

# A Revised Classification of Pacific Island *Cyrtorhinus* with a New Species from Fiji (Hemiptera, Miridae).

By ROBERT L. USINGER.

University of California, Berkeley.

With 6 Figures.

Communicated Oct. 16th 1950 by HÅKAN LINDBERG and RICHARD FREY.

When O. M. REUTER published his classic »Neue Beiträge zur Phylogenie und Systematik der Miriden» in 1910, he was aware of the fact that *Cyrtorhinus mundulus* (Breddin) was a rare exception to the rule that arolia are well developed in the »Heterotomina». In 1939 and 1944 I pointed out additional Pacific Island species which lack the arolia and other species which possess arolia that are typical of this great subfamily. Despite this major inconsistency, the genus *Cyrtorhinus* Fieber, 1858, has remained inviolate, KNIGHT (1935) and others having accepted it in its broadest sense. In the present paper this question is reexamined in connection with the description of a new species from Fiji, referred to me some time ago by Dr. W. J. HALL, director of the Commonwealth Institute of Entomology.

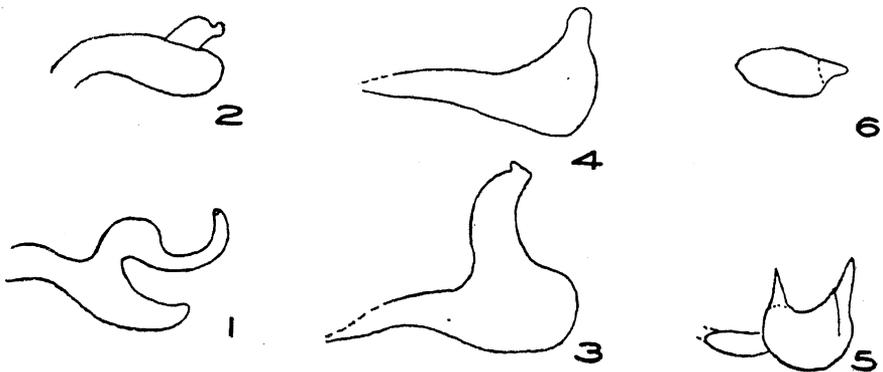
**Phylogeny of *Cyrtorhinus*.** The genus *Cyrtorhinus* is practically cosmopolitan in its distribution (USINGER, 1939), though rather unevenly distributed as to numbers of species in the various zoogeographic regions of the world. Insofar as is known, all species of the *Soc. Scient. Fenn., Comm. Biol. XII. 8,*

genus are predaceous on the eggs of Delphacid leafhoppers. The two Holarctic species examined by me (*caricis* Fallen, *pygmaeus* Zett.) resemble such Pacific Island species as *riveti* Cheesman and *zwaluwenburgi* Usinger in that the arolia are reduced to simple hair-like setae. All of these species are similar in general facies, being small with a relatively short, oval body form.

*Mundulus* Breddin also has the arolia reduced to parallel bristles but *mundulus* is considerably larger with the body form relatively long and slender. *Mundulus* is Austro-Oriental and, to my knowledge, has no close relatives.

In striking contrast to the above-mentioned groups, *lividipennis* Reuter and *fulvus* Knight, both Oriental and Pacific species, are larger, broader, more colorful and with distinct, convergent arolia. A new species of this group is described below.

**Male Genitalia.** In an attempt to determine whether or not *Cyrtorhinus* is monophyletic, a comparative study was made of the male genital claspers of representatives of each of the above groups. The results are shown in the accompanying figures, each clasper being dissected out and drawn without indication of the numerous but appar-



ently non-diagnostic bristles. The figures are of one species from each group but *caricis* and *pygmaeus* are similar to *riveti*; and *fulvus* and *lividipennis* are similar to *vitiensis*. The claspers of *mundulus* are unique and bear out its rather isolated position, as indicated above. CARVALHO (1945) figured the male claspers of *costae* (Stål) from Brazil and it is interesting to note that the left clasper of that species resembles *riveti* whereas the right clasper is quite different.

**Nomenclature.** Although many species remain to be examined, the results of the present study suggest at least a subgeneric division of *Cyrtorhinus*. *Mundulus* was originally described in a separate genus, *Periscopopus* Breddin, 1896, not Fitzinger, 1843, a name which proved to be preoccupied and was renamed *Breddiniessa* by Kirkaldy, 1903. The type of *Cyrtorhinus* is *caricis* Fallen, so the group of small species with bristle-like arolia and left genital clasper as in *riveti* comprise the nominotypical group. This leaves the *lividipennis* group without a name, and for this I propose the subgeneric name, **Reuteriessa**, n. subg., with characters as indicated in the key and with *Cyrtorhinus lividipennis* Reuter as its type.

***Cyrtorhinus vitiensis* Usinger, new species.**

Elongate-oval with predominately black head and pronotum and pale green hemelytra.

Head less than twice as wide across eyes as long, 38::22, the disk smooth and convex anteriorly between eyes, subflattened posteriorly in front of transverse carina. Eyes half as wide as narrowest part of interocular space. First antennal segment longer than vertex, 20::17; proportion of segments 17: 54: 50: 34. Rostrum reaching hind margin of mesosternum.

Pronotum sparsely clothed with decumbent hairs, over twice as broad across humeri as long, 44: 21, the anterior margin with a very narrow collar, lateral margins strongly flaring posteriorly, hind margin very shallowly concave.

Scutellum sparsely clothed with pale hairs.

Hemelytra exceeding tip of abdomen by over one-third their length, the costal margins slightly arcuate at middle but subparallel as compared with related species. Clavus, corium and cuneus with sparse hairs.

Claws with slender but distinct arolia which diverge at base and converge apically.

Color testaceous with a greenish tinge on clavus, corium and cuneus, the membrane subhyaline. Scutellum infuscate basally at middle and laterally, with narrow fuscous along lateral margins to apical third. Head and pronotum black, the vertex pale on either side along inner margins of eyes and extending mesad nearly to middle and along posterior carina. Pronotum pale at middle of hind margin and just within humeral

angles. First antennal black with narrowly pale base and apex, second antennal dark at basal third, pale brown apically and testaceous at apex, third and fourth segments lightly infuscate. Rostrum pale except for dark at extreme apex. Legs entirely pale.

Length 2.76 mm., width (hemelytra) 1.0 mm.

Holotype, male and one male paratype, Dobuilevu, Fiji, June 15, 1948, (B. A. O'Connor) (#1060), sweeping young rice. Received from W. J. HALL, Commonwealth Institute of Entomology, Coll. No. 11133.

*Vitiensis* resembles *lividipennis* very closely but in the latter the body form is relatively broader with more strongly arcuate costal margins, the head and pronotum are much paler and the hemelytra are usually more ochraceous than greenish.

### Key to Pacific Island Species of *Cyrtorhinus*

1. A pair of distinct diverging and then apically converging arolia between claws. Male with left genital clasper bilobed, the inner lobe slender and sinuous (Fig. 1). Head with a more or less distinct pattern formed by broad pale areas contiguous to inner margins of eyes on either side and sometimes meeting at center, always joined along posterior elevated margin before neck. Subgenus *Reuteriessa*, n. subg. Pacific and Orient ..... 2
- Two very fine, small, parallel setae between claws. Male with left genital clasper not as above. Head usually with a more or less distinct pale spot on either side of vertex contiguous with inner margins of eyes ..... 4
2. Length to tip of membrane three times the greatest width across hemelytra. Pale areas of upper surface and legs fulvous ..... *fulvus* Knight
- Length less than three times the greatest width across hemelytra. General color much paler, ochraceous to green ..... 3
3. Anterior lobe of pronotum black. Hemelytra light green. Sides of hemelytra subparallel ..... *vitiensis*, n. sp.
- Anterior lobe of pronotum ochraceous. Hemelytra ochraceous, sometimes tinged with green in fresh specimens. Body form suboval, the costal margins relatively strongly arcuate ..... *lividipennis* Reuter
4. Body form long and slender. Size large, the length 3.06 to 3.42 mm and width 1.05—1.12 mm. Hemelytra pale only laterally. Male with left genital clasper bilobed with one arm truncate and slightly notched at apex (Fig 3). Subgenus *Breddiniessa* Kirkaldy ..... *mundulus* (Breddin)
- Body form relatively short and oval. Size smaller, the length 1.87 to 2.35 mm and width 0.73 to 0.94 mm. Hemelytra often pale fuscous or even paler

throughout. Male with left genital clasper two-pronged, the prongs tapering apically (Fig. 5). Subgenus *Cyrtorhinus* Fieber ..... 5

5. Second antennal segment less than three times as long as first, 12: 5. Rostrum surpassing apices of middle coxae. Color entirely black except for a white spot on either side of vertex adjacent to eyes, extreme base and apex of first antennal segment and pallid but faintly infuscated hemelytra ..... *riveti* Cheesman

— Second antennal segment three times as long as first. Rostrum scarcely reaching apices of middle coxae. Color entirely pale yellowish testaceous except for dark brown eyes and a vague brown area at middle of head ..... *zwaluwenburgi* Usinger

#### References Cited

CARVALHO, J. C. M. 1945. Mirídios Neotropicais: XVII. Gêneros »Cyrtorhinus» Fieber e »Bothrophorella» Reuter. Rev. Brasil Biol., 5: 315—319, 5 figs.  
 KNIGHT, H. H. 1935. Insects of Samoa. Hemiptera. Miridae and Anthocoridae. Pt. II, fasc. 5, pp. 193—228, 9 figs.  
 REUTER, O. M. 1910. Neue Beiträge zur Phylogenie und Systematik der Miriden, nebst einleitenden Bemerkungen über die Phylogenie der Heteropteren-Familien. Acta Soc. Sci. Fennicae, Tom XXXVII, No. 3, pp. 1—172.  
 USINGER, R. L. 1939. Distribution and Host Relationships of *Cyrtorhinus*. Proc. Hawaiian Ent. Soc., 10: 271—273.  
 — 1944. Heteroptera of Canton Island. Proc. Hawaiian Ent. Soc., 12: 147—148, 1 fig.

#### Legend for Illustrations

Figures 1 and 2, *Cyrtorhinus vitiensis*, n. sp., left and right genital claspers of male; Figures 3 and 4, *Cyrtorhinus mundulus* Breddin, same; Figures 5 and 6, *Cyrtorhinus riveti* Cheesman, same.

Printed in August 1951.

