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A REVISION OF THE CELYPHIDAE (DIPTERA) FROM THE PHILIPPINE ISLANDS[1,2]

By JoAnn M. Tenorio[3]

Abstract: Ten new species are described, bringing the total number of Philippine species in this family to 26. Of these, 21 are known only from the Philippines. Five genera are represented, none endemic.

The family Celyphidae is composed of small to medium-sized beetle-like flies. The celyphids are distinguished by the large, often convex scutellum which is longer than the thorax and usually completely covering the abdomen; the weak development of head, thoracic, and scutellar bristles; the leaf-like development of the arista in most genera; and the absence in some genera of the crossvein separating the discal from the second basal cell. In the two genera, *Spaniocelyphus* Hendel and *Acelyphus* Malloch, the wing has the r-m crossvein very short and vein R_{2+3} abruptly curved anteriorly at the apex; in *Idiocelyphus* Malloch, *Hemiglobus* Frey, and *Celyphus* Dalman, the r-m crossvein is longer and vein R_{2+3} curves gently anteriorly at its apical end.

The genus *Idiocelyphus* deviates in some respects from the concept of the family as a whole, and its inclusion has been felt by some to weaken the celyphid claim to family distinction. *Idiocelyphus* has a much shorter scutellum, about as long as the thorax, and moderately developed head and thoracic bristles, as well as two pairs of strongly developed scutellar bristles. A species from Borneo described herein, *Idiocelyphus bifasciatus* n. sp., has the scutellum only about 2/3 as long as the thorax, and the head and especially the thoracic bristles are extremely well developed for the family. However, the development of the head and thoracic bristles even in *Idiocelyphus* does not approach the strong development of these bristles in most genera of Lauxaniidae, and *Idiocelyphus* does retain other definitive celyphid characters, such as the leaf-like arista, the absence of the crossvein separating the discal and second basal cell, and the unusual male genitalia, which as discussed below are typical of the family as a whole.

The first important work on the Philippine celyphids was that of Malloch (1929). Treating the celyphids as a subfamily of Sapromyzidae, Malloch described the genera *Idiocelyphus* and *Acelyphus* and a total of 5 new species from the Philippines. He also reported the presence of 2 other species, bringing the total known from this area to 7. In this same study, Malloch illustrated the male genitalia of 6 species, and although his illustrations were not made with great attention to detail, they probably represent the first attempt to use the male genitalia in separating species of Celyphidae.

Subsequently, Frey (1941) in his more comprehensive work on the family, erected the

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genus *Hemiglobus* and described altogether 4 species and 3 varieties from the Philippines. Frey evidently examined the male genitalia of several species and included descriptions of these genitalia for the species of *Spaniocelyphus*; illustrations were given for the male genitalia of only 2 species. Frey's work revealed that altogether 5 genera were present in the Philippines, 2 of which he believed to be endemic (*Idiocelyphus* and *Hemiglobus*), and 13 species and varieties, all but 2 of these endemic.

Vanschuytbroek (1967) in his notes on Celyphidae from the Philippines and SE Asia, described 2 new species and reported several other species from the Philippines. Although his work brought the known Philippine fauna to 18 species (including the varieties of Frey), some of Vanschuytbroek's reports were erroneous and one of his new species has been found by me to be a junior synonym. The genitalia illustrations of the 2 new species described therein were inadequate.

The treatment of the Philippine Celyphidae in this paper may be considered somewhat introductory to a more extensive study of the SE Asian fauna which I hope to undertake soon. It is highly probable that many of the species known at present only from the Philippines will be found to be widely distributed throughout Southeast Asia when more material from this region has been studied. In fact, in examining just a few species from Borneo which had been inadvertently incorporated with the Philippine material, I found a new species of *Idiocelyphus*, a genus previously reported only from the Philippines, and additional specimens from Borneo of *Spaniocelyphus palawanensis* Vanschuytbroek, a species heretofore found only on Palawan I. in the Philippines. It is also possible that synonymies for a few of the new species described in this paper may turn up after I have had the opportunity to do a more comprehensive study on the SE Asian material and on the type material of the older authors.

The present work brings the total number of Philippine species to 26, 10 of which are described here for the first time, and 21 of which are known only from the Philippines. Five genera are present; none of these are endemic. The genus *Hemiglobus* described by Frey (1941) as endemic has since been reported by Chen (1949) from Tonkin, North Viet Nam. The Philippine fauna contains most of the known species of *Hemiglobus*, *Idiocelyphus*, and *Acelyphus*, is less well represented by species of *Spaniocelyphus*, and has a notable paucity of species of *Celyphus*, only one species out of perhaps 30 described being found in the Philippines.

The male genitalia of the Celyphidae show extremely good specific characters. They have been found here to present the most reliable criterion for separation of species, and for the most part, this work is based on a study of male genital characters. Superficial characteristics, such as the punctation of the scutellum, can be used for specific determination in some genera, but they are not always reliable and must usually be used in conjunction with characters of the male genitalia.

The male genitalia are normally dominated by a pair of long, usually heavily sclerotized median processes which are closely associated with the aedeagal apodeme. Mr George Steyskal of the U. S. D. A., Washington, D. C. (personal communication) feels that these paired structures should be called gonapophyses, and this terminology has been adopted in this paper. The shape and size of the gonapophyses are very important in identifying species of this group. The horseshoe-shaped epandrium is usually articulated with surstyli which vary in size and shape and which are also very important in species

identification. The aedeagal apodeme is variable in length, often extremely flattened and expanded near the apex, but sometimes slender and rounded. The ejaculatory apodeme, sometimes very large, is useful for species differentiation in the genus *Idiocelyphus*, but less well differentiated in other genera; the ejaculatory duct runs up into the membrane between the gonapophyses. A detailed morphological study of the male genitalia has not been attempted here, but a familiarity with the general structure of the genitalia, as well as the terminology used in this paper, is necessary for understanding the keys presented and the descriptions of the various species where male genitalia characters are discussed. The terminology used in this paper is presented in the labeled male genitalia of *Idiocelyphus steyskali*, n. sp., in fig. 1.

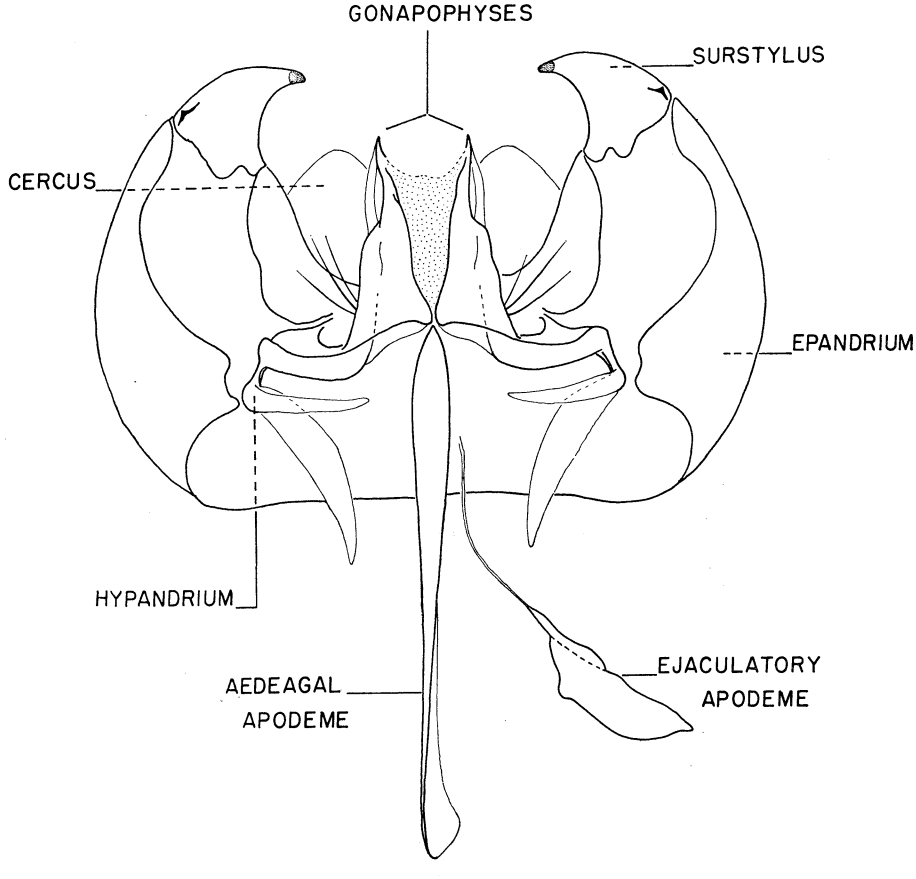

Fig. 1. ♂ genitalia of *Idiocelyphus steyskali*, n. sp., with terminology.

Association of females with their respective males has been attempted only through specific locality data or where good external species characters could be found. I have not found any characters to allow separation of females where species differentiation was based primarily on male genitalia.

Most of the material used in this study was obtained from the B. P. Bishop Museum,

Honolulu. Appreciation is expressed to that institution for loan of their valuable specimens. I would also like to express gratitude to the following persons and institutions for loan of types and additional celyphid material, for information on specimens in their collections, and for many helpful suggestions and information: Mr G. Steyskal, U. S. D. A. at the U. S. National Museum in Washington, D. C.; Dr L. Lyneborg, Universitetets Zoologische Museum, Copenhagen, Denmark; Dr W. Hackman, Zoological Museum of the University, Helsinki, Finland; Dr B. Cogan, British Museum (Nat. Hist.), London; and Mr P. J. van Helsdingen, Natural History Museum at Leiden, Netherlands.

I am especially grateful to Dr Mercedes Delfinado, University of Hawaii, for freely contributing her valuable advice and experience to the fabric of this work; and to Dr D. E. Hardy, University of Hawaii, for his ever-continuing help and guidance.

My gratitude is extended to Mrs Ora Mae Barber for typing the manuscript.

Key to genera of Philippine Celyphidae

1. Scutellum not longer than mesonotum, with 4 scutellar bristles. Mesonotum with relatively well developed humeral, acrostichal, and dorsocentral bristles. Hind tibia with a long, strong, terminal spur. Wings with discal and 2nd basal cells confluent ..... **Idiocelyphus** Malloch

   Scutellum longer than mesonotum, without scutellar bristles. Mesonotum with humeral, acrostichal, and dorsocentral bristles absent or represented only by fine hairs. Hind tibia without a terminal spur. 2

2 (1). Vertex margin sharp, not gently rounded over onto back of head. Scutellum longer than wide, only slightly broader than thorax 3

   Vertex margin rounded over onto back of head. Scutellum usually hemispherical, arched, about 2 × as broad as thorax. Discal and 2nd basal cells distinct, separated by a crossvein 4

3 (2). Discal and 2nd basal cells confluent. Apex of palpus broadly spatulate. Postvertical bristles distinct. Posterior abdomen very broad; abdominal tergites narrow laterally and rounded over onto sides, without dorsolateral sutures dividing the tergites into 3 portions ..... **Acelyphus** Malloch

   Discal and 2nd basal cells distinct, separated by a crossvein. Palpus cylindrical, not greatly broadened or spatulate at apex. Postvertical bristles represented only by minute hairs. Posterior abdomen narrow; abdominal tergites with dorsolateral sutures which divide each tergite into a dorsal and 2 lateral portions; tergites very broad laterally ..... **Spaniocelyphus** Hendel

4 (2). Arista broadened leaf-like at least to middle ..... **Celyphus** Dalman

   Arista thickened only on extreme base, predominantly pilose ..... **Hemiglobus** Frey

Genus **Acelyphus** Malloch

Acelyphus Mall., 1929, *Proc. U. S. Nat. Mus.* 74 (6): 4.

Type of genus: *A. politus* Malloch (Original designation).

This genus may be distinguished by the discal and 2nd basal cell being confluent, the head having well developed convergent postvertical bristles and a sharp vertex, the apex of the palpi broadly spatulate and blackened, and the abdomen broad with the tergites rounded over onto the lateral margins.

The species of *Acelyphus* can be distinguished by superficial as well as male genital characters. The texture of the scutellum is the most useful superficial taxonomic character and, although this is rather variable within a species, it is usually consistent enough to allow a rough separation of species without dissection of the genitalia. However, a few species are so similar externally that reference must be made to the male genitalia.

All the species of *Acelyphus* from the Philippines which I have examined have superficial commonalities which I will mention here. Color is variable and unreliable; species range in color from violet-testaceous to violet-blue. Legs yellow to yellow-brown with front tibia and tarsus often brown. Antennae brown, arista with the flattened portion about 2.5 × longer than the pilose portion. All species have shallow, sparsely scattered depressions over entire surface of scutellum, each depression bearing a fine hair; these piliferous depressions should be distinguished from the pitting or sculpturing which is not associated with fine hairs.

From a study of the male genitalia, it would appear that this genus is a very compact one. Most of the genital structures are extremely similar; there is little or no significant difference in the shape of the surstyli and their attachment to the epandrium, the aedeagal apodeme, or the ejaculatory apodeme. Specific differentiation, for the most part, occurs in the shape of the gonapophyses, especially in their apices. The gonapophyses in both lateral and ventral views have been figured.

Key to species of Acelyphus, based upon ♂♂

1. Scutellum smooth, not rugose or deeply pitted 2
   Scutellum rugose on at least part of its surface 5
2 (1). Mesonotum and usually scutellum with fine dense pilosity covering entire surfaces; if this pilosity is not evident on the scutellum, then the scutellum appears to be covered with closely placed tiny stipples 3
   Mesonotum and scutellum without microscopic pilosity; if mesonotum has pilosity, it is present only on extreme anterior portion 4
3 (2). Pilosity very dense and evident on scutellum. Genitalia with gonapophyses broadly rounded at apices (fig. 3f) ..... **stigmaticus**? (Hendel)
   Pilosity often not evident on scutellum, often appearing only as closely placed stipple-like dots. Genitalia with gonapophyses relatively pointed at apices (fig. 3e) ..... **repletus** Malloch
4 (2). Mesonotum usually with pilosity on anteromedian portion behind head, in addition to small patches of pilosity mesad of each humerus. ♂ genitalia with apices of gonapophyses bent dorsally into a large hook with tip curved downward (fig. 3c) ..... **politus** Malloch
   Mesonotum without pilosity on anteromedian portion. Genitalia with gonapophyses tapering finger-like to apex, pointed at apex and only very slightly curved dorsally, not hook-like (fig. 2c-d) ..... **digitatus**, n. sp.
5 (1). Scutellum wrinkled over entire surface, except for extreme apex. Gonapophyses as in fig. 2a ..... **boettcheri** Frey
   Scutellum pitted only on lateral edges, median longitudinal area and the apex smooth (♀ only of *viridicolor* Frey) 6
6 (5). Mesonotum deep purple-black, darker than scutellum. Gonapophyses narrowed but not tapered to tips, apices blunt and knob-like, not curved dorsally (fig. 2e) ..... **melanothorax**, n. sp.
   Mesonotum usually concolorous with, or lighter than, scutellum. Gonapophyses curved

dorsally, terminating in a short hook (fig. 3a) ..... **lateralis**, n. sp.

Acelyphus boettcheri Frey Fig. 2 a-b.

Acelyphus boettcheri Frey, 1941, *Notul. Ent.* **21**: 7.

I have examined the type ♂ and found it to fit Frey's original description:

Almost entirely testaceous, with violet reflection. The area between the antennal base and eye margin darkened, distinctly set apart from the testaceous face. Mesonotum smooth and shining, only the anterior areas mesad of humeri with patches of microscopic pilosity. Scutellum finely and irregularly wrinkled over entire surface except for extreme apex and with the usual piliferous depressions.

♂ *Genitalia* (Type specimen): Surstyli as in other species, about as broad at widest portion as long, cupped on inner margins, broadly rounded at apices. Gonapophyses in ventral view narrowed and abruptly bent inward on lateral margin at apical 1/4 into a short finger-like process; finger less than 1/4 the length of gonapophysis measured from inner base; lateral margin before the process produced into a sharp corner (fig. 2a); in lateral view, dorsolateral margin of each gonapophysis notched at about middle (fig. 2b). Membrane arising before bent portion at about apical 1/4.

Type Data: Type ♂ in Helsinki Museum, Finland. (♂ genitalia in plastic microvial on pin with specimen). Mindanao, "Philipp., Dauralan, 11.IV.1915". Published type locality reads "N-Mindanao: Dansalan" (Frey 1941: 7).

DISTRIBUTION: Mindanao.

Acelyphus digitatus Tenorio, new species Fig. 2 c-d.

This species is superficially identical to *A. politus* Malloch in having a completely smooth scutellum and a brown spot present on the face between the antennal base and eye margin. This species differs from *politus* by lacking the anteromedian patch of pilosity on the mesonotum and having distinct male genitalia.

♂ *genitalia*: Surstyli as in *politus*. Gonapophyses in ventral view narrowed at apical 1/3 and tapering finger-like to apex, apex slightly pointed, the finger-like process about 1/3 as long as gonapophyses (measured from inner bases of gonapophyses); lateral margins each with a tiny tooth at apical 1/3 (fig. 2c). In lateral view, apices of gonapophyses only very slightly curved dorsally, the underside of curved portion much shorter than length of spine-like process developed on inner dorsal margin of gonapophyses (fig. 2d). Membrane arising just before tapered portion at apical 1/3.

Length (♂): Body, 4.4 mm; wings, 3.4 mm.

Type data: Holotype ♂ (BISHOP 8011), P. I., Mindanao, Agusa n, S. Francisco, 12. XI. 1959, L. W. Quate.

DISTRIBUTION: Mindanao.

Acelyphus lateralis Tenorio, new species Fig. 3a.

The possibility exists that either *A. lateralis* n. sp. or *A. melanothorax* n. sp. is conspecific

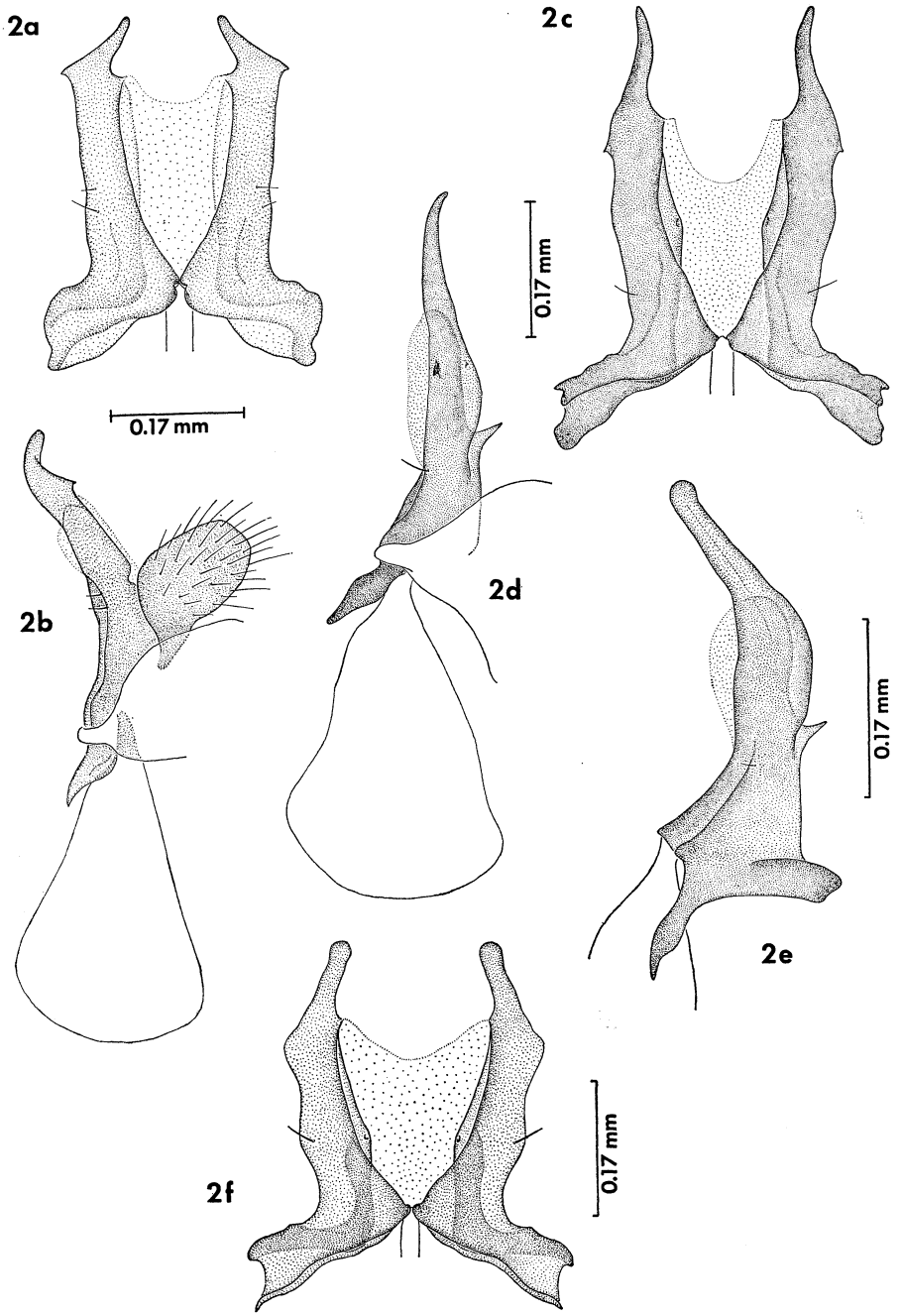

Fig. 2. *Acelyphus boettcheri* Frey, type ♂: a, gonapophyses, ventral view; b, gonapophysis, surstylus, and aedeagal apodeme, lateral view. *A. digitatus*, n. sp.: c, gonapophyses, ventral view; d, gonapophysis and aedeagal apodeme, lateral view. *A. melanothorax*, n. sp.: e, gonapophysis, lateral view; f, gonapophyses, ventral view.

with *A. viridicolor* Frey. Since *A. viridicolor* is based on a unique ♀, genitalia comparisons cannot be made to ascertain which, if either, of these 2 species belongs to *A. viridicolor.*

On the basis of ♂ genitalia, this species is very closely related to *A. politus* Malloch. Superficially, however, it differs from *A. politus* by the absence of the patch of fine pilosity at the anteromedian portion of the thorax behind the head and in the presence of coarse to fine pitting on the scutellum extending from the base down the lateral edges to about apical 1/3 or 1/4, apex and entire median longitudinal area are without this pitting. The piliferous depressions found in *A politus* are also present over the entire surface of the scutellum.

A. lateralis is also very similar to *A. melanothorax* n. sp. in the sculpturing of the scutellum but differs in the lighter thoracic color and the distinct genitalia.

Mesonotum of this species is smooth. Brown spot present between each antennal base and eye margin.

♂ *genitalia.* Surstyli as in other species of *Acelyphus.* Gonapophyses in lateral view similar to *A. politus* and bearing a similar spine-like development on each inner dorsal margin, but the apices of gonapophyses terminate in a smaller hook, more, rounded at apex, not curved downward, and the lower part of hook about equal to the length of the spine-like process (fig. 3a); in ventral view, preapices of gonapophyses before the hooked portion not twisted. Membrane arising at apical 1/3.

♀. Fitting the general characteristics of the ♂ except for genital characters.

Length (♂ and ♀): Body, 3.8-4.6 mm; wings, 3.3-3.8 mm.

Type data: Holotype ♂ (BISHOP 8012), Misamis Or., Minalwang, 1050 m, 24. III.-4. IV. 1961, H. Torrevillas. 1 paratype ♂ (postabdomen lost), Misamis Or., Mt. Balatukan, 1000-2000 m, 27-30. IV. 1960, H. Torrevillas. Allotype ♀ (BISHOP), 4 paratype ♀♀, and 1 paratype ♂, Misamis Or., Balason, 4-5. IV. 1960, H. Torrevillas. Types and paratypes in Bishop Museum.

DISTRIBUTION: Mindanao.

Acelyphus melanothorax Tenorio, new species Fig. 2 e-f.

This species, as well as *A. lateralis*, n. sp., is almost identical superficially to *A. viridicolor* Frey. Since *A. viridicolor* was described from a unique ♀, ♂ genitalia comparisons to ascertain whether this species is conspecific with *A. viridicolor* are not possible.

Similar to *A. lateralis* by lacking anteromedian pilosity on dorsum of thorax and by having lateral punctations on the scutellum extending to apical 1/3 or 1/4, but not occurring at apex or longitudinal median portion. Differing from *A. lateralis* in the scutellar punctations being generally finer and sparser and in the much darker coloration of the thorax, the dorsum being a shining purplish-black and definitely darker than the scutellum. The genitalia are also distinct. Dorsum of the thorax is smooth. Area between antennal base and eye margin slightly darkened on dorsal portion.

♂ *genitalia.* Surstyli as in other species. Gonapophyses in ventral view conspicuously arcuate on inner ventral margins, bent inward and narrowed on apical 1/3; apices blunt and knob-like (fig. 2f). In lateral view, apices of gonapophyses not curved dorsally, apical 1/3 extending anteroventrally; a spine-like process developed on inner dorsal margin (fig. 2e). Membrane arising at apical 1/3 of inner margin.

♀. Like the ♂ except for genital characters.

Length (♂ and ♀): Body, 3.5 mm; wings, 3.0 mm.

Type data: Holotype ♂ (BISHOP 8013), allotype ♀ (BISHOP), 2 paratype ♂♂, and 1 paratype ♀, P. I., Negros Or., L. Balinsasayao, 1–7. X. 1959, L. W. Quate & C. M. Yoshimoto. 1 paratype ♀, Negros Occ., Cadiz, 20. I. 1930, W. D. Pierce. Types and 2 paratype ♀♀ in Bishop Museum, 2 paratypes in U. S. N. M.

DISTRIBUTION: Negros.

Acelyphus politus Malloch Fig. 3 b-c.

Acelyphus politus Malloch, 1929, *Proc. U. S. Nat. Mus.* **74** (6): 4.

I have examined 2 ♂ paratypes from Luzon and found them to have the following characteristics:

Color generally deep metallic purplish-violet. Head with a definite brown spot of matt finish usually present in the area between antennal base and eye margin; face testaceous. Thorax smooth, with a patch of fine pilosity at middle of anterior margin just behind head; a patch of pilosity also present mesad of each humerus. Scutellum deeper violet, smooth and without punctures, but with sparsely scattered piliferous depressions normally found in other species.

♂ *genitalia.* Surstyli as in other species, about as broad at widest portion as long, cupped on inner margins, broadly rounded at apices. Gonapophyses in ventral view slender, preapices somewhat twisted, curving dorsally into a pointed hook with tip curved downward (fig. 3b). In lateral view, a small spine-like process present at about middle of inner dorsal margin of each gonapophysis, the spine shorter than lower length of apical hook (fig. 3c). Membrane arising at apical 1/3 of gonapophyses.

Type data: Type ♂ (USNM), P. I., Luzon, Mount Maquiling, C. F. Baker. Allotype ♀ and 14 paratypes also in U. S. N. M. A large series from Luzon present in the Bishop Museum,

DISTRIBUTION: Luzon, Mindanao (Frey, 1941).

Acelyphus repletus Malloch Fig. 3 d-e.

Acelyphus repletus Mall., 1929, *Proc. U. S. Nat. Mus.* **74** (6): 5.

Acelyphus lyneborgi Vanschuytbroek, 1967, *Ent. Medd.* **35**: 289. **New synonymy.**

This species was first described by Malloch (1929: 5) as having dense erect microscopic pile on the mesonotum and regular, close, stipple-like punctures on the scutellum. Malloch indicated that there was no indication of pile on the scutellum, and for this reason, separated *A. repletus* from the closely related *A. stigmaticus* (Hendel) which has the scutellum, as well as the entire mesonotum, covered with microscopic pile.

Through a study of specimens which I believe represent *A. repletus*, I have found that this species has very tiny, closely placed microtrichia covering the entire mesonotum and scutellum; the microtrichia are usually more evident on the mesonotum and are often so tiny on the scutellum that only the bases of the hairs are evident as the stipple-like dots described by Malloch. In a few specimens, the microtrichia are clearly evident even on the scutellum. Thus, the superficial distinction made by Malloch between *A. repletus* and *A. stigmaticus* seems to break down. However, 3 ♂ specimens which I have seen

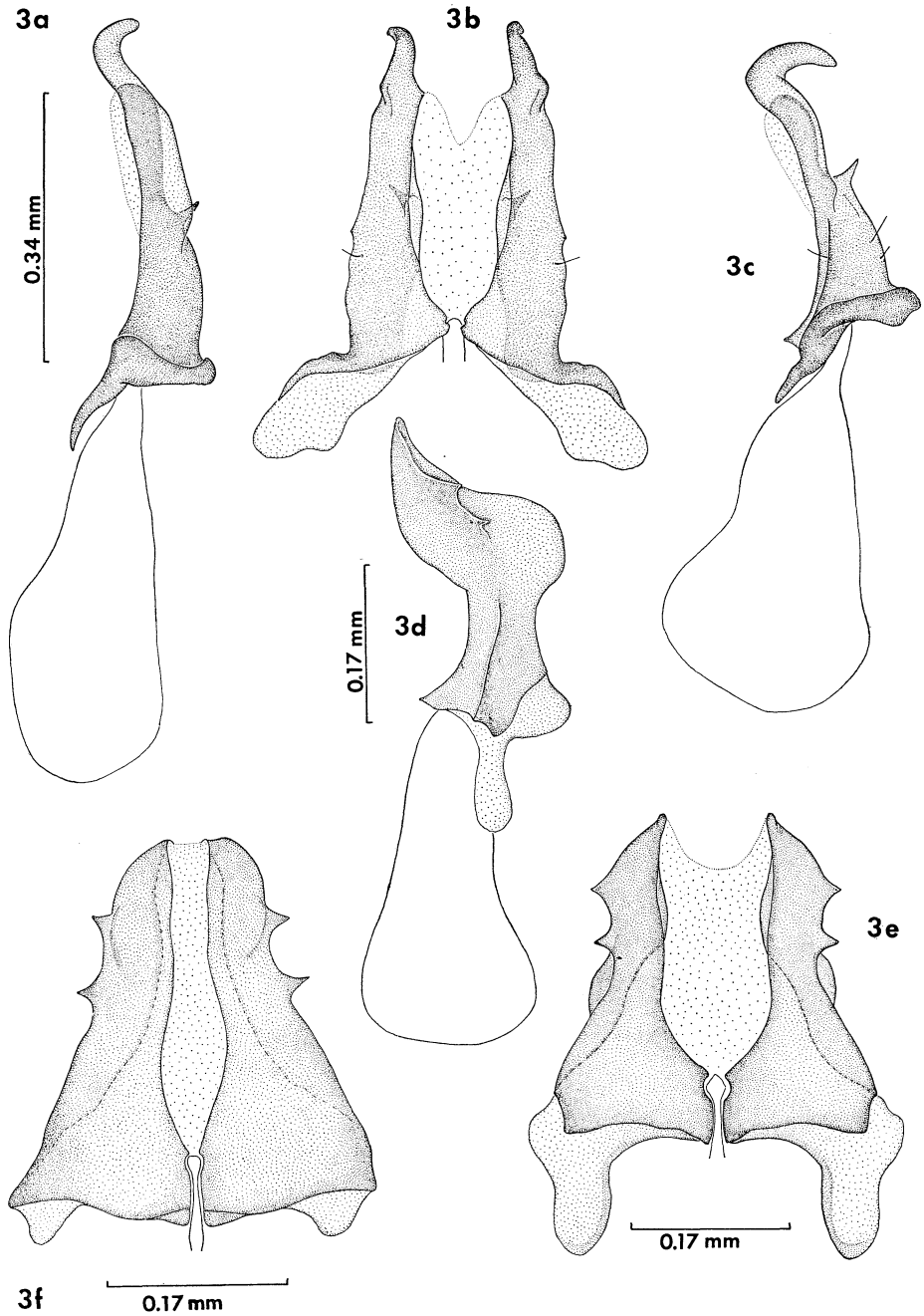

Fig. 3. *Acelyphus lateralis*, n. sp.: a, gonapophysis and aedeagal apodeme, lateral view. *A. politus* Malloch: b, gonapophyses, ventral view; c, gonapophysis and aedeagal apodeme, lateral view. *A. repletus* Malloch: d, gonapophysis and aedeagal apodeme, lateral view; e, gonapophyses, ventral view. *A. stigmaticus*? (Hendel): f, gonapophyses, ventral view.

and which have the pile very evident on both the mesonotum and scutellum, have distinct ♂ genitalia. These specimens may represent *A. stigmaticus*. I have not seen the types of either of these species, but I hope to examine them and clarify the status of *A. repletus* and *A. stigmaticus* in my forthcoming study of the Southeast Asian fauna.

On the basis of ♂ genitalia comparisons, *A. repletus* is very closely allied with the following species which may be *A. stigmaticus*. Differing from all other species of *Acelyphus* from the Philippines, these 2 species have in common the fact that the membrane between the gonapophyses of the ♂ genitalia arise from their apices, and the inner bases of the gonapophyses are enlarged so that the aedeagal apodeme attaches much higher up on the inner margins (fig. 3e). In other species of *Acelyphus*, the membrane arises at about apical 1/3 of inner margins of thə gonapophyses and the aedeagal apodeme attaches almost at the extreme inner bases of the gonapophyses.

♂ *genitalia.* Gonapophyses in ventral view relatively stout, lateral margins with 2 strong teeth developed, 1 just past middle, the other at about apical 1/4; gonapophyses narrowed basad of 1st tooth and apices of gonapophyses narrowed to a slight point (fig. 3e). In lateral view, the gonapophyses are expanded on dorsal surface in the form of a heel and extend anteroventrally, terminating in a slight point (fig. 3d).

Type data: Type ♀ (USNM), Sumatra, Wai Lima, 1912, Karny & Siebers.

Holotype of *Acelyphus lyneborgi*, declared here as synonym of *repletus*, was incorrectly labeled "*Spaniocelyphus lyneborgi.*"

DISTRIBUTION: Palawan, Balsahah River, Iwahig, 18. IV. 1968, D. E. Hardy & M. D. Delfinado, 4 ♂♂ and 2 ♀♀; Palawan, Mantalingajan Range, Pingisan, 11. IV. 1962, H. Holtmann, 1 ♂; Palawan, Eran Pt., 8 km SW of Tarumpitao Pt., 31. XII. 59–4. I. 60, L. W. Quate; Mindanao, Bukidnon, 15 km NW of Valencia, 22–23. IV. 1968, M. D. Delfinado. Specimens from Palawan and Balabac Is. in Universitetets Zoological Museum, Copenhagen. Specimens reported as *A. repletus* by Vanschuytbroek (1967: 290) from Palawan are *Spaniocelyphus palawanensis* Vanschuytbroek. Sumatra; Singapore.

Acelyphus stigmaticus? (Hendel)

Spaniocelyphus stigmaticus Hendel, 1914, *Supplta. Ent.* **1** (3): 93.
Acelyphus stigmaticus: Malloch, 1929, *Proc. U. S. Nat. Mus.* **74**: 5.

Malloch (1929: 4) states that *A. stigmaticus* has dense erect microscopic pile covering the entire disc of the scutellum and mesonotum. However, these characters are not evident from Hendel's original description (1914: 93–94) in which he states "Es [the scutellum] zeigt beinahe keine Skulptur, namentlich oben··· Der thoraxrucken is ganz glatt poliert." Malloch does not say that he saw the type. Malloch's illustration (1929: 89, fig. 5 and 6) of what he considers to be an *A. stigmaticus* genitalia appears to be the genitalia of a species of *Spaniocelyphus*.

The species described here fits Malloch's description of having fine pile covering the entire mesonotum and scutellum, but the genitalia of this species does not correspond with Malloch's previously mentioned genitalia illustration.

This species is very close to *A. repletus* in the structure of the ♂ genitalia. Like that of *A. repletus*, the genitalia of *A. stigmaticus?* differs from the genitalia of other *Acelyphus*

by having the membrane arising from the apices of the gonapophyses; also the aedeagal apodeme attaches much higher up on the inner margins of the gonapophyses. The pile on the scutellum of this species is much more evident than in *A. repletus*.

The 3 specimens I have seen are teneral, light testaceous-violet in color. The entire dorsal surface of the mesonotum and scutellum is densely covered with microscopic pile, in addition to the piliferous depressions present on the scutellum. Face between base of antennae and eye margins with slight darkening.

♂ *genitalia*. As in *A. repletus*, the lateral margins of the gonapophyses each with 2 stout teeth developed; this species with lateral margin of gonapophyses past apical tooth rounded rather than tapering to apex, the apex of each gonapophysis rounded rather than pointed (fig. 3f). Lateral view of gonapophyses as in *A. repletus* (fig. 3d).

Type data: I have not seen the type of *A. stigmaticus* which was described from Formosa, Tappani.

Distribution: Palawan, mouth of Malabangan Riv., 25. V. 1958, H. E. Milliron, 1 ♂; Palawan, Tarumpitao Pt., 27. V. 1958, Milliron, 1 ♂. 1 additional ♂ specimen from Palawan, Mantalingajan in Copenhagen Museum.

Acelyphus viridicolor Frey, NEW STATUS

Acelyphus politus var. *viridicolor* Frey, 1941, *Notul. Ent.* **21**: 7.

I have seen the unique ♀ of this species. It was described as a variety of *A. politus* Malloch. However, an examination of the ♀, which is teneral, reveals that the scutellum, unlike that of *A. politus* which has the scutellum completely smooth, has lateral punctations extending to about apical 1/3, the median longitudinal portion and apex of the scutellum being smooth. This scutellar characteristic is the same as that of *A. lateralis* n. sp. and *A. melanothorax* n. sp. and it is very possible that one of these new species belongs to *A. viridicolor*. But since *A. lateralis* and *A. melanothorax* are distinguished essentially by color and male genitalia characters, and since *A. viridicolor* is based on a teneral ♀, it is impossible to ascertain which, if either, of the two new species is conspecific with *A. viridicolor*.

♀ (Type): Testaceous-violet with a definite green sheen. Head as in other species; antennae missing. Thorax concolorous with the scutellum, without anteromedian pilosity on the mesonotum. Scutellum as described above, in addition to having the usual scattered piliferous depressions. Legs yellowish brown.

Length: Body, 3.8 mm; wings, 3.0 mm.

Type data: Holotype ♀ (Zoological Museum of the University, Helsinki). "Kalambuuge, Philipp., 19. I. 15." (G. Boettcher Collection). Correct locality should be Kolambugan, Philipp.

DISTRIBUTION: Mindanao.

Genus **Celyphus** Dalman

Celyphus Dalman, 1818, *K. Svenska Vetensk. Acad. Handl.* 39 (1): 72-73; 1823, *Analecta Ent.*, p. 32-33.

Type of genus: *Celyphus obtectus* Dalman (monotypic designation).

Until 1859, all species of the Celyphidae were placed in the genus *Celyphus* Dalman. Beginning with the description of *Paracelyphus* Bigot (1859), subsequently with the description of *Spaniocelyphus* Hendel (1914) and continuing with the addition of *Idiocelyphus* Malloch (1929), *Acelyphus* Malloch (1929), and later *Hemiglobus* Frey (1941), species began to be removed from the original genus *Celyphus* and placed in new genera.

The genus *Celyphus* is distinguished by having the discal and 2nd basal cells distinct, the vertex rounded, postvertical bristles absent or reduced, and the arista thickened to at least 1/2 its length. *Celyphus* is closely related to the genus *Hemiglobus* Frey, these genera being superficially distinguished by *Celyphus* having the arista thickened to at least the middle and *Hemiglobus* having the arista thickened only on the extreme base. However, while the ♂ genitalia in species of *Hemiglobus* are apparently undifferentiated, the ♂ genitalia which I have dissected in species of *Celyphus* seem to have good specific characters and are structurally different from the genitalia of *Hemiglobus*.

There are perhaps about 20 known species in this genus, one or possibly two of which are found in the Philippines. On the basis of the literature, many of these species are extremely similar and have largely been separated through superficial differences, such as the absence or presence of a spot on the face, the punctation of the scutellum, and often by coloration. Few genitalia studies are evident in the literature for this genus.

Celyphus puncticeps Malloch Fig. 4 a-c.

Celyphus puncticeps Malloch, 1929, *Proc. U. S. Nat. Mus.* **74** (6): 8.—Vanschuytbroek, 1967, *Ent. Meddr.* **35**: 285 (as *punctipes*, in error).

I have seen 3 paratypes of this species, 2 from Puerto Princesa, Palawan, and 1 from Singapore.

Frons with both inner and outer vertical bristles present, a distinct brown spot present between antennal bases and eye margins, the thickened portion of the arista equal to slightly more than 1/3 length of arista (thickened part not as wide as 3rd antennal segment), and scutellum finely crinkled on about the basal 1/2; rugosities most pronouced at basolateral portions at apical 1/3 to 1/4, the apical 1/2 of scutellum smooth except for piliferous depressions which sparsely cover entire scutellum. The 2 paratypes from Palawan are testaceous, tinged with violet; the paratype from Singapore testaceous with a distinct greenish tinge.

♂ *genitalia*. As in fig. 4a-c.

Type data: Type ♂ (USNM). Five paratypes: 2 from Singapore, 1 from Penang, and 2 from Palawan also present in U. S. N. M.

Type locality: Singapore, Straits Settlements.

DISTRIBUTION: Palawan; Malaya, Singapore, Siam, Sumatra.

Celyphus bisetosus Malloch

Celyphus bisetosus Malloch, 1929, *Proc. U.S. Nat. Mus.* **74** (6): 8.

The occurrence of this species in the Philippines was reported by Vanschuytbroek (1967: 285). I have seen the specimen from Palawan determined by Vanschuytbroek to be *C. bisetosus*, on the basis of which he made this report. It was apparently a misidentifica-

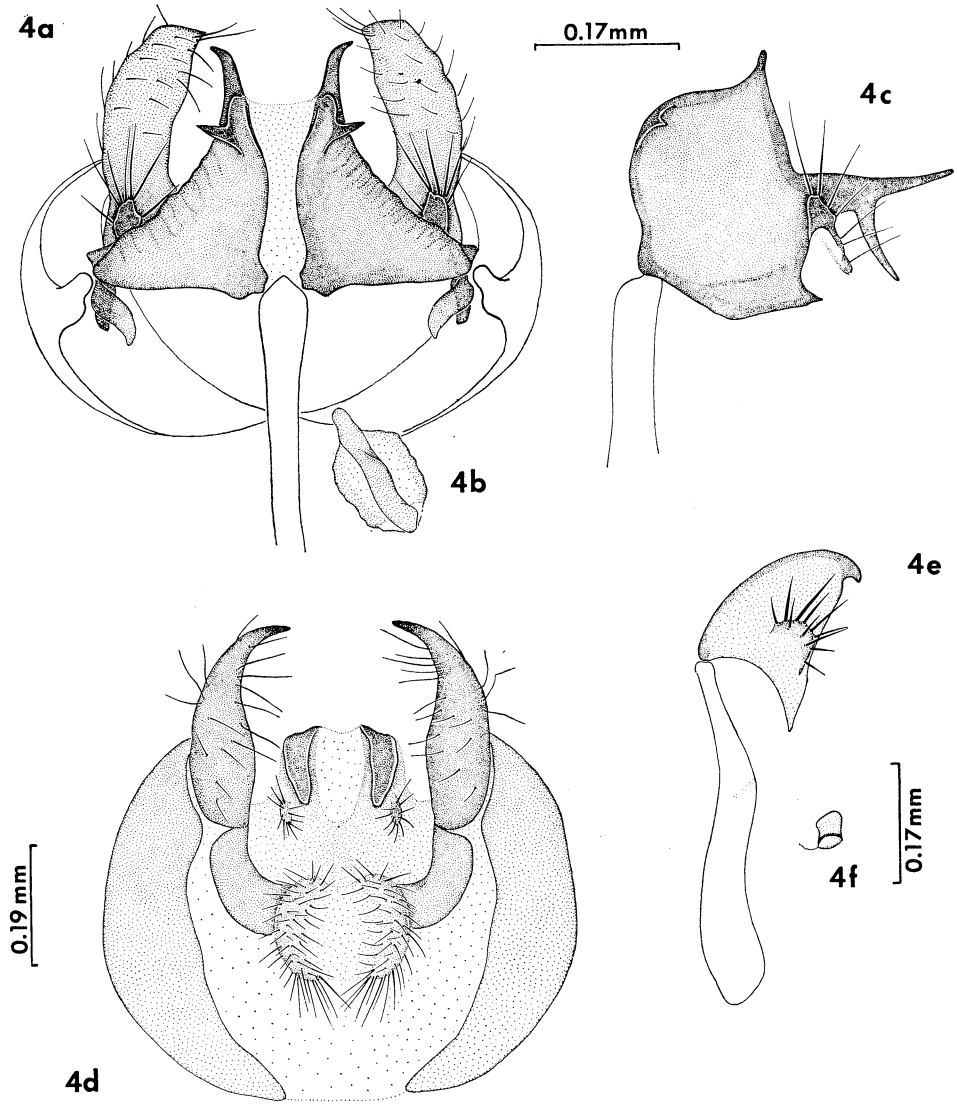

Fig. 4. *Celyphus puncticeps* Malloch: a, ♂ genitalia, ventral view; b, ejaculatory apodeme; c, gonapophysis, ventrolateral view. *Hemiglobus testaceus* (Malloch): d, ♂ genitalia, dorsal view; e, gonapophysis and aedeagal apodeme, lateral view; f, ejaculatory apodeme.

tion. It is a ♀ specimen of *C. puncticeps* Malloch.

Celyphus obtectus Dalman

Celyphus obtectus Dalman, 1818, *K. Svenska Vetensk. Acad. Handl.* **39** (1): 73-75; 1923, *Analecta Ent.*, pp. 32-33.

This species which occurs widely in the Oriental Region was reported by Walker (1860: 147) to be represented in the Philippines by specimens present in the British Museum. According to Mr Brian Cogan of the British Museum (personal communication), the specimens presumed to be there are not in that museum and may have been lost.

Until this species appears in future Philippine collections, it may be presumed that the report of *C. obtectus* from the Philippines was erroneous.

Genus **Hemiglobus** Frey

Hemiglobus Frey, 1941, *Notul. Ent.* **21**: 13.

Type of genus: *Paracelyphus testaceous* Malloch (Original designation).

The genus *Hemiglobus* Frey has previously been described as endemic to the Philippines. However, Chen (1949: 5) described a new species of *Hemiglobus* from Hoa-Binh, Tonkin (N. Viet Nam). From Chen's rather complete description of *H. violaceus* Chen, it appears that this is indeed a legitimate species of *Hemiglobus*.

This genus differs from its close relative *Celyphus* Dalman in the almost completely setaceous arista, broadened only on the extreme base, as well as from *Paracelyphus* Bigot in the absence of a deep, transverse furrow on each side at the base of the scutellum. All of the described species of *Hemiglobus* are testaceous or violaceus in color with a huge globular scutellum almost as wide as long, the vertex rounded and without postvertical bristles, and the frons very short (less than 1/2 the length of the face measured from ocelli to base of antennae).

While the species of *Hemiglobus* have quite good external characters for species designations, these mostly in the sculpturing of the scutellum, the male genitalia are practically indistinguishable. I have studied the male genitalia of *H. testaceus* (Malloch), *H. pellucidus* Frey, and *H. lacunosus* Frey, and they are identical; yet the scutellar sculpturing of these 3 species is quite definitive. Thus, in *Hemiglobus*, we have a case of external differentiation, but little or no differentiation in the male genital characters.

The genitalia of *H. testaceus* (Malloch) have been illustrated as representative of the genital characters of the genus (fig. 4d-f).

Key to species of Hemiglobus Frey

1. Scutellum with a more or less definite transverse brownish band across basal 1/5, blending in with coloration of the mesonotum. Scutellum completely and irregularly wrinkled, wrinkling not forming any definite or patterned depressed areas .... **testaceus** Malloch

   Scutellum without such a transverse band across base of scutellum. Scutellum smooth or with very large flat indentations, or with only shoulder regions of scutellum irregularly wrinkled 2

2 (1). Scutellum completely smooth, covered with very fine short pubescence ..... **pellucidus** Frey

Scutellum not completely smooth, not covered with fine pubescence 3

3 (2). Scutellum largely smooth, only in shoulder region sparsely and irregularly wrinkled; pale reddish yellow with a strong green-violet reflection ..... **resplendens** Frey

Scutellum completely covered with large, flat, crater-like pits, each pit with a microscopic hair 4

4 (3). Face between base of antenna and eye margin with a small black spot ..... **lacunosus** Frey

Face between base of antenna and eye margin without a spot ..... **lacunosus unicolor** Frey

Hemiglobus lacunosus Frey

Hemiglobus lacunosus Frey, 1941, *Notul. Ent.* **21**: 15.

Hemiglobus testaceus: 1929, *Proc. U. S. Nat. Mus.* **74** (6): 7 (2 paratypes, 1 ♂, 1 ♀, only—USNM No. 41087).

I have examined the type of this species. Entirely testaceus in color, this species is distinguished by the comparatively large pits on the scutellum, compositely giving a reticulated appearance, the pits flattened at the bottom and crater-like; each pit contains a piliferous depression. The mesonotum has only very slight indications of pitting. A brown spot is present between antennal bases and eye margins.

Type data: Type ♂ (unique; in Zool. Mus. Univ. Helsinki), Siargao Island "Philipp., Dapa Okt-Nov. 1916" G. Boettcher, collection. ♂ genitalia in plastic microvial on same pin as specimen. (2 paratypes of *testaceus* actually specimens of *lacunosus*).

DISTRIBUTION: Siargao Island; Mindanao.

Hemiglobus lacunosus var. **unicolor** Frey

Hemiglobus lacunosus var. *unicolor* Frey, 1941, *Notul. Ent.* **21**: 15.

The type of this subspecies which I have on hand is based on a ♀. It is virtually identical to *H. lacunosus* except in the absence of the orbitoantennal spot and in its obviously larger size, neither character of which I judge to be significant to warrant subspecies designation without a large series. The violet reflection which Frey states to be present in *H. lacunosus* but lacking in var. *unicolor* is not evident in the preserved type specimens. On the basis of the above observations and the fact that the species is based on a unique ♀, the validity of *H. lacunosus unicolor* as a legitimate subspecies must remain in doubt.

Type data: Type ♀ (unique; in Helsinki), Panaon Is. "Philipp., Panave, 9. 12. 1915" G. Boettcher Collection.

DISTRIBUTION: Panaon Island.

Hemiglobus pellucidus Frey

Hemiglobus pellucidus Frey, 1941, *Notul. Ent.* **21**: 14.

The type specimen of this species which I have on hand is teneral and thus very weakly sclerotized; this probably explains why Frey described the thorax and scutellum as being "durchsichtig" [transparent]. The type fits the description given by Frey and is distinguished from all other *Hemiglobus* by lacking any pitting or piliferous depressions on the scutellum but having instead minute hairs completely covering the scutellum and extending up over at least the apicomedial portion of the mesonotum. A small dark brown orbito-antennal spot is present which, in the type, extends into a thin brown line along the ptilinial suture above the antennal bases.

The aedeagal apodeme is very short in this specimen, a condition probably correlated with tenerality.

Type data: Type ♂ (in Helsinki), Siargao Is. "Philipp. Cabuntug, 18. 9. 1916" G. Boettcher collection. ♂ genitalia in plastic microvial on pin with specimen. One paratype ♂ also in Helsinki.

DISTRIBUTION: Siargao Island.

Hemiglobus resplendens Frey

Hemiglobus resplendens Frey, 1941, *Notul. Ent.* **21**: 14.

I have not seen the type of this species, nor do I have specimens of it in my collection.

According to Frey, this species is shiny reddish yellow, with pink or green-violet reflection. A small brown spot is present between the antennal bases and the eye margins. Scutellum on the base with scattered, irregular, large pitting, otherwise smooth except for tiny pits from which arise fine bristles. These are probably the piliferous depressions that are found in many other species.

Type data: Type ♀ (?; in Helsinki), N-Mindoro, San Theodoro. 1. 1916. G. Boettcher collection. One ♂ and one ♀ paratype also in Helsinki Museum.

DISTRIBUTION: Mindoro.

Hemiglobus testaceus (Malloch) Fig. 4 d-f.

Paracelyphus testaceus Malloch, 1929, *Proc. U. S. Nat. Mus.* **74** (6): 7.
Hemiglobus testaceus: Frey, 1941, *Notul. Ent.* **21**: 15.

The type series of this species in the U. S. N. M. consists of a mixture of species. Two paratype ♂♂ which I have seen, both from Mindanao, are identical to the type of *H. lacunosus* Frey. According to Mr George Steyskal, who has supplied me with further information on the type and type series, there are apparently 3 different species in the remaining specimens of the series in the museum.

Based on Mr. Steyskal's description, the type does not have an orbito-antennal spot; the scutellum is irregularly rugose rather than reticulate and has a rather faint, medially interrupted, subbasal brownish scutellar fascia; the mesonotum, in the triangular

area before the scutellar base, is lightly rugose and the lateral sections mesad of and posterior to the humeri are somewhat dull with fine sculpture.

I have on hand a series of specimens which agree with the above description; the sculpturing of the scutellum is in the form of coarse, irregular pitting, the pitting not conforming to any pattern; a transverse brown band is present across the basal 1/5 of the scutellum, almost concolorous with the mesonotum, scutellum also with sparse, but regularly placed piliferous depressions. The mesonotum has shallow pitting on the longitudinal median portion. The orbito-antennal spots are absent.

Type data: Luzon, Mt. Makiling (Baker). 2 paratypes (Mindanao; Davao ♀ ?, and Tangcolan, Bukidnon ♂) misidentified as *testaceus* are *H. lacunosus* Frey. B. P. Bishop Museum with a series of specimens from the following localities: Luzon, Montalban Dam, 16. III. 1960, sweeping, T. C. Maa; Luzon, Camarines Sur, Mt. Iriga, 8. IV. 1962, H. M. Torrevillas.

DISTRIBUTION: Luzon. The literature includes records of this species from several other islands, but these may have been misidentifications.

Genus **Idiocelyphus** Malloch

Idiocelyphus Malloch, 1929, *Proc. U. S. Nat. Mus.* **74** (6): 5.

Type of genus: *I. bakeri* Malloch (Original designation)

This genus has been considered to be endemic to the Philippines. However, I now have on hand 1 new species, *I. bifasciatus*, from Borneo, which shows most of the generic characters of *Idiocelyphus* but which differs in several ways from the Philippine forms of the genus. Lacking sufficient material to make a close study, I have, for the present, placed this Borneo species under *Idiocelyphus*. Additional material may later provide evidence that warrants a distinct genus or at least subgenus ranking.

This genus emphasizes the close relationship of the celyphids to the family Lauxaniidae. The smaller size of the scutellum and the presence of thoracic and scutellar bristles, which serve to separate *Idiocelyphus* from the other celyphid genera, show an approach to some of the Lauxaniidae genera. This is most pronounced in *I. bifasciatus* from Borneo in which the head and thoracic bristles are the best developed of any I have seen in the family.

Idiocelyphus may be separated from the other genera in the family by the presence of numerous bristles on the mesonotum and 2 pairs of scutellar bristles, in the shorter scutellum which is not longer than the thorax, and in the presence of a long terminal spur on each hind tibia.

The Philippine species thus far studied are inseparable except on the basis of the ♂ genital structures. These have been found to be so distinct and so uniform within the species for which I have series, that they are obviously specific characters.

Heretofore, only 1 species has been described in this genus, *Idiocelyphus bakeri* Malloch. From my recent study, I have been able to delineate 6 additional Philippine species. All of these are externally almost identical to *I. bakeri* and to each other, but can easily be separated on the basis of their very different ♂ genitalia. On the basis of ♂ genitalia, this genus would appear to be exceedingly heterogenous. The gonapophyses, the surstyli, the ejaculatory apodeme, the aedeagal apodeme, and sometimes the shape of the epand-

rium can, by their size and shape, be used almost independently of each other to assign species designations. Superficial differences which I have been able to find in the Philippine species are extremely subtle and tend to intergrade given a large series. Therefore, because of their extreme variability, any superficial differences presented in the description below should not be considered diagnostic. The ♂ genitalia should be examined as the most reliable specific criterion. Once the genitalia of a species has been examined and the major characters noted, one can then usually place other members of the same species merely by observation of a dry mounted ♂ specimen, as the gonapophyses and surstyli are usually projecting from the posteroventral end of the abdomen. Characters which are common to all the Philippine forms, with the exceptions noted under the separate species, are as follows:

Shining brownish testaceus to deep purple in color. Face usually testaceus, frons darker with a purple tinge; clypeus bluish violet to blue-black, projecting at an angle to the face; arista brown, pilose portion about 2/3 as long as leaf-like portion. Palpi blackened at apices and mouthparts blackened on anteroapical portion. Head with strong inner and outer vertical bristles, convergent postverticals and 2 pairs of relatively weakly developed bristles on frons, possibly representing 1 pair of reclinate orbital bristles and 1 pair of inclinate interfrontal bristles; other very tiny hairs usually visible in lower orbital positions. Thorax and scutellum covered with dense microscopic pile. Bristling on thorax as follows: 1 humeral, 2 notopleural, 1 supraalar, and 2 infraalar bristles, 4 irregular rows of acrostichal bristles and 1 row of dorsocentral bristles, posterior dorsocentrals being stronger; 1 pair of strong prescutellar bristles, and 2 pairs of scutellar bristles. Mesopleura large, shining and bare except for microscopic pilosity.

Idiocelyphus bifasciatus from Borneo differs in many of the foregoing characters common to the Philippine species. These differences will be noted under the description of this species.

This paper brings the number of species of *Idiocelyphus* described to 8, 7 of these from the Philippines.

Key to species of Idiocelyphus, based upon ♂ genitalia

1. Clypeus metallic blue-black, shining, projecting at an angle from face. Palpi darkened at apices and mouthparts darkened on anterior portion ..... Philippine species 2
   Clypeus yellow, not projecting at an angle from face. Palpi and mouthparts entirely yellow ..... **bifasciatus**, n. sp.
2 (1). Epandrium large and thickened, expanded lateroventrally, the expansion tapered and directed inward; expansions of epandrium each terminating in a short surstylus which is broad basally, apically pointed and curved inward (fig. 5a). Gonapophysis forked in lateral view (fig. 5b) ..... **steyskali**, n. sp.
   Epandrium not so expanded, not greatly thickened. Gonapophysis not forked in lateral view 3
3 (2). Surstylus well developed, slender and finger-like 4
   Surstylus not well developed, or, as in *forcipatus* n. sp., there is no indication of an articulation of surstyli with the lobes of the epandrium 6
4 (3). Surstylus much shorter than gonapophysis, reaching to only about the apical 2/3 of length of gonapophysis; surstylus relatively straight-sided, not noticeably curved inward (fig. 8b). Apical margin of gonapophysis broadly rounded in lateral view (fig. 8a) ..... **spatulus**, n. sp.

Surstylus as long as or longer than, the gonapophysis, usually reaching past tip of gonapophysis; surstyli arched on inner surface, curved inward. Apical margin of gonapophysis in lateral view pointed or interrupted by a small prominence 5

5 (4). Gonapophysis, in lateral view, globular, the smoothness of the apical margin interrupted by a small nipple-like prominence (fig. 5e). Surstylus about 6 × longer than wide, tapering to a slight point at apex. Hypandrium developed into 2 rounded lobes, each lobe situated ventrad of the base of each gonapophysis (fig. 5d) ..... **bilobus** n. sp.

Gonapophysis in ventral view curved outward into a slight hook at apex (fig. 8d). Surstylus about 4 × longer than widest projecting portion, more broadly rounded at apex. Hypandrium not as above ..... **bakeri** Malloch

6 (3). Apex of gonapophysis, in ventral view, reaching much beyond apex of cerci, the gonapophyses twisted across each other at base so that one projects dorsad of the other; gonapophyses curved pincer-like on apical 1/3 and heavily sclerotized past curved portion (fig. 6 e). No evidence of a surstylus articulated with the epandrium ..... **forcipatus**, n. sp.

Apex of gonapophysis, in ventral view, not reaching past apex of cerci, the cerci almost entirely visible. A small surstylus articulated with epandrium (fig. 7a and 7d) 7

7 (6). Surstylus ovoid, over 2 × as wide as long, as measured from base to apex (fig. 7a). Gonapophysis in lateral view somewhat toe-shaped, about 2 × as long as broad (fig. 7c) ..... **parviceps**, n. sp.

Surstylus more or less hemispherical, just slightly wider than long (fig. 7d). Gonapophysis in lateral view greatly expanded on ventral surface, about as broad as long; a small, heavily sclerotized hook-like process developed on posterodorsal margin (fig. 7e) ..... **reniformis**, n. sp.

Idiocelyphus bakeri Malloch Fig. 8 d-f.

Idiocelyphus bakeri Mall., 1929, *Proc. U. S. Nat. Mus.* **74** (6): 6.

Mr George Steyskal has kindly dissected and illustrated for me the ♂ genitalia of the type ♂ of this species in the USNM. On the basis of comparisons of the ♂ genitalia of 3 ♂ specimens on hand from the type locality with Mr Steyskal's illustrations, I am able to determine these specimens as *I. bakeri.*

The following description is based on the 5 ♂ specimens in the B. P. Bishop Museum and the genitalia illustrations made from one of them.

This species is generally lighter in color than other species of *Idiocelyphus*, testaceus with a violet tinge.

♂ *genitalia*: Surstyli long and slender, more than 4 × as long as widest projecting portion, arched on inner surfaces, curving inward, rounded on apices; surstyli about as long as gonapophyses, in prepared material usually reaching just past their tips (fig. 8d). Gonapophysis, in lateral view, broad at base, extended into a thinner portion recurved at tip into a slight hook; in ventral view, the gonapophysis is undulated on ventrolateral margin, relatively straight on inner margin, with the hook at apex appearing dorsolaterally directed (fig. 8d). Aedeagal apodeme laterally flattened on about apical 1/2, about 2 × as long as gonapophyses, as measured from point of attachment of apodeme. Ejaculatory apodeme as in fig. 8e and 8f.

♀. I am placing 3 specimens here through locality association.

Length (♂ and ♀): Body, excluding abdomen, 3.5 mm; wings, 3.9 mm.

Type data: Holotype ♂ and 3 paratypes (in USNM), Luzon, Mount Makiling, C. F. Baker. I have not seen the type, but have seen 2 paratypes, one a ♀ from Mt. Makiling and the other a ♂ from Zamboanga, described elsewhere in this paper as new (*I. bilobus*. n. sp.). Specimens in the B. P. Bishop Museum collection all from Luzon, Mt. Makiling.

DISTRIBUTION: Luzon, Mt. Makiling.

Idiocelyphus bifasciatus Tenorio, new species Fig. 6 a-b.

This Borneo species is superficially very distinct from the superficially homogeneous Philippine species. It differs notably in the almost completely testaceus color, the clypeus not projecting or darkened, the bristles on the mesonotum and head more well developed, and in having a distinct suture dividing off the notopleural sclerite (fig. 6d).

♂ and ♀. Completely testaceus in color except for 2 brown vittae on the mesonotum and brownish-black 2nd abdominal tergum. *Head*: Vertex very sharp, head extremely concave behind. Frons subshining, very flat almost on same plane with face, frons not distinctly angled with face as in other species; interfrontal (?) and upper orbital bristles more strongly developed than in other species; postvertical bristles well developed. Antennae missing in specimens on hand. Clypeus, palpi, and mouthparts concolorous with face. *Thorax*: Testaceus tinged with brown on dorsum; 2 brown vittae extending down each dorsocentral row almost to apex, the vittae broadest at anterior ends. Mesonotum and scutellum covered with fine microscopic pile. Bristling on thorax as follows: 1 humeral; 3-4 notopleurals, the 2 closest to notopleural suture strongly developed; 1 supraalar; 2 infraalars; 3 pairs of large postsutural dorsocentrals; 1 pair of large presuturals; 2 pairs of scutellar bristles. This species has a definite suture dividing off the notopleural sclerite. Mesopleura covered with yellow hairs. *Legs*: Entirely yellow, no brown band evident on tibiae. Ventral surfaces of all femora covered with long yellow hairs along entire length. *Wings*: Essentially as in other species of *Idiocelyphus*. *Abdomen*: Entirely yellow except for the brownish-black second tergum. ♂ genitalia as in fig. 6a.

Length (♂ and ♀): Body, excluding abdomen, 2.8 mm ; wings, 3.5 mm.

Type data: Holotype ♀ (BISHOP 8014), N. Borneo (Sabah), Tenompok, 13. II. 1959, T. C. Maa. Allotype ♂ (BISHOP), N. Borneo (Sabah), Singkor, 19. I. 1959, T. C. Maa.

DISTRIBUTION: Borneo.

Idiocelyphus bilobus Tenorio, new species Fig. 5 b-f.

Idiocelyphus bakeri Malloch, 1929, *Proc. U. S. Nat. Mus.* 74 (6): 6. (♂ paratype No. 41073 only).

This species is based on a ♂ specimen which was included as a paratype of *I. bakeri* Malloch. It is superficially similar to the other Philippine *Idiocelyphus*, but has distinct ♂ genitalia.

♂ *genitalia*: Surstyli, in ventral view, very long and slender, about six times as long as wide, relatively pointed at apices (fig. 5d). Gonapophyses in lateral view almost globular, with a small nipple-like prominence breaking roundness of apical portion (fig. 5e). The hypandrium in this species is unusual, being developed into 2 rounded lobes, 1 lobe situated ventrad of the base of each gonapophysis (fig. 5d). Aedeagal apodeme slender, not noticeably expanded at apex, slightly longer than gonapophysis. Ejaculatory apodeme as in fig. 5f.

♀. Unknown.

♂. Body, excluding abdomen, 3.3 mm ; wings, 3.5 mm.

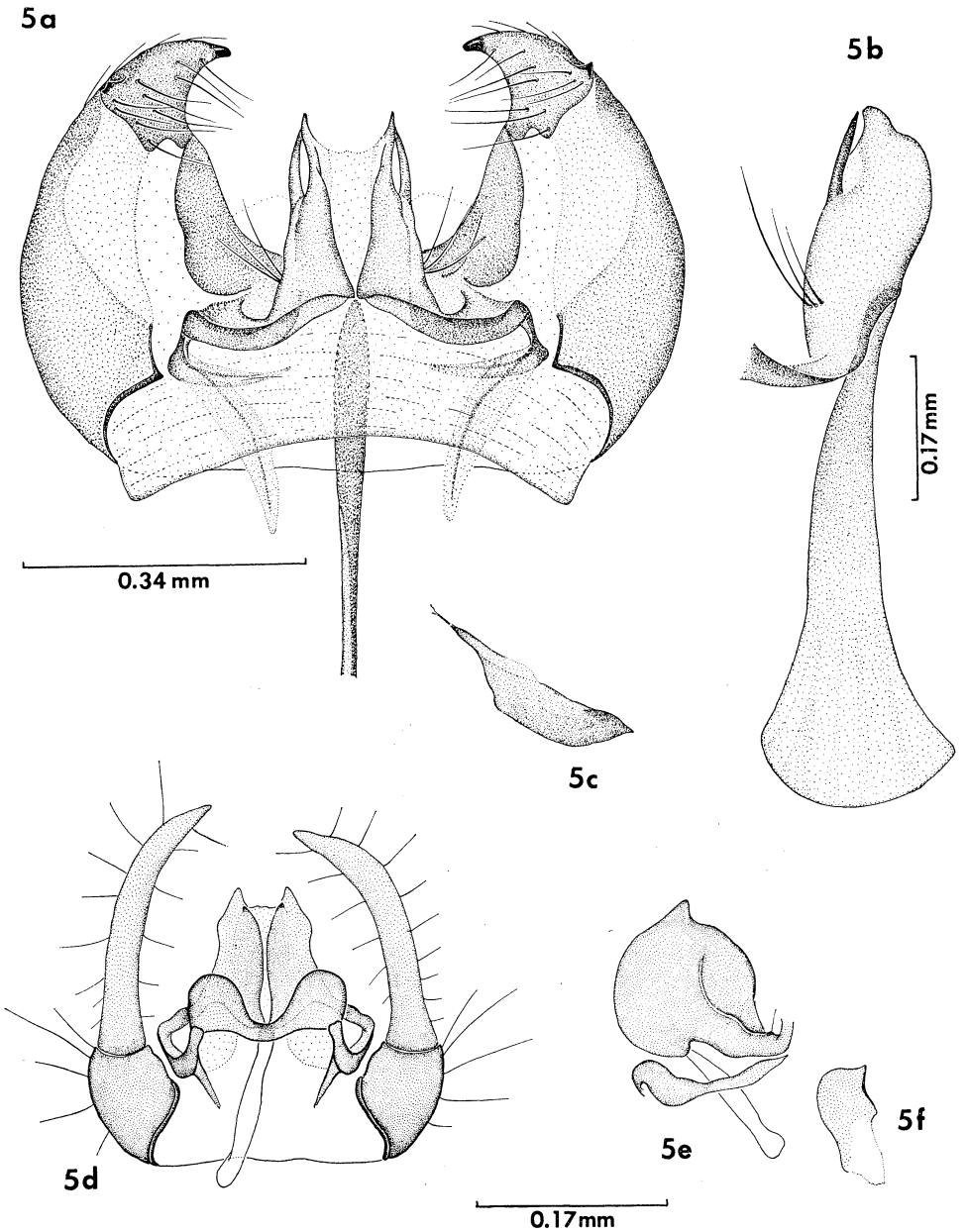

Fig. 5. *Idiocelyphus steyskali*, n. sp.: a, ♂ genitalia, ventral view; b, gonapophysis and aedeagal apodeme, lateral view; c, ejaculatory apodeme. *I. bilobus*, n. sp.; d, ♂ genitalia, ventral view; e, gonapophysis and aedeagal apodeme, lateral view; f, ejaculatory apodeme.

Type data: Holotype ♂ (unique), P. I., Mindanao, Zamboanga, C. F. Baker. Type in the U. S. National Museum as *I. bakeri* Malloch, paratype No. 41073.

DISTRIBUTION: Mindanao.

Idiocelyphus forcipatus Tenorio, new species Fig. 6 d–e.

The unique type of this species is teneral, but the genitalia is so distinct that I am

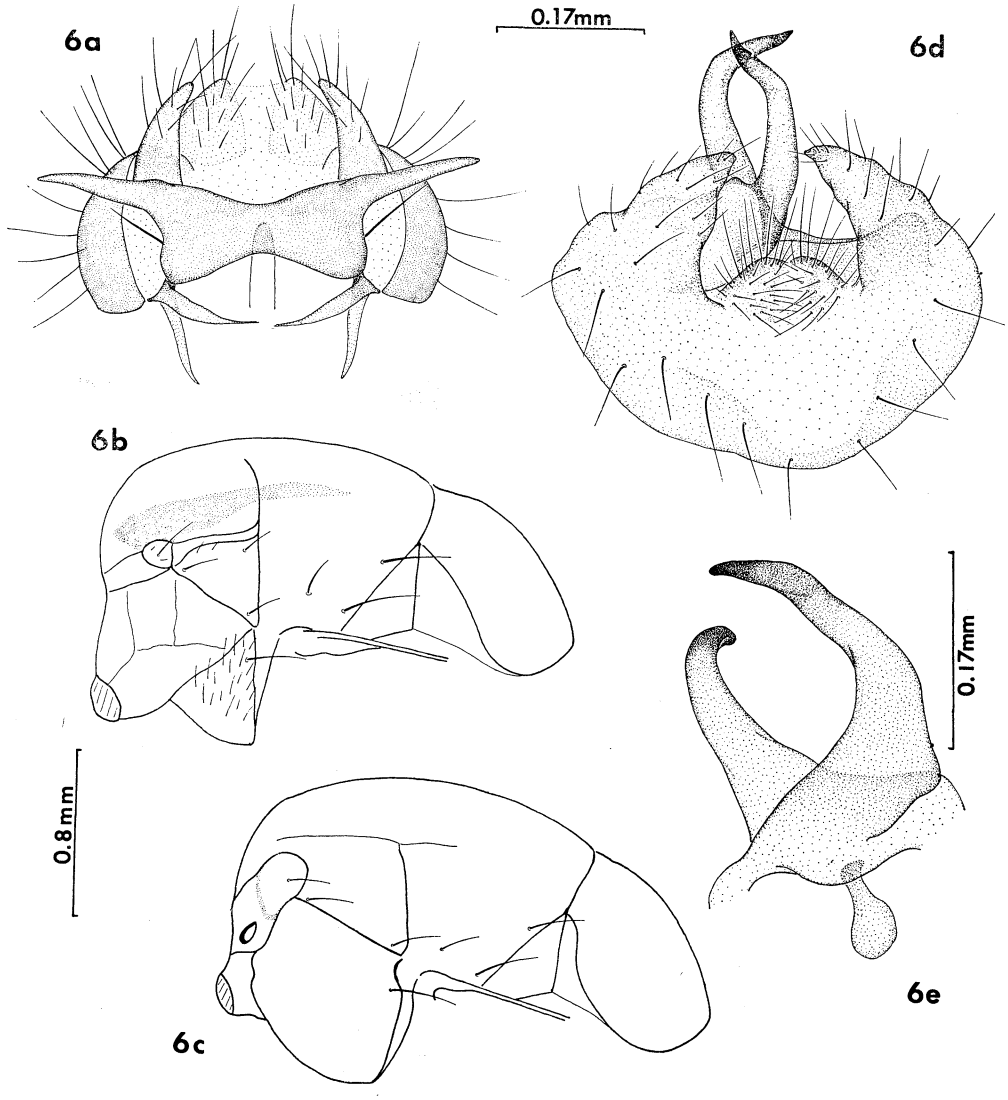

Fig. 6. *Idiocelyphus bifasciatus*, n. sp.: a, ♂ genitalia, ventral view; b, thorax, lateral view. *I. steyskali*, n. sp.: c, thorax, lateral view. *I. forcipatus*, n. sp.: d, ♂ genitalia, dorsal view; e, gonapophyses and aedeagal apodeme, lateral view.

describing it as new.

Body color shining greenish gold; this lightness of color may be attributable to tenerality, although this specimen is quite different in color from any teneral specimens of the other species. Interfrontal bristles appear closer together and farther up on frons (about 1/3 distance from base of antenna to vertex) than in other species, but in absence of a series of specimens, this character cannot be considered diagnostic.

♂ genitalia notable in overdevelopment of gonapophyses in relation to other structures; they are long, slender, heavily sclerotized structures which twist across each other at their bases and are oriented so that one gonapophysis lies dorsad of the other; apical 1/3 of each gonapophysis bent almost at a right angle, with pointed apex of one directed laterally and the other directed lateroventrally (fig. 6d). The relatively unsclerotized epandrium tapers on each lateroventral margin and curves inward toward gonapophyses, reaching to about middle of their length (fig. 6d); epandrium lobes slightly notched at apices; there is no evidence of an articulation with surstyli. The laterally flattened aedeagal apodeme is the shortest that I have seen in this genus; in lateral view, it is very small, shaped somewhat like a light bulb, and equal to less than 1/4 length of gonapophysis, as measured from point of attachment of apodeme (fig. 6e). This underdevelopment of the aedeagal apodeme may be related to tenerality, as I have seen similar short apodemes in teneral specimens of other species. The ejaculatory apodeme appears to be at least as long as the aedeagal apodeme, and narrow, but is very membranous in this specimen and has not been illustrated.

Length (♂): Body, excluding abdomen, 3.5 mm; wings, 3.9 mm. ♀ unknown.

Type data: Holotype ♂ (BISHOP 8015), P. I., Mindanao, Zamboanga Del Sur, Lemesahan, 600m, 7. IX. 1958, H. E. Milliron.

DISTRIBUTION: Mindanao.

Idiocelyphus parviceps Tenorio, new species Fig. 7 a-c.

♂ genitalia: Surstyli formed into 2 small, slightly ovoid lobes, over twice as wide as long (length measured from base to apex), located between ventrolateral bases of epandrium and lateral bases of gonapophyses (fig. 7a). Gonapophyses, in ventral view, straight on lateral margins, inner margin extending somewhat laterally to a rounded apex; in lateral view, each gonapophysis is toe-shaped, rounded on ventroapical margin and slightly pointed on apicodorsal margin (fig. 7c); gonapophysis about 2/3 as long as aedeagal apodeme, apex not reaching apices of cerci. Aedeagal apodeme rod-like, rounded on entire length, very slightly expanded at apex in lateral view. Ejaculatory apodeme kidney-shaped (fig. 7b).

Length: Body, excluding abdomen, 3.5 mm; wings, 3.9 mm.

♀ unknown.

Type data: Holotype ♂ (BISHOP 8016), P. I., Luzon, Dalton Pass, Nueva Viscaya Prov., 900 m, 9. IV. 1968, D. E. Hardy. 1 paratype ♂ (BISHOP): Luzon, Camarines Sur, Mt. Isarog, 500-600 m, 6. IV. 1963, H. M. Torrevillas.

DISTRIBUTION: Luzon.

Idiocelyphus reniformis Tenorio, new species Fig. 7 d-f.

The ♂ genitalia of this species is very similar to that of *I. parviceps*, n. sp., in the almost complete exposure of the cerci in ventral view, in the small size of the surstyli, and in the aedeagal apodeme being somewhat rod-shaped, rounded and only slightly expanded at apex in

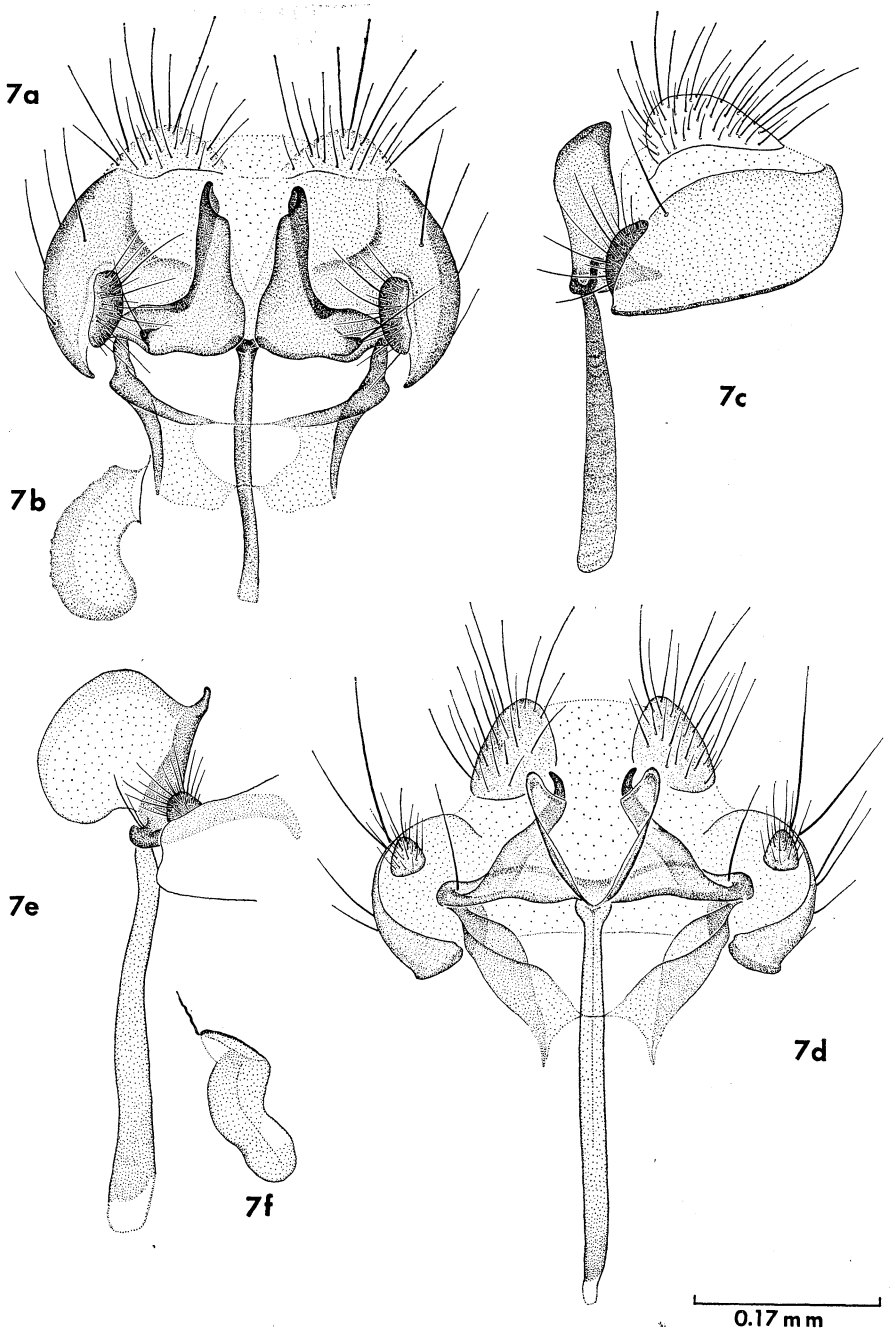

Fig. 7. *Idiocelyphus parviceps*, n. sp.: a, ♂ genitalia, ventral view; b, ejaculatory apodeme; c, ♂ genitalia, lateral view. *I. reniformis*, n. sp.: d, ♂ genitalia, ventral view; e, gonapophysis, aedeagal apodeme and surstylus, lateral view; f, ejaculatory apodeme.

lateral view. These 2 species differ in the shapes of their gonapophyses.

♂ *genitalia*: Surstyli tiny and more or less hemispherical, slightly wider than long (fig. 7d-e). Gonapophyses, in lateral view, each greatly expanded on ventral margin forming a kidney-shaped or pouch-like flap; posterodorsal surface developed into a heavily sclerotized hook-like process, curved laterally (fig. 7e); gonapophyses short, only about 1/3 length of aedeagal apodeme. Aedeagal apodeme laterally flattened near apex only, slightly expanded before apex. Ejaculatory apodeme as in fig. 7f.

♀: I have on hand 4 ♀♀ from the type locality which probably belong here.

Length (♂ and ♀): Body, excluding abdomen, 3.5 mm; wings, 3.9 mm.

Type data: Holotype ♂ (BISHOP 8017), P. I., Luzon, Albay Province, Mt. Mayon, 1200-1800 m, 18. V. 1962, H. M. Torrevillas. 1 paratype ♂, 4 paratype ♀♀ (BISHOP): same locality as above, 4-15. V. 1962.

DISTRIBUTION: Luzon.

Idiocelyphus spatulus Tenorio, new species Fig. 8 a-c.

♂ *genitalia*: Surstyli formed like a finger, rounded at tips and about 5-6 times as long as wide; surstyli about 1/2 as long as gonapophyses (fig. 8b). In lateral view, gonapophyses broad on basal 1/2, narrower on apical 1/2 and broadly rounded at apices; lateral surfaces somewhat concave with gonapophyses curved lateroventrally (fig. 8a). Aedeagal apodeme about 1/3 longer than gonapophysis, measured from point of attachment of apodeme; apodeme laterally flattened on apical 2/3, in lateral view, broad along almost entire length, expanded on ventral margin at apex (fig. 8a). Ejaculatory apodeme as in fig. 8c.

Length (♂): Body, excluding abdomen, 3.3 mm; wings, 3.9 mm.

♀. unknown.

Type data: Holotype ♂ (BISHOP 8018), P. I., Luzon, Nueva Vizcaya, 11. IV. 1968, D. E. Hardy.

DISTRIBUTION: Philippines; Luzon.

Idiocelyphus steyskali Tenorio, new species Fig. 5 a-c.

♂ *genitalia*: Epandrium in ventral view (fig. 5a) expanded lateroventrally, tapering towards ends and articulated with relatively small surstyli (in comparison with size of epandrium) continuous with apices of epandrium lobes, curved inward and pointed apically; surstyli each with a small pointed process at lateroventral bases. Gonapophyses shorter than expansions of epandrium in lateral view, bearing a heavily sclerotized spine-like process on dorsal surface at about apical 2/3, giving a forked appearance to the structure (fig. 5b); 3 yellow hairs present on dorsolateral margin at about basal 1/3 of each gonapophysis. Aedeagal apodeme long in ventral view, about 3× as long as gonapophyses, as measured from point of attachment of apodeme; apodeme laterally flattened on apical 1/2, greatly expanded dorsoventrally before apex, widest portion about .5-2.0 × wider than widest portion of gonapophysis. Ejaculatory apodeme as in fig. 5c.

♀. I am placing 20 ♀♀ here through locality association.

Length (♂): Body, excluding abdomen, 3.4 mm; wings, 3.5 mm.

Type data: Holotype ♂ (BISHOP 8019), Mindanao, Agusan, 10 km SE of S. Francisco, 17. XI. 1959, C. M. Yoshimoto. 30 ♂♂ paratypes as follows: same data as type; same locality,

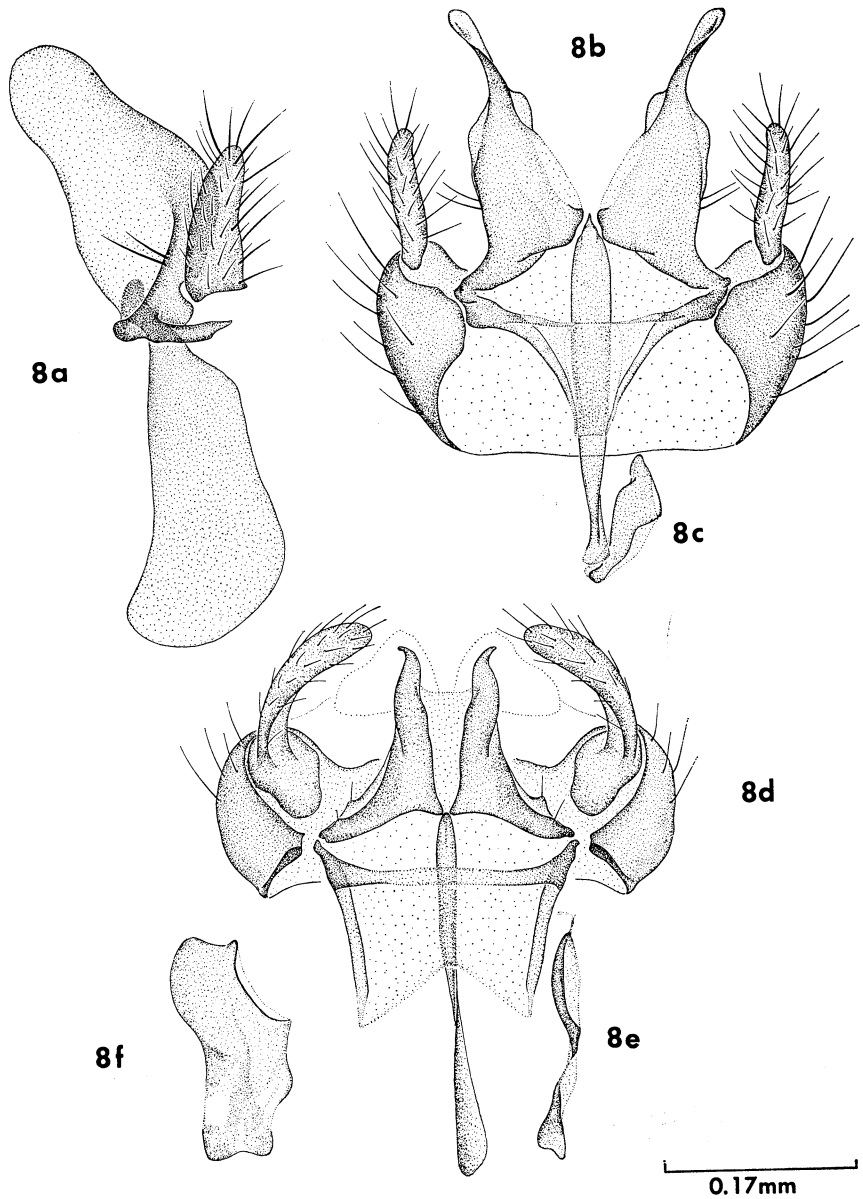

Fig. 8. *Idiocelyphus spatulus*, n. sp.: a, gonapophysis, aedeagal apodeme and surstylus, lateral view; b, ♂ genitalia, ventral view; c, ejaculatory apodeme. *I. bakeri*; d, ♂ genitalia, ventral view; e, ejaculatory apodeme, ventral view; f, ejaculatory apodeme, lateral view.

12-14.XI.1959, L. W. Quate; Mindanao, Misamis Or., Minalwang, 1050 m, 24. III.-4. IV. 1961, H. Torrevillas; Agusan, Esperanza, 4-11. XI. 1959, C. M. Yoshimoto; Misamis Or., Mt. Kibungol, 20 km SE of Gingoog, 700-800 m, 9-18. IV. 1960, H. Torrevillas. 20 ♀♀ from the same localities as the males are probably this species, but are not being assigned paratype designation. 8 paratypes in U. S. N. M., remaining paratypes in Bishop Museum.

DISTRIBUTION: Mindanao.

Genus **Spaniocelyphus** Hendel

Spaniocelyphus Hendel, 1914, *Supplta. Ent.* **1** (3): 92.

Type of genus: *Spaniocelyphus scutatus* (Wiedemann) (Original designation).

This genus is characterized by having the vertex sharp, postvertical bristles reduced or absent, a crossvein separating discal cell from 2nd basal cell, arista leaf-like on at least basal 1/2, palpi slender and not expanded at apices, and abdominal tergites with lateral longitudinal sutures which divide each tergite into a dorsal and 2 lateral plates, the lateral plates wide.

The species of *Spaniocelyphus* fall into 2 groups: those with smooth scutellum and those with rugose, or partially rugose, scutellum. Within each group, the gonapophyses of the ♂ genitalia form the primary specific determinant.

KEY TO SPECIES OF SPANIOCELYPHUS, BASED UPON ♂♂

1. Scutellum rugose, with distinct depressions or pits covering at least basal 1/2 of scutellum 2
   Scutellum generally smooth or with only slight crinkling on some portions 3
2 (1). Mesonotum of uniform color, not yellowed anteriorly behind head. Mesonotum smooth, or if pitting is present, it is usually pronounced only on apicomedian portion. Gonapophyses of genitalia in lateral view pointed apically (fig. 9d); in ventral view, with large toothlike processes onlateral margins (fig. 9e). **scutatus** var. **philippinus** Frey
   Mesonotum yellowed anteriorly behind head, yellowing usually including anterior portions of humeri. Mesonotum with a longitudinal median line of pitting extending from base to apex. Gonapophyses in lateral view rounded at apex (fig. 9a) and not toothed laterally ..... **palawanensis** Vanschuytbroek
3 (1). Mesonotum with anterior portion behind head slightly discolored with yellow. Adults usually with metallic green or green-blue sheen. Gonapophyses as in fig. 9c .... **viridescens**, n. sp.
   Mesonotum including anterior portion behind head completely dark. Gonapophyses as in fig. 9b and 9f 4
4 (3). Gonapophyses in lateral view distinctly domed at apices (fig. 9b); inner vertical margin apicad of middle with a slight bump, but not pointed. In ventral view, lateral teeth of gonapophyses relatively small ..... **nigrocoeruleus** Malloch
   Gonapophyses in lateral view not domed at apex; inner ventral margin somewhat concave on basal 1/2, extending into a slight point at middle (fig. 9f). In ventral view, lateral teeth of gonapophyses relatively large ..... **levis** (van der Wulp)

Spaniocelyphus levis (van der Wulp)

Celyphus levis van der Wulp, 1886, *Midden-Sumatra Exped.* Diptera. 4: 53.

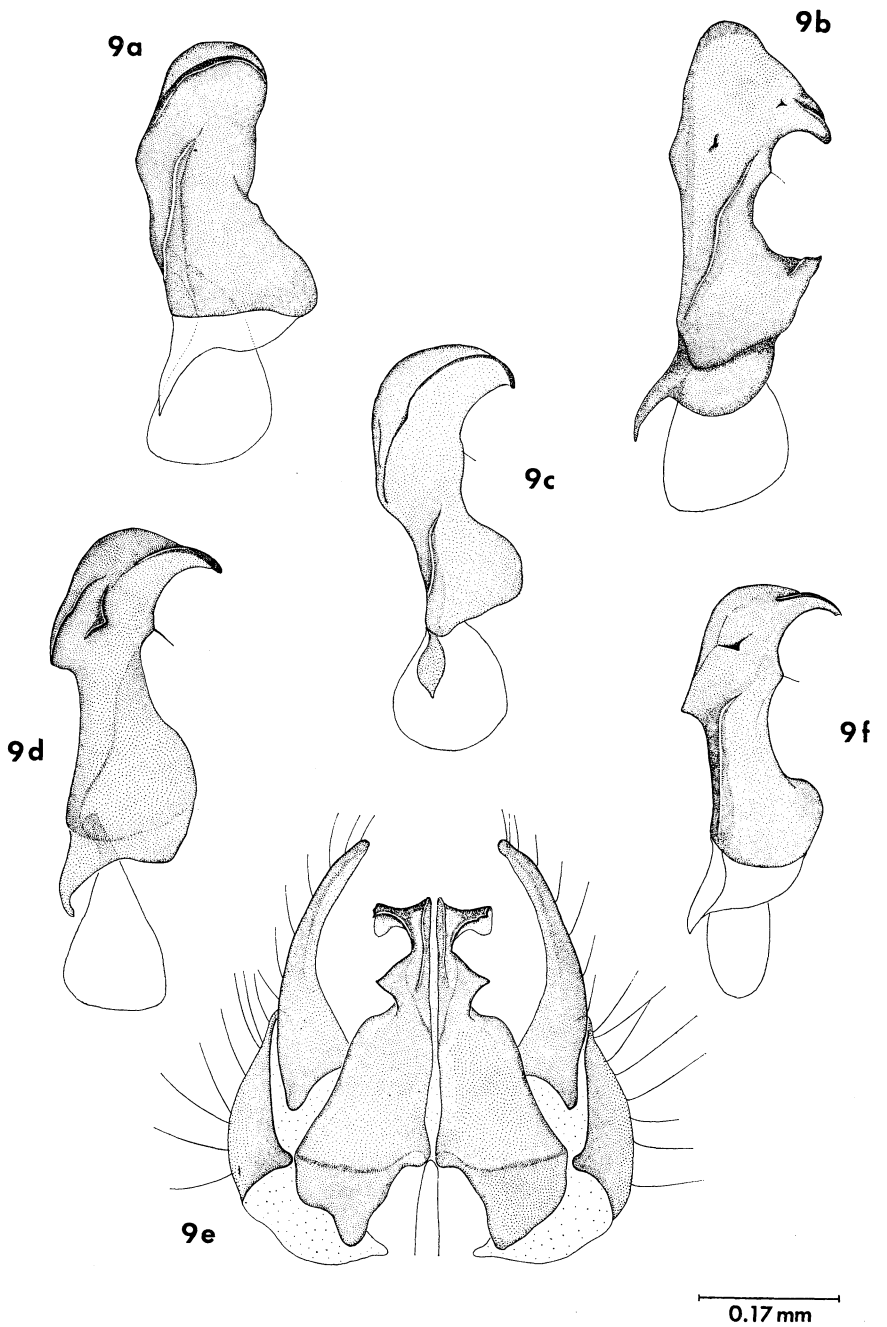

Fig. 9. *Spaniocelyphus palawanensis* Vanschuytbroek: a, gonapophysis, lateral view. *S. nigrocoeruleus* Malloch: b, gonapophysis, lateral view. *S. viridescens*, n. sp.: c, gonapophysis, lateral view. *S. philippinus* Frey: d, gonapophysis, lateral view ; e, ♂ genitalia, ventral view. *S. levis* (van der Wulp): f, gonapophysis, lateral view.

Spaniocelyphus laevis: Malloch, 1929, *Proc. U. S. Nat. Mus.* **74** (6): 11.

This species was described from 2 specimens from Soeroelangoen. According to P. J. van Helsdingen of the Natural History Museum at Leiden (personal communication), the 2 syntypes deposited in that museum are both ♀♀.

Van der Wulp's description (1886: 53), kindly translated from Dutch by Mr G. Steyskal is as follows: Thorax and scutellum completely smooth, only, with a trace of grooves or impressed spots; thorax about as long as wide. Head and antennae rust-colored; front with metallic sheen. Thorax steel blue, including sides; scutellum metallic purple. Abdomen shining black, ventrally yellow. Legs rust-colored, with blackish femora. Wings yellowish.

Two species on hand, evidently new, fit this general description. Both have a smooth thorax and scutellum, the scutellum with slight crinkling in some areas but without definite pits or depressions. One of these species which I believe to be *S. levis* is generally smaller in size, purplish black in color, with the entire mesonotum dark including the anterior portion behind the head; the genitalia of this species are almost identical to *S. scutatus philippinus* Frey. This is evidently the same species which Frey (1941: 9) presumed to be *S. levis*, as he too observed that the genitalia (gonapophyses) were the same as that of *S. scutatus philippinus*. However, since *S. levis* was originally based on two ♀♀ syntypes, and since the ♂ genitalia characters are of great importance in separating these two species having smooth scutellums, any specific assignment of ♂♂ to *S. levis* must remain presumptuous.

♂ *genitalia*: Genitalia essentially the same as in *S. scutatus philippinus*. Gonapophyses in ventral view with 2 to 3 tooth-like flaps formed on lateral margins, 1 large tooth just past middle, another large tooth preapically tapering to a pointed apex; a smaller tooth is sometimes present between the two larger teeth mentioned above. In lateral view (fig. 9f), the two large teeth are distinctly separated.

Length (♂ and ♀): Body, 3.4-3.8 mm; wings, 3.1-3.5 mm.

Type data: 2 ♀♀ syntypes in Natural History Museum at Leiden, from "Soeroelangoen" [Sumatra]

DISTRIBUTION: Luzon, N-Mindoro (Frey 1941); Leyte Island, 5 km E Ormoc, 3-11.X. 1965, D. Davis, 1 ♂ in U. S. N. M.; Sumatra.

Spaniocelyphus nigrocoeruleus Malloch

Spaniocelyphus nigrocoeruleus Malloch, 1929, *Proc. U. S. Nat. Mus.* **74** (6): 11.

I have not seen the type ♀ of this species, but I have seen a labeled ♀ from U. S. N. M. which has presumably been compared with the type in the same museum. Since *S. nigrocoeruleus* is based on a ♀, I cannot make a definite assignment of ♂♂ to this species. However, the 3 ♂♂ and 2 ♀♀ on hand from Negros, which is the type locality, appear to belong here.

This species is evidently closely related to *S. levis*, both species having a completely smooth mesonotum and scutellum which are entirely deep metallic blue-black; neither species have the anterior margins of the thorax or the humeri yellowed. *S. nigrocoeruleus* was originally separated from *S. levis* on the basis of head coloration (Malloch 1929: 10

-11), the face and frons being very dark in the former and testaceus in the latter. However, an examination of a series of *S. levis* reveals that occasional specimens manifest dark-colored heads also. The only reliable criterion for separation of these 2 species is the male genitalia.

♂ and ♀. Face and frons relatively dark, shining dark brown tinged with blue on frons. Mesonotum completely smooth and shining blue-black, including anterior margin. Scutellum blue-black, entirely smooth except for scattered piliferous depressions. Legs brown. General form of ♂ genitalia as in other species; gonapophyses greatly domed at apex and as in figure 9b.

Type data: Type ♀ (in USNM), P. I., Cuernos Mountains, Negros, C. F. Baker.

DISTRIBUTION: Negros. Frey (1941: 9) reported this species from Catanduanes Island, but since his determination was based primarily on head coloration, it may have been erroneous. Vanschuytbroek (1967: 287) reported this species from Palawan; I have seen the specimen (in Copenhagen) upon which he based this report. It is a ♂ of *S. palawanensis* Vansch.

Spaniocelyphus palawanensis Vanschuytbroek

Spaniocelyphus palawanensis Vanschuytbroek, 1967, *Ent. Meddr.* **35**: 287-88.

I have seen the type of this species, presumably a ♂. The genitalia have been dissected, probably by the original author, and are not associated with the mounted specimen. I have compared specimens from Borneo and Philippines with the holotype and judge them to be conspecific. A homotype ♂ has been designated.

This species is related to *S. scutatus philippinus* in that the scutellum is completely pitted almost to the apex. It differs from *S. scutatus philippinus* in the yellowing of the anterior margins of the thorax and anterior portions of the humeri; also differing in having a distinct median line of pitting on mesonotum extending from base to apex; if this pitting is present on the mesonotum of *S. scutatus philippinus*, it is usually pronounced only on the apicomedian portion.

S. palawanensis would appear also close to *S. hangchowensis* Ouchi. According to Ouchi (1939: 245), *S. hangchowensis* is as follows:

"…Dorsum [of thorax] brownish black with greenish shimmer except for the extreme anterior margin tinged with brownish orange and almost without scar-like punctures on its entire surface. Scutellum brownish black with slightly greenish shimmer and with scar-like punctures on its entire surface…"

The mesonotum of the above species evidently lacks the definite punctations present in *S. palawanensis*. *A. hangchowensis* is based on a unique ♀ and is deposited in Shanghai Science Institute. The type is not available for comparison.

♂ and ♀. Face and frons brownish testaceus. Mesonotum metallic blue with propleura and anterior portions of humeri orange-yellow; dorsum rugose down a longitudinal median line from base to apex, rugosities most pronounced at apex. Scutellum metallic blue, sometimes with violet tinge, and completely rugose. Specimens from Palawan with greenish-blue tinge, those from Borneo violaceus.

♂ genitalia. Surstyli slightly shorter and thicker than other species, but still tapered to tips. Gonapophyses rounded at apices and without distinct lateral teeth (fig. 9a).

Type data: Type ♂ (?; in Univ. Zool. Mus. Copenhagen), "Philippines, Palawan, Brooks Point, Uring Uring, 22. VIII. 1961. Noona Dan Exp. 61-62".

1 paratype ♂ from same locality in Copenhagen. 1 paratype ♂ (Copenhagen) labeled *S. palawanensis* is not this species, but rather *A. repletus*. Homotype ♂ (BISHOP), Borneo, Sabah, Kota Kinabalu, 27. III. 1968, D. E. Hardy.

DISTRIBUTION: Palawan; Borneo.

Spaniocelyphus scutatus philippinus Frey

Spaniocelyphus scutatus var. *philippinus* Frey, 1941, *Notul. Ent.* **21**: 10.

I have seen the type and allotype but cannot determine the sexes, as both specimens are lacking the postabdominal segments. I have also seen 2 paratypes, both apparently ♀♀. Type and allotype fit the following description:

Face and frons brown with slight purplish tinge. Thorax including scutellum entirely purplish to blue-black. Scutellum with irregularly shaped, shallow depressions covering entire surface except for the smooth apex. Mesonotum with slight depressions on a median longitudinal line, these most noticeable apicomedially. Legs yellow-brown.

This species is extremely variable externally: Color is usually a deep blue-black, with head brownish testaceus, but with some specimens greenish or gold-tinged. Sculpturing of scutellum very variable, usually densely pitted from base to apex but sometimes relatively smooth on apical 1/2, only basally with dense pitting. Mesonotum usually completely smooth, but sometimes, as in type and allotype, having shallow depressions on apicomedian 1/2. Thorax always deep blue-black including the anterior margin; no anteromedian pilosity.

The ♂ genitalia are the best means for identifying these superficially divergent forms. In ventral view, the gonapophyses bear a large median, lateral tooth-like flap, this varying somewhat in thickness and position (fig. 9e); in lateral view, apices of gonapophyses curved and flap-like (fig. 9d).

Type data: Holotype ♂ (in Zool. Mus. Univ. Helsinki), P. I., "Luzon, Manila, XI, 1914", G. Boettcher collection. Allotype ♀ (Zool. Mus. Univ., Helsinki), "Luzon, Lamao, VII, 1914", G. Boettcher collection.

DISTRIBUTION: Luzon, Mindanao (long series in the B. P. Bishop Museum); Palawan, Eran Pt., 8 km SW of Tarumpitao Pt., 31. XII. 1959-4. I. 1960, L. W. Quate, 2 ♂♂.

Report of this species from Palawan by Vanschuytbroek (1967: 287) was erroneous; his report was based on a male of *S. palawanensis* Vansch.

Spaniocelyphus viridescens Tenorio, new species Fig. 9c.

This species is externally similar to *S. levis* in having the mesonotum and scutellum smooth. It differs from *S. levis* in coloration, being a metallic green or green-blue, rather than purplish black, in having the anterior margin of the thorax behind the head slightly yellowed, and in the distinct ♂ genitalia.

♂ and ♀. Mesonotum and scutellum smooth, sometimes with slight, irregular crinkling on scutellum; thorax and scutellum uniformly greenish or greenish blue, only anterior portion of thorax behind head slightly discolored with yellow, this discoloration usually not involving humeri.

♂ *genitalia*: Gonapophyses intermediate in structure between *S. levis* and *S. palawanensis*. While each gonapophysis of *S. levis* has flap-like teeth laterally, *S. viridescens* has no distinct teeth developed on gonapophyses (fig. 9c). Apex of each gonapophysis not developed flap-like as in *S. levis*, nor is the ventral margin at about middle pointed, but rather gently rounded.

Length (♂): Body, 3.8-4.6 mm; wings, 3.3-3.8 mm.

Type data: Holotype ♂ (BISHOP 8020), 3 paratype ♂♂, 1 paratype ♀, P. I., Luzon, Dalton Pass, Nueva Vizcaya, 9-10. IV. 1968, D. E. Hardy & M. Delfinado. Allotype ♀, P. I., Luzon, Mt. Province, Mayoyao, Ifugao, 1200-1500 m, 2. IX. 1966, H. Torrevillas. 20 paratype ♂♂, 3 paratype ♀♀, Mt. Province, Ifugao, 1200-1500 m, 4-14. IX. 1966 and 25-29. VIII. 1966, H. Torrevillas. 1 paratype ♂, Luzon, 2 km W of Santa Fe, Nueva Vizcaya, 11. IV. 1968, D. E. Hardy. Types and 17 paratypes in Bishop Museum; 11 paratypes in U. S. N. M.

DISTRIBUTION: Luzon.

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