

SCIENTIFIC RESULTS OF EXPLORATIONS BY THE U. S. FISH COM-
MISSION STEAMER ALBATROSS.

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No. V.—ANNOTATED CATALOGUE OF THE INSECTS COLLECTED IN
1887-'88.

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INTRODUCTION.

Upon assuming charge of the Department of Insects, after Dr. Riley's departure for Europe in April last, I found this collection awaiting report, and learned that the *Myriapoda* and *Arachnida* received with the *Hexapoda*, under Accession Number 21699, had been sent to specialists for report. After a review of the material, and notification from the office of the Assistant Secretary in charge of the Museum that a speedy report was desirable, I decided that the most expeditious and satisfactory method of determining the collection would be to call upon the best known specialists in the country for assistance. I therefore sent the *Hemiptera* of the collection to Prof. P. R. Uhler, of Baltimore, Md.; the *Orthoptera* to Mr. Lawrence Bruner, of Lincoln, Nebr.; the *Diptera* to Dr. S. W. Williston, of New Haven, Conn.; the *Lepidoptera* to Rev. W. J. Holland, of Pittsburgh, Pa.; and the *Mallophaga* to Prof. Herbert Osborn, of Ames, Iowa. All of these gentlemen very kindly sent in prompt and satisfactory reports, and each is wholly responsible for the determinations in his group. The remainder of the material was determined by the Aid of the Department, Mr. M. L. Linell.

The method of arrangement adopted was deemed most desirable as giving at a glance an idea of the collections made in each general locality, but at the same time it rendered it impossible to publish each report by itself.

The *Arachnida* have been determined by Dr. George Marx, of the Department of Agriculture, and it has been deemed best to place his report in its entirety at the end of the *Hexapoda*. His report includes certain manuscript names, and the specific descriptions accompanying will be published elsewhere.

The *Myriapoda* were submitted to Mr. Charles H. Bollman, of Bloomington, Ind., who finds but eight species represented. His report is so short that his descriptions of new species are included.

The material as a whole is of great interest, and presents a strong argument in favor of future collections by the Fish Commission steamers and other Government vessels. From our standpoint the collections are surprisingly small, and but little time has evidently been given to these three classes. Conspicuous species have in most cases been preferred, and in all of the localities an hour's industrious sweeping of the herbage with a beating-net would have infinitely enriched the collections.

HEXAPODA.

CLEMENTE ISLAND, CALIFORNIA.

COLEOPTERA.

Family CARABIDÆ.

Besides fragments of the common Californian *Anisodactylus brunneus* Dej., a new species of *Calosoma* was collected here. 2 ♂. Size of *C. palmeri* Lec. from Guadeloupe Island, but different in form and sculpture.*

Family TENEBRIONIDÆ.

Eulabis grossa Lec.

One specimen.

Eusattus robustus Lec.

Three specimens.

These two species seem to be peculiar to the island.

Eleodes dentipes Esch.

One specimen. Occurs abundantly in South California.

LEPIDOPTERA.

Family BOMBYCIDÆ.

One larva of *Spilosoma* sp.

LOWER CALIFORNIA AND PANAMA.

COLEOPTERA.

Family TENEBRIONIDÆ.

Asida morbillosa Lec.

One specimen. Ballenas Bay.

Asida obsoleta Lec.

Fragments of a variety of this Californian species were taken on St. Margarita Island.

* The coleopterological fauna of Clemente Island is quite well known, and the occurrence of this conspicuous new *Calosoma* under this locality label arouses the suspicion that a mistake may have been made.—L. O. II.

Eleodes quadricollis Esch.

Thirty-seven specimens. St. Margarita Island. Occurs also abundantly in Southern California.

Eleodes militaris Horn.

Eleodes dentipes Esch.

Eleodes acuticauda Lec.

Fragments of these three species found at Ballenas Bay.

Cryptoglossa sp.?

Fragments. Ballenas Bay.

Cerenopus costulatus Horn.

A female and fragments of another specimen of this rare species found at Ballenas Bay.

Argoporis, new species.

Six specimens. St. Margarita Island.

Family MELOIDÆ.

Tegrodera erosa Lec.

Four specimens. St. Margarita Island. A species well known from Southern California.

Family CERAMBYCIDÆ.

Megaderus stigma Lin.

One specimen. Panama.

ORTHOPTERA.

Family ACRIDIIDÆ.

Schistocerca vaga Scudd.

A single female specimen from Ballenas Bay belongs here.

Thrinx californicus Thos.

A single pupa of this species is contained in the collection from Cerros Island.

Five specimens of a rather large *Acridiid* were collected at Cerros Island. This insect is a rather peculiar one, since from its general appearance it can easily be mistaken for one of the *Edipodine*. A casual glance will, however, be sufficient to show its relationship with the *Rhomaleans* on the one side and the *Truxalids* on the other. It is one of the comprehensive forms sometimes met with among insects. The strongly spined prosternum forbids its being placed either with the *Edipodine* or *Truxalina*, while the structure of the pronotum gives its place with the *Tropidinotians*. It may be new, but from want of the proper reference-books I refrain from describing it as such.

Family BLATTIDÆ.

Blabera limbata (Burm.).

A single specimen from Panama belongs here.

Nyctobora ? *holosericea* ? Kl.

Two immature specimens of a cockroach from Panama are placed in the genus *Nyctobora* and referred to *holosericea* Kl. with doubt.

HEMIPTERA.

Tetyra farcta Germar, (*Pachycoris*). Zeits. I, p. 92.

No. 20. *Pachycoris guttipes* Walker, Brit. Mus., Cat. Hem., I, p. 47, No. 11.

One female from Panama. It has the antero-lateral margins of the pronotum a little more expanded than in the normal Mexican specimens, and the black dots much reduced in size.

Augocoris sexpunctatus Fabr. (*Cimex*), Spec. Ins., II, p. 339, No. 7.

Augocoris sexpunctatus Stål, Enum. Hemipt., I, p. 18, No. 2.

Two males were taken on board the ship at electric light, latitude 4° 18' N., longitude 85° W. The smaller one is suffused with rose color on the upper side, and it is evidently immature, with the exterior integument imperfectly oxidized, and consequently it would have been dark colored if allowed to reach maturity. It is remarkable for having the rostrum very nearly as long as the body. The tip of this organ as now resting reaches almost to the end of the anal segment, but if set flat against the venter it would reach quite to the extremity of that segment.

Augocoris ehrenbergii Germar, Zeits., I, p. 140, No. 2.

One male from Panama, captured on board ship, March 6. It is only in deference to the views of my friend, the late Dr. Carl Stål, that I retain this species as separate from the preceding. The length of the rostrum is now observed to be of no value in separating the species of this genus.

Family COREIDÆ.

Catorhintha guttula Fabr. (*Lygæus*), Ent. Syst., IV, p. 162, No. 92.

A single immature female was collected at Panama. It is larger than the typical specimens from the West Indies and Central America, has the antenniferous spine longer and more curved, and one of the spines is wanting on the right-hand side.

MALLOPHAGA.

(On *Diomedea erulans*).

Two species of *Lipeurus*.

Lipeurus taurus Nitsch.

Many specimens of males, females, and young.

Lipeurus diomedææ F. ♂, ♀, juv., and eggs.

Fabricius's description is very meager. Dufour described it fully as did Giglioli from *D. brachyura*. Piaget thinks *L. ferox* of Giebel from *D. melanophrys* the same, but makes *diomedææ* the synonym. The identity of the forms from the different species of *Diomedææ* is supported by careful comparison of these specimens with the descriptions of various authors and with a ♀ from the *D. brachyura* in my possession. The eggs inclosed in the vial with these and *L. taurus* probably (almost certainly) belong to *diomedææ*. They are very large, 2.4^{mm} long. Their shape is peculiar, reminding one of the valves of a barnacle, flattened, attached by a short pedicel; the outline as a whole semicordate, the straight line running from pedicel to apex and the opposite sides curved. Black lines run along the margin and on each face parallel to these, and a short, transverse line near the center; between this and the base are two irregular spots or expansions of the dark lines.

(On *Phaëton athereus*).

No species have been described from this bird to my knowledge, and if so it must have been since the publication of Piaget's "Les Pediculines"

Docophorus sp.

An undescribed species, 2^{mm} long, with triangular head, narrow clypeus which is deeply emarginate. The color is brown, and the transverse bands of the abdomen run without interruption the width of the segments. Differs decidedly from *D. hexagonus* Giebel described from *Phaëton phœnicurus*, in having the clypeus deeply cut instead of evenly truncate. Approaches *D. brevantennatus* Piaget, which occurs on *Sula australis*, but appears to be slightly smaller and lighter colored, while the abdominal bands are not interrupted in the middle. Three specimens. If desired to designate by name it may be called *Docophorus phaëtonus*.

Menopon sp. near *fuscofasciatum* Piag.

Agrees very closely with *fuscofasciatum* described from *Lestris pomarina* except that it appears somewhat more robust than shown in Piaget's figure. Whether the difference is sufficient for formation of a new species is doubtful without comparison with specimens of that species.

Colpocephalum sp. near *anguliceps* Piaget.

Agrees more closely with *C. anguliceps* from *Fregata minor* than with *C. incisum* from *Phaëton flavirostris*. A very minute species, of which there was a single specimen in the vial with other lice from *Phaëton athereus*, and this was unfortunately lost by accident, an involuntary cough carrying it from the slide while placed under the microscope for dry examination.