

SCIENTIFIC RESULTS OF THE U. S. ECLIPSE EXPEDITION TO WEST
AFRICA, 1889-'90.

REPORT UPON THE INSECTA, ARACHNIDA, AND MYRIOPODA.

BY

C. V. RILEY,

Honorary Curator of Insects,

[including descriptive papers on *Pseudoneuroptera* by *P. P. Calvert*; and on *Arachnida* by
Nathan Banks and *George Marx*.]

(With Plate LXX.)

INTRODUCTION.

The insects of this collection are from a region the insect fauna of which is almost totally unrepresented in the National Museum collection. For want of funds we have been unable to make more than a very small beginning in the collection of exotic insects, while the literature at command in Washington upon exotic species, is yet very insufficient. A large proportion also of the African insect fauna yet remains to be worked up. For these various reasons I have been obliged to refer much of the material to specialists for determination, my own part in the work being little more than the orderly arrangement of the determinations for publication. The collection as a whole is not large, and the Coleoptera and Lepidoptera were more generally collected than the insects of any other order.

The Hymenoptera of the collection were kindly determined by Mr. W. F. Kirby, of the British Museum, and I have simply brought the list together in proper arrangement and added a few notes.

The Lepidoptera, after some few species had been determined at the Museum, were sent to Rev. W. J. Holland, of Pittsburg, Pa., who submitted a full list of determinations arranged according to locality. In the interest of uniformity Mr. Holland's list has been rearranged in systematic order.

There were only seven species of Diptera collected. Dr. S. W. Wiljiston, who has so materially assisted me in working on the Diptera, was unwilling to attempt their determination, and the material was so poor and so scanty that it was not thought worth while to send it abroad. Four of the species have been determined generically.

In the Coleoptera, with the aid of Mr. M. L. Linell, a certain number of species were made out and the residue were then sent to Dr. David Sharp, of England, who has determined them, when necessary, by comparison with the collection in the British Museum. Mr. Champion, of the British Museum, has given a few of the names in the families Cistelidæ, Lagriidæ, and Anthicidæ to Dr. Sharp, while Mr. Jacoby has examined some of the Chrysomelidæ and Mr. Gorham the Endomychidæ.

The Orthoptera have been determined by Mr. Henri de Saussure, of Geneva, Switzerland.

The Pseudoneuroptera were sent to Mr. P. P. Calvert, of Philadelphia, Pa., who describes the new species.

The Hemiptera were sent to Mr. A. L. Montandon, of Bucharest, Roumania, who has given me most of the determinations.

In the Arachnida the families Attidæ and Lycosidæ have been studied by my assistant, Mr. Nathan Banks, and his report, with descriptions of the new species, is appended. The remaining Arachnids have been referred to Dr. George Marx, whose report, with descriptions, is also included. The Myriopoda were sent to Messrs. O. F. Cook and G. N. Collins, of Syracuse University, and as five of the seven species comprising this material were, according to their decision, entirely new to science, I have appended their report in the form in which it was received.*

I have added such details as to number of specimens and locality as may have value. My sincere thanks are due to all the gentlemen named for their courteous aid in the determination of the material.

INSECTA.

Order HYMENOPTERA.

Family APIDÆ.

Bombus sp.

A single poor alcoholic specimen. Horta, Fayal.

Xylocopa torrida Westwood.

Eight specimens, all females. Congo, January 2, 1890, and December 20, 1889.

Megachile rufipes Fabr.

One poor specimen. Congo, January 2, 1890.

Megachile nasalis Smith.

One poor specimen. Congo, December 25, 1889.

* On account of the excessive delay in publication, Messrs. Cook and Collins withdrew their report in January, 1893, and have published it elsewhere.

Family VESPIDÆ.

Polistes smithii Sauss. Var. (?)

Two specimens. Congo, January 2, 1890.

Belenogaster sp.

One specimen. Congo, December 27, 1889.

Family EUMENIDÆ.

Synagris calfida Linn.

Two specimens. Congo, December 24, 1889.

Synagris æquatorialis Sauss.

Two specimens. Congo, no date.

Eumenes fenestralis Sauss.

One specimen. Congo, no date.

Eumenes æthiopica Sauss, var. (?)

One specimen. Congo, January 2, 1890.

Family LARRIDÆ.

Larra sericea Smith.

One specimen. Congo, January 2, 1890.

Larra sp.

One specimen. Congo. This is a handsome species, one-half larger than *L. sericea*, with a golden pubescence on the thorax, the wings yellowish and the abdomen black, transversely banded with silvery pubescence on the posterior borders of the segments. The face is densely clothed with golden pubescence, and the legs are uniformly light brown.

Family SPHECIDÆ.

Pelopæus spirifex L.

Two specimens. Congo, January 2, 1890. The clay tunnels of this species were also collected, but present nothing characteristic.

Pelopæus ecksteinii Dahlt. (?)

Two specimens. Congo. This species, which Mr. Kirby has labeled with a query, is rather larger than *P. spirifex*, and differs superficially, mainly in being red where the latter is yellow.

Sphex sp.

One specimen. Congo. This is a large and handsome species, 40 millimeters in length, with blue-black abdomen and wings, velvety, black metathorax, and mahogany-brown pro and meso thorax, head antennæ, and legs.

Family POMPILIDÆ.

Mygimica atropos Smith.

One specimen. Congo, December 30, 1889.

Family MUTILLIDÆ.

Mutilla leucopyga Smith.

One specimen. St. Paul de Loanda.

Mutilla medon Smith.

Two specimens. Congo.

Mutilla sp.

One specimen. Congo. This is a small wingless insect, two-thirds the size of *M. leucopyga*, which it resembles in general coloration. The abdomen, however, is less hairy, is of an elongate pyriform shape, and has three silvery spots each side.

Family PONERIDÆ.

Streblognathus æthiopicus Smith.

One specimen. Freetown, Sierra Leone.

Family FORMICIDÆ.

Catoglyphis viatica Fabr.

One specimen. Congo.

Catoglyphis viatica Fabr., var. (?)

One specimen. Congo.

Camponotus fulvipectus De Geer.

Three specimens of this handsome species. South Africa.

Family CHRYSIDIDÆ.

Pyria lyneca Fabr.

One specimen. Congo.

Family PROCTOTRYPIDÆ.

Embolemus (?) sp.

One specimen. Congo.

NOTE.—In addition to the recognizable material, there was a mutilated Andrenid, an undeterminable Melinid, and a pupa apparently of a large Eumenid, all from Congo.

Order LEPIDOPTERA.

Suborder RHOPALOCERA.

Family PAPILIONIDÆ.

Papilio demoleus Linn.

One torn male, Freetown, and two specimens, Congo (Bauana Point).

Family PIERIDÆ.

Terias æthiopica Trin.

Several examples, Freetown, and several specimens, Congo (Banana Point).

Terias desjardinsii Boisd.

Two females. Elmina.

Terias senegalensis Boisd.

Two or three specimens. Congo (Banana Point).

Pieris severina Cram. (?)

The tattered fragments of a species of *Pieris*, probably *severina*, collected at Cape Verde Islands (St. Vincent). The principal reason for calling this identification into question is the fact that the anterior wing lacks the black spot at the end of the cell. Otherwise, so far as can be determined from the fragments of the insect preserved for us by the diligence of the collector, there is reason to think that the foregoing determination is correct. Two undoubted examples were collected at Banana Point, Congo.

Pieris gidica Godt.

Several males and one female. Congo (Banana Point). The specimens are rather larger than, and the black markings heavier than, in any examples I have seen from Natal and more southerly portions of the continent, and upon the under side of the primaries the black angulated streak at the extremity of the discoidal cell is extended inwardly along the median nervure to the origin of the first median nervule. This is a constant feature in every specimen, and gives the under side a very different facies from typical specimens of *gidica* taken further south. The form is worthy of a varietal name.

Pieris zochalia Boisd.

A fragment of a male specimen. Congo (Banana Point).

Herpæmia eriphia Godt.

One female. St. Paul de Loanda.

Mylothris poppea Cram

One ragged female. Freetown.

Mylothris chloris Fabr.

One female. Elmina.

Colias electra Linn.

One example. Cape of Good Hope.

Teracolus evippe Linn.

One badly damaged specimen of the male of the species, St. Vincent, Cape Verde Islands. Also two males and one female, St. Paul de Loanda.

Teracolus calias Cram.

One mutilated female, St. Vincent, Cape Verde Islands. Also one male, St. Paul de Loanda.

Teracolus doubledayi Hopper, = *T. hevitsonii* Kirby.

Two examples. St. Paul de Loanda.

Family DANAIIDÆ.

Danais plexippus Linn.*Danais chrysippus* Linn.

Numerous examples, all males, Congo (Banana Point). Also two males, St. Helena.

Danais chrysippus Linn var. *alcippus* Cram.

One specimen of this, the common North African form of the species, Freetown.

Family ACRÆIDÆ.

Acraea encedon Linn.

Numerous examples, male and female Congo (Banana Point).

Acraea manjaca Boisd.

One female example, St. Paul de Loanda, differing from Madagascar specimens only in being a trifle larger.

Acraea horta Linn.

Numerous examples. Cape of Good Hope.

Family NYMPHALIDÆ.

Pyrameis cardui Linn.

Four examples, St. Helena.

Precis amestris Drury.

One example Freetown, and one good example, Elmina.

Hypolimnas misippus Linn.

One male of this widely distributed species was taken at Porto Grande, St. Vincent, Cape Verde Islands, one female at Congo (Banana Point), and three males and three females at St. Paul de Loanda.

Neptis melicerta Drury.

A small example of the male, Freetown.

* There are two female specimens of this insect in this collection, which were taken by Mr. E. G. Howe at Horta, Fayal, Azores Islands. The insect is North American originally, but within comparatively recent years has attained to a wide geographical distribution. Its spread westwardly through the islands of the Pacific and to Australia has recently been commented upon by entomologists, and I have a specimen taken in Java about three years ago by Mr. William Doherty. Its presence in the Azores is in keeping with its occasional occurrence in England, and we may soon expect to find it established upon the continent of Africa, where it will no doubt find congenial food plants.—W. J. H.

Euphædra cyparissa Cram.

The remnants of a specimen, the hind wings of which appear to have been bitten off by a bird or a dragon fly, Freetown.

Hamanumida dædalus Fabr.

A piece of a specimen, Freetown.

Palla varanes Cram.

A perfect female, Freetown.

Harma cænis Drury.

One male specimen, St. Paul de Loanda.

Family SATYRIDÆ.

Mycælesis vulgaris Butl.

One male specimen, Freetown. This species is widely distributed from Senegambia southward into the region of the Congo.

Mycælesis eliasis Hew.

Three specimens, St. Paul de Loanda.

Family LYCÆNIDÆ.

Lycæna lysimon Huebn.

One female, St. Paul de Loanda, and one female captured on board ship between St. Vincent and Sierra Leone.*

Lycæna bætica Linn.

Two examples, St. Helena, and one male specimen, Ascension.

Family HESPERIDÆ.

Tagiades flesus Fabr.

One specimen, Freetown, and one specimen, Elmina.

Pamphila mohopaani Wallengren.

One female example, Congo (Banana Point).

Pamphila n. sp.?

St. Paul de Loanda.

One specimen, in poor condition, which I can not refer satisfactorily to any of the species known to me, but which comes very near *P. fatuellus* Hopffer, from which it differs mainly by having two spots at the end of the cell of the anterior wing; in this respect being like *P. mohopaani*, though otherwise, especially upon the under side, revealing great differences.

* It is quite a common occurrence for specimens of Lepidoptera and other winged insects to be taken at sea off the western coast of Africa, and numerous references to such phenomena are found in the literature of travel. The writer has in his possession some specimens of *Lycæna cissus* Godt., and of the common *Pieris rapæ* Linn., which were taken at sea 75 miles off Cape Palmas. The power of sustained flight of such insignificant and apparently weak creatures is simply marvellous.—W. J. H.

Suborder HETEROCERA.

Family SPHINGIDÆ.

Sphinx cingulata Linn.

Three specimens, St. Vincent, Cape Verde Islands.

Family ZYGÆNIDÆ.

Ægocera venulia Cram.

One male example of the varietal form figured by Boisduval in the *Monographie des Zygamides* Planche I, Fig. 3.

Euchromia sperchina Cram.

Two specimens, Freetown.

Euchromia leonis Butl.

One specimen, Freetown.

Syntomis sp.

Two examples, too badly rubbed to make a positive determination possible, Freetown.

Syntomis kuhlweinii Lefeb.

Two specimens, Cape of Good Hope.

Family BOMBYCIDÆ.

Bombycid moth not determined, Freetown.

Family NOCTUIDÆ.

Achæa chameleon Guen.

Two examples, Congo (Banana Point), and one example, St. Paul de Loanda.

Eustrotia? sp.?

One broken specimen, Congo (Banana Point).

Tarache? sp.?

Two examples, Congo (Banana Point).

Order DIPTERA.

Family ASILIDÆ.

Omnatius n. sp.

Two specimens, Congo, January 2, 1890.

Ospriocerus sp.?

One specimen, Congo.

Family TABANIDÆ.

Diachlorus sp.

One specimen, Congo, January 2, 1890.

Family DOLICHOPODIDÆ.

Gen. ? sp. ?

One specimen, Freetown, Sierra Leone.

Family CONOPIDÆ.

Conops sp.

One specimen, Congo.

Family MUSCIDÆ (sens. strict.)

Gen. ? sp. ?

Two specimens, Congo.

Family HIPPOBOSCIDÆ.

Gen. ? sp. ?

One specimen, Congo, January 2, 1890.

Order COLEOPTERA.

Family CICINDELIDÆ.

Cicindela melancholica Fab. (Determined by Dr. David Sharp.)

Eleven specimens, St. Paul de Loanda.

Family CARABIDÆ.

Calosoma rugosum De Geer.

One specimen, Porto Grande, St. Vincent, November 11, 1889.

Scarites perplexus Dej. (Determined by Sharp.)

One specimen, Congo.

Graphipterus limbatus Cast. (Determined by Sharp.)

One specimen, South Africa.

Anthia decemguttata Linn.

One specimen, Cape of Good Hope.

Pheropsophus guineensis Chand.

Three specimens, Congo.

Abacetus sp. (Sharp det.)

One specimen, Congo.

Chlænium sp."Probably var. *major* of *C. cuprithorax* Qued." (Sharp). One specimen, Congo.*Harpalus ruficornis* Fab. (Sharp det.)

One specimen, Port Horta, Fayal, November 2, 1889.

- Family DYTISCIDÆ.

Eretes sticticus Linn.

Five specimens, St. Paul de Loanda, (?) December 12, 1889.

Cybister filicornis Sharp.

Six specimens, Congo, December 25, 1889.

Cybister senegalensis Aubé.

Two specimens, Congo, December 25, 1889.

Cybister tripunctatus Oliv.

Thirty-one specimens, St. Paul de Loanda (?), December 12, 1889.

Family HYDROPHILIDÆ.

Berosus cuspidatus Er.

One specimen, Congo.

Family GYRINIDÆ.

Dineutes aereus Klug.

One specimen, Freetown, Sierra Leone.

Dineutes subspinosus Klug.

One specimen, St. Paul de Loanda.

Family STAPHYLINIDÆ.

Goërius oleus Müll.

Two specimens, Port Horta, Fayal.

Family SCARABÆIDÆ.

Ateuchus prodigiosus Er. (Sharp det.)

One specimen, St. Paul de Loanda.

Ateuchus capensis Dej. (Sharp det.)

Three specimens, Congo, and one specimen, South Africa.

Gymnopleurus chloris Klug. (Sharp det.)

Three specimens, Congo.

Gymnopleurus virens Er.

Fourteen specimens, St. Paul de Loanda; one specimen, Congo.

Onthophagus hybridus Dej. (*vinctus* Er.) (Sharp det.)

One specimen, Congo.

Onthophagus thoracicus Oliv. var. of ♀. (Sharp det.)

Three specimens, Congo, January 2, 1890.

Anomala sp. "Unnamed in our collections." (Sharp).

One specimen, Congo.

Adoretus sp. "Unknown." (Sharp).

Two specimens, Congo.

Adoreuts sp. "Unknown" (Sharp).

Two specimens, Congo, January 2, 1890.

Melisseus eudoxus Woll. (Sharp det.)

One specimen, St. Helena, March 1, 1890.

Heteronychus sp. "Unknown, near *licas*, *arator*." (Sharp).

Sixteen specimens, Congo, December 25, 1889.

Temnorhynchus diana Beauv.

One specimen, Congo.

Oryctes boas Fabr.

One male, Elmina, Gold Coast, November 28, 1889, and one female, St. Paul de Loanda.

Heterorhina monoceros Gory and Perch.

Two specimens, St. Paul de Loanda.

Gnathocera trivittata Swed. (Sharp det.)

Five specimens, Freetown, Sierra Leone.

Gnathocera afzelii Swartz. (Sharp det.).

Eight specimens, Freetown, Sierra Leone.

Pachnoda inscripta Gory and Percheron.

Four specimens, Freetown.

Pachnoda marginata Dru.

Four specimens, Elmina, Gold Coast, and twelve specimens, Freetown, Sierra Leone.

Family BUPRESTIDÆ.

Aphanisticus sp. "Unknown" (Sharp).

One specimen, Congo.

Family MONOMMIDÆ.

Monomma giganteum Guer. (Sharp det.).

One specimen, St. Paul de Loanda.

Family ELATERIDÆ.

Heteroderes "near *crucifer*. ?*inscriptus* Er., but has not been compared with description" (Sharp).

One specimen, Congo.

Family PTINIDÆ.

Apate terebians Pall. (Sharp det.).

Two specimens, Congo.

Family TENEBRIONIDÆ.

Zophosis muricata Fab. (Sharp det.).

One specimen, South Africa.

Pedinomus favosus Er. (Sharp det.).

One specimen, South (?) Africa.

Psammodes tenebrosus Er. (Sharp det.).

Twelve specimens, St. Paul de Loanda.

Blaps nitens Cast. ? (Sharp det.).

One specimen, Horta, Fayal, November 2, 1889.

? *Blaps*. "Unknown" (Sharp).

One specimen, Horta, Fayal, November 2, 1889.

Adesmia sp. "Unknown to me and at British Museum" (Sharp).

One specimen, South Africa.

Pogonobasis verrucosa Er. (Sharp det.).

One specimen, Congo.

Opatrum sp. ? (Sharp det.).

Seven specimens, St. Helena.

Gnophota curta Er. var. (Sharp det.).

Three specimens, St. Paul de Loanda.

Gnophota curta Er. ? another var. (Sharp det.).

One specimen, Congo, December 25, 1889.

Zophobas morio Fab. (Sharp det.).

Three specimens, St. Helena, February 22, 1890.

Family CISTELIDÆ.

Hymenorus sp. (Champion det.).

Two specimens, Congo, January 2, 1890.

Family LAGRIIDÆ.

Lagria aeneipennis Fabr. ? (Sharp det.).

Three specimens, Congo.

Lagria sp. near *cuprina* Fabr. (Champion det.).

One specimen, Freetown, Sierra Leone.

Family ANTHICIDÆ.

Formicomus sp. (Champion det.).

One specimen, Congo.

Family RHIPIDOPHORIDÆ.

Emenadia flabellata Fab. (Sharp det.).

One specimen, Congo, January 2, 1890.

Family MELOIDÆ.

Mylabris oculata Thunb. (Sharp det.).

Two specimens, South (?) Africa.

Mylabris dentata Oliv. (Sharp det.).

Two specimens, St. Paul de Loanda; five specimens, Congo.

Mylabris (Actenodia) chrysomelina Er. (Sharp det.).

Two specimens, St. Paul de Loanda.

Family OTIORHYNCHIDÆ.

Tanymecus sp. ? (Sharp det.).

One specimen, Congo.

Tanymecus sp. ? (Sharp det.).

Two specimens, Congo. "Genus unknown to me and not in the British Museum; near *Otiorhynchus*" (Sharp). Two specimens, Cape Ledo.

Naupactus longimanus Fab. (Sharp det.).

Five specimens, Ascension Island. This is a Brazilian species, and its occurrence at Ascension Island is of interest.

Family CERAMBYCIDÆ.

Delochilus prionoides Thoms. (Sharp det.).

One specimen, Cape of Good Hope.

"Genus near *Oeme*; unknown to Bates or me; not in British Museum; not compared with Quedenfeldt's recent descriptions. This is the most important insect of the lot" (Sharp). One specimen, Congo, January 2, 1890. This is a handsome, slender, burnished green species, with rufous legs, 25 millimeters long.

Phryneta spinator Fab.

One specimen, Congo, January 2, 1890.

Diastocera trifasciata Fab. (Sharp det.).

Eight specimens, Freetown, Sierre Leone.

Family CHRYSOMELIDÆ.

Cryptocephalus sp. "unknown" (Sharp).

Two specimens, Congo, January 2, 1890.

? *Melitonoma* (Sharp det.).

One specimen, Congo, January 2, 1890.

? *Melitonoma* (Sharp det.).

Seven specimens, Congo, January 2, 1890. One specimen, St. Paul de Loanda.

Aulacophora sp. ? (Jacoby det.).

Two specimens, Congo, January 2, 1890.

Luperodes occipitalis Reiche ? (Jacoby det.).

Sixteen specimens, Congo, January 2, 1890.

Graptodera sp. (Sharp det.).

Five specimens, Congo.

Family ENDOMYCHIDÆ.

Danaë (Oediarthrus) *natalensis* Gorh. (Gorham det.).

One specimen, Congo.

Family COCCINELLIDÆ.

Xanthadalia Cr. (*Harmonia* Muls.) *rufescens* Muls. var. (Sharp det.).
Five specimens, Congo.

Alesia (*Micraspis* Cr.) *aurora* Gerst. ? (Sharp det.).
Five specimens, Congo, January 2, 1890.

Exochomus nigromaculatus Goeze (*auritus* Scriba) (Sharp det.).
Nine specimens, Congo, January 2, 1890.

Chilomenes (*Cydonia* Muls.) *lunata* Fabr. (Sharp det.).
Five specimens, Congo, January 2, 1890.

Chilomenes lunata Fabr. var. (Sharp det.).
Seven specimens, Congo; one specimen, St. Helena, a dark variety,
in which the yellow and red maculation has become reddish brown.

Epilachna chrysomelina Fabr. (Sharp det.).
Three specimens, Congo.

Order HEMIPTERA.

Suborder HETEROPTERA.

Family PENTATOMIDÆ.

Agonoscelis erosa Wolfi.
Two specimens, Congo.

Nezara viridula Linn.
One specimen, Horta, Fayal, November 2, 1889.

Family COREIDÆ.

Leptoglossus membranaceus Fabr.
One specimen, Congo, January 2, 1890.

Family LYGÆIDÆ.

Lygæus elegans Wolfi.
Two specimens, South Africa.

Family PYRRHOCORIDÆ.

Odontopus sexpunctatus Lap.
Two specimens, St. Paul de Loanda.

Dysdercus superstitiosus Fabr.
Two specimens, Congo, January 2, 1890.

Family REDUVIIDÆ.

Harpactor segmentarius Germ.
Two specimens, Congo, January 2, 1890.

Harpactor albopilosus Sign.
Two specimens, Congo.

Family HYDROMETRIDÆ.

Lampotrechus leptocorus Reuter.

Two specimens, Congo.

Family NEPIDÆ.

Laccotrephes fabricii Stål.

One specimen, Congo, December 25, 1889.

Family BELOSTOMATIDÆ.

Belostoma niloticum Stål.

One specimen, St. Paul de Loanda.

Order ORTHOPTERA.

Family BLATTIDÆ.

Panchlora indica Fabr.

Six specimens, St. Helena.

Panchlora maderæ Fabr.

One specimen, St. Helena; one specimen, Ascension Island, March 22, 1890.

Blatta germanica L.

One specimen, Congo. January 2, 1890.

Periplaneta australasiæ L.

One specimen, Porto Grande, November 11, 1889; three specimens, Barbadoes, May 8, 1890.

Nauphoeta cinerea Oliv.

Two specimens, St. Helena.

Family MANTIDÆ.

Polyspilota pustulata Fabr.

One specimen, Freetown, Sierra Leone.

Parathespis sp. (larva).

One specimen, St. Paul de Loanda.

Thespis sp. (larva).

One specimen, St. Paul de Loanda.

Mantis? sp. (larva).

One specimen, Freetown, Sierra Leone.

Family PHASMATIDÆ.

Bacillus sp. ?

One specimen, Congo.

Family GRILLIDÆ.

Liogryllus bimaculatus De Geer.

Six females and larvæ. From Ascension Island and St. Helena, February 23, 1890.

Gryllus melanocephalus Serv.

One specimen, Congo.

Œcanthus capensis Sauss.

One specimen, Freetown, Sierra Leone.

Gryllotalpa africana Palis d. Beauv.

One specimen, Congo, January 2, 1890.

Gryllomorpha aptera Herr.-Schäf.

One specimen, Ascension Island.

Brachytrypus vastator Afz. ♂ ♀ and larvæ.

Five specimens, December 25, 1889.

Family CONOCEPHALIDÆ.

Gen. ? sp. ? larvæ.

Two specimens, Ascension Island.

Superfamily ACRIDIINA.

Family ACRIDIDÆ.

Acridium anguliferum Kraus.

One specimen, Freetown, Sierra Leone.

Near *Pezotettix*. sp. ?

One specimen, Freetown, Sierra Leone.

Coptacra sp. ? (larvæ).

One specimen, Congo.

Catantops ? (larvæ).

One specimen, Congo.

Catantops sp.

One specimen, Congo.

Catantops melanostictus Schaum.

One specimen, Congo, January 2, 1890.

Caloptenus femoratus Fabr.

One specimen, St. Paul de Loanda, December 10, 1889.

Family EDIPODIDÆ.

Pachytylus (larvæ).

Two specimens, St. Paul de Loanda.

Cosmorhyssa costata Fabr.

Two specimens, Congo.

Acrotylus deustus Thunbg. var.

One specimen, St. Paul de Loanda.

Trilophidia annulata Thunbg.

One specimen, Congo.

Pachytylus migratorioides Reich.

Small variety. One larva, Horta, Fayal; two adults, Ascension Island.

Ædaleus nigrofasciatus Fabr. var. *gracilis* Sauss.

Three specimens, Porto Grande.

Family PYRGOMORPHIDÆ.

Chrotogonus senegalensis ♂ ♀.

One specimen, St. Paul de Loanda; two specimens, Congo.

Ochrolebia caffra ? Linn. (larvæ).

Eight specimens, Congo, January 2, 1890.

Atractomorpha congensis Sauss. ♂ ♀.

Eleven specimens, Congo.

Family PAMPHAGIDÆ.

Xiphocera canescens St.

One specimen, Congo.

Family TETTIGIDÆ.

Paratettix sp.

Seven specimens, Congo.

Gen. ? sp. ? (larvæ).

Congo.

Family TRYXALIDÆ.

Acrida unguiculata Ramb.

Thirteen specimens, Congo and St. Paul de Loanda, January, 1890.

Acrida turrata Linn. (larvæ).

Two specimens, Congo.

Paracinema tricolor Thunbg.

One specimen, Congo, January 2, 1890.

Epacromia tricoloripes St.

One specimen, Congo.

Stencbothrus sp. ?

One specimen, St. Paul de Loanda.

Tryxalis sp. ?

One specimen, Congo.

Gen. ? sp. ?

Three specimens, Congo.

Gen. ? sp. ?

Two specimens, St. Helena.

Family FORFICULIDÆ.

Sphingolabris sp. ?

Five specimens, Congo.

Labidura riparia Palis.

One specimen, Congo, December 25, 1889.

Order NEUROPTERA.

Family HEMEROBIIDÆ.

Subfamily MYRMELEONIDÆ.

A large Myrmeleonid (undetermined) having a wing expanse of 100 millimeters and a length of 40 millimeters, was collected at Congo, December 28. The thorax and head are black, the legs brown, and the abdominal joints brown, tipped with black.

Order PSEUDONEUROPTERA.

By P. P. CALVERT.

Family LIBELLULIDÆ (*sens. lat.*).

Subfamily LIBELLULINÆ.

Diplax dilatata n. sp. Calvert. (Figs. 1 and 2.)

♂. Vertex hairy, brownish or brownish yellow above, blackish in front and on the sides; tip truncated, its outline very slightly concave from side to side.

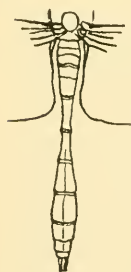


FIG 1.
Abdomen of *Diplax dilatata*
♂ n. sp.

Frons hairy, brownish yellow or reddish, grooved above, with a rather wide blackish band in front of eyes and vertex; in front with two small dark spots. Nasus and rhinarium brownish yellow, rhinarium sometimes darker. Labrum reddish yellow with some obscure blackish marks. Labium black; its lobes brown, blackish on the inner and anterior margins and at joint with labium (at this joint sometimes yellow). Basal joint yellow. Occiput brown. Rear of eyes dark brown with three yellowish spots, a row of light-colored hairs from the right uppermost spot to the left one.

Prothorax blackish, anterior margin yellow; posterior lobe with a reddish tinge (dark red in life?), hind margin broad, bilobed, with a fringe of long light-colored hairs.

Thorax brownish yellow, hairy; median dorsal ridge blackish, reaching downwards to the front margin, which is also black, a brown humeral stripe, first and second lateral sutures each with a black stripe, a short, broader black stripe in front of the spiracle. The stripes on the sides reach down to black spots around the feet. Pectus mostly blackish.

Feet moderately long, black, femora sometimes brownish interiorly, posterior tibiae with two rows of 10 to 12 spines; tarsal nails toothed before apex.

Abdomen compressed at the base, becoming narrower to the base of the fifth segment, whence it widens and thickens to the seventh segment, where it is wider than at the base; from the seventh segment it narrows to the apex, which is a little wider than at the base of the fifth segment; the dilated portion at seventh segment triangular in cross section. Color, brownish yellow, some parts with a reddish tinge (red in life?); segment 1 dark brown at base; 2 sometimes with a small median dorsal

brown spot; a brown dot on each side of the median dorsal line near the apex of 3 to 6, sometimes also on 7 and 8; 2 and 3, only, with a transverse carina.

Genitalia not prominent. Hamule bifid, internal branch terminating in a small, rather acute hook directed outwards; external branch much thicker; apex obtuse. Genital lobe with apex rounded, hairy.

Appendages brownish yellow, with short hairs. Superiors of about the length of the eighth segment; viewed from above, they are straight, dilated on the inner side before the apex, which is acute, black; viewed from the side, they are directed slightly downwards to the extreme apex, which inclines slightly upwards (as in *vulgata*); on the under side are 9 to 13 black denticles corresponding in position to the dilatation on the inner side. Inferior appendage, viewed from the side, is concave above from base to apex, which latter is curved upwards and ends in a small black denticle on each side; this denticle extends a little beyond the last denticle on the under side of the superiors; viewed from below, the appendage is rather broad, triangular, apex truncated, slightly emarginate.



FIG. 2.
Genitalia of *Diplax dilatata* ♂ n. sp.

Wings hyaline, reticulation brownish, hind wings with a light yellow cloud alongside of the membranule, extending outwards to about the level of the basilar cross vein, and backwards but little farther than the apex of the membranule. Pterostigma 3 to 4 times as long as broad, brownish yellow, surmounting parts of two or three cells. Membranule moderate, whitish. Sectors of the areculus stalked. One basilar cross vein placed nearer the base than the first antecubital. Nodal sector slightly waved. No hypertrigonals. Front wings with 10 (occasionally 9 in one wing) antecubitals, the last not continuous; 10 to 12 postcubitals; discoidal triangle with one or two cross veins; internal triangle of 4 to 6 cells; four, then three rows of discoidal areolets. Hind wings with 7 antecubitals, the last continuous; 10 to 12 postcubitals; discoidal triangle free, its inner side in the prolongation of the areculus; no internal triangle; discoidal areolets three, then two rows increasing; sectors of the triangle arising from the same point.

One male differs in having an additional basilar cross vein placed so as almost to form an internal triangle on the right hind wing, an indication of the beginning of such a vein on the left hind wing, both hind wings with discoidal triangle crossed by one vein.

♀. Similar to the male; differs as follows: Lobes of the labium yellow, margined as in ♂. The first three segments of the abdomen yellow; 1 black at base, 2 and 3 brownish along the median dorsal line; a crooked brown stripe on the sides of 1 to 3; venter of 2 and 3 black. Remaining segments of abdomen lost.

Nine antecubitals to the front wings, last one on the right wing having a corresponding cross vein in the subcostal space although not continuous. Right-hand wing with 6 antecubitals. Two discoidal areolets at the triangle in hind wings.

Measurements: ♂? Total length, 44.5 to 47.5 millimeters. Abdomen (incl. app.), 26.5 to 31.5 millimeters. Superior appendages, 1.75 to 2 millimeters. Front wing, 35.5 to 37 millimeters. Hind wing, 33 to 34.5 millimeters. Pterostigma, 3.5 to 4 millimeters. Width of abdomen at base of 5, 1.5 millimeters. Width of abdomen at 7, 3 to 4 millimeters.

♀. Length, abdomen, appendages, ?. Front wing, 37.5 millimeters. Hind wing, 34.5 millimeters. Pterostigma, 3.5 millimeters.

Four males, one female from St. Helena. Dr. Hagen examined one of the males for me and wrote, "It is unknown to me." This species belongs to the group of genera embracing *Diplax*, *Thecadiplax*, and *Erythrodiplax* in Dr. Karsch's arrangement of the Libellulina (Berliner Ent. Zeit., xxxiii, pp. 347-392, 1890). I place it provisionally in *Diplax*.

Libellula (Orthetrum) capensis n. sp. Calvert. (Fig. 3.)*Libellula assimilis* Hagen MS.

♂. Vertex reddish, in front black, tip bifid, apices acute. Frons reddish yellow, sides lighter, grooved above, front separated from each side by a vertical carina, the two carinae united by a horizontal carina just above the lower margin of the frons. Nasus and rhinarium luteous. Labrum reddish yellow. Labium and its lobes brown. Occiput reddish brown.

Prothorax with anterior lobe brown, posterior lobe yellowish, broad, its hind margin slightly notched in the middle.

Dorsum of thorax luteous, a faint indication of a brownish spot on each side of the median crest near its summit, and a brown humeral stripe. Sides yellowish, obscure, with ill-defined brown marks around the lateral sutures.

Feet luteous, tibiae darker, apices of femora and tarsi black.

Abdomen rather slender, compressed at base, slightly contracted at the fourth segment becoming wider to the sixth, but not so wide as at base; from 6 tapering gradually to apex. First three segments luteous, an ill-defined brown stripe each side. Dorsum of remaining segments pruinose, under side of abdomen luteous.



FIG. 3.
Genitalia of *Libellula capensis*
♂ n. sp.

Genitalia a little prominent. Anterior lamina with sides rounded to the apex, which is truncated. Hamule bifid, branches of equal length, straight, almost parallel, separated by but a short interval; inner branch black, slender, apex rounded, with a slight hook; outer branch luteous; much thicker, apex rounded. Genital lobe broad, apex rounded, hairy.

Superior appendages black, about as long as the ninth segment, similar to those of *D. dilatata* (q. v.). Inferior appendage luteous, sides blackish, similar to that of *dilatata*.

Wings hyaline, somewhat milky, a very slight yellowish cloud at base. Reticulation blackish, costa luteous exteriorly. Pterostigma, brownish yellow, three to four times as long as broad, surmounting two and parts of two other cells. Membranule blackish. Sectors of the areculus stalked. One basilar cross vein placed very nearly on a level with the first antecubital. Nodal sector waved. Front wings with one hypertrigonal; 13 (right), 15 (left) antecubitals, the last one continuous; 11 postcubitals; discoidal triangle with one cross vein; internal triangle of three cells; three rows of discoidal areolets.

Hind wings with no hypertrigonals; 10 (right), 11 (left) antecubitals, the last one continuous; 11 (right), 10 (left) postcubitals; discoidal triangle free, its inner side slightly nearer the base than the prolongation of the areculus would be; no internal triangle; two rows of discoidal areolets, increasing; sectors of the triangle a little separated at their origin. Total length, 49 millimeters. Abdomen (incl. app.), 33.5 millimeters. Superior appendages, 2 millimeters. Front wing, 34.5 millimeters. Hind wing, 33 millimeters. Pterostigma, 3.5 millimeters.

One male from Cape Town. Dr. Hagen examined this specimen and wrote to me (September 2, 1890) it "is my *L. assimilis*, never published." This species belongs to the genus *Orthetrum* of Kirby's Revision.

Libellula (Orthetrum) caffra Burmeister. (Fig. 4.)

Dr. Hagen has determined two specimens for me as belonging to this species. They are a male from Congo and a female from Freetown, Sierra Leone. Both have a considerable portion of the abdomens wanting.

In his Revision of the Subfamily Libellulina (Trans. Zool. Soc. London, XII, pp. 249-348, 1889), Mr. W. F. Kirby refers *caffra* to his new genus *Thermothemis* (p. 289). I think it rather belongs to his genus *Orthetrum*. *Thermothemis* is stated (*l. c.*) to have the triangle in the forewings followed by four or five rows of cells;

Burmeister (Handbuch der Entom., II, pp. 855, 856) places *caffra* with species having "gleich anfangs drei Zellenreihen in dem Felde hinter dem Dreieck der Vorderflügel,"* and with these two specimens agree. These two specimens also differ from the characters of *Thermothemis* by having the pterostigma moderate; fore wings with 14 (♂) or 13 (♀) antecubitals, 10 (♂) or 9 (♀) postcubitals, discoidal triangle traversed by one vein, one hypertrigonal, internal triangle of 3 (in one wing 4) cells; hind wings with triangle free, no hypertrigonals, sectors of the triangle a little separated at base.



FIG. 4.

Genitalia *Libellula caffra* ♂ Burm.

FIG. 5.

Genitalia of *Libellula* sp. ♂.

FIG. 6.

Genitalia of *Libellula unifasciata* ♂ Oliv.

Another male from Congo which, at first, I had also referred to *caffra*, may perhaps belong to another species, as there are differences in the genital hamule and in the coloring of the thorax. Unfortunately this male has also lost the greater part of the abdomen. (See accompanying figure, 5.)

***Libellula (Cacergates) unifasciata* Oliv.** (Figs. 6 and 7) (*leucosticta* Burm.).

Eight males and three females from Congo. One male from Porto Grande, St. Vincent. One male from Angola, December 9.

The width of the dark band on the wings of the male varies; its least width on the fore wings is from the level of the second postcubital to that of the ending of the median sector; its greatest width on the same wings is from the level of the nodus to that of the inner side of the pterostigma.

This species is the type of the genus *Cacergates* Kirby.

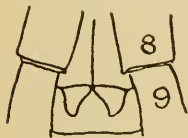


FIG. 7.

Vulva of *Libellula unifasciata* ♀ Oliv.

FIG. 8.

Vulva of *Libellula rubrinervis* ♀ Selys.

FIG. 9.

Genitalia of *Libellula rubrinervis* ♂ Selys.

***Libellula (Trithemis) rubrinervis* Selys.** (Figs. 8 and 9.)

One male and one female from Congo.

***Libellula (Crocothemis) erythræa* Brullé.** (Fig. 10.)

One male from Congo.

***Libellula (Urothemis) edwardsii* Selys.** (Fig. 11.)

Three males from Congo agree with Baron de Selys's description (C. R. Soc. Ent. Belg., 4 Mai 1878, p. lxx.) Another male from Congo agrees quite well with Rambur's description of "*sanguinea* Burm." (*Névroptères*, p. 112), and differs from the males of *edwardsii* by the general reddish color of its body and reticulation, and by the size and color of the basal markings on the hind wings. I can find no structural differences between it and the males of *edwardsii*. The three males of *edwardsii* have on the hind wings a blackish-brown basal streak in the subcostal space and

*It was not until after I had entirely completed the MS. of this paper that I noticed that Dr. Karsch had previously pointed out (Berliner Ent. Zeit. XXXIII, p. 377, 1890) from the same quotation from Burmeister that *caffra* Burm. does not belong to *Thermothemis*. Dr. Karsch there states that *caffra* is unknown to him.—P. P. C.

half of the costal space reaching a little more than halfway to the first antecubital, and a blackish-brown basal spot bounded anteriorly by the submedian nervure, extending outwards to the level of the first antecubital (not reaching the triangle), and not reaching the anal border. In the other male the streak and spot are similarly situated, and are reddish-brown, with the veins lighter; the streak reaches outwards half way between the first and second antecubitals, the spot a little farther so as to extend a short distance into the triangle.



FIG. 10.
Genitalia of *Libellula erythraea*
♂.

Burmeister describes (Handb. d. Ent., II, p. 858, No. 60) both male and female of *sanguinea* from Madras. Rambur says that he has described only the male [of "*sanguinea* Burm."] from Senegal. Baron de Selys states (*l. c.*, p. lxiv) that *signata* Ramb. (*Névr.*, p. 117, only the female, locality unknown) is synonymous with *sanguinea* Burm. If *signata* Ramb. and *sanguinea* Ramb. are different species, as seems probable, *sanguinea* Ramb. may be a variety of *edwardsii*, or founded on younger specimens thereof. It should be noted moreover, that *edwardsii* is recorded from Dakar in Senegal (Selys, *l. c.*, p. lxxv). The lighter colors of *sanguinea* Ramb. approach more nearly those of the female than of the male of *edwardsii*.



FIG. 11.
Genitalia of *Libellula edwardsii*
♂ Selys.

Two Libelluline nymphs from Congo are included in the collection.

Subfamily AGRIONINÆ.

Pseudagrion glaucescens Selys.

One male from Porto Grande, St. Vincent.

Pseudagrion torridum ? Selys.

One specimen from Congo, with the abdomen wanting (except the first segment), may belong to this species.

Pseudagrion species.

One male from Porto Grande, St. Vincent, but with the head wanting. Seems to belong to an undescribed species of *Pseudagrion*.

ARACHNIDA.

ARANEINA.

By NATHAN BANKS.

Family ATTIIDÆ.

Menemerus marginellus, Simon.

One damaged specimen from "Congo."

Hasarius adsonii ? Aud. & Sav.

Three specimens which probably belong to this common tropical form, from Ascension Island.

Family LYCOSIDÆ.

Lycosa sp?

One very much damaged specimen from Ascension Island.

Lycosa brevipes, nov. sp. Banks.

Length, ♀, 10 millimeters. Cephalothorax yellowish brown, with three yellow stripes; a median, widest behind; and a submarginal one on each side, wider than the median one and but slightly separated from the margin. On each side of the anterior part of the median stripe is a yellow, elongate spot.



FIG. 12. Epigynum of *Lycosa brevipes*. Eyes black; mandibles reddish; palpi and legs yellowish, without markings; sternum yellow; abdomen gray above, yellow beneath; a narrow yellow median stripe on anterior part of dorsum, bounded by black; epigynum reddish; spinnerets yellow.

Cephalothorax narrow, pars cephalica not very high. Anterior row of eyes straight, as long as second row, M. E. larger than S. E. Eyes of third row same size as those of second row and about twice as far apart; legs short and stout; sternum broad, rearly round; abdomen oblong oval, widest behind the middle. Epigynum small. One specimen, "Congo."

Pardosa valida nov. sp. Banks.

Length, ♀, 6 millimeters. Cephalothorax reddish, blackened in eye region and on margins; mandibles dark, red brown; sternum black; palpi and legs yellowish, with black rings and spots; abdomen dark brown, almost black above, venter lighter brown, clothed with white hairs; epigynum red brown; spinnerets black.

Cephalothorax broad, sloping suddenly behind dorsal groove. Anterior row of eyes curved, little shorter than second row, S. E. slightly lower than M. E., equal in size. Eyes of second and third rows equal in size, the latter as far from the former as the former are from each other. Legs long, especially the fourth pair, the tip of the femur of which reaches the end of the abdomen. Abdomen elliptical, about as long as the cephalothorax. Two specimens, "Congo;" another, much damaged, from "Sierra Leone."



FIG. 13. Epigynum of *Pardosa valida*.

ON A NEW GENUS AND SOME NEW SPECIES OF ARANEÆ FROM THE WEST COAST OF AFRICA COLLECTED BY THE U. S. STEAMER ENTERPRISE.

By GEO. MARX.

1. *Selenocosmia nigroventris*, nov. spec. Male. Figs. *ia* and *ib*.

Cephalothorax long, 14 millimeters; broad in the middle region, 12 millimeters.

Leg I. Femur, 12 millimeters; patella and tibia, 14.2; metatarsus, 8; tarsus, 5.8; total, 40 millimeters.

Leg II. Femur, 11 millimeters; patella and tibia, 12.4; metatarsus, 8; tarsus, 5.5; total, 36.9 millimeters.

Leg III. Femur, 8.6 millimeters; patella and tibia, 10.6; metatarsus, 8.5; tarsus, 5.5; total, 33.2 millimeters.

Leg IV. Femur, 11.3 millimeters; patella and tibia, 13.5; metatarsus, 11; tarsus, 5.6; total, 41.4 millimeters.

The whole upper surface of cephalothorax, abdomen, and legs densely covered with light mouse-colored pubescence; sternum, maxilla, labium; femoral joint of palpi and coxæ velvety black; abdomen at the central region also black; at the inner side of maxilla a fringe of long, pink-colored hairs.

Anterior ME largest; posterior ME very close to the former and contiguous with the posterior L. E.; eye, tubercle, transverse, oval.

One male specimen from the Congo.

2. *Cydrela brunnea*, nov. spec. Female. Figs. 2a-d.

Cephalothorax long, 5.5 millimeters; broad, in the middle, 4.3; abdomen long, 6.5 millimeters.

Leg I. Femur, 3.8; patella and tibia, 4.2; metatarsus, 2.5; tarsus, 2; total, 12.5 millimeters.

Leg II. Femur, 3.4; patella and tibia 3.7; metatarsus, 2.2; tarsus, 1.6; total, 10.9 millimeters.

Leg III. Femur, 3.3; patella and tibia, 3.6; metatarsus 2.7; tarsus, 1.3; total, 10.9 millimeters.

Leg IV. Femur, 3.8; patella and tibia, 4.5; metatarsus, 3.5; tarsus, 2.8; total, 14.6 millimeters.

Palpi femur, 3.1 long, 1.5 thick; patella and tibia, long 2.8, thick 1.3; Tarsus, long 1.5.

Cephal., trophi, sternum and legs shining dark reddish brown, the tibia, metatarsi and tarsi a little lighter; abdomen * brown, with some spots, all parts sparsely covered with yellowish hairs.

Cephalothorax oval, p. cephal. impressed at the sides, attenuated and globulate in front; high, declining moderately from the center to the front and the back, but steeply sloping transversely; median fossa short and very distinct, clypeus high and somewhat projecting.

The two anterior eyes contiguous, a little smaller than those of the middle row, which are the largest of all and separated from each other by a space which hardly equals their diameter; the smaller posterior ME are the same distance apart from the eyes of the second row as these are from the eyes of the first row; they are separated from each other by their diameter; the two lateral eyes of the third row stand farther back than the median eyes, and form a recurved line; clypeus higher than the space between the eyes of the first and the second rows.

Mandibles stout, attenuating toward the tip and directed slightly backward. Maxilla subtriangular, much broader than high, surrounding the labium and nearly meeting each other in front of the latter, drawn out externally for the insertion of the palpi. Labium oblong ovate and nearly twice as high as it is broad. Sternum sinuate in front, posteriorly, slightly pointed, with swellings opposite the coxae, not higher than broad, and flat. Palpi nearly three times as stout as the legs; femoral joint clavate at apex, tibial joint at the inner side with a row of short blunt spines; tarsus terminating into a long strong tooth and armed at the sides with double rows of similar spines.

Legs slender, hairy, all joints but the femora with numerous short spines on the superior surface and longer ones beneath, which are particularly numerous at the distal ends of tibiae and metatarsi.—Congo.

3. *Cydrela maculata*, nov. spec. Female. Fig. 3a-b.

Cephalothorax long, 4 millimeters; broad in the middle, 2.2; abdomen long, 4—broad, 3.

Leg I. Femur, 2; patella and tibia, 3; metatarsus, 1.6; total, 7.8 millimeters.

Leg II. Femur, 1.6; patella and tibia, 2; metatarsus, 1.3; total, 5.7 millimeters.

Leg III. Femur, 1.8; patella and tibia, 2; metatarsus, 1.5; total, 6.3 millimeters.

Leg IV. Femur, 2.4; patella and tibia, 2.4; metatarsus, 2; total, 8 millimeters.

Cephalothorax, mouth parts, sternum, palpi, and legs dark brown; coxae lighter colored, abdomen brownish with two round yellowish spots closely together at the base of the dorsum, and two or three short, transverse, recurved lines of the same color above the spinnerets; at the under side the basal region and the spinnerets are light brown.

* The abdomen is so much shriveled that it is impossible to determine its form or color.

Cephax oblong ovate, high, not much narrower in front than in the middle region: seen from the side the dorsum is highly arched in the longitudinal axis. P. cephal. not distinctly separated from p. thorax, in front rounded and globulate, median fossa short and very deep.

Eyes subequal, anterior eyes separated from each other by a space equal to three times their diameter. Space between the eyes of the second row about equal to their diameter; these eyes are removed from the anterior by a space equal to the last mentioned. Posterior eye row strongly recurved, the middle eyes a little farther apart than the eyes of the second row, the posterior lateral eyes removed from the middle by a distance equal to three times their diameter.

Cephax twice as long as broad. Legs on all joints but the femora with a few short spines, slender and short. Palpi twice as stout as femur I and armed like brunnea.

Four specimens from Kilimanjaro, Africa.

Machomenus nov. genus.

Cephalothorax perfectly flat, a little longer than broad, much rounded at the sides, a little constricted behind the posterior lateral eyes. A distinct and very prominent transverse ridge between the two eye rows, extending outward, forming a sharp and prominent point on each side.

Eyes eight, in two transverse rows, the anterior straight row situate at the vertical front of the cephalothorax before the ridge, the posterior slightly recurved row with the two middle eyes on the flat dorsal surface and the lateral eyes on the posterior angle of the projecting point of the ridge. The anterior lateral eyes the largest; space between the anterior middle eyes equals about one and one-half of their diameter, and they are about twice as far removed from the anterior lateral eyes. The posterior lateral eyes a little larger than posterior middle; the eyes of this row are about equidistant.

Mandibles weak, short, directed backward. Maxillæ inclined over the labium, truncate at apex, labium broader than long, subtriangular, rounded at tip.

Legs: The two anterior pairs much longer and stouter than the two posterior pairs; first pair a little longer than second. Tibiæ with a few scattered spines at the inner side, and a double row of prominent spines at the metatarsi of the two anterior pairs; no scopala on the tarsi.

Machomenus albidus nov. sp. Male (undeveloped), Fig. 4a-c.

Cephalothorax whitish, with two longitudinal brownish bands removed from the lateral borders by a space equaling their width. Mouth parts, sternum, and legs yellow, mottled with white spots. Abdomen oblong-ovate, with two dark spots in the first third of its length and a number of transverse lines on the posterior region. Several undeveloped males and females from Congo.

5. *Selenops brownii* nov. sp. Female, Fig 5a.

Cephalothorax long, 4.5; broad in the middle, 5.4; broad in front, 2.6 millimeters. Abdomen long, 6.5; broad, 5; first leg, 15.6 millimeters long; second leg, 18 millimeters; third leg, 17.5 millimeters; fourth leg, 18 millimeters.

Cephalothorax uniformly reddish, testaceous, with brownish narrow lateral borders; p. cephal. slightly more red; mouth parts of the same color, apex of maxillæ and labium with a paler border; sternum paler. Abdomen olive-yellowish brown, with three pair of white spots in the middle region and several similar ones at the apical border, several indistinct transverse dark wavy bands and brown spots; at the under side pale grayish-yellow; legs yellowish at the inner side, with a brownish line, and at the tibiæ with two dark rings, which are more distinct in the two anterior pairs than in the two posterior; all eyes surrounded by a black area, which is less

distinct at the central eye and most prominent in the posterior lateral; these latter are situated upon a large black tubercle.

The anterior eye row nearly straight, close to the margin of the clypeus; the median eyes about their diameter apart, the smaller lateral oblique. The posterior row recurved, the middle eyes a little larger than those of the first row and only apart from these by a space equaling their radins. The posterior lateral eyes the largest, situate at the outer side of a large tubercle; the posterior middle eyes are further apart than they are from the posterior lateral.

Mandibles subgeniculate at the base, directed forward and diverging.

Maxillæ arched, at the basal half concave, surrounding the labium; at the distal half rounded at both sides to an oval. Labium, about half as long as maxillæ; a little longer than broad, wider at apex than at the base, and rounded at tip. Sternum oval, slightly longer than broad.

Abdomen truncate in front, with nearly parallel sides and pointed at apex, covered with short, bristle like hairs.

Legs long and slender, with a sparse, fine pubescence; the tibiae of the two anterior pair with three pair, the metatarsi with two pair, of very long spines. Several females from the Congo.

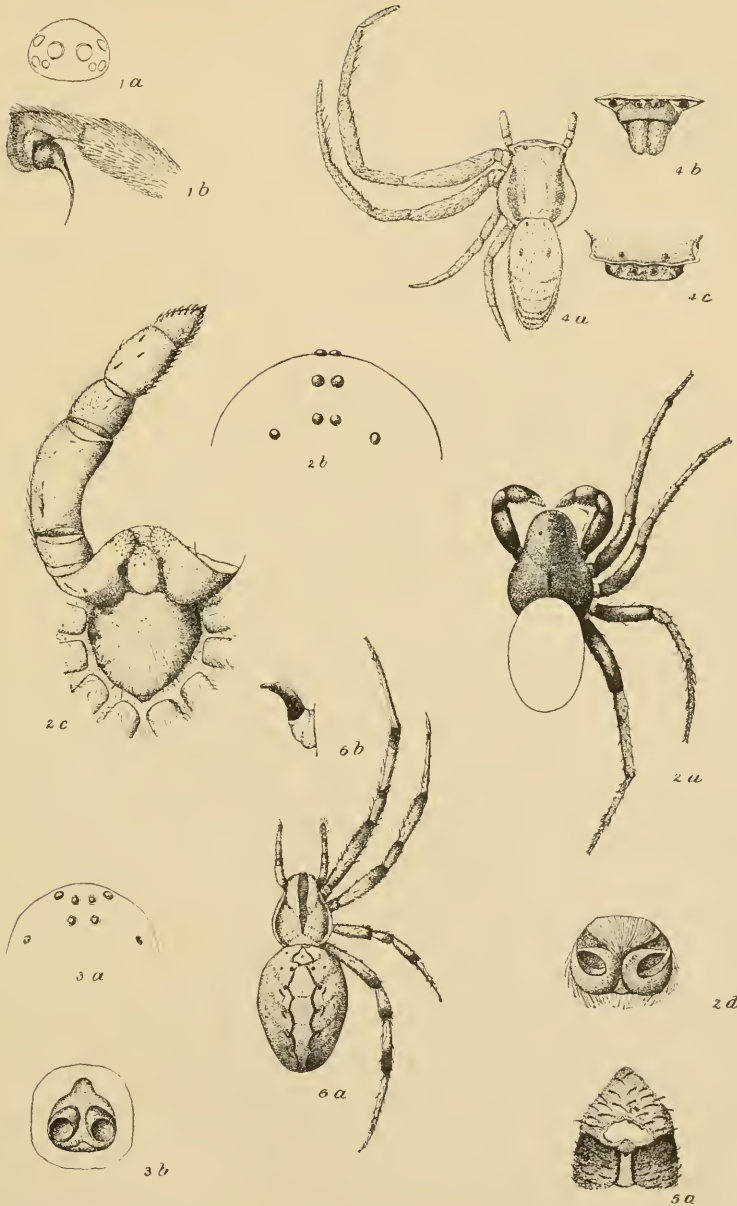
6. *Epeira eclipsis* nov. sp. Fig. 6a-b.

Cephalothorax long, 5.4 millimeters; broad in the middle, 4.3; broad in front 2 millimeters; abdomen long, 10; broad, 6.5 millimeters; first leg, 20 millimeters long; second, 18.5; third, 12; fourth, 20 millimeters.

Cephalothorax pale yellow, with a dark-brown strip running over the dorsum and a similar one on each side, not quite at the margin. Abdomen grayish, mottled with darker and lighter spots at the sides, a scalloped longitudinal band running over the dorsum, a few brown short stripes near the angles of the scallops. At the under side, in the central region, a black longitudinal band running from the epigynum to the spinnerets, bordered by a narrow white stripe which widens into an oval spot at the middle region, and a similar but smaller spot at the base of the spinnerets. Legs reddish-yellow, with dark-brown bands and with many short spines. Sternum blackish-brown, with a narrow yellow longitudinal band. Maxillæ and labium dark brown, with lighter tips. Congo.

EXPLANATION OF PLATE LXX.

- | | |
|--|--|
| 1a. <i>Selenocosmia nigroventris</i> n. sp., eyes. | 4a. <i>Machomenus albidus</i> n. sp., male, undeveloped, enlarged. |
| 1b. <i>Selenocosmia nigroventris</i> , male palpas. | 4b. <i>Machomenus albidus</i> , face from the front. |
| 2a. <i>Cydrela brunnea</i> n. p., female, enlarged. | 4c. <i>Machomenus albidus</i> , face tilted upward. |
| 2b. <i>Cydrela brunnea</i> , eyes. | 5a. <i>Selenops brownii</i> n. sp., epigynum. |
| 2c. <i>Cydrela brunnea</i> , palpi, trophi, and sternum. | 6a. <i>Epeira eclipsis</i> n. sp., female enlarged. |
| 2d. <i>Cydrela brunnea</i> , epigynum. | 6b. <i>Epeira eclipsis</i> , epigynum. |
| 3a. <i>Cydrela maculata</i> n. sp., eyes. | |
| 3b. <i>Cydrela maculata</i> , epigynum. | |



Marx del.

ARACHNIDA OF ECLIPSE EXPEDITION.