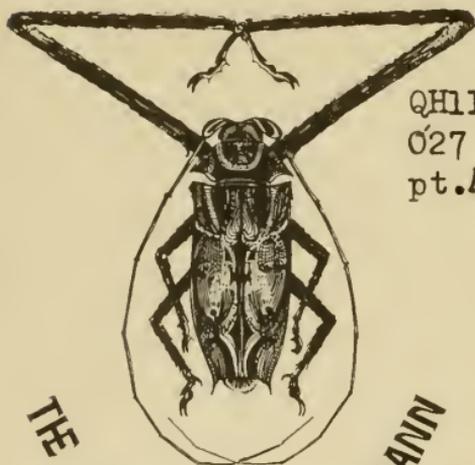


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# MATABELE LAND

AND

## THE VICTORIA FALLS

*FROM THE LETTERS & JOURNALS OF THE LATE*

FRANK OATES, F.R.G.S.

SECOND EDITION

APPENDIX IV

## ENTOMOLOGY

By J. O. WESTWOOD, M.A., F.L.S., ETC.  
HOPE PROFESSOR OF ZOOLOGY IN THE UNIVERSITY OF OXFORD

WITH ADDITIONS BY  
A. SIDNEY OLLIFF AND W. L. DISTANT

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## APPENDIX IV.

### ENTOMOLOGY.<sup>1</sup>

By J. O. WESTWOOD, M.A., F.L.S., Etc.

Hope Professor of Zoology in the University of Oxford.

(PLATES V.-IX.)

THE Collection of Insects formed by Mr. F. Oates, now in the Entomological Department of the Museum of the University of Oxford, although not of considerable extent, fortunately comprises examples of many of the very peculiar groups and genera characteristic of the greater part of the African continent.

The geographical distribution of animals has, during the last few years, attracted so much attention among naturalists that a few preliminary observations on the subject will not be considered out of place.

M. Lacordaire, in the chapter on the geographical distribution of insects, in his 'Introduction à l'Entomologie,' divided the African continent into numerous regions, as follows:—1. Upper Egypt, Nubia, and Abyssinia; 2. The

<sup>1</sup> [Since this article was published in the first edition of this work, a number of insects in the collection, not then particularized—chiefly amongst the Coleoptera—have been named by Mr. A. Sidney Olliff, who has also described several additional new species. A list of the Rhynchota has been furnished by Mr. W. L. Distant (also including some new species), and some further additions have been made by Professor Westwood. The names of all insects added by Mr. Olliff and Mr. Distant are distinguished from those named by Professor Westwood by an asterisk (\*) and the sign (†) respectively. It will further be found in several instances that the names of genera printed in the first edition have been altered in the ensuing pages, and in some cases specific names also. Where the latter have been changed the names used in the earlier edition have been given between brackets as synonyms.—ED.]

country south of the Atlas Range, as far as the Great Desert, and including Morocco ; 3. Senegambia ; 4. The coast of Guinea ; 5. Congo ; 6. The Cape of Good Hope ; 7. Madagascar ; 8. The islands of Mauritius and Bourbon.

In the more recent works of Mr. Wallace on the geographical distribution of animals we find that (with the exception of the whole of North Africa—including the northern half of Egypt—which is, like the northern half of Arabia, united with the Mediterranean sub-region and regarded as a portion of the primary Polar Arctic region) the remainder of Africa, south of the tropic of Cancer, is constituted into a primary region, to which the name of "Ethiopian" has been applied, and in which the zoological productions are of a remarkably homogeneous character. Of this Ethiopian region the portion which extends on the western side of the continent, between the rivers Gambia and Congo, and consequently embracing Guinea and the Gold Coast, and reaching as far as  $25^{\circ}$  East long., is of a distinct character, being occupied by dense forests. To this sub-region the name of "West African" has been applied. Another sub-region, the "South African," is formed of that part of the continent south of the tropic of Capricorn, but extending northwards along the east coast as far as Mozambique.

The remainder of Africa, from the tropic of Cancer to the river Gambia on the west coast, and including Senegambia, Timbuctoo, South Egypt, Abyssinia, the eastern half of Africa (including the great lakes and Zanzibar), and reaching from Mozambique on the east to Angola, Benguela, and Damara Land on the west coast, is considered as forming a third sub-region, to which the inappropriate name of "East Africa" has been applied. It is in the south-eastern portion of this third sub-region that the collection of insects formed by Mr. F. Oates was obtained.

The surface of all this sub-region is described by Mr. A. R. Wallace as "generally open, covered with a vegetation of high grasses or thorny shrubs, with scattered trees and isolated patches of forest in favourable situations. The only parts where continuous forests occur are

on the eastern and western slopes of the great Abyssinian plateau, and on the Mozambique coast from Zanzibar to Sofala. The whole of this great district has one general zoological character. Many species range from Senegal to Abyssinia; others from Abyssinia to the Zambesi; and a few, as *Mungos fasciatus* and *Phacochærus Æthiopicus* (to which great numbers of species of insects may be added), range over the entire sub-region." Various species of quadrupeds and birds are mentioned, which are found in Gambia, Abyssinia, and South-east Africa, but not in the West African sub-region; and yet Mr. Wallace adds, "Although this sub-region is so extensive and so generally uniform in physical features, it is by far the least peculiar part of Africa. It possesses, of course, all those widespread Ethiopian types which inhabit every part of the region; but it has hardly any special features of its own. The few genera which are peculiar to it have generally a limited range, and for the most part belong either to the isolated mountain-plateau of Abyssinia, which is almost as much Polar-Arctic as Ethiopian, or to the woody districts of Mozambique, where the fauna has more of a West or South African character." Surely these circumstances, if correctly stated, together with the fact connected with the existence of the Great Sahara desert, extending many hundred miles in width across Africa, lead to the conclusion that the division of Africa south of the tropic of Cancer into three principal areas is unnatural, and that, with the exception of the necessary consequence of greater life-action within the tropics, there is so much uniformity in the animal productions of Africa as to render it (with our present knowledge at least) undesirable to cut up the continent into these sub-regions.

#### Order LEPIDOPTERA.

The Lepidopterous insects (butterflies and moths) especially attracted much of Mr. Oates's attention; and of the day-flying species (Rhopalocera) he collected seventy-three different kinds, of which nineteen<sup>1</sup> appear to be previously undescribed. As they form

<sup>1</sup> [When the above was written for the first edition, one of this number (*Callosune Buxtoni*) had, unknown to Professor Westwood, been already described under the same name by Mr.

the most important part of his collection, I have given a complete catalogue of them in the following pages. These insects abound in certain districts, and in Mr. Trimen's work on South African butterflies, published in 1862-1866, as many as 197 different species are recorded, after deducting 29 species inserted incorrectly; whilst in his new work (of which vols. i. and ii., published in 1887, include the families NYMPHALIDÆ, ERYCINIDÆ, and LYCÆNIDÆ) he expects, when it is completed, to bring the number of known South African forms up to about 380.

Species of the families DANAIDÆ, SATYRIDÆ, ACRÆIDÆ, NYMPHALIDÆ, LIBYTHEIDÆ, LYCÆNIDÆ, PIERIDÆ, PAPILIONIDÆ, and HESPERIIDÆ, occur in each of the three divisions into which Mr. Wallace has divided the continent of Africa south of the Great Desert; but of the families ELYMNIIDÆ and NEMEOBIIDÆ no species have been found in the South African sub-region, which, however, possesses seven genera peculiar to itself,—two belonging to the SATYRIDÆ, one to the ACRÆIDÆ, three to the LYCÆNIDÆ, and one to the HESPERIIDÆ. The beautiful species of *Zeritis* are also peculiar to this sub-region, one additional species only inhabiting West Africa.<sup>1</sup>

Of the DANAIDÆ, species occur in each of the four Ethiopian sub-regions. Of the SATYRIDÆ, which also occur in all the four sub-regions, *Gnophodes*, *Leptoneura*, and a few other small genera are exclusively African. Of the ELYMNIIDÆ, which are characteristic of the Malayan and Moluccan districts, one species also occurs in Ashanti. The MORPHIDÆ, BRASSOLIDÆ, and typical HELICONIIDÆ do not occur in Africa; the ACRÆIDÆ, on the contrary, have their metropolis in this continent, which produces more than two-thirds of all the known species. Of the NYMPHALIDÆ, which is the largest and most universally distributed family of butterflies, species occur in all the sub-regions of Africa. There are fourteen genera of these butterflies exclusively African, including *Lachnoptera*, *Amphudema*, *Catuna*, *Euryphene*, *Romaleosoma*, *Aterica*, and *Harma*. *Libythea* (constituting the family LIBYTHEIDÆ) is widely distributed, and occurs in Western Africa and Madagascar, and one species has been discovered in Eastern and South-eastern Africa. The family *Nemeobiidæ* is represented in West Africa and Madagascar, but not in South Africa. No representative of the family ERYCINIDÆ (proper) occurs in the old world or Australia. The LYCÆNIDÆ, on the other hand, are found in all the sub-regions of the globe, the genera *Pentila*, *Liptena*, *D'Urbania*, *Axiocerces*, *Capys*, *Phytala*, *Epitola*, *Hewitsonia*, and *Deloneura* being peculiar to Africa. Of the family PIERIDÆ, *Teracolus* and *Pseudo-*

Butler (P. Z. S., 1876), a matter which has now been set right in the succeeding text. *Acraea Acronycta* of the first edition has also now been referred to *A. Stenobeia*, Wallengren, and *Acraea Amphimalla* and *A. Dircaea* both to *A. Caldarcna*, Hewitson.—ED.]

<sup>1</sup> From recent investigations a large number of genera have been formed out of sub-divisions of the older genera given in the text of the first edition, so that the genera thus formed have considerably increased the number of these groups peculiar to Africa, as stated above.

*pontia*<sup>1</sup> are the only genera exclusively African; but the species of other genera are very numerous, especially in the group of white butterflies with orange tips to their fore wings. The family PAPILIONIDÆ is very widely distributed over all the warmer regions of the globe; and although no peculiar genus belonging to the family is found in Africa, there are several very interesting groups of species, such as *Papilio Nireus* and its allies, with black wings spotted or banded with green. The *Merope* group, the males of which are cream-coloured, spotted with black and furnished with tails, is remarkable for having tailless females in West and South Africa, so much unlike their partners as to have been described as several distinct species; whereas in Madagascar the females of this group can scarcely be distinguished either in form or colour from the males.<sup>2</sup> Lastly, of the HESPERIIDÆ, distributed all over the globe, thirteen of the genera contain species which are natives of Africa, three of them being peculiar to that region—namely, *Abantis* from Mozambique, *Ceratruchia* from Western Africa, and *Caprona* from Southern Africa.

### LEPIDOPTERA RHOPALOCERA.

Family PAPILIONIDÆ.

Genus PAPILIO (auctt.)

1. (1) PAPILIO DEMOLEUS, Linnæus; Trimen, Rhop. Afr. Austr., p. 17.  
*Papilio Demodocus*, Esper, Ausl. Schmett., p. 205, pl. 51, f. 1.  
Ranges from Western Tropical Africa to the Cape of Good Hope.

Genus CALLIDRYAS, Boisduval.

*Callidryas* (char. emend.), Doubleday and Hewitson, Gen. D. Lep., p. 66. *Catopsilia* (Hübner), W. F. Kirby, Syn. Cat., p. 481 (haud recte).

2. (1) CALLIDRYAS SWAINSONII, Westwood in Oates's Matabele Land, ed. 1, App. p. 335 (1881).  
*Colias Pyrene*, Swainson, Zool. Ill., i. pl. 51 (not of Linnæus, which is an Indian species, belonging to the genus *Thestias*, Boisduval.)  
*Callidryas Pyrene*, Butler, Lep. Exot., p. 44, pl. 16, f. 8-10.  
*Callidryas Florella*, Boisduval; Trimen, l. c. p. 68; but not of Fabricius nor Donovan, Nat. Repos., iii. pl. 90.

Many individuals of this species were taken at the Motlautsi River, varying in having the black spot of the disk of the fore wings, and the orange spots on the under side of the hind wings. A specimen from Guinea, received by Mr. Hope from Mr. Westermann of Copenhagen as the *Florella*, Fabricius, is identical with the South African specimens of Swainson's species. The type specimen described by Fabricius, drawn by Jones (Icones, ii., Dan. Cand. pl. 5, f. 3, 4),

<sup>1</sup> More recently regarded as a moth.

<sup>2</sup> M. Oberthür has recently described an Abyssinian insect of the *Merope* form with sexes similar, as in Madagascar, which he calls *Papilio Antinorii*.

and copied by Donovan, is from Sierra Leone, and was, and still is, in the Banksian Collection. *C. Swainsonii* is very widely dispersed.

3. (2) *CALLIDRYAS RHADIA*, Boisduval; Trimen, *l. c.* p. 69.  
*Callidryas Castalia*, Doubleday and Hewitson, Gen. D. Lep., p. 68 (not of Fabricius).

Two specimens captured at Tati. The Rev. H. Rowley sent it from the Zambesi to the Oxford Museum.

Genus *TERACOLUS*, Swainson.

4. (1) *TERACOLUS SUBFASCIATUS*, Swainson, Zool. Ill., ser. 2, Ins. pl. 115<sup>1</sup>; Boisduval; Trimen, *l. c.* pp. 58, 331.

*Ptychopteryx Bohemani*, Wallengren, Lep. Rhop. Caffr., p. 18.

Originally described from the Burchell Collection now at Oxford. Six specimens from Tati. The species appears to be very rare, as in 1862 Mr. Trimen had not seen an individual. The female has the extremity of the fore wings brilliant orange-red, but variable in the intensity of the colour, instead of pale orange-yellow, as figured by Swainson.

5. (2) *TERACOLUS AGOYE*, Wallengren, Lep. Rhop. Caffr., p. 15; Trimen, *l. c.* p. 325.

*Anthocharis Eosphorus*, Trimen, Trans. Ent. Soc. Lond., ser. 3, i. p. 523 (1863).

One specimen; locality not noted.

Genus *PIERIS* (auctt.)

6. (1) *PIERIS MESENTINA*, Cramer, Pap. Ex., pl. 270, f. A, B; Godart; Boisduval; Trimen, Rhop. Afr. Austr., p. 35.

*Papilio Aurota*, Fabricius, Ent. Syst., iii. pt. 1. p. 197.

Many specimens taken at Bamangwato, the Motlautsi River, Tati, Gubuluwayo, Inyati (November 30, 1873), the Gwailo River, and at or near the Victoria Falls.

7. (2) *PIERIS SEVERINA*, Cramer, Pap. Ex., pl. 338, f. G, H; Godart; Boisduval; Trimen, *l. c.* p. 32.

Two specimens, of unrecorded locality.

Genus *IDMAIS*, Boisduval.

8. (1) *IDMAIS ERIS*, Klug, Symbol. Phys., pl. 6, f. 15, 16; Boisduval; Reiche in Ferret and Galinier's Voy. Abyss., iii. p. 460, pl. 31, f. 1-3; Trimen, *l. c.* p. 59.

Var. *Idmais Fatma*, Felder, Novara-Reise, Lep. ii. p. 189 pl. 25, f. 3.

Tati; and the Ramakwebani River, July 29, 1874.

9. (2) *IDMAIS VESTA?* Reiche in Ferret and Galinier's Voy. Abyss. iii. p. 463, pl. 31, f. 7, 8 (not of Trimen, *l. c.* p. 62, = *Idmais Chrysonome*, Doubleday and Hewitson, Gen. D. Lep., pl. 7, f. 5; nor of Klug nor Boisduval.)

<sup>1</sup> The name of this species is accidentally omitted in the classified index of the second series of Swainson's 'Illustrations'; and Mr. Trimen complains that the plate is not in the copy of the work in the Public Library at Cape Town, having been probably omitted by the binder from not appearing in the classified index.

The specimens collected by Mr. Oates have the base of all the wings on the upper side broadly white, the remainder ochreous buff, with a large dark brown spot at the extremity of the discoidal cell of the fore wings, a dark brown, very irregular bisinuated fascia running across the fore wings beyond the middle, and extending across the middle of the hind wings, nearly reaching the anal angle; the outer margin of the fore wings is dark brown, with two rows of ochreous buff spots, the outer ones small; the outer margin of the hind wings is brown, inwardly dentated, with a marginal row of ochre spots. Beneath, the fore wings are bright orange-yellow at the base, yellow in the middle, with the apex and the entire hind wings brownish ochre, the markings of the fore wings ill defined, and with three obscure bands across the hind wings. In the female the ground colour of the upper surface of the wings is uniformly pale yellowish buff. The fascia across the hind wings separates this species from *I. Chrysonome*, Doubleday (*I. Vestæ*, Trimen). M. Reiche's figure apparently represents a larger and more suffused insect, the under side especially being more variegated, and the ground colour of the hind wings bright yellow.

Genus TACHYRIS, Wallace.

10. (1) TACHYRIS AGATHINA, Cramer, Pap. Ex., pl. 237, f. D, E; Godart; Boisduval; Trimen, *l. c.* p. 28; Hopffer in Peters's Reise Mossamb., Zool. v. p. 351, pl. 21, f. 11, 12. *Pieris Thyssa*, Hopffer, Ber. Akad. Berl., 1855, p. 639; id. in Peters's Reise Mossamb., Zool. v. p. 349, pl. 21, f. 7-10. Near the Victoria Falls in January.

Genus CALLOSUNE, Doubleday.

11. (1) CALLOSUNE EUPOMPE, Klug, Symb. Phys., pl. 6, f. 11-14; Boisduval; Trimen, *l. c.* p. 45. *Papilio Evippe*, Cramer, Pap. Ex., pl. 91, f. D, E (not of Linnæus). *Pontia Acaste*, Klug, Symb. Phys., pl. 7, f. 16, 17? *Pieris Polycaste*, Boisduval, Sp. Gén., i. p. 525? *Anthopsyche Theopompe*, Felder, Novara-Reise, Lep. ii. p. 183. Motlautsi River, August 1873; Tati.
12. (2) CALLOSUNE DANAË, Fabricius; Donovan, Ins. India, pl. 26, f. 2; Boisduval; Doubleday and Hewitson, Gen. D. Lep., pl. 7, f. 2; Trimen, *l. c.* p. 44. *Papilio Eborea*, Cramer, Pap. Ex., pl. 352, f. C-F. *Teracolus cinerascens*, Butler, Cist. Ent., i. p. 172 (1873); id. Proc. Zool. Soc., 1876, p. 155.

This handsome species inhabits Natal, Damara Land, Ceylon, Bengal, Madras. Male, Inyati (November 30, 1873); females, near the Gwailo River (October 19, 1873) and Impakwe River (February 12, 1874).

13. (3) CALLOSUNE EVIPPE, Linnæus; Clerck, Icones, pl. 40, f. 5; Cramer, Pap. Ex., pl. 91, f. F, G; Godart; Boisduval; Lucas, Exot. Lep., pl. 37, f. 1.  
Tati; and between Inyati and Gubuluwayo, December 1, 1873.
14. (4) CALLOSUNE OMPHALE, Godart; Boisduval; Trimen, *l. c.* p. 50.  
Near the Victoria Falls in January.
15. (5) CALLOSUNE ANTIGONE, Boisduval, Sp. Gén., p. 572; Trimen, *l. c.* p. 52.  
Both sexes, Ramakwebani River, February 14, 1874; also females at the Gwailo River in October. These females have no orange on the upper side of the fore wings.
16. (6) CALLOSUNE CASTA, Gerstaecker, Arch. f. Nat., xxxvii. pt. 1, p. 357 (1871); id. in v. d. Decken's Reisen in Ost-Afrika, iii. pt. 2, Ent. p. 365, pl. 15, f. 1, 1a.  
Taken at Tati.
17. (7) CALLOSUNE KEISKAMMA, Trimen, *l. c.* p. 56, pl. 2, f. 3, 4.  
Var. *Anthopsyche Topha*, Wallengren, Wien. Ent. Mon., iv. p. 34.  
Ramakwebani River, July 28, 1874. Mr. Kirby cites Klug's *Pontia Evarne* (Symb. Phys., pl. 6, f. 1-4) as identical with this species, but the rounded fore wings of the male, with the black exterior margin, and the submarginal row of black spots on the hind wings, at once separate these two insects. See the observations of Mr. Weale on this subject (Trans. Ent. Soc. Lond., 1877, p. 273).
18. (8) CALLOSUNE INORNATA, Westwood in Oates's Matabele Land, ed. 1, App. p. 338 (1881).  
Alis supra albis, basi nigro parum pulverosis, anticis macula trigona distincta apicali aurantia: alis anticis infra albis apice albido-lutescenti, intus magis brunnea; alis posticis lutescenti-albidis, linea recta longitudinali media paullo obscuriori. Expans. alar. antic. lin. 19.  
The locality of this very simply coloured species is not recorded.
19. (9) CALLOSUNE IONE, Godart; Boisduval; Lucas, Exot. Lep., pl. 37, f. 4; Reiche in Ferret and Galinier's Voy. Abyss., iii. p. 457, pl. 30, f. 1-8; Hopffer in Peters's Reise Mos-samb., Zool. v. p. 357, pl. 21, f. 1-6; Trimen, *l. c.* p. 43.  
*Anthopsyche speciosa*, Wallengren, Lep. Rhop. Caffr., p. 16.  
*Anthocharis Erone*, Angas, Kafirs Ill., pl. 30, f. 3.

Two males, taken at Tati.

The species of this genus, in which the males have the extremity of the fore wings marked with a brilliant blue or pale purple patch, are so closely allied as to suggest the possibility of their being geographical sub-species; they appear, however, to be constant in their characteristic markings, and the females are even more distinct than

the males, which are generally so unlike the females that their sexual relations might readily be questioned.

In the male specimens of *C. Ione*, captured by Mr. Oates at Tati, the fore wings have the faintest trace of a very minute black discoidal dot, a brilliant silky purple subapical patch, the apex itself black, and the inner edge margined with black, which is slightly scalloped. The hind wings are pure white, with delicate black veins, without any discoidal spot. On the under side the fore wings have the minute discoidal dot, and the apical patch is replaced by pale greyish buff, with a slightly defined darker inner margin; the veins of the hind wings are not black, the basal half of the costa is orange, with a short brownish transverse dash, near the middle of the costa, extending only to the first branch of the subcostal vein; the remainder of the wing white. One of Mr. Oates's specimens is very small ( $1\frac{2}{3}$  inch in the expanse of the fore wings), with the black veins excessively slender.

20. (10) CALLOSUNE REGINA, Trimen, Trans. Ent. Soc. Lond., ser. 3, i. p. 520 (1863); Westwood in Oates's Matabele Land, ed. 1, App. p. 399, pl. E, f. 9, 10 (1881). (Plate V., figs. 9, 10.)

The males have the veins of the fore wings, beyond the middle, very slender and black, and with a very minute discoidal dot. The female of this species, represented for the first time in the former edition of this work, as cited above, has the wings on the upper side white, with the veins concolorous; a large black round spot at the extremity of the discoidal cell, and a large purple-red subapical spot, down the middle of which is a richer shade of purple, edged internally with blackish brown, the apex and apical margin being of the latter colour; the base of the wings is slightly powdered with greyish scales, and there are two minute dusky dots towards the inner angle of the fore wings. On the under side the purple patch of the fore wings is replaced by dirty pale buff, having an oblique row of five pale black spots, and the hind wings are slightly fleshy buff coloured, finely freckled all over with pale brown irrorations, with a discoidal spot, and a curved row of oblong spots beyond the middle of the wing, of pale brown; the costal margin is slightly fulvous at its base. The expansion of the fore wings is  $2\frac{5}{16}$  inches. Taken at Tati.

A male, in the Hopeian collection, from the Zambesi, has the hind wings marked along the outer margin with black dots at the extremity of the longitudinal veins.

21. (11) CALLOSUNE THEOGONE, Boisduval; Trimen, Rhop. Afr. Austr., p. 51.

One specimen; locality not recorded.

22. (12) CALLOSUNE BUXTONI, Butler, Proc. Zool. Soc., 1876, p. 130; Westwood in Oates's Matabele Land, ed. 1, App. p. 340, pl. E, f. 7, 8 (1881). (Plate V., figs. 7, 8.)

The female (or rather the reputed female) of this species here figured differs from the male in having a large orange patch at the

extremity of the fore wings, which are white with a slight yellowish tinge; a minute discoidal black dot and a curved row of brown spots within the orange mark, those towards the costa being most indistinct; the inner margin of the orange mark is also brownish, as is the apex itself and the apical margin, the brownish margin terminating near the hinder angle in a brownish spot; the hind wings are uniformly white, with the extremity of the veins towards the outer angle more or less dusky. On the under side the orange spot of the fore wings wants both the inner and apical dark edging, and bears a curved row of brown spots; the hind wings are very pale fleshy buff, and very delicately freckled, with a bar of darker brown extending from the middle of the costa to the median vein, where it is curved backwards; there is also a brown dot on a small whitish spot near the extremity of the discoidal cell. The female varies from  $1\frac{3}{4}$  to  $2\frac{1}{4}$  inches in the expansion of the fore wings. Taken at Tati.

23. (13) CALLOSUNE EVENINA, Wallengren, Lep. Rhop. Caffr., p. 12; Trimen, *I. c.* p. 322; id. Trans. Ent. Soc. Lond., 1870, p. 380, pl. 6, f. 11.

One specimen (locality not noted), with the black markings on the upper surface of the wings much less diffused than in the figure given by Mr. Trimen; possibly a male. Another specimen in Burchell's African collection, in the Hopeian Museum, has the large dark spot on the fore wings extending over the discoidal cell, but the hind wings are almost unspotted.

24. (14) CALLOSUNE EIONE, Boisduval, Sp. Gén., p. 578.

One broken specimen, without locality, is very closely allied to the insects noticed above, as *C. Antigone*, Boisduval.

25. (15) CALLOSUNE PSEUDETTRIDA, Westwood in Oates's Matabele Land, ed. 1, App. p. 340 (1881).

Alis supra pallide flavescentibus, apice fusco cum serie subapicali macularum 6 aurantiacarum, puncto minuto nigro discoidali, nubilaque parva fusca ante angulum posticum; alis posticis serie marginali macularum conoidearum fuscis (versus angulum analem interdum obsoletis) nubila parva pone medium costæ, fasciaque valde abbreviata pone medium disci versus angulum externum, pallide fuscis: alis anticis infra pallide flavescentibus, apice alisque posticis luteo-albidis; anticis striga obsoleta et obliqua fusciscenti versus apicem, posticis punctis duobus fusciscentibus pone medium disci versus angulum externum. Expans. alar. antic. unc. 1, lin. 5.

Affinis *C. Dairæ*, Klug, et præsertim *C. Etridæ*, Boisduval (Indiæ orientalis incolæ).

Habitat prope Tati.

The orange subapical spots in the male are dilated into a broader yellow fascia in the female.

## 26. (16) CALLOSUNE CONFUSA. (Plate V., figs. 3, 4.)

*Callosune Wallengrenii*, Westwood in Oates's Matabele Land, ed. 1, App. p. 341, pl. E, f. 3, 4 (1881); Butler, MS. in Brit. Mus. olim (not *Teracolus Wallengrenii*, var., Butler, Proc. Zool. Soc., 1876, p. 157.)

Alis supra albis; anticarum apice late aurantiaco; puncto discoidali, striga angulata guttarum fuscarum pone medium apiceque fusco, intus ad venas angulatim producto; alis posticis pone medium fascia abbreviata e maculis fuscis formata, margineque postico fuscomaculato. Expans. alar. antic. unc.  $1\frac{5}{12}$ .

Habitat ad ripas Tauani fluv.; mense Augusto capta.

The wings on the upper side are white, with a slight yellow tinge, the apical half being of a fine orange-red colour; the base is suffused with brown scales; a round black dot is placed at the extremity of the discoidal cell, in front of which the costa is dusky; half-way between the cell and the apex is an oblique row of four brown spots, succeeded by a larger one, extending more towards the base of the wing, which is followed by a double spot towards the middle of the hind margin; the apical margin is brown, which colour extends upwards along the veins, forming a row of brown teeth, the largest of which is at the end of the first branch of the median vein: the hind wings are powdered with brown scales at the base; beyond the middle of the wing is a curved row of brown spots, extending from the costa to the middle; also a row of brown spots along the outer margin. On the under side the fore wings are suffused with orange, preceding the row of subapical spots, the apical portion being buff, which is also the colour of the hind wings, which have a white spot in the centre surrounded by a brown ring, and followed by a curved row of pale brown spots, rather more dilated and somewhat ocellated in the middle of the row; the apical margin of all the wings is destitute of the brown markings of the upper side.

Mr. Butler's short description of *Teracolus Wallengrenii* and its varieties (Proc. Zool. Soc., 1876, p. 157) differs from Mr. Oates's insect described above, in having the orange extremity of the fore wings bordered internally with black.

## 27. (17) CALLOSUNE RAMAQUEBANA, Westwood in Oates's Matabele Land, ed. 1, App. p. 341, pl. E, f. 5, 6 (1881). (Plate V., figs. 5, 6.)

Parvus alis supra albis, albo-ciliatis anticis plaga maxima fusca marginis postici, puncto nigro discoidali, apiceque late fusco, serie macularum fulvarum inclusa; alis posticis basi fuscis, margine postico late fusco, serie macularum albarum plus minusve confluentium, præsertim versus angulum analem, inclusa: alis subtus flavido-tinctis, posticis puncto minuto discoidali nigro, flavo supra tincto. Fœm. supra absque colore fulvo. Expans. alar. antic. unc.  $1\frac{1}{3}$ .

. Habitat prope Ramakwebani (Ramaqueban) fluv. ; mense Februario capta.

This pretty little species is nearly allied to *C. Etrida* and *C. Eione*, but differs in its characteristic markings. On the upper side the wings of the male are white, with a very slight yellowish tinge ; the anterior have a large brown patch occupying the greater portion of the posterior margin, and extending over the greater part of the discoidal cell, at the extremity of which is a small round black spot ; the extremity of the wing is very broadly brown, the dark colour commencing on the costal margin in front of the discoidal spot, and extending nearly to the posterior angle of the wing, where it is much narrowed, especially in the spaces between the anal vein and the first and second branches of the median vein, reaching considerably more forward between the second and third branches of the latter, so as nearly to unite with the truncated extremity of the large brown patch ; the brown apex of the wing bears a row of five fulvous oval spots, the hind one of which is ill defined and less strongly coloured : the hind wings are brown at the base, and beyond the middle they are marked with a curved irregular brown bar, which is partially connected with the brown spotted hind margin of the wing, having a row of white spots between them, which become larger and more or less confluent, especially towards the anal angle. On the under side the fore wings are tinged with yellow, especially towards the tips, the large brown markings of the upper side being nearly obsolete : the hind wings are also yellowish, with a faint dusky fascia beyond the middle, with a black discoidal spot surmounted with yellow scales ; the costa at the base is bright yellow, and the fringe of all the wings is white. The female is slightly larger, with the brown markings more suffused, the orange spots of the fore wings obsolete, and replaced by brown, and the white submarginal spots of the hind wings almost obliterated and replaced with brown.

Genus TERIAS, Swainson.

*Eurema*, Kirby, Syn. Cat., p. 441 (haud recte).

28. (1) TERIAS RAHEL, Fabricius ; Godart ; Boisduval ; Trimen, Rhop. Afr. Austr., p. 76.

Var.? *Terias Caffra*, Felder, Novara-Reise, Lep. ii. p. 213.

Var.? *Terias Drona*, Wallengren, Lep. Rhop. Caffr., p. 19 (not of Horsfield).

Ramakwebani River, February ; near the Victoria Falls in January ; and near the Dry River, beginning of March.

29. (2) TERIAS ZOË, Hopffer, Ber. Akad. Berl., 1855, p. 640 ; id. in Peters's Reise Mossamb., Zool. v. p. 369, pl. 23, f. 10, 11 ; female.

Mas. Alis supra minus saturate atomosis, posticis limbo nigro omnino carentibus et unicoloribus.

Habitat ad marg. Ramakwebani fluv. ; mense Februario capta.

30. (3) *TERIAS SERULI*, Westwood in Oates's Matabele Land, ed. 1, App. p. 342 (1881).

Alis supra pallide flavis, anticis apice macula trigona fusca intus parum curvata integra, ante angulum posticum desinente ; angulo extremo apicali pallescenti ; alis posticis immaculatis : alis anticis subtus flavis, costa, apice, alisque posticis carneo-lutescentibus, omnibus immaculatis. Expans. alar. antic. fere  $1\frac{1}{2}$  unc.

Habitat ad ripas Seruli fluv. ; mense Augusto capta.

#### Family ACRÆIDÆ.

#### Genus ACRÆA, Fabricius.

31. (1) *ACRÆA ATERGATIS*, Westwood in Oates's Matabele Land, ed. 1, App. p. 342, pl. F, f. 1, 2 (1881). (Plate VI., figs. 1, 2.)

Alis supra rufo-aurantiis, nigro-maculatis, anticis apice nigro et sub apicem nigro-lineatis margine apicali omnium nigro. Expansio alar. antic. unc.  $2\frac{1}{2}$ .

Habitat prope "Victoria Falls" ; mense Januario capta.

The upper side of the wings is of a rich orange-red colour, the base of all the wings slightly powdered with black atoms ; a black spot is placed in the middle of the cell of the fore wings, followed by a smaller transverse one at the extremity of the cell ; at a little distance beyond the cell is a short black, rather oblique fascia, formed of five more or less confluent spots, the innermost being incurved and placed between the 2d and 3d branches of the median vein ; this last spot is succeeded by two other spots, the three being parallel with the apical margin of the wing ; there is also a minute round dot towards the base of the wing behind the basal part of the median vein, and two small dots near the inner angle ; the veins are black in the apical part of the wing, with the interstices between the veins marked with slender black lines, the margin itself as well as the apex of the wing being also black ; the hind wings are marked with twelve round black spots, the six outer ones arranged in a very waved line ; the margin is also black. On the under side the fore wings are of a more rosy tint, except towards the apex, where they are more orange ; the spots of the upper side are here reproduced : the hind wings on this side are more variegated ; the black spots are more numerous, being about 18 in number, several close to the base of the wing being visible, which are not seen on the upper side ; the spots are placed on pale greyish buff spaces, which gives them an ocellated appearance ; and the outer margin of the wing is pale greyish buff with a very slender black marginal line, preceded by very slender black lunules, the veins rather thickened and black along the margin, the spaces between the veins being rosy red in the part of the wing between the terminal row of spots and the

lunules. Antennæ black; palpi fulvous, with the last joint black; body black, spotted with white and rose-colour; legs fulvous, tarsi black; abdomen, above black with thin yellowish edges to the segments, each of which has two fulvous spots, beneath fulvous with two rows of black specks.

Another specimen, which I cannot distinguish specifically from the preceding, was also taken at the Victoria Falls in January 1875, and has the upper surface of the wings rather brighter orange-red, with two minute additional black dots within the discoidal cell, at about half its length from the base, and with the abdomen orange-fulvous, the three basal segments on the upper side being alone black, varied with orange. The apical margin of the fore wings in this specimen is not so rounded as in the other with the spotted abdomen, which is evidently a female, the probability being that the male has the wings rather less rounded and the abdomen not spotted.

32. (2) *ACRÆA ATOLMIS*, Westwood in Oates's Matabele Land, ed. 1, App. p. 343, pl. F, f. 3, 4 (1881). (Plate VI., figs. 3, 4.)

*Alis supra aurantiacis basi nigricantibus, maculis nigris minutis notatis, anticarum apice venis nigris margineque tenuissimo nigro maculaque postica prope angulum posticum posita. Expans. alar. antic. unc. 1½.*

Habitat prope "Victoria Falls"; mense Januario capta.

This species is smaller than the preceding, with the various black markings very small, the interspaces of the apical portion of the fore wings not striolated with black, and the posterior spot of the fore wings placed just between the preceding spot and the hind angle of the wing. The upper surface of the wings is uniformly orange, with the basal half rather redder, the base itself being suffused with black scales; within the discoidal cell is a small kidney-shaped black spot, followed by a narrow oblique one at the extremity of the cell; behind this (between the 1st and 2d branches of the median vein) is another spot, and between the latter and the posterior angle of the wing is a third, the three forming nearly a straight row; beyond the discoidal cell is a short oblique row of small black dots, between which and the apical margin of the wing the veins are black; the hind wings have a small black dot within the discoidal cell, and a curved row of six small black dots across the wing close to the extremity of the cell; the hind margin is very slenderly black, and the veins also have their apical portions black. The wings beneath are of a uniform rosy buff-colour, with the black spots more numerous and distinct than above, the hind wings having about 18 small but distinct ones, those at the base and near the anal margin not visible above; the apical margin of all the wings is very slenderly black, the hind wings having no trace of the lunular markings of the preceding and following species. Body black, sides of thorax with yellowish buff spots; abdomen buff, with the basal segments dusky above.<sup>1</sup>

<sup>1</sup> In the engraving the apical margin of the fore wings is represented rather too much rounded.

33. (3) *ACRÆA AXINA*, Westwood in Oates's Matabele Land, ed. 1, App. p. 344, pl. F, f. 5, 6 (1881). (Plate VI., figs. 5, 6.)

Alis supra luteo-fulvis, nigro-maculatis, posticis magis aurantiacis ; anticarum apice, lineolisque abbreviatis apicalibus (inter venas) nigricantibus ; alis posticis maculis minoribus, exterioribus lineam irregularem multo pone medium alæ formantibus, margine externo nigro. Expans. alar. antic. unc. 1 $\frac{5}{8}$ .

Habitat prope Tati et Gwailo fluv. ; mense Octobre capta.

This small species has the upper side of the fore wings rather dirty luteo-fulvous, that of the hind wings being brighter coloured. The extremity of the fore wings and the narrow apical margin are black, and the interspaces between the veins near the apex of the wings are marked with slender abbreviated black lines, leaving a narrow paler space beyond the fascia ; the five spots between the base and the middle of the wings are strongly marked, and the abbreviated oblique black fascia beyond the cell is more continuous : the hind wings have the black spots also well marked, the outer ones forming an irregular row considerably beyond the middle of the wing, the central spot especially being not far from the black marginal border. On the under side the fore wings are slightly rosy, the apical portion being more buff with the spaces between the veins orange ; the black spots on this side are not so strongly marked as above : the hind wings are more pale buff, with the spaces between the veins strongly marked with rose-colour, the black spots resting on pale spaces, giving them an ocellated appearance ; the very narrow black outer margin of these wings is preceded by a series of small black arches, including a row of pale yellow spots. The palpi, head, and sides of the body are coloured as in the preceding species ; the abdomen in one of our specimens is broken off, but in the other it is pale buff, with the upper side of the basal segments black, with two pale dots, indicating (as well as the shape of the fore wings) this individual (represented in our figures) to be of the male sex.

In his new work on 'South African Butterflies' (vol. i. pp. 147, 148) Mr. Trimen considers this insect to be merely a variety of *Acræa Doubledayi*, Guérin in Lefebvre's Voy. Abyss., vi. p. 378 ; Reiche in Ferret and Galinier's Voy. Abyss., iii. p. 468, pl. 33, f. 1, 2 ; but the type specimens of *A. Axina* have the fore wings on the upper side much more uniformly coloured and entirely destitute of the white portion beyond the row of post-median black spots, and the spots on the hind wings are also differently disposed.

\* \* The orange and rosy tints described above are almost obliterated in one of the two specimens, most probably from longer exposure in the winged state.<sup>1</sup>

<sup>1</sup> [In some impressions of the plates in the first edition of this work the figure of the under-side of *A. Axina* was coloured from the paler specimen.—ED.]

34. (4) *ACRÆA ACONTIAS*, Westwood in Oates's Matabele Land, ed. 1, App. p. 345, pl. F, f. 7, 8 (1881). (Plate VI., figs. 7, 8.)

Alis supra obscure fusco-rufis, nigro-maculatis, maculis 4 in medio alarum anticarum, fascia abbreviata maculari, margine apicali late venisque apicalibus nigris; alis posticis basi maculisque submediis lineam irregularem formantibus, margineque postico cum venis nigris. Expans. alar. antic. unc.  $1\frac{5}{8}$ .

Habitat prope "Victoria Falls"; mense Januario capta.

The dull brownish red colouring of the upper side of the wings distinguishes this species. The fore wings are marked near the base, behind the middle of the cell, with a small black dot, followed by four rather large spots of the same colour, placed so as to form an oblique triangle; beyond the cell is the ordinary abbreviated fascia, formed of four black spots, which is succeeded by a narrow paler buff space, the apex being traversed by black veins, the extremity of the anterior margin and the whole of the apical margin being also black: the hind wings have a suffused black spot near the base, the middle of the wing being crossed by zigzag rows of small but nearly uniform black spots; the outer margin is black, as are the veins beyond the middle of the wing. On the under side the fore wings are more rosy-coloured from the base to the abbreviated fascia, beyond which they are paler buff, with orange stripes between the veins: the hind wings have the black dots smaller but more numerous than on the upper side, there being about 20 on each wing, the ground colour of which is buff, with the spaces between the veins in the basal portion rosy, but beyond the cell they are marked with longitudinal orange stripes between the veins; the outer margin is very narrowly black, preceded by a very narrow black line parallel with the margin. The body is black, much spotted at the sides below the wings with buff and rosy; the abdomen is orange, marked above with black fasciæ, forming more or less incomplete lateral circular spots; the ventral surface yellow, with two rows of black spots. The apical margin of the fore wings is but slightly convex, but the spotting of the abdomen indicates the specimen to be a female.

35. (5) *ACRÆA AGLAONICE*, Westwood in Oates's Matabele Land, ed. 1, p. 346, pl. F, f. 9, 10 (August 1881); Trimen, S. Afr. Butt., i. p. 151, pl. 3, f. 3. (Plate VI., figs. 9, 10.)

*Acræa fenestrata*, Trimen, Trans. Ent. Soc. Lond., 1881 (September), p. 435.

Alis supra rufo-puniceis, anticis apicem versus magis aurantiacis, macula fenestrata bipartita subapicali notatis, nigro-maculatis, venis apicalibus nigris; posticis maculis minutis margineque latiori apicali nigris. Expans. alar. antic. unc.  $2\frac{1}{2}$ .

Habitat prope Tati.

This species has the upper surface of the wings more richly coloured than any of the others captured by Mr. Oates, being of an orange-carmine colour, especially in the hind wings. The fore wings are marked half-way between the end of the discoidal cell and the tip of the wings with a square vitreous spot, through which runs a veinlet dividing it into two parts; the base of the wings, especially in the hind parts, is irrorated with black scales; the discoidal cell has a rather large oval black spot beyond its middle, followed by a smaller lunate one at the extremity of the cell, beyond which is an oblique row of five conjoined black dots; another round black spot is placed towards the base of the wing behind the median vein, and two other circular ones behind the extremity of the cell placed transversely; the veins at the extremity of the wings are slenderly black: the hind wings are marked with about 10 minute black dots (varying, however, in size), and the hind margin of the wing is rather broadly edged with black. On the under side the fore wings are rosy-coloured, with the spots of the upper side, including the vitreous spot, reproduced: the hind wings are greyish buff, with the spaces between the veins varied with rosy at the base and along the anal margin, and with rich orange between the middle of the wing and the row of submarginal black lunules, which latter rest upon a narrow yellowish buff margin; the spots on this side, about 17 in number, are distinct, appearing partially ocellated. Body black, with rosy spots behind the eyes and on the sides of the chest, which is also spotted with pale buff; palpi orange, terminal joint black; legs orange, tarsi black; abdomen broken off.

The unique specimen of this species collected by Mr. Oates has the abdomen mutilated, but the structure of the fore legs and the shape of the fore wings prove that it is a male individual.

36. (6) *ACRÆA STENOBEA*, Wallengren, Wien. Ent. Mon., iv. p. 35 (1860); id. Öfvers. Vet. Akad. Förh., xxix. (3), p. 49 (1872); Trimen, S. Afr. Butt., i. p. 153, pl. 3, f. 2. (Plate VI., figs. 11, 12.)

*Acraea Acronycta*, Westwood in Oates's Matabele Land, ed. 1, App. p. 346, pl. F, f. 11, 12 (1881).

Alis supra luteo-aurantiacis; anticis triente basali fusco; macula ad apicem cellulæ, pone medium alæ fascia abbreviata maculari, maculisque duabus posticis (margine postico parallelis) nigris; alis posticis magis albidis, ante medium nigro-maculatis, margineque postico latiori nigro: subtus maculis magis distinctis margineque albido-maculato. *Expans. alar. antic. unc. 1 $\frac{3}{4}$ .*

Habitat ———?

The upper surface of the wings (especially the hind pair) of this species is whitish orange, the base being strongly suffused with dark brown scales hiding the spots in that part; one of these, near the extremity of the discoidal cell, is visible, and the cell itself is closed

by a semicircular spot, followed at a short distance by an oblique abbreviated black fascia formed of conjoined spots, of which the hinder one is smallest and most distinct; two other spots appear on the disk of the wing behind the extremity of the cell, and are placed nearly parallel with the apical margin, which is very narrowly black and slightly concave: the hind wings have a somewhat more suffused whitish hue than the anterior; they are brown at the base, and are marked before the middle with an irregular series of black dots, followed by two minute ones beyond the middle; the posterior margin is widely black. On the under side the fore wings have five black spots in the middle, followed by the abbreviated macular fascia: the hind wings are more tinged with rose-colour than the anterior ones, and are marked with about twelve black dots of different sizes; the posterior margin is pale yellowish white, surmounted by a row of black arches, resting upon a very narrow black edging. The head and body are black, spotted with pale buff, the sides of the thorax beneath the wings with a reddish spot; the abdomen is nearly white, the basal segments on the upper side black, with a pair of round white dots.

37. (7) *ACRÆA CALDARENA*, Hewitson, Ent. M. Mag., xiv. p. 52 (1877); Trimen, S. Afr. Butt., i. p. 149. (Plate V., figs. 1, 2.)  
*Acræa Amphimalla*, Westwood in Oates's Matabele Land, ed. 1, App. p. 347, pl. E, f. 1, 2 (1881).  
 Var. *Acræa Dirçæa*, Westwood, l. c., p. 348.

Alis supra fulvo vel puniceo luteis nigro-guttatis, anticarum apice late nigro triangulariter terminata, posticarum margine apicali e lunulis nigris, maculis concoloribus inclusis, notato. Expans. alar. antic. unc.  $1\frac{3}{4}$ – $2\frac{1}{2}$ .

Habitat prope Tati, et marg. Motlautsi fluv.; mense Maio capta.

This very distinct species has the wings on the upper side of a buff colour, varying from dull orange to reddish; the black spots are of small size, and the fore wings have the apex broadly and triangularly black, whilst the hind wings have the slender apical outer black margin preceded by a series of slender depressed black arches enclosing spots of the ground colour of the wing; the ordinary black spot in the middle of the discoidal cell is sometimes preceded by a smaller, more or less slightly marked, dot, behind which is another small one; the cell is partially closed by a small oblique black spot, followed at some distance by a row of four small spots placed obliquely, and there are two other small spots between the middle of the wing and the posterior angle, the outer one being occasionally duplicated; in the hind wings the black spots, about twelve in number, are of nearly uniform small size. On the under side the black apex of the upper side is replaced by the ground colour of the rest of the wing, the spaces between the veins being more strongly marked with orange stripes: the hind wings are buff-coloured, with the spaces between the veins

in the basal portion marked with red, having the black dots (about twenty in number) surrounded with buff, whilst in the apical half of the wing the intervening spaces are more orange; the black arches preceding the slender outer black edging are marked more distinctly than on the upper side. The head and body are spotted as in the preceding species.

Several specimens of this insect in Mr. Oates's collection from the above localities were described in the first edition of this book as a separate species, under the name of *A. Dircaea*; but they are too closely allied to *A. Caldarena* (with which they are united by Mr. Trimen) to be regarded as specifically distinct, the chief difference being that the types of *A. Dircaea* have only nine small black spots on the upper side of the fore wings. The following is the description of *A. Dircaea* which was given in the first edition of the present work (p. 348):—

“Alis supra fulvis, puniceo interdum tinctis; anticarum apice late nigris maculisque 9 parvis nigris, 4 in lineam obliquam pone medium positis; alis posticis maculis circiter 14 parvis nigris discoidalibus, margine tenui nigro fulvo-maculato: alis subtus pallidioribus, apice anticarum lutescenti, fulvo-strigoso; maculis nigris parum majoribus præsertim in alis posticis, interstitiis rubro-maculatis. Expans. alar. antic. unc. 2.

“*A. Oncaea*, Hopffer, affinis, sed apice lato nigro alarum anticarum optime distinguitur.”

38. (8) *ACRÆA NATALICA*, Boisduval in Delegorgue's Voy. Afr. Austr., ii. p. 590; Hopffer in Peters's Reise Mossamb., Zool. v. p. 371, pl. 23, f. 12, 13; Trimen, S. Afr. Butt., i. p. 155.

*Acræa Bellua*, Wallengren, Lep. Rhop. Caffr., p. 22.

*Acræa Hypatia*, var. B, Trimen, Rhop. Afr. Austr., p. 98.

A series of small specimens was taken at Tati, each measuring only 2 inches in the expanse of the fore wings. A large specimen ( $2\frac{3}{4}$  inches expanse) was taken near the Dry River in the beginning of March, and one ( $2\frac{1}{2}$  inches expanse) was taken near the Motlautsi River in August.

39. (9) *ACRÆA ANEMOSA*, Hewitson, Ex. Butt., iii. Acr. pl. 3, f. 14, 15; Trimen. S. Afr. Butt., i. p. 157.

Near the Umvungu River, end of October; and near the Victoria Falls in January.

40. (10) *ACRÆA NEOBULE*, Doubleday and Hewitson, Gen. D. Lep., pl. 19, f. 3; Reiche in Ferret and Galinier's Voy. Abyss., iii. p. 466, pl. 33, f. 3, 4; Trimen, S. Afr. Butt., i. p. 137.

Var. ? *Acræa Mahela*, Boisduval, Faune Madag., p. 31, pl. 6, f. 1.

Ramakwebani River, February 14, 1874.

41. (11) *ACRÆA RAHIRA*, Boisduval, *l. c.* p. 33, pl. 5, f. 4, 5 ;  
Trimen, *Rhop. Afr. Austr.*, p. 103 ; *id. S. Afr. Butt.*, i. p. 166.  
Taken on the Zambesi road, end of November.

## Family NYMPHALIDÆ.

## Genus CHARAXES, Ochsenheimer.

42. (1) *CHARAXES PELIAS*, Cramer, *Pap. Ex.*, pl. 3, f. C, D ; Godart ;  
Trimen, *Rhop. Afr. Austr.*, p. 175 ; *id. S. Afr. Butt.*, i. p.  
331 ; Butler, *Lep. Exot.*, p. 25, pl. 10, f. 5.  
Near the Seruli River, August 19, 1873 ; and near the Victoria  
Falls in January.

## Genus CYNTHIA, Fabricius.

43. (1) *CYNTHIA CARDUI*, Linnæus et auct. ; Trimén, *Rhop. Afr.*  
*Austr.*, p. 119 ; *id. S. Afr. Butt.*, i. p. 200.  
Taken at the Indunas' Tree, near the Umvungu River, end of  
November.

## Genus JUNONIA, Hübner.

44. (1) *JUNONIA CLELIA*, Cramer, *Pap. Ex.*, pl. 21, f. E, F ; Trimén,  
*Rhop. Afr. Austr.*, p. 128 ; *id. S. Afr. Butt.*, i. p. 214.  
Bamangwato, Ramakwebani River, Gubuluwayo, and near Tati.
45. (2) *JUNONIA CEBRENE*, Trimén, *Trans. Ent. Soc. Lond.*, 1870,  
p. 353 ; *id. S. Afr. Butt.*, i. p. 210.  
*Junonia Enone*, auct. (part.) ; Trimén, *Rhop. Afr. Austr.*,  
p. 125.  
Tati, Ramakwebani River, and about the Matengwe River.
46. (3) *JUNONIA ORITHYIA*, Linnæus ; Cramer, *Pap. Ex.*, pl. 19, f. C,  
D, pl. 32, f. E, F, and pl. 290, f. A, B ; Trimén, *Rhop. Afr.*  
*Austr.*, p. 327. Common in India, etc.  
Var. (*Africa Australis*) *Junonia Bööpis*, Trimén, *Trans. Ent.*  
*Soc. Lond.*, 1879, p. 331 ; *id. S. Afr. Butt.*, i. p. 217, pl. 4, f. 2.

This very variable species was taken near the Victoria Falls in  
the month of January. The Hopeian collection also has it from  
Sierra Leone.

47. (4) *JUNONIA OCTAVIA*, Cramer, *Pap. Ex.*, pl. 135, f. B, C ;  
Trimén, *Rhop. Afr. Austr.*, p. 130 ; *id. S. Afr. Butt.*, i. p. 229.  
Near the Victoria Falls in January.
48. (5) *JUNONIA NATALICA*, Felder, *Wien. Ent. Mon.*, iv. p. 106  
(1860) ; Trimén, *S. Afr. Butt.*, i. p. 238.  
*Junonia Hecate*, Trimén, *Rhop. Afr. Austr.*, p. 140, pl. 3,  
f. 6.  
Near the Victoria Falls in January.
49. (6) *JUNONIA CLOANTHA*, Cramer, *Pap. Ex.*, pl. 338, f. A, B ;  
Trimén, *Rhop. Afr. Austr.*, p. 137 ; *id. S. Afr. Butt.*, i.  
p. 222.  
Near the Dry River, middle of March.

Genus *DIADEMA*, Boisduval.

50. (1) *DIADEMA MISIPPUS*, Linnæus ; Trimen, S. Afr. Butt., i. p. 277.  
*Diadema Bolina*, auctt. ; Trimen, Rhop. Afr. Austr., p. 153.  
 Var. fœm. *Papilio Inaria*, Cramer, Pap. Ex., pl. 214, f. A, B.  
 Near the Victoria Falls ; also from Sierra Leone, the Zambesi, and Mauritius, in the Hopeian collection.

Genus *ATERICA*, Boisduval.

51. (1) *ATERICA MELEAGRIS*, Cramer, Pap. Ex., pl. 66, f. A, B ;  
 Drury, Ill. Exot. Ent., iii. pl. 27, f. 3, 4 ; Trimen, Rhop. Afr. Austr., p. 157.  
*Papilio Dædalus*, Fabricius ; Trimen, S. Afr. Butt., i. p. 309.  
 Indunas' Tree, near the Umvungu River, in November.

Genus *HYPANIS*, Boisduval.

52. (1) *HYPANIS ILITHYIA*, Drury, Ill. Exot. Ent., ii. pl. 17, f. 1, 2 ;  
 Cramer, Pap. Ex., pl. 214, f. C, D ; Trimen, Rhop. Afr. Austr., p. 214 ; id. S. Afr. Butt., i. p. 264, pl. 5, f. 4.  
 Tati, Ramakwebani River, Inkwisi River (March 1874), Dry River ;  
 and Indunas' Tree, near the Umvungu River.

Family *DANAIDÆ*.Genus *DANAIS*, Latreille.

53. (1) *DANAIS CHRYSIPPUS*, Linnæus ; Cramer, Pap. Ex., pl. 118, f. B, C ; Trimen, Rhop. Afr. Austr., p. 88 ; id. S. Afr. Butt., i. p. 51.  
 Indunas' Tree, near the Umvungu River ; and near Gubuluwayo in December.

Family *SATYRIDÆ*.Genus *CYLLO*, Boisduval.

54. (1) *CYLLO LEDA*, Linnæus et auctt. ; Trimen, Rhop. Afr. Austr. p. 186 ; id. S. Afr. Butt., i. p. 112.  
 An extremely variable species. The specimen from the Nata River (beginning of December 1874) has an obscure fulvous subapical patch bearing two black spots on the fore wings ; beneath, pale brown, with dark brown fasciæ, and scarcely any trace of ocelli on the hind wings. Specimens from Ashanti are pale brown beneath, strongly freckled all over with brown, and with large ocelli on the hind wings.

Genus *EREBIA*, Dalman.

55. (1) *EREBIA NARYCIA*, Wallengren, Lep. Rhop. Caffr., p. 32 ; Trimen, Trans. Ent. Soc. Lond., 1870, p. 350, pl. 6, f. 1 ; id. S. Afr. Butt. i. p. 77 (not of Trimen, Rhop. Afr. Austr., p. 198, = *Pseudonympha Neita*, Wallengren, Öfvers. Vet. Akad. Förh. xxxiii. (1), p. 84, 1875).

Ramakwebani River, middle of March.

The two butterflies in Mr. Oates's collection to which the name of *Erebia Narycia* is here assigned, are in very bad condition, but agree in having the orange-red patch on the fore wings entirely *beyond the discoidal cell* and of an oval form, narrowed towards the posterior angle of the wing, and bearing, towards the apical angle, a round black spot with two white dots in its middle, and surrounded by an orange ring. The hind wings on the upper side also bear an obscure orange-red patch beyond the middle, on which are two minute black dots with a white speck in each. On the under side these spots are replaced by three black ocelli in the middle towards the outer margin, and another of the same kind towards the outer costal angle; each of these spots bears a minute white central speck, and is surrounded by an orange ring, and this by a brown one, and they are enclosed on a rather paler ground by a slender fulvous brown line, which is strongly bisinuated between the third and outer ocelli in the smaller of our two specimens. I consider that these two insects and several of the nearly allied supposed species are local varieties of one widely diffused variable species.

Genus YPTHIMA, Hübner.

56. (1) YPTHIMA NAREDA, Kollar in Hügel's Kaschmir, iv. pt. 2, p. 451; Hewitson, Trans. Ent. Soc. Lond., ser. 3, ii. p. 284, pl. 17, f. 6, 7.

Near the Victoria Falls in January.

Genus MYCALESIS, Hübner.

57. (1) MYCALESIS VICTORINA, Westwood in Oates's Matabele Land, ed. 1, App. p. 350 (1881).

Sordide fusca, alis anticis pone medium nonnihil pallidioribus; ocellis duobus nigris ochreo anguste cinctis, singulo punctum album includente subapicali multo minori; posticis concoloribus lineis duabus tenuibus submarginalibus pallidioribus serieque ocellorum ut in anticis: alis subtus pallidioribus magis lutescentibus, fascia angusta recta communi pone medium, anticis 2-posticis 7-ocellatis, ocellis valde inæqualibus, in posticis lineis pallidis valde sinuatis inclusis. Expans. alar. antic. unc.  $1\frac{3}{4}$ .

Affinis *M. Eusiro*, Hopffer in Peters's Reise Mossamb., Zool. v. p. 393, pl. 25, f. 3, 4.

Habitat prope "Victoria Falls;" mense Januario capta.

This insect is doubtfully referred by Mr. Trimen (S. Afr. Butt., i. p. 108) to *M. perspicua*, Trimen (Trans. Ent. Soc. Lond., 1873, p. 104, pl. 1, f. 3), but the type of *M. Victorina* has the ground colour of the basal half of the wings unicolorous, without the slightest trace of the close brown cross-hatching, and the two middle ocelli of the hind wings beneath are as large as the larger one on the fore wings.

Family LYCÆNIDÆ.<sup>1</sup>

## Genus AMBLYPODIA, Horsfield.

58. (1) AMBLYPODIA NATALENSIS, Westwood and Hewitson, Gen. D. Lep., pl. 75, f. 4; Hopffer in Peters's Reise Mossamb., Zool. v. p. 399? Trimen, Rhop. Afr. Austr., p. 227; id. S. Afr. Butt., ii. p. 150.  
 Var.? *Spindasis Masilikazi*, Wallengren, Lep. Rhop. Caffr., p. 45; Trimen, S. Afr. Butt., ii. p. 152.  
 Near the Victoria Falls in January.
59. (2) AMBLYPODIA? LEROMA, Wallengren, Lep. Rhop. Caffr., p. 42; Trimen, Rhop. Afr. Austr., p. 231; id. S. Afr. Butt., ii. p. 169.  
 Near Tati.

## Genus ZERITIS, Boisduval.

60. (1) ZERITIS PERION, Cramer, Pap. Ex., pl. 379, f. B, C; Trimen, Rhop. Afr. Austr. p. 267; Hopffer in Peters's Reise Mossamb., Zool. v. p. 403, pl. 26, f. 1-3.  
*Papilio Harpax*, Fabricius; Trimen, S. Afr. Butt., ii. p. 162.  
 Gubuluwayo, beginning of December.
61. (2) ZERITIS AMANGA, Westwood in Oates's Matabele Land, ed. 1, App. p. 351 (1881); Trimen, S. Afr. Butt., ii. p. 165, pl. 9, f. 1.

Fœm. Alis supra læte rufo-aurantiacis; anticis macula magna basali nigra, costa pone medium margineque apicali nigris; alis posticis, rufo-aurantiacis, basi nigricantibus: alis subtus purpureo-rufis, anticarum costa ad basim guttisque duabus parvis prope basim tertia parum majori submedia, alteraque subapicali, argenteis; posticis guttis paucis argenteis vix notatis. Expans. alar. antic. unc.  $1\frac{1}{3}$ .

Habitat prope Gwailo fluv.; mense Octobre capta.

The red basal half of the costa of the fore wings, the outwardly angulated apical margin, the shorter hind wings, with both the anal and outer margin emarginate near the tails, and the splendid silvery base of the costa of the fore wings beneath, separate this insect from *Z. Perion*.

Mas. (Zambesi, Rowley. In Mus. Hopeiano Oxoniæ). Alis anticis supra fuscis, costa ad basim maculaque late trigona versus angulum externum marginis postici rufis; alis posticis rufis, basi venisque versus angulum externum nigricantibus: alis infra castaneo-rufis, costa anticarum basi, guttisque tribus argenteis ut in fœmina, squamis paucis argenteis in lineas transversas dispositis; alis posticis strigis tribus undulatis gracilibus obscurioribus guttisque nonnullis argenteis prope caudam. Margo externus alarum anticarum in medio angulatus, inter medium et angulum posticum emarginatus.

<sup>1</sup> The generic arrangement of the Lycænidæ is in a very unsettled condition and requires a general revision, which could only be effected advantageously in dealing with a much larger number of species than are represented in the present collection.

## Genus POLYOMMATUS, Latreille.

62. (1) POLYOMMATUS TELICANUS, Lang, Verz., ed. 2, p. 47; Hübner, Eur. Schmett., Pap. f. 371-2, 553-4; Godart; Boisduval; Trimen, Rhop. Afr. Austr. p. 238; id. S. Afr. Butt., ii. p. 69.  
Tati, the Gwailo River, and near the Victoria Falls.
63. (2) POLYOMMATUS OTACILIA, Trimen, Trans. Ent. Soc. Lond., 1868, p. 90; id. S. Afr. Butt., ii. p. 102.  
Near the Victoria Falls in January.
64. (3) POLYOMMATUS SYBARIS, Hopffer, Ber. Akad. Berl., 1855, p. 642; id. in Peters's Reise Mossamb., Zool. v. p. 408, pl. 26, f. 6-8; Trimen, Rhop. Afr. Austr., p. 242; id. S. Afr. Butt., ii. p. 85.  
Near the Victoria Falls in January.

## Genus LYCÆNA, Fabricius.

65. (1) LYCÆNA PARSIMON, Fabricius; Godart; Boisduval; Trimen, S. Afr. Butt., ii. p. 18.  
*Papilio Celæus*, Cramer, Pap. Ex., pl. 379, f. K, K; Trimen, Rhop. Afr. Austr. p. 247.  
Var. *Lycæna Asteris*, Godart; Wallengren, Lep. Rhop. Caffr., p. 40; Trimen, S. Afr. Butt., ii. p. 24.  
Var. *Lycæna Methymna*, Trimen, Trans. Ent. Soc. Lond., ser. 3, i. p. 280 (1862); id. S. Afr. Butt., ii. p. 27.  
Male, Ramakwebani River, in February; female, Bamangwato, Tati.
66. (2) LYCÆNA JESOUS, Guérin in Lefebvre's Voy. Abyss., vi. p. 383, pl. 11, f. 3, 4; Wallengren, Lep. Rhop. Caffr., p. 39; Trimen, Rhop. Afr. Austr., p. 250; id. S. Afr. Butt., ii. p. 72.  
Near the Gwailo River, October 12, 1873.
67. (3) LYCÆNA ASOPUS, Hopffer, Ber. Akad. Berl., 1855, p. 642; id. in Peters's Reise Mossamb., Zool. v. p. 410, pl. 26, f. 13-15; Trimen, Rhop. Afr. Austr., p. 249; id. S. Afr., Butt., ii. p. 16.
68. (4) LYCÆNA HOLCIAS, Westwood.  
*Lycæna Lochias*? Westwood in Oates's Matabele Land, ed. 1, App. p. 352 (1881); not *Lycænesthes Lochias*, Hewitson, Lycænidæ, p. 221, pl. 90, f. 7, 8 (1877), from Madagascar.  
Alis supra fuscis purpureo parum squamosis; posticis maculis duabus inequalibus nigris colore pallidiori cinctis, submarginalibus, ciliis albis: alis subtus pallide fuscis albidoque alternatim fasciatis; posticis macula nigra intus aurantiaco, extus argenteo, notata, alteraque simili sed multo minori ad angulum analem, cauda nulla. Expans. alar. antic. lin. 10.  
Habitat ———?

## Genus CHRYSOPHANUS, Hübner.

69. (1) CHRYSOPHANUS LARA, Linnæus ; Fabricius ; Trimen, Rhop. Afr. Austr., p. 260 ; id. S. Afr. Butt., ii. p. 123.  
*Papilio Jolaus*, Cramer, Pap. Ex., pl. 270, f. F, G.  
*Papilio Gorgias*, Stoll, Suppl. Cramer, Pap. Ex. pl. 33, f. 5, 5d.

## Family HESPERIIDÆ.

## Genus ISMENE, Swainson.

70. (1) ISMENE PISISTRATUS, Fabricius ; Jones, Icones, vi. pl. 26, f. 1 (typus in Mus. Brit.)<sup>1</sup>  
*Papilio Florestan*, Cramer, Pap. Ex., pl. 391, f. E, F ; Godart ; Boisduval ; Trimen, Rhop. Afr. Austr., p. 318.  
 Var. *Rhopalocampta Valmaran*, Wallengren, Lep. Rhop. Caffr., p. 48. Fascia alba latitudine æquali absque maculis nigris.  
 Holfontein, July 13, 1873.

## Genus LEUCOCHITONEA, Wallengren.

71. (1) LEUCOCHITONEA LEVUBU, Wallengren, Lep. Rhop. Caffr., p. 52 ; Trimen, *l. c.* p. 306.  
 Near the Dry River, beginning of March.

## Genus CAPRONA, Wallengren.

72. (1) CAPRONA PILLAANA, Wallengren, Lep. Rhop. Caffr., p. 51 ; Trimen, *l. c.* p. 308.  
 Near Tati or the Gwailo River.

## Genus PAMPHILA, Fabricius.

73. (1) PAMPHILA RANOHA, Westwood in Oates's Matabele Land, ed. 1, App. p. 353 (1881).

Alis supra nigro-fuscis, costa prope basim fulvo-irrorata, fascia fulva e basi marginis interni per medium alæ extensa, sensim dilatata et ante apicem alæ desinente, maculam ovalem inter cellulam et apicem nigram gerente, ciliis fulvis ; alis posticis fascia lata irregulari pone medium fulva : alis subtis fulvis, anticis linea prope basim, macula discoidali ovata strigaeque subapicali ad angulum analem sensim dilatata nigro-fuscis ; alis posticis fulvis nigro-guttatis, guttis novem in lineas duas margine postico parallelas dispositis. Expans. alar. antic. unc.  $1\frac{1}{8}$ .

Habitat prope "Victoria Falls ;" mense Januario capta.

<sup>1</sup> The black mark extending from near the anal margin on the under side of the hind wings was more divided than usual in Drury's specimen, figured by Jones, so as to have led Fabricius to describe the hind wings as four-spotted.

74. (2) PAMPHILA HARONA, Westwood in Oates's Matabele Land, ed. 1, App. p. 353 (1881).

Magnitudo *P. lineæ*, Wien. Verz. Alis supra fulvis, anticarum costa (ad basim valde angusta) margineque apicali nigris; macula basali marginis interni, striga recta in cellula discoidali et macula conica ad apicem cellulæ nigris; alis posticis fulvis costa late nigra, ultra medium ad angulum externum angusta: alis infra fulvis, posticis pallidioribus; anticis macula magna baseos costam non attingente, altera parva transversa ad apicem cellulæ, tertiaque parva conica marginis apicalis versus angulum internum; alis posticis immaculatis; striola longitudinali magis brunnea, margine anali parallela. Expans. alar. antic. unc. 1 $\frac{3}{4}$ .

Habitat prope "Victoria Falls;" mense Januario capta.

### LEPIDOPTERA HETEROCERA.

Moths of various sizes and Hawk-moths appear to be very numerous in Southern Africa. A large number of species of the former were collected by Mr. Oates, chiefly of small size, the majority of which, unfortunately, were ill preserved.

#### Family SPHINGIDÆ.

The SPHINGIDÆ are not especially remarkable. The Death's-head Hawk-moth, *Acherontia Atropos*, Linnæus, occurs throughout South Africa, and was found between Gubuluwayo and the Gwailo River. *Chærocampa Capensis*, Linnæus, with its bright pink under wings, extends from the Cape to Natal and Zululand. A new species, closely allied to this last insect, was captured by Mr. Oates:—

CHÆROCAMPA VIRGO, Westwood in Oates's Matabele Land, ed. 1, App. p. 354, pl. E, f. 11 (1881). (Plate V., fig. 11.)

Alba albido vix tincta, alis posticis plaga fere basali ovali punicea; omnibus subtus omnino concoloribus. Expans. alar. antic. fere unc. 3. Habitat prope Gubuluwayo vel Gwailo fluv.

The Genus *Nephele*, Hübner (*Zonilia*, Walker), contains several South African species, e.g. *Sphinx Peneus*, Cramer; *Zonilia fumosa*, Walker; *Nephele comma*, Hopffer; *Zonilia viridescens*, Walker, and the beautiful *Zonilia argentifera*, Walker. Several species of the silver-striped Hawk-moths occur in South Africa, as *Chærocampa Charis*, Walker; *C. Schenki*, Möschler; *C. Theylia*, Linnæus (*Eson*, Cramer), etc. The lovely *Lophostethus Dumolinii*, Latreille, is from Natal. The clear-winged *Hemaris Hylas*, Linnaeus, was captured at Gubuluwayo. And lastly, it may be mentioned that the Rev. H. Rowley sent the *Aëlopus hirundo*, Gerstaecker (Arch. f. Nat., xxxvii. pt. 1, p. 360 (1871), and in v. d. Decken's Reisen in Ost-Afrika, Ent. p. 375, pl. 15, f. 7) from the Zambesi.

It may also be mentioned as a remarkable circumstance in Entomological Geography that the grand *Chrysidia Rhipheus*, Cramer, supposed until quite recently to be confined to Madagascar, and to be the only old world representative of the splendid new world *Urania*, has been found on the east coast of Africa, near Zanzibar. Gerstaecker has figured the continental individual as a distinct species, but specimens which I have examined appear not to differ specifically from the Madagascar ones.

#### Family ZYGÆNIDÆ.

In this family a beautiful species of *Zygæna*, closely allied to the very striking *Z. ochroptera*, Felder, was taken at Tati:—

ZYGÆNA TRICOLORATA, Westwood in Oates's Matabele Land, ed. 1, App. p. 354 (1881).

Chalybea, humeris alisque anticis aurantiacis, harum margine apicalo nigro; alis posticis sanguineis limbo nigro ante angulum analem desinente. Expans. alar. antic. unc. 1, lin. 5.

*Z. ochroptera*, Felder (Novara-Reise, Lep. iv. pl. 82, f. 20), differt colore alarum limboque nigro multo angustiori.

Another new species was taken at Gubuluwayo:—

ZYGÆNA TRANSVERSALIS, n. sp.

*Eucenia zygænoidi*, Felder (Novara-Reise, Lep. iv. pl. 82, f. 21), valde affinis, alis autem posticis medio supra sanguineis fascia transversa media nigra; alis anticis infra basi, et pone medium sanguineo maculatis. Exp. alar. antic. unc. 1, lin. 6.<sup>1</sup>

The beautiful *Anteris ampla*, Walker, was also taken by Mr. Oates, as well as several species of *Procris* and *Syntomis*.

#### Family AGARISTIDÆ.

This family is represented in Mr. Oates's collection by a beautiful species of *Eusemia*, allied to *E. Euphemia*, Cramer, Pap. Ex., pl. 345, f. A; *E. longipennis*, Walker (Butler, Ill. Lep. Het. Brit. Mus., i. p. 10, pl. 5, f. 5); *E. pallida*, Walker (Butler, l. c. pl. 5, f. 3); and *E. contigua*, Walker (Butler, l. c. pl. 4, f. 8):—

EUSEMIA ADULATRIX, Westwood in Oates's Matabele Land, ed. 1, App. p. 355, pl. G, f. 1, pl. H, f. 3, 3a-b (1881). (Plate VII., fig. 1, and Plate IX., figs. 3, 3a, 3b.)

Alis anticis nigris, maculis duabus parvis subbasalibus fascia obliqua integra submedia, alteraque magna late ovali inter medium et apicem, interstitiis argenteo-irroratis; striga minuta marginis interni pone medium punctoque rotundato intus angulum posticum flavo-

<sup>1</sup> [This insect was referred to in the first edition of the present work (p. 354), but a name was not assigned to it there.—ED.]

albidis ; alis posticis sanguineis, limbo nigro ; abdomine luteo, nigro-annulato. Expans. alar. antic. unc. 2½.

Habitat prope Tati et Gwailo fluv. ; mense Octobre capta.<sup>1</sup>

### Family SATURNIIDÆ.

This splendid family is well represented in Africa, particularly in the south-eastern portion, where a number of beautiful species have been found, especially in Natal. A monograph of these insects, so

<sup>1</sup> The following descriptions of several other allied African species of this beautiful genus may be given here :—

EUSEMIA PALLIDA, Walker, Cat. Lep. Het. Brit. Mus., i. p. 52 (1854) ; Butler, Ill. Lep. Het. Brit. Mus., i. p. 10, pl. 5, f. 3 (1877).

*Eusemia niveosparsa*, Westwood in Oates's Matabele Land, ed. 1, App. p. 355 (1881).

Corpore tenui, abdomine nigro, fulvo-annulato ; alis anticis nigris maculis 7 parvis niveis,—1ma. parva in medio cellulæ ; 2da. obliqua cellulam terminante ; 3tia. ovali inter cellulam et apicem alæ ; 4ta. elongata ante medium marginis interni ; 5ta. pone maculam 2am ; 6ta. bipartita inter 3am et 7am prope angulum posticum ; alis posticis sanguineis, limbo nigro. Expans. alar. antic. unc. 3.

Habitat in Montibus Camerouns, Afric. occid. In Mus. Hopeiano.

The type of *E. pallida* is a faded specimen.

EUSEMIA ÆMULATRIX, Westwood in Oates's Matabele Land, ed. 1, App. p. 355 (1881).

Mediocriter angusta, alis anticis angustis, nigris, albido-maculatis,—macula parva rotunda in medio cellulæ ; 2da. majori ad apicem cellulæ ; 3tia. fasciiformi in partes quinque venis nigris divisa, angusta et in medio extus angulata ; 4ta. elongata e basi ad medium marginis interni extensa ; 5ta. irregulari-ovata pone 2am ; 6ta. minuta intus angulum posticum ; alis posticis sanguineis, limbo nigro ; abdomine fulvo, ano nigro-barbato. Expans. alar. antic. unc. 2½.

Habitat —? In Mus. Hopeiano.

EUSEMIA PARDALINA, Walker, Proc. Nat. Hist. Soc. Glasgow, i. p. 329, pl. 5, f. 1 (1869).

The type of this species, from Congo, is in the Hopeian collection, together with a second individual brought from Angola by Monteiro. It differs from *E. Euphemia* in its smaller size, and in having the ground colour of the hind wings rich orange fulvous instead of sanguineous.

EUSEMIA MERETRIX, Westwood in Oates's Matabele Land, ed. 1, App. p. 355 (1881).

Alis anticis nigris, maculis 5 fulvis,—1ma. obliqua subbasali marginem anticum et posticum non attingenti ; 2da. ovali ad apicem cellulæ ; 3tia. duplo majori oblongo-ovali et obliqua inter cellulam et apicem alæ ; 4ta. fere rotundata pone 2am ; 5ta. parva angulo postico proxima ; costa basi albo-guttata, margine postico immaculato ; alis posticis rufis, limbo nigro. Expans. alar. antic. unc. 2¾.

Habitat in Afric. merid. (D. Buxton). In Mus. Hopeiano.

EUSEMIA NUGATRIX, Westwood in Oates's Matabele Land, ed. 1, App. p. 356 (1881).

Alis anticis nigris, costa ad basim biguttata, maculis 6 luteo-albidis,—1ma. subtrigona ante medium cellulæ ; 2da. subquadrata parum obliqua ante apicem cellulæ ; 3tia. magna subovali obliqua inter medium et apicem alæ, intus vena 3tia medianâ in dentem nigrum incisa ; 4ta. oblonga marginis postici, medium marginis fere attingente ; 5ta. pone 2am ; 6ta. fere ad angulum posticum alæ ; interstitiis argenteo parum squamosis ; alis posticis rufo-aurantiacis, limbo simplici nigro. Expans. alar. antic. unc. 2¾-3¼.

Habitat apud promontorium, "Cape Palmas," Afric. occid. (Savage). In Mus. Hopeiano.

EUSEMIA GLOSSATRIX, Westwood in Oates's Matabele Land, ed. 1, App. p. 356 (1881).

Alis supra nigris, purpureo-nitidis, præsertim in alis posticis ; anticis fascia media parum curvata tripartita straminea, alteraque inter medium et apicem alæ e punctis 4 albis formata, interstitiis squamis argenteis perpaucis ornatis ; alis posticis margine postico albo, intus dentato ; abdomine supra nigro, subtus fulvo ; collare et pedibus subtus fulvis. Expans. alar. antic. unc. 2¼.

Habitat in Afric. orient.-merid. In Mus. Hopeiano.

far as then known, was published by myself in the 'Proceedings of the Zoological Society,' in 1849 (with four coloured plates) containing thirty-three species, of which half were previously undescribed. Of these, perhaps the most striking is the long-tailed species *Actias mimosæ*, with pale green wings, which lives upon the mimosa, on the banks of the river Tugela, the southern boundary of Zululand, the cocoons of which are used by the natives for tobacco-boxes. Another fine species is *Saturnia Alcinoë*, Cramer, Pap. Ex., pl. 322, f. A, B (Var? *S. Caffraria*, Stoll, Suppl. Cramer, Pap. Ex., pl. 31, f. 2, 2c.; *S. Caffra*, Boisduval in Delegorgue's Voy. Afr. Austr., ii. p. 601). A specimen of this species, measuring seven inches in the expansion of the fore wings, was taken by Mr. Oates, but the precise locality was not recorded. Another species was also captured by Mr. Oates, which may be thus characterized :—

SATURNIA CERVINA, Westwood in Oates's Matabele Land, ed. 1, App. p. 357 (1881).

Toto roseo-cervina, alis anticis spatio minuto transverso squamis destituta ad apicem cellulæ, striolaque paullo obscuriori paullo curvata et vix distincta inter cellulam et marginem posticum; alis posticis macula parva trigona ad apicem cellulæ; abdomine magis fulvo; alis anticis apice subrotundatis. Expans. alar. antic. unc. 4 $\frac{2}{3}$ .

Habitat prope Tati.

A beautiful species, nearly allied to the European Emperor-moth, was also taken by Mr. Oates :—

SATURNIA FLAVIDA, Butler, Ann. Mag. Nat. Hist., ser. 4, xix. p. 462 (1877); Westwood in Oates's Matabele Land, ed. 1, App. p. 357 (1881).

*S. Apollonia*, Cramer (Pap. Ex. pl. 250, f. A), persimilis; differt colore fusco-griseo alarum flavido-tincto, fascia fusca pone ocellum, absque maculis duabus nigricantibus subapicalibus, colore fusco subapicali omnium alarum intus flavido latius marginato. Expans. alar. antic. unc. 3 $\frac{1}{3}$ .

Habitat prope Gubuluwayo.<sup>1</sup>

<sup>1</sup> Descriptions of two additional species of *Saturnia* in the Hopeian collection closely allied to *S. flavida*, together with that of a remarkable species collected by Mr. Buxton, may be added here :—

SATURNIA TERPSICHORINA, Westwood in Oates's Matabele Land, ed. 1, App. p. 357 (1881).

*S. Apollonia* similis at multo minor et pallidior, ocello alarum anticarum ovali, fascia tenui extus connexa, hac prope apicem alæ absque maculis duabus nigris; alis posticis basi albis absque fascia indistincta subbasali, ocello ovali extus cum fascia tenui fusca conjuncta, fascia 2da submarginali ut in *S. Apollonia*; thoracis dorso macula livido-fusca; incisuris abdominis livido-marginatis. Expans. alar. antic. unc. 2 $\frac{1}{2}$ .

Habitat in Afric. merid.-orient. In Mus. Hopeiano.

SATURNIA DVOPS, Maassen and Weymer, Beitr. Schmett., f. 21 (1872).

This species is also closely allied to *S. Apollonia*, but wants the ocellus on the hind

## Family BOMBYCIDÆ.

The family BOMBYCIDÆ appears to be rich in species of the sub-family LIMACODIDES, the caterpillars of which are clothed with short erect bristles, which are capable of inflicting poisonous wounds; their cocoons are very solid and egg-shaped. Notwithstanding their defensive appendages the caterpillars are subject to the attacks of parasites, and in the 'Transactions of the Entomological Society of London' (1876, p. 574, pl. 10), I have given the history of a curious dipterous insect, *Systropus crudelis*, which destroys individuals of one of the species of this group. Mr. Oates obtained a number of species, the majority of which are, however, in a very mutilated condition. Of one, which is a very showy insect, I give the description below:—

LIMACODES ARGENTIFERA, Westwood in Oates's Matabele Land, ed. 1, App. p. 358 (1881).

Læte pallido-viridis, alis anticis basi macula media fasciaque subapicali valde curvata e guttis argenteis, singulis guttis annulo brunneo cinctis, fascia externa e medio marginis postici versus apicem extensa at guttis sensim decrescentibus; alis posticis abdomineque fulvis. Expans. alar. antic. unc. 1¼.

*Pantoctenie Gemmanti*, Felder (Novara-Reise, Lep. iv. pl. 82, f. 16), proxima.

Habitat prope Gubuluwayo.

A large species of this family was taken by Mr. Oates at Tati:—

JANA MARIANA, White, Ann. Mag. Nat. Hist., xii. p. 264 (1843);  
Westwood in Oates's Matabele Land, ed. 1, App. p. 358, pl. G, f. 6 (1881). (Plate VII., fig. 6.)

Fawn-coloured; the fore wings with four slender oblique undulating brown bands. In the hind wings the bands are rather broader and more distinct, and there is a large purplish black spot at the base of the latter. The fore wings measure from 4 to 4¾ inches in expanse.

The type specimen from Congo is in the British Museum.

Mr. Oates also obtained specimens of *\*Deiopeia pulchella*, Linnaeus; *\*Phiala xanthosoma*, Wallengren; *\*Antiphella crocicollis*, Herrich-Schaffer; *\*Chilena prompta*, Walker; and *\*Argyris vestalis*, Butler.

wings. Maassen obtained it from Natal. Specimens from South-eastern Africa, and from Angola (Monteiro), are in the Hopeian collection at Oxford.

SATURNIA HYPERBIUS, Westwood in Oates's Matabele Land, ed. 1, App. p. 357 (1881).

Alis anticis ferruginosis, puncto minimo vitreo ad apicem cellulæ; striga recta obliqua pone medium alæ cinerea, area pone strigam magis aurantiaca, margine apicali plumbeo-tincto, ciliis rufis; alis posticis fulvis oculo mediocri medio cinereo (medio albido) circulo nigro; striga angusta cinerea inter ocellum et marginem posticum plumbescentem, ciliis rufis; alis subtus saturatioribus, venis flavis, anticis macula rotunda nigra, medio vitrea; cellula in posticis fere oblitterata, strigaeque pone medium angustiori et minus distincta; corpore rufo, abdomine magis fulvo. Expans. alar. antic. fere unc. 5.

Habitat in Afric. merid. (D. Buxton). In Mus. Hopeiano.

## Family GEOMETRIDÆ.

A single example of the ubiquitous \**Sterrha sacraria*, Linnæus, was found by Mr. Oates near Tati.

## Family NOCTUIDÆ.

This family is represented in Mr. Oates's collection by the following species :—\**Acontia Komaga*, Felder ; \**Heliothis armiger*, Hübner ; \**Cylogramma Latona*, Cramer ; \**Sphingomorpha Monteironis*, Butler ; \**Grammodes stolidi*, Fabricius ; and \**Ophiusa proferans*, Walker.

The species of the remaining Lepidopterous families captured by Mr. Oates did not comprise any remarkable new species, and were for the most part in a much broken condition, rendering their determination very difficult.

## Order COLEOPTERA.

## Family CICINDELIDÆ.

## Genus MANTICHORA, Fabricius.

1. MANTICHORA LATIPENNIS, Waterhouse, Mag. Nat. Hist., i. p. 503, f. 62 (1837).

## Genus DROMICA, Dejean.

2. DROMICA MAUCHII, Bates, Ent. Mo. Mag., viii. p. 287 (1872). (Plate VII., fig. 5, and Plate IX., figs. 1, 1a, 1b.)

*Dromica (Myrmecoptera) Oatesii*, Westwood in Oates's Matabele Land, ed. 1, App. p. 359, pl. G. f. 5, pl. H, f. 1, 1a-b (1881).

Fœm. Nigra, capite rugose striolato, labro lævi, in medio fulvo ; pronoto subopaco transverse striolato, linea media dorsali albo-hirta, elytris obovalibus granulatis, singulis 5-costatis, costis longe ante apicem desinentibus ; costa suturæ proxima e tuberculis oblongis formata ; costa 2da ad basim straminea, nigro-punctata ; margine externo inter medium et apicem linea gracili albida notato ; antennis pone articulum 4tum dilatatis, compressis, articulis sensim ad apicem decrescentibus. Long. corp. unc. 1, lat. med. elytr. lin. 3½.

## Family CARABIDÆ.

## Genus ANTHIA, Weber.

3. ANTHIA MAXILLOSA, Fabricius, Mant., i. p. 194 ; Olivier, Ent., iii. 35, p. 13, pl. 8, f. 90 ♂, pl. 1, f. 10 ♀.
4. ANTHIA HOTTENTOTTA, n. sp. (Plate VIII., fig. 3).

Nigra, elytrorum margine tenuissimo albo, capitatis vertice impressione profunda rotundata notato ; pronoto cordato angulis posticis

rotundis ; impressione ovali dorsali, hujus lateribus elevatis ; elytris ovalibus subconvexis, striolis gracillimus impressis. Mas. mandibulis mediocribus, labro parum longioribus. Long. corp. lin. 15, lat. elytr. lin.  $5\frac{1}{2}$ .

5. ANTHIA MELLII, De Brême, Ann. Soc. Ent. Fr., ser. 2, ii. p. 292, pl. 7, f. 4 (1844).
6. ANTHIA CINCTIPENNIS, Lequien, Mag. Zool., 1832, class ix. pl. 38.
- \*7. ANTHIA THORACICA, Fabricius, Mant., i. p. 195 ; Olivier, Ent., iii. 35, p. 14, pl. 10, f. 5♂ ♂, pl. 1, f. 5 ♀.

Genus CYPHOLOBA, Chaudoir.

8. CYPHOLOBA ALVEOLATA, De Brême, Ann. Soc. Ent. Fr., ser. 2, ii. p. 293, pl. 7, f. 5 (1844).

Genus CYCLOLOBA, Chaudoir.

9. CYCLOLOBA SEPTEMGUTTATA, Fabricius, Ent. Syst., iv. App. p. 442 ; Castelnau, Hist. Nat., i. p. 61, pl. 4, f. 9.
- Var. sordida guttis obliterated.

Genus POLYHIRMA, Chaudoir.

10. POLYHIRMA MACILENTA, Olivier, Ent., iii. 35, p. 26, pl. 11, f. 130.
11. POLYHIRMA NOTATA, Perroud, Ann. Soc. Linn. Lyon., 1845-6, p. 52 (= *P. amabilis*, Boheman).

Var. ? Nigra gracilis, elytris costatis, interstitiis profunde punctatis, capite pronoto et dimidio basali elytrorum linea dorsali albo tomentoso, his etiam gutta media communi apicali albis, pectore utrinque maculis albo-hirtis notatis. Long. corp. lin. 10, lat. elytr. ultra medium, lin. 3.

Genus GRAPHIPTERUS, Latreille.

12. GRAPHIPTERUS CORDIGER, Dejean, Spéc. Col., v. p. 461.
13. GRAPHIPTERUS WESTWOODII, De Brême, Ann. Soc. Ent. Fr., ser. 2, ii. p. 291, pl. 7, f. 6 (1844).

Genus ORTHOGONIUS, Dejean.

14. ORTHOGONIUS CAFFER, Boheman, Ins. Caffr., i. p. 64 (1848).

Genus DRYPTA, Fabricius.

15. DRYPTA JUCUNDA, Boheman, Ins. Caffr., i. p. 27 (1848).

## Family HYDROPHILIDÆ.

## Genus SPHÆRIDIMUM, Fabricius.

- \*16. SPHÆRIDIMUM APICALE, Boheman, Ins. Caffr., i. p. 606 (1848), var.

## Family SCARABÆIDÆ.

## Genus PACHYLOMERA, Kirby.

17. PACHYLOMERA FEMORALIS, Kirby, Zool. Journ., iii. p. 520, pl. 14, f. 1.

## Genus SCARABÆUS, Linnæus.

18. SCARABÆUS ISIDIS, Castelnau, Hist. Nat., ii. p. 64.

Var.? Dentibus clypei valde obtusis, pedibus gracilibus, tibiis anticis dentibus externis fere obsoletis. Long. corp. lin. 19.

19. SCARABÆUS SAVIGNII, MacLeay, Hor. Ent., ii. p. 503 (= *S. transversus*, Castelnau).

20. SCARABÆUS INTRICATUS, Fabricius, Syst. El., i. p. 56; MacLeay, Hor. Ent., ii. p. 500; Castelnau, Hist. Nat., ii. p. 66.

## Genus CIRCELLIUM, Latreille.

21. CIRCELLIUM BACCHUS, Fabricius, Spec. Ins., i. p. 32; Herbst, Käf., ii. p. 297, pl. 19, f. 4. (Var. *Lycæus*, Westwood in Partington's Brit. Cycl., Nat. Hist. ii. p. 55.)<sup>1</sup>

## Genus ANACHALCOS, Hope.

22. ANACHALCOS CUPREUS, Fabricius, Syst. Ent., p. 29; Olivier, Ent., i. 3, p. 156, pl. 7, f. 58.

Var. minor (long. lin. 10) et brevior.

## Genus GYMNOPLEURUS, Illiger.

23. GYMNOPLEURUS OLIVIERI, Castelnau, Hist. Nat., ii. p. 72.  
 24. GYMNOPLEURUS FULGIDUS, Olivier, Ent., i. 3, p. 167, pl. 22, f. 199.  
 25. GYMNOPLEURUS ÆNEESCENS, Wiedemann in Germar's Mag. Ent., iv. p. 128 (= *G. speciosus*, Dejean, Cat.).

## Genus SISYPHUS, Latreille.

26. SISYPHUS HIRTUS? Wiedemann, Zool. Mag., ii. p. 24 (1823).

## Genus CATHARSIVS, Hope.

27. CATHARSIVS TRICORNUTUS, De Geer, Mém. Ins., vii. p. 637, pl. 47, f. 16; *Catharsius nemestrinus*, Boheman, Ins. Caffr., ii. p. 220 (= *Scarabæus nemestrinus*, Fabricius).

<sup>1</sup> [A figure of this insect is given in a plate of beetles in vol. i. (*Nat. Hist.*) of the above work, but both plate and figure are devoid of reference numbers.—ED.]

## Genus COPRIS, Geoffroy.

28. COPRIS IACCHUS, ♂ Fabricius, Syst. Ent., p. 20; Olivier, Ent., i. 3, p. 105, pl. 22, f. 195; ♀ *C. Œdipus*, Fabricius, *l.c.* p. 21; Olivier, *l.c.* p. 112, pl. 13, f. 121.
29. COPRIS CÆLATUS, Fabricius, Ent. Syst., iv. App. p. 435; Voet, Col., i. pl. 23, f. 6.

## Genus ONTHOPHAGUS, Latreille.

- \*30. ONTHOPHAGUS GAZELLA, Fabricius, Ent. Syst., i. pt. 1, p. 56; Fåhræus in Boheman's Ins. Caffr., ii. p. 275.

Widely distributed on the African continent.

## Genus ONITIS, Fabricius.

31. ONITIS INUUS, Fabricius, Ent. Syst., Suppl. p. 25; Olivier, Ent., i. 3, p. 138, pl. 14, f. 135.

## Genus ONITICELLUS, Serville.

32. ONITICELLUS INÆQUALIS, Reiche in Ferret and Galinier's Voy. Abyss., iii. p. 335, pl. 20, f. 4, 4a (1850). (= *Onitis ciliatus*, Germar, MS.)
- \*33. ONITICELLUS MILITARIS, Castelnau, Hist. Nat. ii. p. 91 (1840).
- \*34. ONITICELLUS INTERMEDIUS, Reiche in Ferret and Galinier's Voy. Abyss., iii. p. 337, pl. 20, f. 5, 5 a-c, ♂, f. 6 ♀.

## Genus APHODIUS, Illiger.

- \*35. APHODIUS GRANARIUS, Linnæus, Syst. Nat., ed. 12, i. pt. 2, p. 547, n. 23 (1767); von Harold, Berl. Ent. Zeit., vii. p. 347 (1863).

This species, which ranges over almost the entire globe, is common in South Africa.

- \*36. APHODIUS LIVIDUS, Olivier, Ent., i. 3, p. 86, pl. 26, f. 222, 222 a-b; Boheman, Ins. Caffr., ii. p. 339.

Almost as widely distributed as the preceding species.

## Family MELOLONTHIDÆ.

## Genus SCHIZONYCHA, Blanchard.

- \*37. SCHIZONYCHA AFRICANA, Castelnau, Hist. Nat., ii. p. 34.

## Genus ANOMALA, Samouelle.

- \*38. ANOMALA VARICOLOR, Gyllenhal in Schönherr's Syn. Ins., App. p. 114.

## Genus ADORETUS, Castelnau.

- \*39. ADORETUS, sp.

## Family TROGIDÆ.

## Genus TROX, Fabricius.

- \*40. TROX VARIOLOSUS, Fåhræus in Boheman's Ins. Caffr., ii. p. 378.  
 \*41. TROX, near T. INCULTUS, Fåhræus in Boheman's Ins. Caffr., ii.  
 p. 377.

## Family DYNASTIDÆ.

## Genus ORYCTES, Illiger.

42. ORYCTES BOAS, Fabricius, Ent. Syst., i. pt. 1, p. 8 ; Olivier, Ent.,  
 i. 3, p. 35, pl. 4, f. 24, 24 *a-b*.

## Genus HETERONYCHUS, Burmeister.

- \*43. HETERONYCHUS, sp.

## Family CETONIDÆ.

## Genus PACHNODA, Burmeister.

44. PACHNODA CORDATA, Drury, Ill. Exot. Ins., ii. p. 60, pl. 32, f. 5.  
 (Var. *obsoleta*, Schaum, Ann. Soc. Ent. Fr., ser. 2, ii. p. 388,  
 1844 ; id. *l.c.* ser. 2, vii. p. 280, 1849).

## Genus SPILOPHORUS, Lacordaire.

45. SPILOPHORUS PLAGOSUS, Boheman, Ins. Caffr., ii. p. 49.

## Genus PHOXOMELA, Schaum.

46. PHOXOMELA UMBROSA, Gory and Percheron, Mon. Cét. p. 282,  
 pl. 55, f. 1.

## Genus OXYTHYREA, Mulsant.

47. OXYTHYREA DISCICOLLIS, Blanchard, Cat. Collect. Ent., p. 11  
 (1850) ; Reiche in Ferret and Galinier's Voy. Abyss., iii. p.  
 358, pl. 22, f. 1, 1*a*.  
 48. OXYTHYREA HÆMORRHOIDALIS, Fabricius, Syst. Ent., App.  
 p. 819 ; Gory and Percheron, Mon. Cét., p. 298, pl. 57, f. 8.

## Family BUPRESTIDÆ.

## Genus ACMÆODERA, Eschscholtz.

- \*49. ACMÆODERA DECEMGUTTATA, Thunberg, Mus. Nat. Ups., iv.  
 p. 51 (1787), var.

## Genus CHRYSOBOTHRIS, Eschscholtz.

- \*50. CHRYSOBOTHRIS DORSATA, Fabricius, Mant., i. p. 179 ; Castel-  
 nau and Gory, Ins. Col., ii. Chrys. p. 6, pl. 1, f. 7.

## Genus SPHENOPTERA, Solier.

\*51. SPHENOPTERA, sp.

## Genus AGRILUS, Stephens.

\*52. AGRILUS HASTULATUS, Fähræus in Boheman's Ins. Caffr., i.  
p. 356.*Agrilus Capensis*, Murray, Ann. Mag. Nat. Hist., ser. 4, ii. p.  
108 (1868).

## Family ELATERIDÆ.

## Genus TETRALOBUS, Serville.

53. TETRALOBUS BIFOVEOLATUS, Boheman, Ins. Caffr., i. p. 380 ;  
Westwood in Oates's Matabele Land, ed. 1, App. p. 361, pl.  
G, f. 4 (1881). (Plate VII., fig. 4.)

## Genus CARDIOPHORUS, Eschscholtz.

\*54. CARDIOPHORUS, sp.

## Family PAUSSIDÆ.

## Genus HETEROPAUSSUS, Thomson.

55. HETEROPAUSSUS ALTERNANS, Westwood, Proc. Linn. Soc., ii.  
p. 56 (1849); id. Thes. Ent., p. 74, pl. 16, f. 2.

## Family HISTERIDÆ.

## Genus HISTER, Linnæus.

\*56. HISTER GIGAS, Paykull, Mon. Hist., p. 9, pl. 2, f. 1 ; Marseul,  
Ann. Soc. Ent. Fr., ser. 3, ii. p. 170, pl. 6, f. 1 (1854).\*57. HISTER CAFFER, Erichson, Jahrb. der Ins., p. 132 (1834); Mar-  
seul, Ann. Soc. Ent. Fr., ser. 3, ii. p. 188, pl. 6, f. 10 (1854).\*58. HISTER SUBSULCATUS, Marseul, Ann. Soc. Ent. Fr., ser. 3, ii.  
p. 221, pl. 7, f. 38 (1854).

## Genus SAPRINUS, Erichson.

\*59. SAPRINUS SPLENDENS, Paykull, Mon. Hist., p. 53, pl. 4, f. 7 ;  
Marseul, Ann. Soc. Ent. Fr., ser. 3, iii. p. 380, pl. 16, f. 22  
(1855).

## Family CUCUJIDÆ.

## Genus HECTARTHURUM, Newman.

\*60. HECTARTHURUM GIGAS, Fabricius, Syst. El., ii. p. 92 ; Murray,  
Ann. Mag. Nat. Hist., ser. 3, xix. p. 338 (1867). (Plate VIII.,  
fig. 4.)

## Family SILPHIDÆ.

## Genus SILPHA, Linnæus.

61. SILPHA MICANS, Fabricius, Ent. Syst., iv. App. p. 445.

## Family DERMESTIDÆ.

## Genus DERMESTES, Linnæus.

- \*62. DERMESTES VULPINUS, Fabricius, Spec. Ins., i. p. 64 ; Boheman, Ins. Caffr., i. p. 583.  
A cosmopolitan species.

## Family CLERIDÆ.

## Genus NECROBIA, Latreille.

- \*63. NECROBIA RUFIPES, De Geer, Mém. Ins., v. p. 165, pl. 15, f. 4 ; Boheman, Ins. Caffr., i. p. 515.  
64. NECROBIA, sp.

## Family BOSTRYCHIDÆ.

## Genus APATE, Fabricius.

- \*65. APATE TEREBRANS, Pallas, Spic. Zool., ix. p. 7, pl. 1, f. 3 ; Olivier, Ent., iv. 77, p. 5, pl. 1, f. 4.  
66. APATE FRANCISCA, Fabricius, Syst. El., ii. p. 379 ; Duval, Gen. Col., iii. pl. 56, f. 276 (= *A. monacha*, Fabricius ♂).

## Genus BOSTRYCHUS, Geoffroy.

67. BOSTRYCHUS CORNUTUS, Olivier, Ent. iv. 77, p. 7, pl. 1, f. 5, 5 *a-c*.  
68. BOSTRYCHUS, sp.

## Family TENEBRIONIDÆ.

## Genus ZOPHOSIS, Latreille.

- \*69. ZOPHOSIS ANGUSTICOSTIS, Deyrolle, Ann. Soc. Ent. Fr., ser. 4, vii. p. 130 (1867).  
\*70. ZOPHOSIS CRYPTICOIDES, Deyrolle, Ann. Soc. Ent. Fr., ser. 4, vii. p. 182, pl. 1, f. 4 (1867).

## Genus ADESMIA, Fischer.

71. ADESMIA BACCATA, Gerstaecker, Arch. f. Nat., xxxvii. pt. 1, p. 58 (1871) ; id. in v. d. Decken's Reisen in Ost-Afrika, Ent. p. 167, pl. 9, f. 1 (1873).  
*Adesmia (Macropoda) foveicollis*, Haag, Mitth. Münch. Ent. Ver., ii. p. 88 (1878).  
\*72. ADESMIA PLATYNOTA, Gerstaecker, Ber. Akad. Berl., 1854, p. 530 ; id. in Peters's Reise Mossamb., Zool. v. p. 274, pl. 16, f. 2 (1862).  
*Adesmia Gerstaeckeri*, Haag, Beitr. z. Kennt. Tenebr., p. 20 (Deutsche Ent. Zeits., Beiheft, 1875.)

## Genus HIMATISMUS, Erichson.

- \*73. HIMATISMUS VARIEGATUS, Fabricius, Spec. Ins., i. p. 323; Olivier, Ent., iii. 57, p. 14, pl. 2, f. 16.

## Genus EURYCHORA, Thunberg.

- \*74. EURYCHORA, sp.

## Genus MOLURIS, Latreille.

75. MOLURIS GIBBOSA, Olivier, Ent., iii. 59, p. 11, pl. 1, f. 5, 5 *a-b*; Solier, Mem. Accad. Torin., ser. 2, vi. p. 291 (1844).

## Genus PSAMMODES, Kirby.

76. PSAMMODES PIERRETI, Amyot, Mag. Zool., 1835, class ix. pl. 129; Solier, Mem. Accad. Torin., ser. 2, vi. p. 288 (1844).
- \*77. PSAMMODES SEMISCABER, Haag, Col. Hefte, viii. p. 76.
- \*78. PSAMMODES PUBESCENS, Solier, Mem. Accad. Torin., ser. 2, vi. p. 297 (1844).

## Genus TRACHYNOTUS, Latreille.

79. TRACHYNOTUS ÆNEUS, Solier, Mem. Accad. Torin. ser. 2, vi. p. 323 (1844).
- \*80. TRACHYNOTUS GLABER, Fåhræus, Öfvers Vet. Akad. Förh., xxvii. p. 275 (1870).
- \*81. TRACHYNOTUS MÆRENS, Haag, Deutsche Ent. Zeits., xxiii. p. 294 (1879).

## Genus SOMATICUS, Hope.

82. SOMATICUS RUGOSUS, Fabricius, Spec. Ins., i. p. 315; Herbst, Käf., viii. p. 149, pl. 126, f. 5

## Genus DICHTHA, Haag.

83. DICHTHA INFLATA, Gerstaecker, Ber. Akad. Berl., 1854, p. 532; id. in Peters's Reise Mossamb., Zool. v. p. 280, pl. 16, f. 12.
84. DICHTHA CUBICA, Guérin, Rev. Zool., 1845, p. 285. *Moluris albipes*, Melly, MS. in Brit. Mus.  
*D. inflata* simillima, pronoto haud granulato, elytris lævibus, glabris, tenue rufo-marginatis, pedibus luteo-tomentosis.  
 In individuo nostro sutura elytrorum nullo modo elevata est.

## Genus HOPATRUM, Fabricius.

- \*85. HOPATRUM MICANS, Germar, Ins. Spec. Nov., p. 145.

## Genus ANOMALIPUS, Guérin.

86. ANOMALIPUS LINEATUS, Gerstaecker, Ber. Akad. Berl., 1854, p. 531; id. in Peters's Reise Mossamb., Zool. v. p. 275, pl. 16, f. 4.

## Genus TOXICUM, Latreille.

- \*87. TOXICUM MATABELICUM, Olliff, n. sp.

Elongate, black and opaque; head rather broad, narrowed towards the base, somewhat finely and closely punctured in front, the punctures slightly closer and stronger near the base; the anterior margin rounded; the sides oblique, with a moderately deep transverse excavation between the two frontal horns, which are rather short, stout, and slightly incurved; eyes not very large, completely divided; antennæ with the club four-jointed; prothorax transverse, strongly convex, very slightly narrower in front than behind, rather strongly, very closely and irregularly punctured; the anterior angles strongly deflexed; the sides oblique; the posterior margin bisinuate; scutellum transverse, very finely punctured; elytra slightly broader than the prothorax, strongly convex, moderately strongly and rather irregularly striate-punctate; the interstices broad with faint indications of transverse wrinkles; under side black, shining; prosternum closely and rather strongly punctured; mesosternum, metasternum, and abdominal segments much more finely punctured; legs black; tarsi pitchy. Length,  $9\frac{1}{2}$  mm.

From Tati.

This species belongs to the section of the genus *Toxicum*, in which the eyes are completely divided, and is closely allied to *T. aries*, Klug (Ins. Madag., 1833, p. 177), from Madagascar. It differs, however, in being slightly broader, in having the anterior angles of the prothorax more strongly deflexed, and the disk more strongly and closely punctured. The lines of punctures on the elytra are very similar in the two species, but those of *T. Matabelicum* are slightly more irregular.

A. Sidney Olliff.

## Genus OATESIUS, Westwood.

*Derospharius*, Westwood in Oates's Matabele Land, ed. 1, App. p. 362 (1881), (nom. præoccup.).

Corpus oblongum, subcylindricum; capite parvo, conico, ante oculos utrinque rotundato-elevato, antennis longitudine dimidii corporis, articulis æqualibus, externis paullo brevioribus at non crassioribus; mandibulis capitis longitudine æqualibus curvatis, supra prope basim cornu erecto, apice inciso, armatis; labro subrotundato, antice emarginato; palpis maxillaribus elongatis, articulo ultimo vix securiformi; mentum transversum antice angustatum; palpis labialibus parvis, subcylindricis; prothorax rotundatus, subglobosus; pedes satis graciles; tarsis heteromeris, simplicibus, unguibus simplicibus.

This genus is apparently allied to *Centronipus* and *Stenochia*.

88. OATESIUS ANTHRACINUS, Westwood. (Plate VII., fig. 3, and Plate IX., figs. 2, 2a, 2b, 2c).

*Derosphærius anthracinus*, Westwood in Oates's Matabele Land, ed. 1, App. p. 362, pl. G, f. 3, pl. H, f. 2, 2 a-c (1881).

Niger nitidus, capite inter antennis biimpresso, pronoto subtiliter punctatissimo; elytris punctato-striatis. Long. corp. fere lin. 6.

Genus TENEBRIO, Linnæus.

- \*89. TENEBRIO, near T. OBSCURUS, Fabricius, Ent. Syst., i. pt. 1, p. 111.

Genus PRAOGENA, Castelnau.

- \*90. PRAOGENA SPLENDENS, Mäklin, Act. Fenn., vii. p. 572 (1863).

Family LAGRIIDÆ.

Genus LAGRIA, Fabricius.

- \*91. LAGRIA VILLOSA, Fabricius, Spec. Ins., i. p. 160; Olivier, Ent. iii. 49, p. 4, pl. 1, f. 1, var.

Family CANTHARIDÆ.

Genus CORYNA, Billberg.

92. CORYNA POSTHUMA, Marseul, Mém. Soc. Liège, ser. 2, iii. p. 603 (1873), var.

Genus MYLABRIS, Fabricius.

- \*93. MYLABRIS OCULATA, Thunberg, Diss. Nov. Ins. Spec., vi. p. 114, f. 14.  
 \*94. MYLABRIS TRANSVERSALIS, Marseul, Mém. Soc. Liège, ser. 2, iii. p. 400 (1873).  
 \*95. MYLABRIS LUNATA, Pallas, Icon., p. 79, pl. E, f. 5, 5 a-b.

Genus EPICAUTA, Redtenbacher.

- \*96. EPICAUTA PECTORALIS, Gerstaecker, Ber. Akad. Berl., 1854, p. 695; id. in Peters's Reise Mossamb., Zool. v. p. 296.  
 \*97. EPICAUTA TOMENTOSA, Mäklin, Act. Fenn., x. p. 627 (1875).

Family CURCULIONIDÆ.

Genus POLYCLEIS, Boheman.

- \*98. POLYCLEIS LONGICORNIS, Fåhræus, Öfvers. Vet. Akad. Förh., xxviii. p. 25 (1871).

Genus BRACHYCERUS, Olivier.

- \*99. BRACHYCERUS APTERUS, Linnæus, Syst. Nat., ed. 10, i. p. 386, n. 80 (1758); Olivier, Ent., v. 82, p. 44, pl. 1, f. 3, 3 a-b.

100. BRACHYCERUS CONGESTUS, Gerstaecker, Ber. Akad. Berl., 1855, p. 83; id. in Peters's Reise Mossamb., Zool. v. p. 306, pl. 18, f. 7.

Genus HIPPORRHINUS, Schönherr.

- \*101. HIPPORRHINUS SEVERUS, Gyllenhal in Schönherr's Gen. Curc. v. p. 747.

Family CERAMBYCIDÆ.

Genus ZAMIUM, Pascoe.

- \*102. ZAMIUM, sp.

Genus PLOCEDERUS, J. Thomson.

103. PLOCEDERUS DENTICORNIS, Fabricius, Syst. El., ii. p. 271.  
*Hammaticherus serraticornis*, Bertoloni, Mem. Accad. Sci. Bologn., vi. p. 440, pl. 22, f. 4 (1855).

Genus TAPINOLACHNUS, J. Thomson.

- \*104. TAPINOLACHNUS OATESII, Olliff, n. sp. (Plate VIII., fig. 7.)

Elongate, depressed, pitchy black and somewhat shining, very densely clothed with fine silky olivaceous green pubescence; prothorax with a large sub-denuded patch on the disk; elytra very obsoletely punctured, with a broad fascia composed of brownish olivaceous pubescence near the base, and another rather narrower but similar fascia just behind the middle, the apical sutural angle produced into a fine spine.

♂. The head covered with pale greenish grey pubescence, finely and sparingly punctured in front, very finely rugulose transversely at the base, with a longitudinal impression between the eyes; antennæ rather more than twice as long as the body, clothed, especially near the base, with fine greenish grey pubescence; prothorax longer than broad, moderately strongly constricted and narrowed in front, irregularly rugose transversely, with a large irregular bare patch in the middle, which is slightly impressed behind; the sides gradually rounded, irregular, with a feeble callosity about the apical fourth; scutellum small, obsoletely punctured; elytra more than one and a half times as long as the head and prothorax together, much broader than the prothorax at the base, slightly narrowed behind, very obsoletely punctured, with a broad fascia at the basal fourth and another much narrower fascia behind the middle,—the pubescence composing these fasciæ darker in colour and less dense than that on the other parts of the elytra; the sides nearly parallel, rounded behind; sutural angle produced into a small spine; under side coloured as above, very finely punctured, the pubescence less dense; legs pitchy black, clothed with olivaceous green pubescence, which is much paler at the apex of the anterior tibiæ and on the under sides of the tarsi. Length, 19-23 mm.

♀. Differs from the male in having the antennæ only slightly longer than the body. Length, 24-25 mm.

From Tati; also in Captain G. E. Shelley's collection from the neighbourhood of Potchefstroom in the Transvaal.

This beautiful species appears to be allied to *Tapinolachnus Gyllenhalii*, Fåhræus (Öfvers Vet. Akad. Förh., xxix. (1), p. 52, 1872), but may be distinguished by the absence of a central thoracic groove and the form of the elytral fasciæ, etc.

A. Sidney Olliff.

\*105. TAPINOLACHNUS, near T. FURVUS, Fåhræus, Öfvers Vet. Akad. Förh., xxix. (1), p. 52 (1872).

A single female example only.

\*106. TAPINOLACHNUS AQUILUS, Olliff, n. sp. (Plate VIII., fig. 8.)

Elongate, somewhat depressed, pitchy black, densely clothed with dirty golden yellow pubescence; prothorax strongly rugose transversely, with a longitudinal impression on each side of the middle near the base; elytra with two sub-denuded fasciæ, similar in position to those of the preceding species.

♂. The head rather densely pubescent, finely rugulose at the base, with a longitudinal impression between the eyes; prothorax constricted in front, rather strongly and irregularly rugose transversely, with a very slight longitudinal impression in front and a much stronger longitudinal impression near the base on each side of the middle; sides irregular, unarmed; scutellum extremely finely punctured; elytra about twice as long as the head and prothorax together, slightly narrowed behind, extremely finely punctured, with a broad fascia at the basal fourth, and another behind the middle; sides rounded behind; the apex truncate, the outer angle slightly produced, the inner forming a moderately strong spine; under side coloured as above, less densely pubescent; legs pitchy, clothed with dirty golden yellow pubescence, which inclines to bright yellow near the apex of the anterior tibiæ and on the under sides of the tarsi. Length, 26 mm.

♀. Differs from the male in having the antennæ only slightly longer than the body, and the longitudinal impressions on the prothorax less distinct. Length, 25 mm.

No exact locality noted.

In form this species appears to approach *Tapinolachnus Natalensis*, White (Cat. Longic. Col. Brit. Mus., i. p. 128), but differs not only in its much smaller size and the position of the sub-denuded elytral fasciæ, but also in the structure of the thoracic depressions, as will readily be seen upon reference to the figure.

A. Sidney Olliff.

Genus PHYLLOCNEMA, J. Thomson.

107. PHYLLOCNEMA LATIPES, De Geer, Mém. Ins., vii. p. 655, pl. 49, f. 3; Fåhræus, Öfvers Vet. Akad. Förh., xxix. (1), p. 58 (1872).

## Genus PHILAGATHES, J. Thomson.

108. PHILAGATHES LÆTUS, Thomson, Syst. Cer., p. 197 (1864).  
*Philagathes Wahlbergii*, Fåhræus, Öfvers Vet. Akad. Förh.,  
 xxix. (1), p. 68 (1872).

## Genus AMPHIDESMUS, Serville.

109. AMPHIDESMUS ANALIS, Olivier, Ent., iv. 67, p. 37, pl. 19, f. 144.

## Genus ELEANOR, J. Thomson.

- \*110. ELEANOR TRAGOCEPHALOIDES, Thomson, Syst. Cer., p. 198.  
 (Plate VIII., fig. 2.)

The single representative of this pretty species obtained by Mr. Oates is remarkably small, measuring only 12 mm. in length.

## Genus PHANTASIS, J. Thomson.

111. PHANTASIS GIGANTEA, Guérin, Icon. Règne Anim., Ins. p. 241 ;  
 Gerstaecker in Peters's Reise Mossamb., Zool. v. p. 331, pl.  
 20, f. 3 ; Fåhræus, Öfvers Vet. Akad. Förh., xxix. (2), p. 29  
 (1872).

## Genus CEROPLESIS, Serville.

- \*112. CEROPLESIS ÆSTUANS, Olivier, Ent., iv. 67, p. 123, pl. 23, f. 176.  
 113. CEROPLESIS HOTTENTOTTA, Fabricius, Syst. Ent., p. 173 ;  
 Olivier, Ent., iv. 67, p. 90, pl. 4, f. 27.  
 \*114. CEROPLESIS FERRUGATOR, Fabricius, Mant., i. p. 138.  
*Lamia ahenea*, Newman, Ent., i. p. 11.

## Genus CERATITES, Serville.

- \*115. CERATITES JASPIDEUS, Serville, Ann. Soc. Ent. Fr., iv. p. 35  
 (1835).

## Genus PYCNOPSIS, J. Thomson.

116. PYCNOPSIS BRACHYPTERA, Thomson, Arch. Ent., i. p. 184 ;  
 Fåhræus, Öfvers Vet. Akad. Förh., xxix. (2), p. 39 (1872)  
 (= *Ceroplesis cruentata*, Dejean, Cat.).

## Genus CROSSOTUS, Serville.

- \*117. CROSSOTUS, sp.

## Genus TETRADIA, J. THOMSON.

- \*118. TETRADIA FASCIATOCOLLIS, Thomson, Syst. Cer., p. 65 ;  
 Fåhræus, Öfvers Vet. Akad. Förh., xxix. (2), p. 37 (1872).

## Genus HECYRIDA, J. Thomson.

- \*119. HECYRIDA TERREA, Bertoloni, Nov. Comm. Acad. Bonon., x. p. 431, pl. 10, f. 5 (1849).

*Hecyrida improba*, Thomson, Arch. Ent., i. p. 181 (1857);  
Fåhræus, Öfvers Vet. Akad. Förh., xxix. (2), p. 35 (1872).

## Genus EUNIDIA, Erichson.

- \*120. EUNIDIA BATESII, Olliff, n. sp. (Plate VIII., fig. 1.)

Elongate, black, shining, very densely covered with rather pale fulvous yellow pubescence; prothorax with a slight callosity in the middle on each side; elytra pale reddish brown, the pubescence fulvous yellow, with an oblique dark fuscous band just before the middle.

The head densely pubescent, finely and closely punctured, with an indication of a longitudinal impressed line between the eyes; antennæ dark fuscous, about one and a half times as long as the body; the first three joints pitchy black, clothed, especially near the base, with yellowish grey pubescence; prothorax transverse, finely and irregularly punctured; scutellum rounded behind, densely clothed with black pubescence; elytra pale reddish brown, more than twice as long as the head and prothorax together, somewhat narrowed posteriorly, densely covered with fine fulvous yellow pubescence, moderately strongly and not very closely punctured, rounded at the apex; the sutural angle very slightly produced; each elytron with a moderately broad dark fuscous band just before the middle, directed obliquely towards the suture; under side piceous, shining, clothed with dirty fulvous yellow pubescence; legs pale pitchy. Length, 11 mm.

From Tati.

This pretty species, which is dedicated to Mr. H. W. Bates, is quite unlike any *Eunidia* known to me. A. Sidney Olliff.

## Family CHRYSOMELIDÆ.

## Genus SAGRA, Fabricius.

121. SAGRA FESTIVA, Gerstaecker, Ber. Akad. Berl., 1855, p. 636;  
id. in Peters's Reise Mossamb., Zool. v. p. 332, pl. 20, f. 6.

## Genus DIAPROMORPHA, Lacordaire.

122. DIAPROMORPHA TETTENSIS, Gerstaecker, Ber. Akad. Berl. 1855, p. 636; id. in Peters's Reise Mossamb., Zool. v. p. 333, pl. 20, f. 7.

## Genus MACROCOMA, Chapuis.

- \*123. MACROCOMA ERIOPHORA, Chapuis in Lacordaire's Gen. Col., x. p. 292 note, pl. 120, f. 3.

## Genus RHYPARIDA, Baly.

- \*124. RHYPARIDA, sp.

## Genus COLASPOSOMA, Castelnau.

- \*125. COLASPOSOMA SENEGALENSE, Castelnau in Silbermann's Rev. Ent., i. p. 22 (1833).

## Genus CORYNODES, Hope.

- \*126. CORYNODES COMPRESSICORNIS, Fabricius, Syst. El., i. p. 419 ; Olivier, Ent., vi. p. 901, pl. 1, f. 7.

## Genus PRASOCURIS, Latreille.

- \*127. PRASOCURIS, sp.

## Genus CHRYSOMELA, Linnæus.

- \*128. CHRYSOMELA, near C. CAFFRA, Thunberg, Nov. Act. Ups., viii. p. 177 (1821).

## Genus DIAMPHIDIA, Gerstaecker.

- \*129. DIAMPHIDIA VITTATIPENNIS, Baly, Ann. Mag. Nat. Hist., ser. 3, xvi. p. 402 (1865). (Plate VIII., fig. 6.)

During a visit to the Museum of the Zoological Society (Natura Artis Magistra) at Amsterdam in 1884, I observed numerous examples of this species in a fine collection formed by the late Dr. Bradshaw on the Zambesi.—(A. S. O.)

130. DIAMPHIDIA FEMORALIS, Gerstaecker, Ber. Akad. Berl., 1855, p. 638 ; id. in Peters's Reise Mossamb., Zool. v. p. 346, pl. 20, f. 16.

## Genus DIACANTHA, Chevrolat.

- \*131. DIACANTHA MELANOPTERA, Thomson, Arch. Ent., ii. p. 219 (1858).

- \*132. DIACANTHA, sp.

## Genus HISPA, Linnæus.

- \*133. HISPA TESTACEA, Linnæus, Syst. Nat., ed. 12, i. pt. 2, p. 603, n. 2 (1767).

## Genus CASSIDA, Linnæus.

- \*134. CASSIDA CONVEXA, Boheman, Mon. Cassid., ii. p. 418 (1854).
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- \*135. CASSIDA THOMSONI, Boheman, Mon. Cassid., iv. p. 302 (1862).
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136. CASSIDA, sp.

## Family LANGURIIDÆ.

## Genus LANGURIA, Latreille.

\*137. LANGURIA NYASSÆ, Fowler, Trans. Ent. Soc. Lond., 1885, p. 384. (Plate VIII., figs. 5, 5a, 5b.)

Elongate, much depressed, rather dark reddish brown, shining; head moderately broad, very feebly emarginate in front, distinctly and closely punctured; the sides reflexed and obliquely narrowed in front of the eyes, which are not very prominent; antennæ brown, basal joint short, with a gradually formed club composed of three rather loosely articulated joints; prothorax slightly convex, about one-half longer than broad, considerably narrowed behind, about as strongly and closely punctured as the head; anterior angles deflexed and acute; the sides oblique, with a fine marginal rim; posterior angles slightly obtuse; scutellum rounded behind, finely and closely punctured; elytra a little more than twice as long as the head and prothorax together, rather closely and finely punctate-striate,—these striæ very irregular and the punctures obliterated near the scutellum; the interstices narrow, very feebly elevated and extremely finely punctured; humeral angles slightly prominent; the sides nearly parallel for two-thirds of their length, then gradually rounded to the apex; under side coloured as above; the sterna and under margins of the prothorax moderately strongly and closely punctured; the abdominal segments more finely punctured and sparingly covered, especially near the sides, with short and very fine grey pubescence; legs reddish brown. Length, 9-10 mm.

From Tati.

After carefully going through the late Mr. G. R. Crotch's fine collection of LANGURIIDÆ in the University Museum at Cambridge, and working up the literature of the subject, I have come to the conclusion that this interesting species is most nearly allied to *Languria dimidiata*, Guérin (Icon. Règne Anim., Ins. p. 314), with which it agrees in form and in the structure of the antennæ; it may, however, be at once distinguished from that species by its uniform brown colour, proportionately shorter prothorax, and less distinctly punctate-striate elytra. Unfortunately I have not been able to find a specimen of *L. Africana*, Chevrolat (Icon. Règne Anim., Ins. p. 314, pl. 50, f. 5) with which to compare it, but judging from the figure and description it appears to differ not only in the colour of the head, prothorax, etc., but also in having the club of the antennæ three instead of four jointed. Chevrolat, in the description above referred to, says "Clava antennarum quinque articulata," but in the figure the seventh antennal joint is represented as little dilated as is the eighth joint of *L. dimidiata* and *L. Nyassæ*.

This species is in Mr. E. W. Janson's collection from Nyassa, and

Captain G. E. Shelley has several specimens of it from Bamangwato and the Umvuli River.<sup>1</sup>

*A. Sidney Olliff.*

\*\* Mr. Olliff had determined this insect as a distinct species previous to his departure for Australia, and the above description was already in type when Mr. Fowler's article appeared in the 'Transactions of the Entomological Society,' with his description of *L. Nyassæ*. Mr. Olliff having written to call attention to the fact, the specimen in the Oxford Museum described by him has been kindly compared by Mr. H. W. Bates with the type specimen of *L. Nyassæ*, in the possession of the Rev. H. S. Gorham, with the result that Mr. Bates has come to the conclusion that the two specimens belong to the same species. The name Mr. Olliff had given the species has therefore, with his authority, here been cancelled, whilst it has seemed advisable to retain in full his description of the insect together with the accompanying figure of it in Plate VIII.—ED.

### Family COCCINELLIDÆ.

#### Genus CHILOMENES, Chevrolat.

\*138. CHILOMENES LUNATA, Fabricius, Syst. Ent., p. 86; Olivier, Ent., vi. p. 1057, pl. 4, f. 48, 48 *a-b*; Crotch, Revis. Coccin., p. 179 (1874).

A variable species of world-wide distribution.

The other orders of insects received but little attention, and but few are contained in Mr. Oates's collection.

### Order ORTHOPTERA.

#### Division SALTATORIA.

1. ACRYDIUM SQUARROSUM, Fabricius, Ent. Syst., ii. p. 52; Stoll, Saut. et Grill., pl. 8*b*, f. 25.
2. ACRYDIUM LEPROSUM, Fabricius, Ent. Syst., ii. p. 51; Stoll, Saut. et Grill., pl. 2*b*, f. 5, pl. 3*b*, f. 7.
3. PETASIA CRUENTATA, Serville, Ann. Sci. Nat., xxii. p. 279 (1831); id. Hist. Orthop., p. 630, pl. 14, f. 5.
4. PAMPHAGUS HAPLOSCELIS, Schaum, Ber. Akad. Berl., 1853, p. 780.

Two larvæ.—Prothorax very much compressed, crested, the ridge and lateral margins with a thin edge of white. Length, 2 inches.

5. GRYLLACRIS, sp.

One female larva undeveloped.

<sup>1</sup> Captain Shelley also possesses a closely allied species collected by the late Mr. J. S. Jameson at Bamangwato, which may be briefly characterized as follows:—

\*LANGURIA ATRICOLOR, Olliff, n. sp.

Elongate, depressed, black with a slight purplish tinge, shining; head moderately strongly punctured; the eyes not very prominent; antennæ black, with a loosely articulated club of three joints; prothorax rather convex, transverse, very slightly narrowed behind, moderately strongly and closely punctured; sides feebly arcuate, with a fine marginal rim; elytra moderately strongly and closely punctate-striate, except near the scutellum, where the punctures are irregular and obliterated as in *L. Nyassæ*; under side and legs coloured as above, the former moderately strongly punctured throughout. Length, 10 mm.

From Bamangwato (Jameson).

Differs from *Languria Nyassæ* in its broader form and black colour, and in having the prothorax transverse with the sides arcuate and the elytra more strongly punctate-striate.

*A. Sidney Olliff.*

6. HETRODES LORICATUS, Gerstaecker in v. d. Decken's Reisen in Ost-Afrika, Ent. p. 26, pl. 2, f. 1.  
*Hetrodes Servillei*, Reiche and Fairmaire in Ferret and Galinier's Voy. Abyss., iii. p. 426, pl. 28, f. 1.
7. GRYLUS CAPENSIS, Fabricius, Ent. Syst., ii. p. 31.
8. PHANEROPTERA MYRTIFOLIA, Linnæus, var. ?

The single individual collected by Mr. Oates at Bamangwato is a male ; it is very narrow, with pale green body and tegmina ; a broad reddish longitudinal band narrowly edged with white occupies the dorsal region of the prothorax and the base of the inner margin of the left tegmen ; legs very long and slender. Length, 1 inch 7 lines.

As the genus *Phaneroptera* is very widely dispersed, this African species is probably distinct from the Surinam insect collected by Rolander and described by Linnæus.

#### Division AMBULATORIA.

9. MANTIS FENESTRATA, Charpentier, Orthop., pl. 40 ♀.
10. MANTIS, sp.  
 Larva.—Lutea, coxis anticis in medio intus nubila brunnea, femoribusque anticis macula nigra nitida prope basin notatis.
11. BACILLUS NATALIS, Westwood, Cat. Orthop. Ins. Brit. Mus., p. 6, pl. 23, f. 7, 8.
12. BLATTA ORIENTALIS, De Geer, Mém. Ins., iii. p. 530, pl. 25, f. 1.
13. BLATTA FERRETI, Reiche and Fairmaire in Ferret and Galinier's Voy. Abyss., iii. p. 420, pl. 27, f. 1, 2.
14. PERISPHERIA GLOMERIS, Saussure, Mém. Orthop., i. p. 7, pl. 1, f. 4.
15. PERISPHERIA, n. sp. ?

Ovalis, subdepressa, nigra, opaca, supra omnino granulata interstitiis punctatissimis, pronoti et mesonoti marginibus lateralibus paullo reflexis, subtus incurvis acutis ; pedibus valde abbreviatis. Long. corp. lin. 7, lat. med. corp. lin. 5.

#### Order NEUROPTERA.

In this order a large specimen of *\*Myrmeleon inclemens*, Walker, and the lovely *Palpares citrinus*, Hagen, were collected.

#### Order HYMENOPTERA.

In this order two large species of sand-wasps with steel-blue wings, *\*Mygnumia vindex*, Smith, and *\*M. insignis*, Smith, as well as *\*Chrysis mucronata*, Dahlbom, were taken.

## Order RHYNCHOTA.

The small collection of insects belonging to this order, made by Mr. F. Oates, comprised only eight species, all belonging to the family PENTATOMIDÆ; of these, however, four prove to be undescribed species, thus showing that Matabele Land possesses a Rhynchotal fauna of which at present we know very little. The collection also proves of considerable interest in the study of geographical distribution, as it included a species of the oriental genus *Erthesina*, of which no Ethiopian representative was previously known to entomological science.—(*W. L. D.*)

## Family PENTATOMIDÆ.

†1. PLONISA PLAGIATA, Signoret, Ann. Soc. Ent. Fr., ser. 6, i. p. 327, pl. 7, f. 52 (1881).

†2. SOLENOSTETHIUM LILIGERUM, Thunberg.

*Cimex liligerus*, Thunberg, Diss. Nov. Ins. Sp., ii. p. 32 (1783).

†3. ERTHESINA AFRICANA, Distant, n. sp.

Closely allied to the common eastern species *E. fullo*, Thunberg, but differing in the following respects; the size is much smaller, and whilst the colour and markings above are very similar, the corium is without the discal dark patch. The body beneath is much darker than in Thunberg's species, the margins of the prosternum and the under surface of the head being black; the abdomen is castaneous, with a very large opaque black macular patch on each side, occupying the whole of the disk, excepting the two basal and two apical segments; legs very dark, castaneous or blackish.

Other peculiar structural characters differentiating this species from *E. fullo* are the more symmetrical head, which is more tapering, has the lateral margins more regular and not notched, the apex regularly and profoundly sinuate, both notched in front and channelled above, and the eyes a little more removed from the base, the pronotum having the lateral angles a little broader, and the slightly larger scutellum with two large dark rounded foveæ at the basal angles. The membrane is pale fuscous, with the veins dark and very distinct. (Antennæ mutilated.) The tibiæ are only slightly dilated. Long. 19 mm. Exp. pronot. angl. 10 mm.

This is the only African species of *Erthesina* yet described, and, despite some slight structural peculiarities as detailed above, it is still in all fundamental respects congeneric with the other species of the genus, which are wholly oriental.

*W. L. Distant.*

†4. CÆNOMORPHA IMPLEXA, Distant, n. sp.

Obscure ochraceous, thickly but irregularly covered with coarse, dark fuscous punctures. Head and eyes black, the central lobe for two-thirds of its length from the base regularly margined with con-

fluent blackish punctures; antennæ black, fourth joint with a broad central ochraceous annulation (fifth joint mutilated); scutellum with five small ochraceous spots on the basal margin, the apex more sparsely punctate; membrane dark fuscous, its apical margin somewhat paler; connexivum dark brownish, coarsely punctate and somewhat obscurely annulated with ochraceous; body beneath and legs as above; coxæ and bases of the femora obscure ochraceous; tibiæ blackish, with a broad central ochraceous annulation; rostrum brownish, with the apex piceous. Long. 18 mm. Lat. pronot. angl. 9 mm.

*W. L. Distant.*

†5. AFRANIA BRACHYPTERA, Schaum.

*Agonoscelis brachyptera*, Schaum, Ber. Akad. Berl., 1853, p. 357; id. in Peters's Reise Mossamb., Zool. v. p. 37, pl. 2, f. 2 (1862).

†6. NEZARA VIRIDULA, Linn. et auctt.; Stål, Enum. Hem., ii. p. 41 (1872).

†7. ASPONGOPUS JAPETUS, Distant, n. sp.

Ochraceous; head, antennæ, two large transverse spots near anterior margin of pronotum, membrane, connexivum, body, abdomen above, and body beneath and legs black.

The antennæ have the second joint considerably longer than the first and very slightly longer than the second, the fourth longest and distinctly incassated (fifth mutilated). The body is finely and somewhat obscurely punctate both above and beneath. The femora are not spined, but the tibiæ are longitudinally serrate or spinous. Long. 18 mm. Lat. pronot. angl. 10 mm.

This species is allied to the Indian *A. Janus*, Fabricius, from which it is superficially discriminated by the unicolorous scutellum, the different colour of the connexivum, etc.

*W. L. Distant.*

†8. DALSIRA ASPERATA, Distant, n. sp.

Testaceous, very coarsely punctate; head and anterior third of pronotum ochraceous, the punctures testaceous; pronotum with two transverse testaceous foveæ near anterior margin; scutellum with three small ochraceous basal spots, two near basal angles and one central; corium, with basal third of costal margin, claval suture, and a submarginal basal line, ochraceous; membrane pale fuscous, the apical margin pale hyaline spotted with fuscous. Body beneath testaceous, thickly punctured with fuscous; margins of the sternum and abdominal spiracles ochraceous, rostrum and legs testaceous, apex of rostrum fuscous. Antennæ testaceous, second joint a little longer than first (remainder mutilated). Eyes blackish.

The pronotum and base of scutellum are rugulose; the pronotum has the lateral angles broadly rounded, the lateral margins nearly straight. Long. 17 mm. Lat. pronot. angl. 10 mm.

The nearest allied species is *D. foveata*, Dallas.

*W. L. Distant.*

## Order DIPTERA.

In this order various species injurious to cattle and horses, including six species of TABANIDÆ, one being the beautiful *Tabanus Africanus* of Gray (Griffith's Anim. Kingd., xv. pl. 114, f. 5), were taken; also two species of *Hippobosca*, and various specimens of the terrible Tsetse (*Glossina morsitans*, Westwood, Proc. Zool. Soc. Lond., 1850, p. 261, pl. 19, f. 1, 1*a-f*), of which I have thought it desirable to give a fresh figure—Plate VII., fig. 2, and Plate IX., figs. 5, 5*a*, 5*b* (ed. 1, pl. G, f. 2, and pl. H, f. 5, 5*a-b*). The figure which I gave of this insect, accompanying my original description, was afterwards copied upon the title-page of Dr. Livingstone's Travels (without acknowledgment), and in my memoir I ventured to suggest not only that the Tsetse was identical with the Zimb of Bruce, but also possibly with the Tsaltsalya; and further, that "the fly that is in the uttermost part of the rivers of Egypt," described by the prophet Isaiah (ch. vii. 18, 19), and considered as the cause of one of the plagues of Egypt, may also have been no other than the Tsetse. Two notes recently published on this insect, with suggestions of remedying or preventing its attacks, may be added:—

Lewis Hornor, in the 'Times,' 25th February 1879, writes, "Having hunted in the African fly country and seen many horses and oxen die of the bite, against which no external application is, I firmly believe, any safeguard, I venture to call attention to the precautions adopted by the Boer elephant-hunters in the interior. The Tsetse inhabits narrow and clearly defined strips of country, familiar to all natives, and readily evident to strangers. On approaching one of these 'fly belts' (so called) a halt is made, and inspanning again at sundown the Boer treks through at night in safety. I only remember one case of mishap, when, in crossing a belt near the confluence of the Chobé and Zambesi, two or three oxen out of nearly forty were bitten, and that, if my memory serves me, on a bright moonlight night."

The African traveller Hildebrandt recommends strongly, in the 'Korrespondenzblatt der afrik. Gesellschaft,' the use of petroleum for those travelling in the tropics, as a protection against insects. Occasional applications to the face and hands ensured entire freedom from mosquitoes, and the same method sufficed to preserve horses and cattle against the deadly attacks of the Dondorobo gadfly, which so often cripples the movements of the explorer. Petroleum likewise protected the Natural History Collections of the traveller from ants, moths, etc.

[The explanation of Plates V.-IX. is given on p. 389.]

## EXPLANATION OF THE PLATES.

## PLATE V.

- Figs. 1, 2. *Acræa Calaarena* (*A. Amphimalla olim*), p. 355.  
 „ 3, 4. *Callosune confusa* (*C. Wallengrenii olim*), p. 348.  
 „ 5, 6. *Callosune Ramaquebana*, p. 348.  
 „ 7, 8. *Callosune Buxtoni*, ♀, p. 346.  
 „ 9, 10. *Callosune regina*; ♀, p. 346.  
 „ 11. *Chærocampa virgo*, p. 363.

## PLATE VI.

- Figs. 1, 2. *Acræa Atergatis*, p. 350.  
 „ 3, 4. *Acræa Atolmis*, p. 351.  
 „ 5, 6. *Acræa Axina* (*A. Doubledayi* ?), p. 352.  
 „ 7, 8. *Acræa Acontias*, p. 353.  
 „ 9, 10. *Acræa Aglaonice*, p. 353.  
 „ 11, 12. *Acræa Stenobea* (*A. Acronycta olim*), p. 354.

## PLATE VII.

- Fig. 1. *Eusemia adulatrix*, p. 364.  
 „ 2. *Glossina morsitans*, p. 388.  
 „ 3. *Oatesius anthracinus* (*Derosphærius anthracinus olim*),  
 p. 377.  
 „ 4. *Tetralobus bifoveolatus*, p. 373.  
 „ 5. *Dromica Mauchii* (*D. Oatesii olim*), p. 368.  
 „ 6. *Jana Mariana*, p. 367.

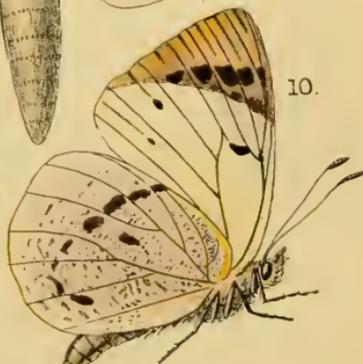
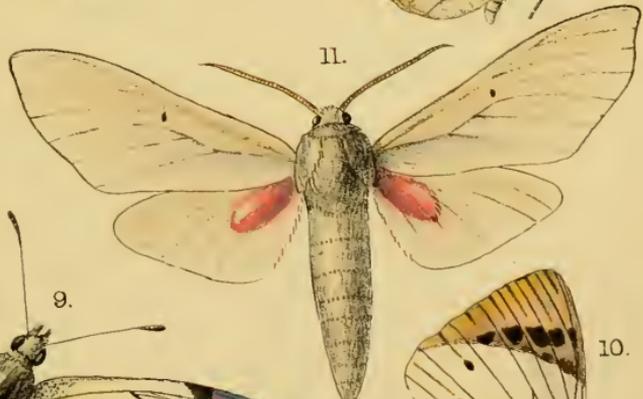
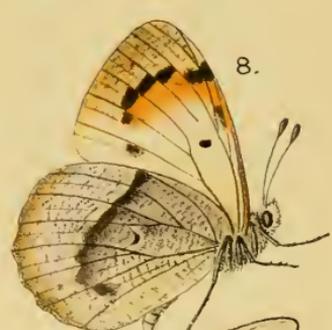
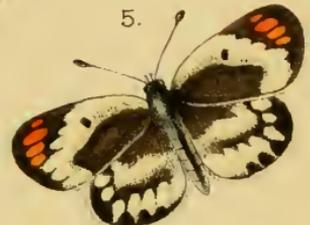
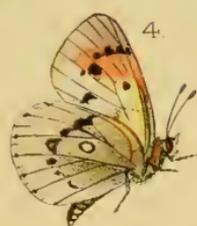
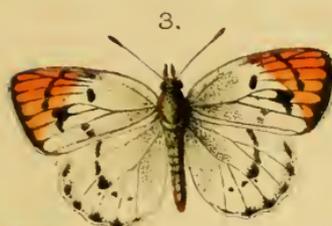
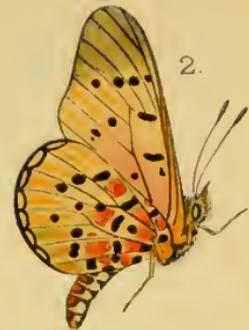
## PLATE VIII.

- Fig. 1. *Eunidia Batesii*, p. 381.  
 „ 2. *Eleanor tragocephaloides*, p. 380.  
 „ 3. *Anthia Hottentotta*, p. 368.  
 „ 4. *Hectarthrum gigas*, p. 373.  
 „ 5. *Languria Nyassæ*; 5a, maxilla of do.; 5b, lower lip and  
 palpi of do., p. 383.  
 „ 6. *Diamphidia vittatipennis*, p. 382.  
 „ 7. *Tapinolachnus Oatesii*, p. 378.  
 „ 8. *Tapinolachnus aquilus*, p. 379.

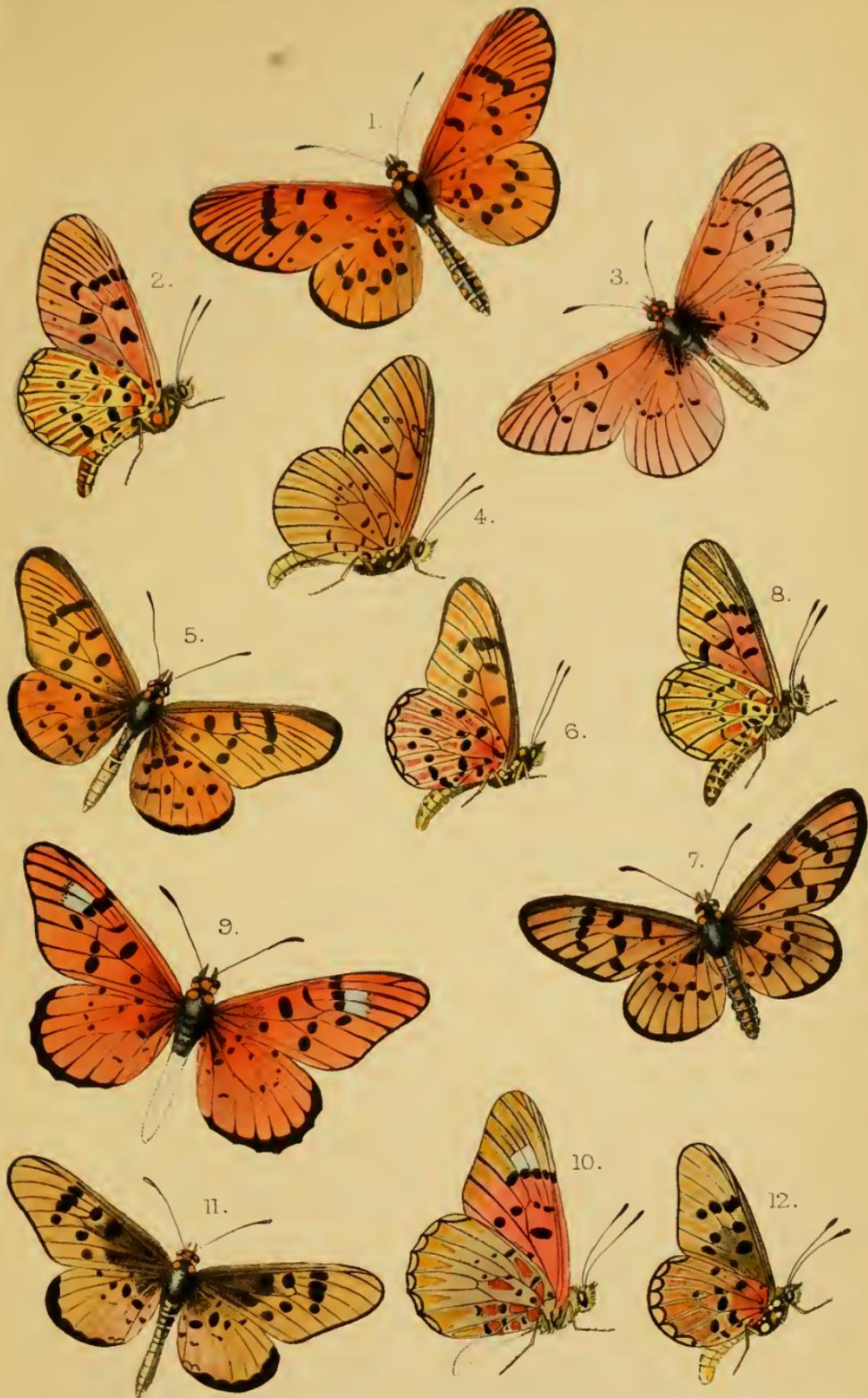
## PLATE IX.

- Fig. 1. Upper lip and mandibles of *Dromica Mauchii*; 1a, maxilla  
 of do.; 1b, lower lip and palpi of do., p. 368.  
 „ 2. Upper lip of *Oatesius anthracinus*; 2a, mandible; 2b,  
 maxilla; 2c, lower lip and palpi of do., p. 377.  
 „ 3. Head, antenna, and spiral tongue of *Eusemia adulatrix*;  
 3a, chief veins of the fore wing of do.; 3b, extremity of  
 the body of the male of do., seen sideways, p. 364.  
 „ 4. Head of *Jana Mariana*; 4a, do., seen sideways; 4b, chief  
 veins of the fore wings of do., p. 367.  
 „ 5. Head of the Tsetse, *Glossina morsitans*, seen sideways,  
 with the parts of the sucker separated from each other;  
 5a, antenna; 5b, pad of the feet of do., p. 388.

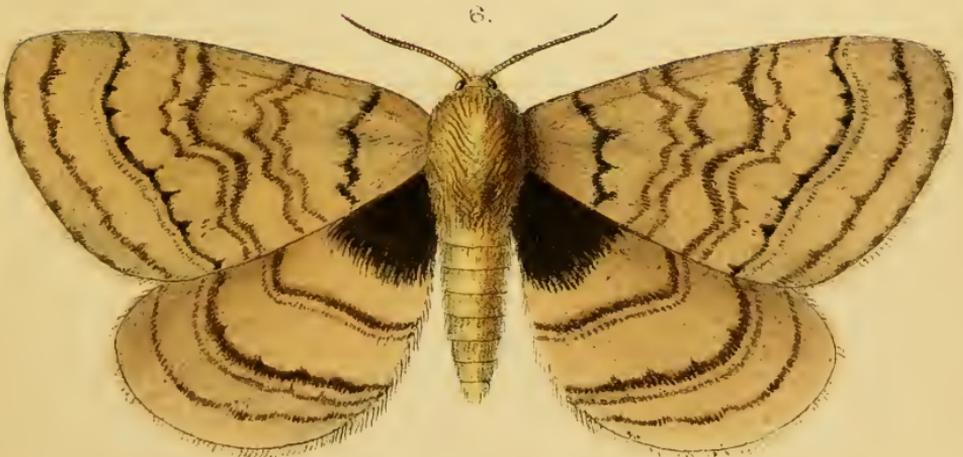
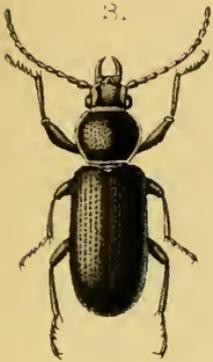




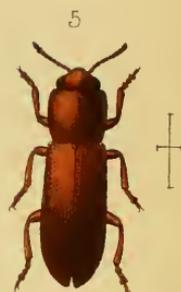
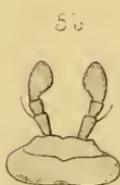




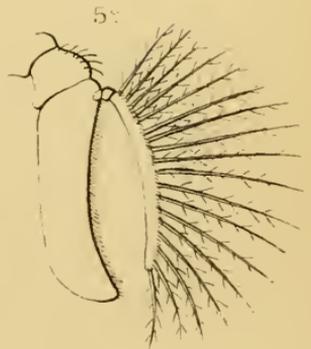
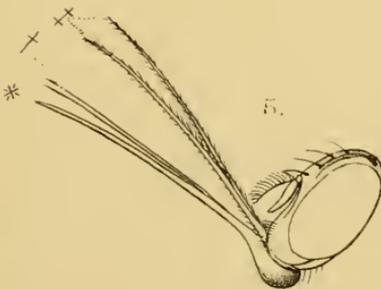
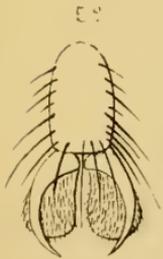
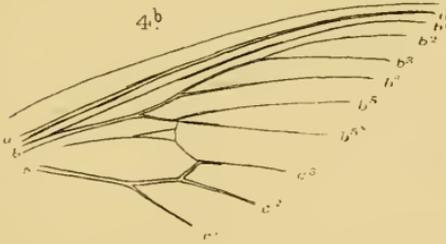
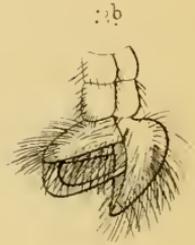
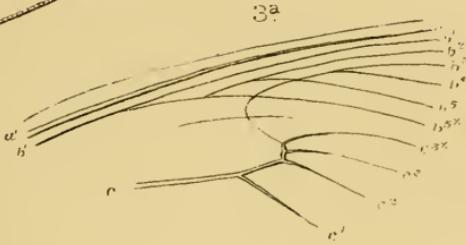
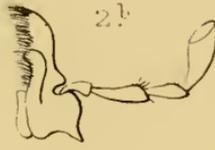
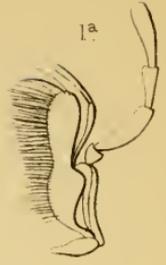














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