

## TWO COLLECTIONS OF FULGOROIDEA FROM SUMATRA

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### ONE PLATE

Very little is known about the fulgorids of Sumatra, especially the small species, so the two small collections, one made by Mr. E. Jacobson and the other by Mr. J. B. Corporaal, are of interest. Besides the species mentioned, there are eight species of Cixiidæ which I am retaining for the present. The types are deposited in the Hawaiian Sugar Planters' Experiment Station collection in Honolulu.

### ACHILIDÆ

*Rhotala depressifrons* sp. nov.

This species is similar in structure to *R. gravelyi* Muir from India, with the following exceptions. The vertex is narrower and longer, the base angularly emarginate with a fine carina, sides with carina rounded off at apex. Base of face smooth and shining, the lateral carinæ at base thickened, becoming slenderer to apex, having a triangular depression over the greater part of the face, a slight trace of a median carina on apical third. There is no trace of a suture dividing the posterior angle of the mesonotum and so it cannot be placed in the Tropicuchidæ, and the whole build and characters of the insect are achilid.

*Female*.—Length, 10 millimeters; tegmen, 11. Dark brown, with small lighter brown marks; legs with slightly lighter bands. Tegmina brown, with slightly dark brown mottlings, veins darker; wings light brown, with darker veins.

Pregenital plate large, short at sides, hind margin gradually produced to middle third which is steeply produced into a long, narrow process slightly bilobed at apex, with the sides curved dorsad, this middle process being as long as basal portion of pregenital plate; genital styles long, narrow, the anterior styles lying in the groove formed by the produced pregenital plate, the posterior pair straight, narrow, apex rounded, reaching nearly to apex of median process of pregenital plate. Anal segment small, longer than broad, rounded at apex.



SUMATRA, Bandar Baroe, November 26, 1919 (*J. B. Corporaal*), 1 female. Type No. 1059.

The venation of this genus is very distinct, the cubitus having six to eight apical veins.

#### CIXIIDÆ

*Kinnara nigrocacuminis* sp. nov. Plate 1, fig. 1.

In this genus vein R, after leaving Sc, joins M for a short distance.

*Male*.—Length, 2.6 millimeters; tegmen, 4.3. Stramineous; front tibiæ fuscous, abdomen dark brown, light on pleura. Tegmina hyaline, shiny, the apex from apex of Sc to apex of Cula dark fuscous; veins same color as membrane; wings hyaline, fuscous, veins dark brown.

Lateral processes of pygofer narrow, long, apex acute, curved, and slightly recurved. Anal segment large, length about three times the width, sides subparallel, anus near apex beyond which apex is narrowed to a point. Genital styles flat, narrow, curved, gradually narrowed to apex. *Ædeagus* complex with membranous filament at apex which appears to be common to this genus.

SUMATRA, Bandar Baroe, January 14, 1920 (*Corporaal*). Type No. 1060.

*Borysthenes diversa* (Distant).

SUMATRA, Bosehr Banda, January, 1920 (*Corporaal*), 1 female.

I identify this specimen as of this Indian species, but the male may show it to be different. The specimen is in bad condition but it agrees quite well with Distant's figure and description.

*Kermesia maculata* Melichar.

SUMATRA, Fort de Kock, June, 1921 (*E. Jacobson*), 1 male.

Eight other species of Cixiidæ await further study in connection with a large collection of this family from the Philippines.

#### DELPHACIDÆ

*Ugyops notivena* (Walker).

SUMATRA, Tandiong Merah, 1919 (*Corporaal*), 2 females.

Until the type of this species is redescribed and the male genitalia are examined there must be some uncertainty as to identification.



Melanesia sp.

SUMATRA, Paga Maban, December, 1919 (*Corporaal*), 1 female.

This appears to be an undescribed species, but the male is necessary for certainty.

*Perkinsiella neoinsignis* sp. nov. Plate 1, fig. 2.

In all external characters this species agrees with the Indian *P. insignis* (Distant), but the genitalia are quite distinct.

Opening of pygofer longer than wide, anal emargination large, anal angles not produced, medioventral margin produced into a small horizontally flat process deeply emarginate in middle, thus forming two flat processes; diaphragm long, dorsal margin V-shaped in middle. Anal segment large with two long, thin spines with their bases far apart. Genital styles not reaching to anal segment, apex truncate, narrow, inner margin straight on apical half, slightly concave on basal, outer margin concave on apical half, produced slightly on basal. *Ædeagus* large, flattened laterally, in lateral view curved, orifice on dorsal aspect of apex; basad of orifice there are two spinelike processes; one long, flat process curved to right, the other a small process slightly curved to left.

SUMATRA, Medan, 1920 (*Corporaal*), 1 male. Type No. 1061.

In *P. insignis* the medioventral process of pygofer is much broader and the two processes diverge slightly; the genital styles are much narrower at apex and gradually wider to basal angle; the *ædeagus* has two small spines about equal in size.

*Dicranotropis corporaali* sp. nov. Plate 1, fig. 3.

*Male*.—Length, 2 millimeters; tegmen, 2.4. The lateral carinæ of pronotum diverging posteriorly but not curved; median carinæ of face forked about one-third from base. Stramineous; mesonotum slightly sordid. Tegmina hyaline, slightly stramineous, veins same color as membrane, tubercles small, sparse, same color as veins bearing stramineous macrotrichia. Genitalia figured. The genital styles are very distinctive.

SUMATRA, Medan, 1920 (*Corporaal*), 1 male. Type No. 1062.

*Phyllodinus platypoda* (Dammerman).

SUMATRA, Fort de Kock, 920 meters elevation, November, 1920 (*Jacobson*), 1 female.

This species was originally placed in *Platybrachys* Dammerman, but that name is preoccupied. *Phyllodinus* Van Duzee as it stands at present consists of two genera and, until it is



straightened out, it is useless to give a new name to *Platybrachys* Dammerman.

*Sogata furcifera* (Horvath).

SUMATRA, Fort de Kock, 920 meters elevation, January, 1921 (*Jacobson*), 5 specimens.

This species has nearly a world-wide distribution. I have not yet placed it in any genus with any satisfaction but believe it is best placed in *Sogata*.

*Nilaparvata greeni* Distant.

SUMATRA, Fort de Kock, 920 meters elevation, January, 1921 (*Jacobson*), 3 males and 2 females.

The type of this genus, *N. greeni* Distant, is the same as *Dicranotropis anderida* Kirkaldy, and the same as what Melichar identifies as *Delphax sordescens* Motschulsky. I am deeply indebted to Doctor Bergroth for critical remarks and copies of the original descriptions of some of Motschulsky's species of *Delphax*. He suggests that possibly Melichar's identification of *D. sordescens* may not be correct. In this I quite agree with him and shall consider *greeni* as the type until the type of *D. sordescens* has been reexamined.

This species has a wide distribution from Australia to India, China, and Formosa. The distinctive feature of the genus is two or three small spines on the hind basal tarsal segment.

*Delphacodes striatella* (Fall).

SUMATRA, Fort de Kock, February, 1921 (*Jacobson*), 1 male.

It is interesting to find this European species in Sumatra.

DERBIDÆ

*Herpis borneensis* Muir. Plate 1, fig. 4.

SUMATRA, Medan, October 20, 1920 (*Corporaal*), 1 male: Fort de Kock, November, 1920 (*Jacobson*), 1 female.

The genital styles are slightly more angular than in the type specimen. The ædeagus has not been dissected out.

*Vekunta punctula* (Melichar).

SUMATRA, Medan, January 31, 1921 (*Corporaal*), 1 female.

This specimen agrees with the description, but as no mention is made of the genitalia or even the sex, of the type, the identification remains uncertain.

Pregenital plate large, short at sides, the outer thirds of the hind margin nearly straight, the middle third produced into a



large process longer than broad, gradually widening from base to middle, then gradually narrowing to the rounded apex. Anal segment slightly longer than wide, apex broadly rounded. Genital styles fairly large, projecting beyond apex of pregenital plate.

*Vekunta pseudobadia* Muir.

SUMATRA, Medan, December 30, 1920 (*Corporeal*), 1 female.

*Kaha perplexa* (Muir).

SUMATRA, Medan, February, March, 1920 (*Corporeal*), 1 male and 3 females.

*Proutista moesta* (Westwood).

SUMATRA, Haboko, July 23, 1920 (*Corporeal*), 2 males: Mopoli Atjeh, September 15, 1920 (*Corporeal*), 1 female.

*Zoraida cumulata* (Walker).

SUMATRA, Atjib aloer Djombae, September 15, 1920 (*Corporeal*), 2 females.

The specimens are much damaged, but the genitalia enable me to identify this widely distributed species.

*Zeugma corporaali* sp. nov. Plate 1, fig. 5.

In size, general build, and color this species is similar to *Z. monticola* Kirkaldy (= *Z. vittata* Westwood?), but the genitalia are quite distinct. In *Z. corporaali* sp. nov. the aedeagus is longer and the apical, bifurcate portion has one large spine in the middle on the side and a broad, bifurcate or subcrescent-shaped process at apex; it also has a series of trifurcate spines. In *Z. monticola* Kirkaldy (Plate 1, fig. 6) the aedeagus is shorter and the apical portion has two small spines in the middle and a bidentate process at apex, and it has no trifurcate spines. The lateral margins of the pygofer are also distinct. The female of *Z. corporaali* differs from *Z. monticola* in having the basal margin of the pregenital plate raised into a rim instead of a small, raised rim forming a small arc slightly posterior to basal margin.

SUMATRA, Medan, December 5, 1918 (*Corporeal*), 1 male, and October 9, 1918 (*Corporeal*), 1 female. Type No. 1063.

This genus is now known from Formosa, the Philippines, Borneo, Java, Sumatra, Malay Peninsula, and India.



## ILLUSTRATION

### PLATE 1

- FIG. 1. *Kinnara nigrocacuminis* sp. nov.; pygofer and anal segment of male, lateral view.
2. *Perkinsiella neocinsignis* sp. nov.; *a*, apex of ædeagus, dorsal view; *b*, right genital style.
3. *Dicranotropis corporaali* sp. nov.; *a*, genitalia of male, three-fourths view; *b*, anal segment and ædeagus, lateral view.
4. *Herpis borneensis* Muir; male genitalia, lateral view.
5. *Zeugma corporaali* sp. nov.; *a*, ædeagus; *b*, pygofer, lateral margin.
6. *Zeugma monticola* Kirkaldy; *a*, ædeagus; *b*, pygofer, lateral margin.

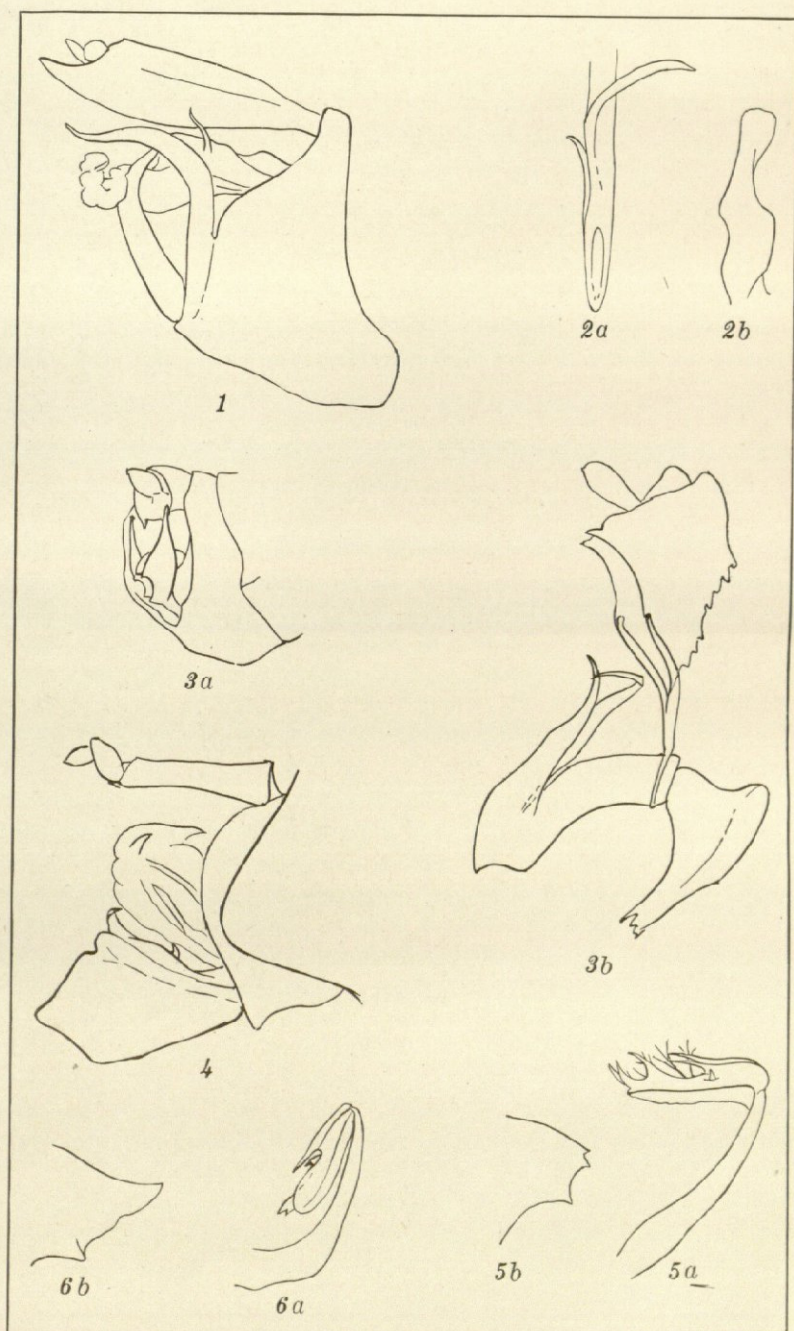


PLATE 1.