph.D., Fall Curator of Coleoptera and Curator of Entomology.
Elisabeth Deichmann, Ph.D., Curator of Marine Invertebrates and Alexander Agassiz Fellow in Oceanography and Zoology.

- Tilly Edinger, Dr.Phil.Nat., S.D. (hon.), Research Paleontologist.
- Ludlow Griscom, A.M., Research Ornithologist.
- Columbus O'Donnell Iselin, II, A.M., S.D. (hon.), Research Oceanographer.
- Arthur Loveridge, Curator of Reptiles and Amphibians.
- Kirtley Fletcher Mather, Ph.D., S.D. (hon.), Litt.D., L.H.D., Curator of the Geological Museum.
- Barbara Lawrence Schevill, A.B., Curator of Mammals.
- Henry Crosby Stetson, A.M., Research Oceanographer and Alexander Agassiz Fellow in Oceanography and Zoology.
- Harry Blackmore Whittington, Ph.D., D.Sc., Curator of Invertebrate Paleontology.
- James Cowan Greenway, Jr., A.B., Associate Curator of Birds.
- William George Fowle Harris, Associate Curator of Oology.
- Bernhard Kummel, Ph.D., Associate Curator of Invertebrate Paleontology.
- Charles Peirson Lyman, Ph.D., Associate Curator of Mammals.
- William Edward Schevill, A.M., Associate Curator of Invertebrate Paleontology.
- William Charles Schroeder, Associate Curator of Fishes.
- William Louis Brown, Jr., Ph.D., Assistant Curator of Insects.
- Ernest Edward Williams, Ph.D., Research Associate in Vertebrate Paleontology.
- James Wittenmeyer Chapman, Sc.D., Research Fellow.
- Benjamin Shreve, Research Assistant.
- Ruth Dixon Turner, M.A., Research Assistant.
- Nelda Emelyn Wright, M.A., Research Assistant and Editor of Publications.
- Charles Foster Batchelder, A.B., C.E., Associate in Mammalogy and Ornithology.
- Arthur Cleveland Bent, A.B., Associate in Ornithology.
- Merrill Edwin Champion, M.D., M.P.H., Associate in Mollusks.
- Arthur Merton Chickering, Ph.D., Associate in Arachnology.
- Harold Jefferson Coolidge, Jr., S.B., Associate in Mammalogy.
- William Cameron Forbes, A.B., LL.D., Associate to Collect Specimens in Natural History.
- Richard Winslow Foster, A.B., Associate in Mollusks.
- Richard Cresson Harlow, S.M., Associate in Oology.
- Henry Seton, A.M., Associate in Vertebrate Paleontology.

- Robert Rakes Shrock, Ph.D., Associate in Invertebrate Paleontology.
- Theodore Elmer White, Ph.D., Associate in Vertebrate Paleontology.
- George Nelson, Preparator in Chief, Retired.
- Stanley John Olsen, Preparator.
- Arnold David Lewis, Assistant Preparator.
- David Martin Seaman, M.S., Assistant Preparator.
- Frances Lowell Burnett, A.M., Assistant.
- Myvanwy Millar Dick, Assistant.
- Ruth Cameron Dunn, B.S., Assistant.
- Barbara Evans, A.B., Assistant.
- Jessie Henderson Sawyer, Assistant.
- Hazel Goldrich Vaughn, Assistant.
- Ruth Wood Norton, A.B., Secretary to the Director.
- Ruth Byington Inman, B.S., Secretary to the Bird Department.
- Joan Carole Kinsella, Staff Secretary.
- Jessie Bell MacKenzie, B.A., Librarian.
- Mary Elizabeth Martin, A.B., B.S. in L.S., Assistant Librarian.
- Elinor Toop, A.B., B.S. in L.S., Assistant Librarian.
- Maxwell Leslie French, Staff Assistant.

PUBLICATIONS FOR THE YEAR 1951-1952

The following have been printed under Museum auspices during the year from July 1, 1951 to June 30, 1952.

BREVIORA

- No. 1. A New Panamanian tree frog. By Edward H. Taylor. 4 pp. February, 1952.
- No. 2. A staurotypine skull from the Oligocene of South Dakota. (Testudinata, Chelydridae). By Ernest Williams. 16 pp. February, 1952.
- No. 3. Notes on Siphonophores. 3. *Nectopyramis spinosa* n. sp. By Mary Sears. 4 pp. May, 1952.
- No. 4. A unique remopleuridid trilobite. By H. B. Whittington. 11 pp. June, 1952.

BULLETIN

Vol. 106

- No. 5. The Oonopidae of Panama. By Arthur M. Chickering. 40 pp. August, 1951.

- No. 6. The Phyllophaga of Hispaniola. (Coleoptera: Scarabaeidae). By Milton W. Sanderson. 37 pp., 6 pls. August, 1951.
- No. 7. A revision of the beetles of the genus *Chalcosicya* Blake (Chrysomelidae) from the West Indies. By Doris H. Blake. 28 pp., 3 pls. November, 1951.
- No. 8. Foraminifera ecology off Portsmouth, New Hampshire. By Fred B Phleger. 78 pp. April, 1952.
- No. 9. Foraminifera species off Portsmouth, New Hampshire. By Frances L. Parker. 33 pp., 6 pls. April, 1952.
- No. 10. Foraminiferal distribution in the Long Island Sound — Buzzards Bay area. By Frances L. Parker. 49 pp., 5 pls. May, 1952.
- No. 11. Revisionary studies of some South American Teiidae. By Rodolfo Ruibal. 56 pp. June, 1952.

JOHNSONIA

Vol. 2, no. 30, September 28, 1951.

The genus *Epitonium* in the Western Atlantic. By W. J. Clench and R. D. Turner, pp. 249-288, pls. 108-130.

OCCASIONAL PAPERS ON MOLLUSKS

Vol. 1, no. 16, July 11, 1951.

Busycon coarctatum Sowerby. By W. J. Clench. pp. 405-412, pl. 50.

Vol. 1, no. 17, March 27, 1952.

The *Scalarinum* species complex (*Umbonis*) in the genus *Cerion*. By W. J. Clench and C. G. Aguayo. pp. 413-440, pls. 51-57.

PSYCHE

Vol. 58, no. 2.

Concerning some *Hydrometra* from Africa (Hemiptera). By H. B. Hungerford. pp. 65-72, 1 pl.

Two new species of exotic ants. By R. E. Gregg. pp. 77-84, 2 figs.

Vol. 58, no. 3.

On two North American Philotarsids (Psocoptera). By E. L. Mockford. pp. 102-107, 2 pls.

Vol. 58, no. 4.

Notes on Alaskan Collembola. II. Three new species of Arctic Collembola. By K. A. Christiansen. pp. 125-140, 3 pls.

PUBLICATIONS BY THE MUSEUM STAFF

Bequaert, J. C.

Carnus hemapterus Nitzsch on a screech owl in Arizona (Diptera). *Psyche*, 58(4):157-158. June 1952.

Hippoboscidae collected in Indonesia by the Sumba expedition. *Verh. Naturf. Ges. Basel*, 63(1):218-220. 1952.

Bigelow, H. B.

Three new skates and a new chimaerid fish from the Gulf of Mexico. *Jour. Wash. Acad. Sci.*, 41(12):383-392. December, 1951. (With W. C. Schroeder.)

Brown, W. L., Jr.

On the publication date of *Polyhomoa itoi* Azuma (Hymenoptera, Formicidae). *Mushi*, 22:93-95. April, 1951. (With K. Yasumatsu.)

New synonymy of a few genera and species of ants. *Bull. Brooklyn Ent. Soc.*, 46:101-106. October, 1951.

Revisional notes on *Camponotus herculeanus* Linné and close relatives in Palearctic regions (Hymenoptera: Formicidae). *Jour. Fac. Agr. Univ. Kyushu*, 10:29-44. October, 1951. (With K. Yasumatsu.)

Adlerzia froggatti Forel and some new synonymy. *Psyche*, 58(3):110. April, 1952.

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