Studies in the *Mastogeniinae* (Coleoptera: Buprestidae) III. New species, combinations and a world catalogue

by

C. L. BELLAMY *

**Abstract** - Nine new species of *Mastogeniinae* are described and illustrated: *Ankureus transvaalensis* from South Africa, *A. somalicus* from Somalia, *A. kenensis* and *A. tsavoensis* from Kenya, *Heljerella papuae* from New Guinea, *H. philippinensis* from Mindanao, and *H. vanuea, H. fiji* and *H. viti*, all from Fiji. *Haplostethus taoi* is transferred to *Mastogenius*. *Mastogenius felix* and *Pseudianthe tenebrosus* are transferred to *Ankureus*. *A. mus* is synonymized with *A. natalensis*. *Micrasta typica* Kerremans is designated as the type-species of that genus. A world catalogue of the *Mastogeniinae* is presented.

**INTRODUCTION**

The genera and species of the buprestid subfamily *Mastogeniinae* have been the focus of a rather overwhelming amount of recent attention. Various descriptive works and nomenclatural shifts have left this group in the midst of a most dynamic systematic flux, which promises to keep us foundering rather than arrive at a consensus classification. I briefly outlined the recent descriptions and opinions of *Collins* (1981), *Toyama* (1983), *Holynski* (1984) and *Manley* (1986a, 1986b) in two previous papers (BELLAMY 1987a, 1987b). From that point to now, only three works have appeared which consider various regional components of the *Mastogeniinae*, those being by *Manley* (1987) and *Williams & Weir* (1987, 1988).

One aspect that is increasingly apparent is that the growing number of mastogeniine species, which show the taxon to be more and more broadly distributed, refutes the argument of this being a group of relicts (CROWSON, 1981). The presence of a described species from the Baltic Amber (OBEHNERGER, 1957), perhaps the only known buprestid from any amber deposit, imparts some factor of accuracy to the dating of this lineage. The evidence of extant distribution suggests both age from the range of localities and is also somewhat of a tribute to the dispersal and/or colonization capabilities with numerous species found on widely separated oceanic islands, e.g. Galapagos, Fiji, Antilles and Mascarenes.

There is also some precedent for regarding this group independent of the *Buprestidae*. GOOD (1925), while studying the wings of the North American buprestid genera, stated that H. S. "Barber believes that *Mastogenius* is a thysanid". FORBES (1926) studied coleopteran wing folding and said that the unsymmetrical recurrents and reversed proximal pivot "definitely throw it out from other buprestids". He placed it near *Megatoma, Thylodrias (Dermestidae), Eucinetus (Eucinetidae)*.

* Department of Entomology, NHB 169, Smithsonian Institution, Washington, D.C. 20560, U.S.A.
and Cyphon (Helodidae). Later (Forbes, 1942), he studied the wing in more detail and concluded to leave "Mastogenius" as an isolated relict-form, perhaps a direct descendant of the common ancestor of Bostrychoidea and Buprestidae. Toyama (1987) has recently speculated that Mastogeniinae may be the most archaic group of buprestids. This would be an obvious problem to attack cladistically, and except for the fact that the larvae of the mastogenines are unknown, I would not hesitate. However, this lack of larval characters and the need to define the generic parameters and thus establish which character states are limiting to genera versus species groups, require some restraint for now.

MATERIALS AND METHODS

The collections that provided the material for those new species described herein are abbreviated as follows: BMNH = British Museum (Natural History), London; BPBM = Bishop Museum, Honolulu; CLBC = my research collection; HMCG = Hans Mühle collection, Pfaffenhofen, West Germany; MCZC = Museum of Comparative Zoology, Harvard University, Cambridge, Mass.; MNHN = Museum National d'Histoire Naturelle, Paris; MRAC = Musée Royale de l'Afrique Centrale, Tervuren, Belgium; NMNH = U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C.; NZAC = New Zealand Arthropod Collection, Auckland; RBCF = R. A. Beaver collection, Suva, Fiji; SANC = South African National Collection of Insects, and TMSA = Transvaal Museum, both Pretoria.

Label data are presented verbatim with parentheses used to enclose additional information, such as repository, place name orthography or geographic coordinates when they could be accurately determined. The slash mark (/) is used to separate data from multiple labels. Dimensions given in descriptions represent maximum length and width. Scale lines with illustrations represent 1 mm. Square brackets [ ] are used in the catalogue to enclose information about original or previous combinations or considerations.

NEW TAXA AND COMBINATIONS

_Mastogenius taoi_ (Toyama) comb. n.

_Haplostethus taoi_ Toyama, 1983: 58.

With the most recent opinion on the validity of _Haplostethus_ LeConte by Manley (1987) again reducing it to synonymy of _Mastogenius_ Solier, this combination is necessary. Further study is needed to determine if _M. taoi_ and _M. insperatus_ Kurosawa are congeneric with the many western hemisphere species of _Mastogenius_.

_Ankareus felix_ (Waterhouse) comb. n.  Fig. 31


My original concept of this taxon was based upon a single specimen from SANC supposedly compared-to-type as mentioned earlier (Bellamy, 1987a). I have subsequently studied the holotype of _A. felix_ and find it to be much closer to both _A. capensis_ Bellamy and _A. natalensis_ Bellamy than to _A. transvaalensis_ sp. n. Until the true generic limits are established for the entire _Mastogeniinae_, I prefer to consider the entire complement of African species under _Ankareus_, with _Mastogenius_ primarily restricted to the western hemisphere.

_Ankareus tenebrosus_ (Fairmaire) comb. n.

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Even though this combination is seemingly automatic following the generic synonymy by Coobs (1979, 1981), there was no mention of the specific combination.

Ankareus transvaalensis sp. n. Figs. 1, 3, 4, 32, 35a

Holotype Male. 2.83 x 1.13 mm; slender elongate ovoid, flattened; surface black with aeneous reflection; moderately covered with adpressed testaceous setae.

Head: frontovertex convexly produced between eyes; frontovertex entire, slightly narrowing between antennal insertions; eyes moderately large, inner margins subparallel; frontovertexes triangularly emarginate distally; surface moderately punctate; antennae reaching past pronotal base when laid alongside; antennomeres concolorous, 3 narrower, longer than 2; 4-10 serrate, with length nearly 2 x width; 11 oblong; moderately covered with short erect white setae.

Pronotum: width 1.76 x length, widest at anterior 1/3; anterior margin transverse medially; posterior margin transverse, with impunctate transverse band; posterolateral angles subobtuse; lateral margins arcuate from past basal angle, then more straight, subparallel, slightly diverging to anterior 1/3, then broadly arcuate; prelateral carina (fig. 3) arcuate when viewed from side; scutellum elongate, truncate basally, attenuate distally, impunctate.

Elytra: narrower than pronotum, widest near apical 1/3; humeri slightly elevated, depressed medially; base with transverse costa between humerus and scutellum; lateral margins subparallel, widening to apical 1/3, then narrowing to separately rounded apices; surface rugose on disc, otherwise with punctation as on pronotum; epipleuron as in fig. 3.

Underside: punctation and setation as on pronotum; prosternum with process truncate distally, sides parallel; hypomeron slightly depressed along lateral pronotal carina for antennae in repose; abdominal sterna with suture between 1 and 2 only feebly indicated medially; sutures between 2, 3, 4 and 5 arcuate medially.

Legs: femora fusiform; tibiae feebly sinuate; metatibiae with setal comb on apical 1/2 of outer margin; left metatarsus missing; tarsomere 1 as long as 2 and 3 together, subequal to 5: 1-4 each with reduced pulvilli: 5 with claws slightly swollen basally.

Genitalia: as in fig. 4.

Variation: the size varies: 2.63-3.06 x 1.03-1.23 mm. The females differ by having the serrate antennomeres with the length and width subequal.

Material examined - Holotype male (SANC); SOUTH AFRICA: Transvaal, The Downs. S24.08 E30.11, 27.xi.1985, A. V. Evans, C. L. Bellamy and C. H. Scholtz; allotype female (CLBC); same data as holotype; 7 paratypes: 2 female, same data as holotype: 2 female. 3 sex not determined. Mariepskop. J. H. Grobler, 15.ii.1956. Paratypes in CLBC, SANC and TMSA.

This species is the one that I confused with A. felix (Waterhouse) in an earlier work (Bellamy, 1987a), based on a supposedly compared-to-type specimen in SANC. A. felix differs by having the pronotum widest at middle and evenly arcuate laterally, with a slight blue reflection, white pubescence, legs and antennae brunneous and more convex dorsally. I have illustrated the left outlines (figs. 31, 32) to help differentiate A. felix and A. transvaalensis. A. capensis can be separated by the differences of the lateral pronotal carinae and epipleuron (fig. 2).

I am still of the opinion (Bellamy, 1987a) that this new taxon is generically distinct from A. capensis, and thus, both A. natalensis and A. felix. However, in lieu of the influx in the classification of the subfamily and the need for a complete generic revision, I will take the most conservative course and retain all the African spp. in Ankareus.

Ankareus natalensis Bellamy


Ankareus mus Théry (nomen nudum); Holyński, 1984: 109. syn. n.

While it is inadvisable to discuss or list undescribed taxa, Holyński (1984) listed A. mus as a synonym of A. felix. While A. felix and A. natalensis are similar, I find that A. mus is rather con-
specific with A. natalensis. A. mus is represented by a "type" and two "paratypes" in BMNH and one additional "paratype" in MNHN.

**Ankareus somalicus** sp. n. Figs. 5, 6, 7, 30, 35b

Holotype Male. 3.10 x 1.13 mm; slender elongate ovoid, flattened; surface shining black; moderately covered with very short recumbent white setae.

Head: frontovertex truncate between eyes; frontovertex entire, slightly narrowing between antennal insertions; eyes moderately large, inner margins feebly convergent; frontoclyptes broadly shallowly arcutely emarginate distally; surface moderately punciate; antennae reaching past pronotal base when laid alongside; antennomeres 1-4 black, 5-11 bruneous; 2 fusiform, 3 narrower, subequal to 2; 4-10 serrate, with length nearly 2 x width; 11 oblong; moderately covered with short erect testaceous setae.

Pronotum: width 1.48 x length, widest at posterior 1/3; anterior margin feebly convex medially; posterior margin bisinuate, with impunctate transverse band; posterolateral angles obtuse; lateral margins broadly arcuate to anterior 1/3; then broadly arcuate; prelateral carina (fig. 6) arcuate when viewed from side; scutellum subcordiform, impunctate.

Elytra: narrower than pronotum, widest near humeri; humeri slightly elevated, depressed medially; base with transverse costa between humerus and scutellum; lateral margins subparallel, widening to apical 1/3, then narrowing to separately rounded apices; surface transversely rugose on disc, otherwise with punctation as on pronotum; epipleuron as in fig. 6.

Underside: punctuation and setation as on pronotum; prosternum with process truncatedistally, sides parallel; hypomeron slightly depressed along lateral pronotal carina for antennae in repose; abdominal sternites with suture between 1 and 2 broadly arcuate, so that 2 is very short medially; sutures between 2, 3, 4 and 5 arcuate medially; 5 emarginate apically.

Legs: femora fusiform; tibiae feebly sinuate; metatibiae with setal comb on apical 1/2 of outer margin; tarsomere 1 as long as 2 and 3 together, subequal to 5; 1-4 each with reduced pulvilli; 5 with claws slightly swollen basally.

Genitalia: as in fig. 7.

Variation: the size varies: 2.90-3.06 x 1.06-1.16 mm. The females differ by having a slight bluish reflection, mostly on the elytra and the serrate antennomeres with the length and width subequal.

Material examined - Holotype male (MRAC): SOMALIA: Mogadiscio, Afgoi (Afgooye), 22.4 -5.5.84. R. Mourglia leg ex larvae Acacia nilotica II - III 1985; allotype female (MRAC): same data except e.1. Acacia sp. 8.1984; 2 male paratypes (HMCG, CLBC): same data as holotype.

This species can be separated from its congeners from East Africa as indicated by the profiles (figs. 27-30) and the male genitalia. Further differences will be discussed under the following two new species.

**Ankareus kenyensis** sp. n. Figs. 8, 9, 10, 28, 35c

Holotype Male. 2.36 x 0.90 mm; slender elongate ovoid, flattened; surface black with aeneous reflection; moderately covered with adpressed testaceous setae.

Head: frontovertex produced between eyes, feebly longitudinally depressed, slightly narrowing between antennal insertions; eyes moderately large, inner margins subparallel; frontoclyptes triangularly emarginate distally; surface moderately punciate; antennae reaching past pronotal base when laid alongside; antennomeres concolorous, 2 globose, 3 narrower, subequal to 2; 4-10 serrate, with length nearly 2 x width; 11 oblong; moderately covered with short erect testaceous setae.

Pronotum: width 1.52 x length, widest before posterior 1/3; anterior margin transverse medially; posterior margin feebly biarcuate, with impunctate transverse band; posterolateral angles obtuse; lateral margins subparallel, arcuate from anterior 1/3; prelateral carina (fig. 9) arcuate when viewed from side; scutellum elongate, arcuate basally, attenuate distally, impunctate.

Elytra: narrower than pronotum, widest near apical 1/3; humeri slightly elevated, depressed medially; base with transverse costa between humerus and scutellum; lateral margins subparallel, widening to apical 1/3, then narrowing to separately rounded apices; surface transversely rugose on disc, otherwise with punctation as on pronotum; epipleuron as in fig. 9.
Figs. 1-12: *Ankareus* spp., dorsal habitus, lateral aspect of pronotum and epipleuron, and genitalia. Figs. 1, 3, 4: *A. transvaalensis* sp. n. Fig. 2: *A. natalensis* Bellamy. Figs. 5-7: *A. somalicus* sp. n. Figs. 8-10: *A. kenyensis* sp. n. Figs. 11, 12: *A. tsavoensis* sp. n. (scale lines = 1 mm).
Underside: punctuation and setation as on pronotum; prosternum with process rounded distally, sides attenuate; hypomeron slightly depressed along lateral pronotal carina for antennae in repose; abdominal sternites with suture between 1 and 2 only broadly arcuate medially; sutures between 2, 3, 4 and 5 arcuate medially.

Legs: femora fusiform; tibiae feebly sinuate; metatibiae with setal comb on apical 1/2 of outer margin; left metatarsus missing; tarsomeres 1-4 subequal, each progressively shorter, longer together than 5; 1-4 each with reduced pulvilli; 5 with claws slightly swollen basally; missing all of left foretarsus, part of right foretarsus.

Genitalia: as in fig. 10.

Variation: the size varies: males, 2.26-2.50 x 0.86-0.96 mm; females, 2.43. The females differ by having the serrate antennomeres with the length and width subequal.

Material examined - Holotype, male (MRAC): KENYA: Nkubu (Meru) (S0.04 E37.40) 1500 m, 1/10.1.87, R. Mourglia legit ex larvae Newtonia buchanani (Bak.) Gilbert & Boutique; allotype, female (MRAC): same data as holotype except 12/25.10.82 (no host data); 9 paratypes (4 male, 5 female) (HMCG, CLBC): same data as allotype.

This species differs from A. alluaudi Kerremans by having the projecting frontovertex more convex and the pronotum more parallel-sided. From A. tsavoensis it differs by being smaller, by the parallel-sided pronotum, the reflected surface color and the male genitalia.

Ankareus tsavoensis sp. n. Figs. 11, 12, 29, 35d

Holotype Female. 2.93 x 1.16 mm; slender elongate ovoid, flattened: surface shining black. elytra with greyish blue reflection; head finely shagreened; pronotum imbricate; elytra glabrous except for more less straight striae of large semiregular punctures; head, pronotum and underside with short recumbent testaceous setae; elytra with sparse, suberect setae both laterally and apically.

Head: frontovertex produced between eyes, longitudinally grooved, slightly narrowing between antennal insertions; eyes moderately large, inner margins subparallel; frontoclypeus triangularly emarginate distally; surface moderately punctate; antennae reaching past pronotal base when laid alongside; antennomeres concolorous. 2 swollen basally, narrow apically; 3 narrower, shorter than 2; 4-10 serrate, with width subequal to length; 11 oblong, nearly as long as 9 + 10; moderately covered with short erect white setae.

Pronotum: width 1.70 x length, widest at middle; anterior margin transverse medially; posterior margin nearly evenly transverse, with impunctate transverse band; posterolateral angles subobtuse; lateral margins arcuate from basal angle, more strongly so on apical 1/3; prelateral carina (fig. 12) feebly arcuate when viewed from side: scutellum subcordiform, impunctate.

Elytra: narrower than pronotum, widest near apical 1/3: humeri slightly elevated, depressed medially; base with transverse costa between humerus and scutellum: lateral margins subparallel, widening to apical 1/3, then narrowing to separately rounded apices; surface transversely rugose on disc, otherwise with punctuation as on pronotum; epipleuron as in fig. 12.

Underside: punctuation and setation as on pronotum; prosternum with process truncate distally, sides parallel; hypomeron slightly depressed along lateral pronotal carina for antennae in repose; abdominal sternites with suture between 1 and 2 convex medially; sutures between 2, 3, 4 and 5 arcuate medially.

Legs: femora fusiform; tibiae feebly sinuate; metatibiae with setal comb on apical 1/2 of outer margin; tarsomeres 1-4 each subequal, taken together slightly shorter than 5; 1-4 each with reduced pulvilli; 5 with claws slightly swollen basally.

Male: unknown.


This species can be distinguished from A. alluaudi by the different reflected surface colors and by being larger. It differs from A. kenyensis as indicated previously.

Helferella papuae sp. n. Figs. 13-15, 34, 35e

Holotype Male. 3.0 x 1.30 mm; robust elongate ovoid; surface black with blue reflection; moderately, finely punctate, pronotal disc feebly imbricate; surface with very short adpressed white setae, which are longer on pronotal
Figs. 13-26: Helferella spp., dorsal habitus, lateral aspect of pronotum and epipleuron, and genitalia. Figs. 13-15: H. papuæ sp. n. Figs. 16, 17: H. philippinensis sp. n. Figs. 18-20: H. vanuae sp. n. Figs. 21-23: H. fiji sp. n. Figs. 24-26: H. viti sp. n. (scale lines = 1 mm).
disc.

**Head:** angularly produced between eyes; eyes large, inner margins sinuate, converging dorsally; frontoclypes constricted between antennal cavities, triangularly emarginate distally; antennae reach to basal 1/3 of pronotum when laid along side; antennomere 2 subspherical; 3 narrower, length subequal to 2; 4 subserrate; 5-10 serrate with length x width proportion decreasing distally; 11 oblong; moderately covered with erect white setae.

**Pronotum:** width 1.71 x length, widest posterior to basal 1/3; anterior margin transverse medially; posterior margin biarcuate; posterolateral angles obtuse; lateral margins strongly arcuate along basal 1/2, then attenuate to arcuate anterolateral angle; prelateral carina as in fig. 14; scutellum: triangular, longer than wide.

**Elytra:** narrower than pronotum, widest anterior of apical 1/3; humeri slightly elevated, depressed medially; base with transverse costa between humerus and scutellum; lateral margins subparallel, widening to apical 1/3, then narrowing to separately rounded apices; surface transversely rugose on disc, otherwise with punctuation as on pronotum; epipleuron as in fig. 14.

**Underside:** prosternal process broad, sides subparallel, roundly truncate distally; hypomeron (fig. 14) with deep longitudinal groove ventrad lateral pronotal margin; abdominal sternites with suture between 1 and 2 only faint, sutures between 3, 4, and 5 transverse medially, angulate laterally.

**Legs:** femora fusiform; tibiae feebly sinuate; metafemora with setal comb nearly entire on outer margin; tarsomeres 1-4 each subequal, taken together slightly shorter than 5; 1-4 each with reduced pulvilli; 5 with claws slightly swollen basally; missing tarsomere 5 on left protarsus, both middle legs, most of one hind tibia and entire tarsus.

**Female:** unknown.

**Material examined** - Holotype, male (MCZ C #33354): PAPUA N(EW), G(UINEA), Dobodura (Dobuduru S8.46 E148.22), Mar-July 1944, Darlington.

This new species can be separated from the only other New Guinean mastogeniine, *H. dianae* Cobos (fig. 33) with its black color, head more strongly produced between eyes, smaller size, male genitalia and island locality (Biak Is., Bosnek) (Cobos, 1957).

**Helferella philippinensis** sp. n. Figs. 16-17, 35f

Holotype Female. 2.96 x 1.30 mm; robust elongate ovoid; surface shining black; surface nearly glabrous with very short, sparse adpressed white setae.

**Head:** angularly produced between eyes; eyes large, inner margins sinuate, converging dorsally; frontoclypes constricted between antennal cavities, triangularly emarginate distally; antennae reach to basal 1/3 of pronotum when laid along side; 2 globose; 3 narrower, length subequal to 2; 4 subserrate; 5-10 serrate with length x width proportion decreasing distally; 11 oblong; moderately covered with erect white setae.

**Pronotum:** width 1.69 x length, widest at basal 1/3; anterior margin transverse medially; posterior margin biarcuate; posterolateral angles subacute; lateral margins strongly arcuate along basal 1/2, then attenuate to arcuate anterolateral angle; prelateral carina as in fig. 17; scutellum: triangular, longer than wide.

**Elytra:** narrower than pronotum, widest anterior of apical 1/3; humeri slightly elevated, depressed medially; base with transverse costa between humerus and scutellum; lateral margins subparallel, widening to apical 1/3, then narrowing to separately rounded apices; surface transversely rugose on disc, otherwise with punctuation as on pronotum; epipleuron as in fig. 17.

**Underside:** prosternal process broad, sides subparallel, roundly truncate distally; hypomeron (fig. 17) with deep longitudinal groove ventrad lateral pronotal margin; abdominal sternites with suture between 1 and 2 only faint, sutures between 3, 4, and 5 transverse medially, angulate laterally.

**Legs:** femora fusiform; tibiae feebly sinuate; metafemora with setal comb nearly entire on outer margin; tarsomeres 1-4 each subequal, taken together slightly shorter than 5; 1-4 each with reduced pulvilli; 5 with claws slightly swollen basally.

Left three distal antennomeres; right middle leg and left midtarsus mounted on a point beneath specimen.

**Male:** unknown.

**Material examined** - Holotype, male (NMNH): Zamboanga, Mindanao P hilippines) l(lands) / C F Baker Collection 1927.

This is the first known mastogeniine from the Philippines and obviously expands the range.
Figs. 27-34: Left dorsal aspects. Fig. 27: Ankareus alluaudi Kerremans. Fig. 28: A. kenyensis sp. n. Fig. 29: A. tsavoensis sp. n. Fig. 30: A. somalicus sp. n. Fig. 31: A. felix (Waterhouse). Fig. 32: A. transvaalensis sp. n. Fig. 33: Heferella dianaes Cebot. Fig. 34: H. papuae sp. n.
of *Helferella*. Its locality on Mindanao lies approximately halfway between the Bonin Islands of southern Japan, which is the type locality for *Mastogenius insperatus* Kuroswa and southeast Papua New Guinea. *H. philippinensis* is larger, but less setose than *H. diana* and smaller, but without the blue reflected color of *H. papuana*.

**Helferella vanuae** sp. n.  Figs. 18-20, 35g

Holotype. Male. 2.36 x 1.03 mm; robust elongate ovoid; surface shining black; surface very sparsely shallowly punctate, slightly more on lateral areas of pronotum and elytra; no evidence of dorsal setation when viewed at 45 x, except or head.

Head: angularly produced between eyes; eyes large, inner margins sinuate, converging dorsally; frontoclypeus constricted between anterior carinae, shallowly arcuately emarginate distally; antennae reach to basal 1/3 of pronotum when laid along side; antennomere 2 globose; 3 narrower, slightly longer than 2; 4 subcylindrical, 5-8 serraté; left apical three and right apical five antennomeres missing; moderately covered with erect white setae.

Pronotum: width 1.82 x length, widest posterior to basal 1/3; anterior margin transverse medially; posterior margin biarcuate; postero-lateral angles obtuse; lateral margins strongly arcuate along basal 1/2; then attenuate to arcuate antero-lateral angle; disc flattened; pre-lateral carina as in fig. 19; scutellum: triangular, longer than wide.

Elytra: narrower than pronotum, widest anterior of apical 1/3; humeri slightly elevated, depressed medially; base with transverse costa between humerus and scutellum; lateral m. agens subparallel, widening to apical 1/3, then narrowing to coarsely rounded apices; epipleuron as in fig. 19.

Underside: proterosternal process broad, sides subparallel, truncate distally; abdominal sternites with suture between 1 and 2 only faintly indicated, convex medially; sutures between 3, 4, and 5 feebly concave medially, angulate laterally.

Legs: femora fusiform; tibiae feebly sinuate; metatibiae with setal comb nearly entire on outer margin; tarsomeres 1-4 each subequal, taken together slightly shorter than 5; 1-4 each with reduced pulvilli; 5 with claws slightly swollen basally; missing right foreleg.

Left foetatarsus, 2 antennomeres and genitalia mounted on card.

Genitalia: as in fig. 20.

Female unknown.


This species differs from *H. fiji* with the absence of any reflected color, by the roundly obtuse posterolateral pronotal angles, by its slightly smaller size, male genitalia and by the illustrated differences in profile and configuration of pronotal carinae and epipleuron.

**Helferella fiji** sp. n.  Figs. 21-23, 35h

Holotype. Male. 2.20 x 0.86 mm; robust elongate ovoid; surface black with feeble aeneous reflection; moderately, finely punctuate; pronotal disc feebly imbricate; pronotal surface with very short adpressed white setae on antemedial portion.

Head: angularly produced between eyes; eyes large, inner margins sinuate, converging dorsally; frontoclypeus constricted between anterior carinae, broadly shallowly arcuately emarginate distally; antennae reach to basal 1/3 of pronotum when laid along side; antennomere 2 subcylindrical; 3 narrower, length subequal to 2, 4 subcylindrical, 5-10 serrate with length x width proportion decreasing distally. 11 oblong; moderately covered with erect white setae.

Pronotum: width 1.52 x length, widest near middle; anterior margin transverse medially; posterior margin biarcuate; postero-lateral angles acute; lateral margins straight to basal 1/3, then broadly arcuate to arcuate antero-lateral angle; pre-lateral carina as in fig. 22; scutellum: triangular, longer than wide.

Elytra: narrower than pronotum, widest anterior of apical 1/3; humeri slightly elevated, depressed medially; base with transverse costa between humerus and scutellum; lateral margins subparallel, widening to apical 1/3, then narrowing to separately rounded apices; surface transversely rugose on disc, otherwise with punctuation as on pronotum; epipleuron as in fig. 22.

Underside: proterosternal process broad, sides subparallel, roundly truncate distally; abdominal sternites with suture between 1 and 2 only faintly indicated, sutures between 3, 4, and 5 transverse medially, angulate laterally.
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Legs: femora fusiform; tibiae feebly sinuate; metatibiae with setal comb on apical 1/2 of outer margin; tarsomeres 1-4 each subequal, taken together slightly shorter than 5; 1-4 each with reduced pulvilli; 5 with claws slightly swollen basally; metatibial comb nearly entire, setae short.

Genitalia: as in fig. 23.
Female: not known for certain.
Variation: Male paratype, 2.50 x 0.96 mm; sex indet. paratype, 2.36 x 0.96 mm.


This species differs from H. vanuae as indicated previously under that species. From H. viti, it differs by having the acute posterolateral pronotal angles, with the pronotum strongly constricted basally, by the illustrated differences in the profile and lateral pronotal carinae and by the male genitalia.

Helferella viti sp. n. Figs. 24-26, 35i

Holotype Male. 2.30 x 1.06 mm; robust elongate ovoid; surface black with cupreous reflection on pronotum; moderately, finely punctate, pronotal disc feebly imbricate; surface with very short sparse adpressed white setae, which are denser on anteromedial portion of pronotal disc.

Head: angularly produced between eyes; eyes large, inner margins sinuate, converging dorsally; frontoclypes constricted between antennal cavities, broadly shallowly emarginate distally; antennae reach to basal 1/3 of pronotum when laid along side; antennomere 2 subspherical 3 narrower, length subequal to 2, 4 subserrate, 5-10 triangularly serrate with length x width proportion decreasing distally, 11 oblong; moderately covered with erect white setae.

Pronotum: width 1.76 x length, widest posterior to basal 1/3; anterior margin transverse medially; posterior margin biarcuate; posterolateral angles obtuse; lateral margins strongly arcuate along basal 1/2, then attenuate to arcuate anterolateral angle; prelateral carina as in fig. 25; scutellum: very nmw elongate triangular.

Elytra: narrower than pronotum, widest anterior of apical 1/3; humeri slightly elevated, depressed medially; base with transverse costa between humerus and scutellum; lateral margins subparallel, widening to apical 1/3, then narrowing to separately rounded apices; surface transversely rugose on disc, otherwise with punctuation as on pronotum; epipleuron as in fig. 25.

Underside: prosternal process broad, sides subparallel, slightly widening to round apicolateral angles, truncate distally; abdominal sternites with suture between 1 and 2 only faint, sutures between 3, 4, and 5 convex medially, angulate laterally.

Legs: femora fusiform; tibiae feebly sinuate; metatibiae with setal comb on apical 1/2 of outer margin; tarsomeres 1-4 each subequal, taken together slightly shorter than 5; 1-4 each with reduced pulvilli; 5 with claws slightly swollen basally; metatibial comb nearly entire, setae short.

Genitalia: as in fig. 26.
Variation: Allotype, female: 2.56 x 1.23 mm; pronotal punctuation slightly more dense; reflected color more aeneous. Male paratypes: 1.60-2.51 x 0.40-1.16 mm.


This species can be distinguished from the two previous by differences noted under those taxa.

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Fig. 35: Distribution of new spp. of Ankareus and Helferella. a: A. transvaalensis; b: A. somalicus; c: A. kenyensis; d: A. tsavoensis; e: H. papuae; f: H. philippinensis; g: H. vanuae; h: H. fiji; i: H. viti.
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Genus Mastogenius Solier


Type species: Mastogenius parallelus Solier (original monotypy).


Genus Neomastogenius Toyama

Neomastogenius Toyama, 1983: 59; Bellamy, 1985: 413. Type-species: Neomastogenius hatayamai Toyama (original designation).

Genus Siamastogenius Toyama

Siamastogenius Toyama, 1983: 62; Bellamy, 1985: 413. Type-species: Siamastogenius cyaneus Toyama (original designation).


Genus Ankareus Kerremans


Obenbergerietta Strand, 1942: 392 (nom. nov., Sicardia preoccupied, Scarabaeidae); Bellamy, 1985: 413; 1987a: 205.

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dominicus Holynski, 1984: 110, 112. S. India.

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dominicus Holynski, 1984: 110, 112. S. India.

dominicus Holynski, 1984: 110, 112. S. India.


Genus *Exaesthetus* Waterhouse


Type-species: *Exaesthetus dasyioides* Waterhouse (original monotypy).


Genus *Micrasta* Kerremans


Type-species: *Micrasta typica* Kerremans (here designated).


*hispaniiae* Fisher, 1940: 166. Dominican Republic.


*minuta* Kerremans, 1896: 150, 153; 1903: 334;


341. Brasil.

Genus Helferella Cobos

Helferella Cobos, 1957: 91; Toyama, 1983: 56, 60; Bellamy, 1985: 413; Williams & Weir, 1987: 153 [key to Australian spp.]; Williams & Weir, 1988: 179 [amended key to Australian spp.].

Type-species: Helferella dianae Cobos (original designation).


papuae sp. n. S.E. New Guinea.

philippinensis sp. n. Mindanao.


vanuae sp. n. Fiji, Vanua Levu.

viti sp. n. Fiji, Viti Levu.


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