The Higher Classification of Australian Buprestidae, with the Description of a New Genus and Species (Coleoptera)

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Abstract

An illustrated key to the subfamilies and tribes of Australian Buprestidae is presented together with a checklist of the higher taxa (subfamily to subgenus) and a description of Australorhipis aphanochila, gen. et sp. nov. The placement of Julodimorpha is reconciled with the redescription of Julodimorphini in the Chalcophorinae. Maoraxini is synonymized under Anthaxiini.

Introduction

The most recent major work to consider the classification of the Australian Buprestidae is that by Carter and Théry (1929). A number of changes have taken place since that work and the series of buprestid fascicles of the Coleopterorum Catalogus by Obenberger (1926, 1930, 1934, 1936, 1937) (here referred to as ‘the catalogue’). The need to integrate the more recent works on Australian Buprestidae, along with research on the higher taxonomy, into a uniform system is evidenced by the heterogeneous systems used or proposed in several recent works, e.g. those by Britton (1970), Hawkeswood (1978), Levey (1978a, 1978b), Williams and Williams (1983), Holynski (1984), Bellamy (1985b), and Bellamy and Williams (1985).

The key to the subfamilies and tribes provided herein is a synthesis of work by Cobos (1979, 1980), Levey (1978b) and Nelson (1981), along with input from the keys of Carter and Théry (1929). Representatives of most genera have been personally examined, along with the descriptions of all others; this has allowed a slightly different use of some of the characters.

The checklist coordinates all recent work and synonymies and shows how the ‘tribes’ of Carter and Théry (1929) fit this new system. Parenthetical remarks are used to highlight original status, date of synonymy, recent revisions or other important works.

The following abbreviations are used in both text and checklist:

- ANIC: Australian National Insect Collection, Canberra
- CLBC: C. L. Bellamy collection, Pretoria
- NMV: Museum of Victoria, Melbourne
- TMP: Transvaal Museum, Pretoria
- ZMCD: Zoologisk Museum, Copenhagen

Name preocc., name preoccupied; non desc., not described; rev., revision; sic, error.

In the description of Australorhipis aphanochila, gen. et sp. nov., label data are given in quotes, each label separately.

Higher Taxonomy

The higher taxonomy of the Buprestidae has received a good deal of attention in recent years, as commented on by Levey (1978b), Nelson (1981) and Bellamy (1985b). The subfamily system proposed by Cobos (1980), along with the trend to more clearly delimit tribal boundaries,
C. L. Bellamy has yielded a much tighter classification at the higher levels, with but a few situations that need clarifying. Since the various classification schemes used by different authors since Carter and Théry (1929) reflect little or no integration of more recent subfamilial or tribal schemes, this paper will attempt to place the higher classification (subfamily–subgenus) in line with the most contemporary plan.

The basic system of the subfamilies is derived from the work of Lacordaire (1857) as commented upon by Nelson (1981). More recent major works have variously considered the number and composition of buprestid subfamilies in Australia. Carter and Théry (1929) used only two: Buprestinae and Chalcophorinae. Britton (1970) recognised six subfamilies: Chalcophorinae, Chrysobothrinae, Mastogeninae, Polyccestinae, Buprestinae and Stigmoderinae; but he inexplicably omitted the Agrilinae. Bily (1974) considered seven subfamilies for the world: Polyccestinae, Sternocerinae, Stigmoderinae, Buprestinae, Chrysobothrinae, Agrilinae and Trachyinae. The most recent major study is by Cobos (1980), who combined the more traditionally used characters with a study of the wing venation, genitalia of both sexes and larval morphology, to define 13 subfamilies for the world: Julodinae, Schizopodinae, Thrincopyginae, Mastogeninae, Acmaeoderinae, Polyccestinae, Chalcophorinae, Chrysobothrinae, Buprestinae, Sphenopterinae, Agrilinae, Trachyinae and Cylindromorphinae.

In recent studies, a number of new tribes have been described, several of which are important to Australian buprestid classification. Cobos has described Xyroscelini (Polyccestinae) (1955), Germaricini (Trachyinae) (1979), and both Astraeusini and Prospherini (Polyccestinae) (1980). Levey (1978b) described Epistomentini and redefined Chrysochroini (Chalcophorinae). Holynski (1984) described Maoraxiini (Mastogeninae). Bellamy (1985b) used Julodimorphini (Julodimorphites Kerremans) and placed it in the Chalcophorinae. The Stigmoderini was downgraded from the subfamilial rank and placed in Buprestinae on the basis of the subfamilial definition of Cobos (1980). Cobos' original spelling of Xiroscelini is due to a restraint of Spanish grammar, but must still be considered as an unjustified emendation. Carter and Théry (1929) did not consider Dicercini (Dicercites) Kerremans as sufficiently distinct from Buprestini, but recently Nelson (1981) and Bily (1982) have more strictly defined this tribe and it is included herein. Recent work has also seen the transfer of a number of genera from one subfamily to another. Astraeus Laporte & Gory was moved to the Polyccestinae from the Buprestinae by Cobos (1980). Microcastalia Heller was moved to the Buprestinae from the Polyccestinae by Cobos (1978). Balthasarrella Obenberger was moved from the Polyccestinae to the Buprestinae by Cobos (1974) and placed in the Buprestini on the basis of, in part, the wing venation. Maoraxia Obenberger was transferred to the Buprestinae from the Mastogeninae by Bellamy and Williams (1985).

Three enigmatic taxa that need clarification are Amorphosoma tasmanicum (Germar), Polyonychus torridus (Blackburn) and Coraebus pulcherrimus Obenberger, currently placed in the Coraebini. The first two are the last taxa to be listed in the checklist of Carter and Théry, and were included with comments as to their uncertain generic placement. Both species were described in the genus Discoderes Chevrolat and subsequently transferred to their current placement: the former by Saunders (1871) and the latter with a question mark by Obenberger (1935).

I have examined the damaged type of Discoderes torridus Blackburn (NMV I–8140), labelled 'Cairns', and find it to be congeneric with two Indian species of Polyonychus in my collection, which confirms the generic transfer by Obenberger (1935). Polyonychus is known from India, south-east Asia and Indonesia, so that the Queensland locality is not unlikely, but further material is needed to firmly establish this genus as a member of the Australian Coraebini.

In addition, I have recently seen a specimen of an apparently undescribed species of Amorphosoma (ZMCD), labelled 'Swan River'; an indication that the genus is represented in Australia. Amorphosoma, as I recently commented (1985a), is a heterogeneous assemblage of species, which is badly in need of revision. A preliminary survey of Amorphosoma suggests that these species that fit within a strict generic definition would present a distribution pattern that could only be termed 'relict' and comparable to the currently understood distribution
of *Mastogenius*, *sensu latu* (prior to Toyama 1983). *C. pulcherrimus* was not available for study, but the confirmed presence of the genus in New Guinea would seem to indicate the validity of this genus as part of the Australian fauna.

Barker (1979) did not consider the subgenus *Stigmoderoides* Théry, and did not formally synonymise it with *Themognathoa* Solier, so for the present I consider it valid. *Hypostigmodera* was described in 1892, but subsequently was synonymised by Kerremans (1903) under *Stigmodera*, resurrected to subgenus by Carter (1931) and further elevated to its original rank by Obenberger (1934). As no further mention has been made of *Hypostigmodera*, I treat it as a valid genus.

A number of descriptive or taxonomic works dealing with Australian buprestids have appeared since the catalogue and are listed to help researchers in the future: Carter (1929a, 1940), Obenberger (1941, 1942, 1943, 1947, 1956a, 1956b, 1958, 1959), Barker (1975, 1977, 1979, 1980, 1983), Levey (1978a, 1978b) and Bellamy and Williams (1985). Two major works are nearing completion, these being the revisions of *Stigmodera* (*Castiarina*) by Barker and of *Melobasis* by Levey. For completeness, I include *Helferella* Cobos in the Mastogeninae, since Williams (personal communication) writes of his intention to describe a new Australian species.

**Key to the Subfamilies and Tribes of Buprestidae of Australia**

1. Sternal cavity for reception of prosternal process formed entirely by mesosternum (Fig. 1) .......................................................... .......................... 2
   Sternal cavity at least partly formed by metasternum (Figs 2, 3) ........................................ 4
   2(1). Tibiae spatulate, dorsally excavated for reception of retracted tarsi ................................. Polycestinae, Xyroscelini
   Tibiae cylindrical, not capable of receiving retracted tarsi .................................................... 3
   3(2). Pronotum widest at middle; elytra strongly carinate at alternate intervals ........................ Polycestinae, Polycestini
   Pronotum widest at base; elytral intervals equally carinate ........ Polycestinae, Proserpini
   4(1). Sternal cavity formed more or less equally by metasternum distally and mesosternum laterally (Fig. 2) .......................................................... 5
   Metasternal portion of sternal cavity greatly reduced; mesosterna laterally expanded forming greater portion of cavity (Fig. 3) ........................................ 11
   5(4). Front of head more or less transversely convex, not constricted by insertion of antennae (Fig. 4) .......................................................... .......................... 6
   Front of head constricted by antennal insertions (Fig. 5) ......................................................... 7
   6(5). Body generally strongly convex; pronotum with 1 lateral carina (Fig. 7) ................................. .......................... Polycestinae, Astraesinii
   Body flattened; pronotum with 2 more or less parallel lateral carinae (Fig. 6) ........................... Mastogenimii, Mastogenini
   7(5). Mesocoxae separated by approximately same width as procoxae (Fig. 8); tarsi elongate, nearly 1/2 of tibial length .................................................... Agrilinae. 8
   Mesocoxae separated by a much greater width than procoxae (Fig. 9); tarsi short, usually only 1/2 of tibial length .................................................... Trachynii. 9
   8(7). Pronotum without submarginal carina, sometimes with a prelateral carina (Fig. 10); tarsi short, metatarsi with segment 1 not longer than following 2 segments combined; scutellum without transverse carina ......................................................... Coraeinii
   Pronotum with submarginal carina (Fig. 11); tarsi elongate, metatarsi with segment 1 as long as following 3 combined; scutellum usually with transverse carina .................. Agrilini
   9(7). Body elongate, cylindrical; pronotum only slightly wider, if at all, than elytra ................. 10
   Body triangular, flattened; pronotum much wider than elytra ........................................... Trachynii
   10(9). Femora dilated, dorsoventrally flattened, excavated to receive retracted tibiae; head generally excavated between eyes (Fig. 12) ................................. Aphaniesticini
   Femora fusiform, distally cylindrical, not able to receive retracted tibiae; head more or less entire, transversely convex (Fig. 13) .................................................. Germariciini
   11(4). Antennal pores distributed over both surfaces of serrate segments (Fig. 14), rarely condensed in apical depression on ventral surface; antennae never pectinate .. Chalcophorinae. 12

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Antennal pores concentrated in well defined, usually apical depression on ventral surface of serrate segments (Fig. 15) or finely diffuse on pectinate plates of males of Australian Buprestis (Fig. 32) .............................................................. 14

12(11). Fronto clypeus reduced or distal margin deeply and broadly excised between the antennae, exposing a large part of the membranous anteclypeus (Fig. 16) .............................................. 13

13(12). Body large, >40 mm in length; cylindrical; sternal cavity open, not enclosing prosternal process; ovipositor strongly sclerotised as in Julodinae (Figs 29, 30) .......... Julodimorphini

Body smaller, <25 mm in length; flattened; sternal cavity enclosing prosternal process; ovipositor membranous, only with supporting coxites sclerotised .............. Epistomentini

14(11). Eyes strongly convergent dorsally; 3rd antennal segment at least 1.5 x length of 4th; scutellum usually much longer than wide, strongly acuminate apically ...... Chrysobothrinus. 15

Eyes at most only slightly convergent dorsally, sometimes divergent; 3rd antennal segment usually shorter, but sometimes just slightly longer, than 4th; scutellum usually with length subequal to width, shape variable, not strongly acuminate .................................. Buprestis. 16

15(14). Third segment of tarsi simple, not extending beyond 4th (Fig. 18) .......... Chrysobothrinus

Third segment of tarsi deeply emarginate and laterally produced into 1 or a series of distally pointing spines (Fig. 19) ................................................................. Actenodini

16(14). Metepimeron evident, yet partly concealed by lateral anterior projection of 1st abdominal sternite (Fig. 20) ................................................................. 17

Exposed portion of metepimeron not concealed by abdominal projection (Fig. 21), but may be concealed beneath epipleural fold of elytra along with abdominal projection ... 18

17(16). Dorsal aspect, or pleural face, of distal abdominal sternites visible from above, declivous or slightly concave; pygidium distally narrowed, at least partly exposed (Fig. 22) .............. Anthaxiini

Abdominal sternites not as above; pygidium not visible, or only very slightly, from above ........................................................................................................... Melanophilini

18(16). Labrum elongate, at least longer than wide, rounded or narrowed distally, overlapping mandibles; mouthparts produced into a muzzle; mentum wide, rounded .......... Stigmoderini

Labrum shorter, transverse, truncate or bilobed; mouthparts not produced into muzzle; mentum transverse, short ......................................................................... 19

19(18). Body convex, cylindrical; eyes dorsally diverging .................................. Bubastini

Body flattened; eyes dorsally converging ......................................................... 20

20(19). Mesepimeron obtuse at angulate junction of metepisternum and epipleuron; inner and outer margins of metepisternum converging posteriorly (Fig. 23) ................. Dicerinini

Mesepimeron acute at angular junction; margins of metepisternum more or less parallel (Fig. 24) ................................................................. Buprestis

Tribe JULODIMORPHINI Kerremans

Julodimorphites Kerremans, 1902, p. 16; Obenberger, 1926, p. 35; Cobos, 1980, p. 25.

Julodimorphus Carter & Thery, 1929, pp. 271, 274, 288.

Type-genus: Julodimorpha Thomson, 1878, p. 51.

Figs 1–3, Sternal cavity, ventral view: 1, Prospheres aurantiopicta (Laporte & Gory); 2, Astraues (Depollus) aberrans van de Poll; 3, Pseudotaenia quadrissignata Saunders.

Figs 4, 5. Head, frontal view: 4, Astraues mastersi MacLeay; 5, Agrilus australasiae Laporte & Gory.

Figs 6, 7, 10, 11. Pronotum, lateral view: 6, Mastogenius frenchi Thery; 7, A. mastersi; 10, Cisseis leucosticta (Kirby); 11, A. australasiae (arrows: I, lateral carina; 2, prelateral carina; 3, sublateral carina).

Figs 8, 9. Pro- and mesocoxa, ventral view: 8, Cisseis albosparsa Laporte & Gory; 9, Habrolooma sp.

Figs 12, 13. Head, dorsal view: 12, Aphanisticus brownii Carter; 13, Gerinarca liliputana Blackburn.

Figs 14, 15. Antennae: 14, Chalcotaenia quadrivittata Waterhouse; 15, Nascioides tillyardi Carter. Abbreviations: Cxl, procoxa; Cx2, mesocoxa; Cx1, procoxal cavity; Cx2, mesocoxal cavity; Ms, mesosternum; Mt, metasternum; Psp, prosternal process.


Fig. 22. Apical part of elytra and pleural abdominal tergites, dorsal view, *Notographus sulcipennis* MacLeay.


Abbreviations: Abd, abdomen; Ac, anteclypeus; Cx3, metacoxal plate; Epm2, mesepimeron (arrow, angle at junction); Epm3, metepimeron; Epp, epipleuron; Eps3, metepisternum; Lb, labrum.
Size large, over 40 mm; elongate, oval; cylindrical.

**Head.** Partly hidden when viewed from above; eyes large, convex, inner margins diverging dorsally; antennal insertions large, close together; labrum projecting forward over base of robust mandibles as in Stigmoderini; anteclypeus partly exposed; antennae with sensory pores, more or less concentrated in fovae distally, on underside of serrat e segments.

**Pronotum.** Widest at base; base and apical margins both with medial lobes; basal angles acute; disc convex; scutellum small.

**Elytra.** Wider than pronotum; strongly striatopunctate; pygidium exposed.

**Underside.** Prosternum reduced between wide hypomera; sternal cavity open, only shallowly excavated between median mesosternal lobes; metasternum only distally part of cavity; procoxal cavities widely excavated posterior to procoxae; metepisternum fully exposed by epipleura, only slightly concealed by anterolateral abdominal projection.

**Tarsi.** Segments large, broad with ventral pulvilli and 1st segment of metatarsi short as in Julodinae.

**Metathoracic wing** (Fig. 26). Typical of the chalcophorine pattern (Fig. 27).

**Ovipositor.** Strongly sclerotized as in Julodinae (Figs 29, 30) [larvae are probably external root-feeders, see Holm (1979)].

**Remarks**

Kerremans (1902) created Julodimorphites as one of four subtribes under the tribe Polycestini. He discussed what he thought to be the important characters and similarities between *Julodimorpha* Thomson and members of the Julodini LeConte & Horn and Stigmoderini Lacordaire. Obenberger (1926) followed this classification for the purpose of the catalogue. Carter and Théry (1929) used the subtribe Julodimorphae (Stigmoderini) and thus removed it from a polycestine consideration. Holm (1979) comments that the morphology of *Julodimorpha* is based upon the chalcophorine pattern and that similarities to the Julodini are simply convergent. Cobos comments (1980, personal communication) that *Julodimorpha* probably represents an independent tribe of Buprestinae with probable affinities to the Stigmoderini.

The similarities to the Stigmoderini are most likely adaptive and convergent. Holm (1979) mentioned the similarities of *Julodimorpha* to the chalcophorine line based on wing venation, lateral pronotal carinae, antennal pore configuration and shapes of the mesosternum and metacoxal plates. He also commented on julodine similarities such as general body shape, loss of apical elytral spine, shortened prosternum and large size. The partly obscured metepimeron shows some degree of relationship to that in some taxa of the Buprestinae. The adaptation of the mouthparts to myrtaceous nectaries, typical of the Stigmoderini, must be viewed as convergent, since the character is present in *Julodimorpha* and *Curis* Gory & Laporte, of the Anthaxiini. Good (1925) studied the wing venation for the North American buprestid genera and judged the presence or absence of the radiomedial crossvein (*r-m*), the closed ‘wedge cell’ (2dA–2dA1) and the cubitoanal cross-vein (*cu-a*) to be very significant. The wing venation of *Julodimorpha* (Fig. 26) is most similar to the chalcophorine configuration (Fig. 27) and differs substantially from that of both the julodines (Fig. 25) and stigmoderines (Fig. 28). The ‘open’ sternal cavity of *Julodimorpha* is formed as in typical chalcophorines, with the more or less free prosternal process very divergent from all buprestid lines. *Julodimorpha* has a tarsal configuration and strongly sclerotized ovipositor (Figs 29, 30) similar to those in the Julodinae, but these must be viewed as convergent characters. The similarity with the Buprestinae in the partly covered metepimeron is hard to explain, as this character is surely non-adaptive.

*Julodimorpha* undoubtedly represents a very early branching from the isolated Australian chalcophorinae lineage. Similar climatic shifts and subsequent niche restrictions in Australia, southern Africa and the eastern Palaearctic region, probably mean that any superficial similarities between *Julodimorpha* and the Julodinae are the result of environmentally induced convergence.
Figs 25–28. Simplified metathoracic wing venation: 25, Julodinae except Aaata and Neojulodis (generalised) (arrow, absent r–m crossvein); 26, Julodimorpha bakewelli White (arrow, closed ‘wedge cell’); 27, Chalcotaenia australasiae Saunders; 28, Stigmodera (Themognatha) variabilis Boisduval (arrow, absent cu–a crossvein).
Figs 29, 30. Ovipositor, dorsal view; 29, J. bakewelli; 30, Julodis cirrhosa Schoenherr.

Tribe ANTHAXIINI Gory & Laporte

Anthaxiae (part) Carter & Théry, 1929, p. 270; Bellamy and Williams, 1985, p. 149. New synonymy.

At the time of its description, the tribe Maoraxiini Holynski (1984) was quite clearly called for, as Maoraxia Obenberger was obviously very different from the other genera of the Mastogeninae. However, in a more recent paper, Bellamy and Williams (1985) transferred Maoraxia from the Mastogeninae to the Buprestinae and proposed that its true generic affinity was probably nearest to Neocuris Fairmaire. Because of the current redefinition of the genera
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of the Anthaxiae in the present classification, it is obvious that the Maoraxiini must be reduced to a junior synonym of the Anthaxiini.

Genus *Australorhipis*, gen. nov.

Type-species: *Australorhipis aphanochila*, sp. nov.

Body elongate, flattened.

**Head.** With frons broad, flatly convex; eyes oval, widely separated, small, not touching pronotum; clypeus short, feebly emarginate; labrum hidden beneath clypeus; mandibles basally curved, tips acute; inner face with acute tooth; maxillary palpi slender, distal segment acuminate; mentum broad, a rounded triangle; antennal insertions small, circular, widely separated; inner margin with small rounded carina; antennae short, only reaching to procoxae when laid alongside; male with segments 3–10 basally short, laterally elongate pectinate, 11 elongate, strongly curved, parallel to 10; female with 3–10 serrate, 11 oblong, curved.

**Pronotum.** Convex; disc slightly flattened; scutellum oblong, curved.

**Elytra.** With basal margin elevated; disc flattened; epipleural lobe small; apices slightly separately round, margin finely serrate.

**Underside.** Prosternum flatly convex; process apically acuminate; sternal cavity mostly formed by mesosterna; metasternal portion of cavity only a distal margin; metepimeron partly obscured by anterolateral projection of 1st abdominal sternite; abdomen with sutures distinct, except between sternites 1 and 2, then only laterally so; sutures broad arcuate.

**Tarsi.** Approximately equal to tibiae in length; segment 1 subequal to 2 and 3 together; 2, 3 and 4 subequal; protarsi with segment 5 subequal to 1–4 together; meso- and metatarsi with 5 slightly longer than preceding 2 segments together; 3 with very small ventral pulvillus on apex; 4 with pulvillus extending over apical half.

**Etymology**

The feminine generic name is a combination of the geographical prefix and the suffix *rhipis* (Greek, 'a fan') for the antennae.

**Remarks**

*Australorhipis* is one of few buprestid genera to exhibit pectinate antennae in the male. With the exception of *Hypostigmodes*, this character is limited to a complex of New World species classified in the genera *Xenorhipis* LeConte, *Hesperorhipis* Fall, *Trichinorhipis* Barr and *Isophaenus* Waterhouse, and discussed by Cobos (1964). The only other example of this character is *Galbella* (*Progalbella*) Bellamy, although this taxon is unrelated. *Australorhipis*, together with the other four New World genera, are members of the tribe Anthaxiini. *Australorhipis* would seem to come nearest *Hesperorhipis* on the basis of the general similarity in the head morphology and the antennal pectinations beginning with segment 3. However, the four New World genera form a fairly homogeneous group, but *Australorhipis* shows a more overall affinity to the Australian genera of the Anthaxiini. *Australorhipis* appears to be more closely related to *Notographus* Thomson and, in fact, *Australorhipis* keys to this genus in a recent key to the anthaxine genera (Bellamy and Williams 1985). *Australorhipis* differs from *Notographus* by having sexually dimorphic antennae; hidden labrum; eyes small, only slightly dorsally converging; tarsi as long as tibiae and pulvilli reduced. *Notographus* has serrate antennae in both sexes; labrum longer than wide, not hidden; eyes large, strongly dorsally converging; tarsi short and pulvilli broad on distal segments.

Pectinate antennae are plesiomorphic in Buprestidae (R. A. Crowson, personal communication), and sexually dimorphic characters are viewed as apomorphic. Although these characters relate *Australorhipis* to the four New World genera, stronger overall similarities require placement next to *Notographus*. The phylogenetic implications of these characters and others await the revision of most of the genera of the Australian Anthaxiini.
Australorhipis is included in the key to the genera (Bellamy and Williams 1985) with the following modification.

4(2). Antennae sexually dimorphic, pectinate in \( \sigma \), serrate in \( \varphi \); labrum hidden beneath clypeus

Australorhipis

Antennae not dimorphic, serrate in both \( \sigma \) and \( \varphi \); labrum not hidden beneath clypeus

4a(4). Pronotum furrowed, widest at middle, constricted at base and clearly cordiform

Notographus

Pronotum not furrowed, width greatest in basal half

Figs 31–34. Australorhipis aphanochila Bellamy, gen. et sp. nov.: 31, 33, holotype male, dorsal habitus (31) and genitalia (33); 32, 34, male (32) and female (34) antennae. Scale lines, each 1 mm.

Australorhipis aphanochila, sp. nov.

(Figs 31–34)

Holotype Male

Size small, 5.0 by 1.7 mm; elongate, oval; flattened above; head, basal antennal segment, pronotum, underside, femora and tibiae black; elytra testaceous, irregularly infused with dark brown from humeri to apices; antennal segments 2–11 and tarsi testaceous.

Head. With vertex, frons wide, transversely convex, slightly flattened medially; eyes small, not touching pronotum, oval, widest in middle, slightly converging dorsally; clypeus short;
antennal insertions beneath widely separated, small, rounded carinae on either side of clypeal apex; insertions excavated lateroventrad to carinae, allowing antennal scape to broadly rotate; antennae (Fig. 32) with segment 1 clavate; 2 globular, wider than long; 3–5 each shorter than 2; 6–10 longer than 2; 11 elongate pectinate; 12 strongly curved, parallel to 10; surface finely punctate within large reticulate shallow punctures, each with single recurved testaceous seta. Pronotum: 1.4 x wide as long, widest at middle; anterior margin transverse, slightly mediadly arcuate; basal margin bisinuate; basal angles obtuse; lateral margins arcuate, carinate in basal \( \frac{1}{12} \); disc coavec, slightly mediadly flattened; 1 small fossa mediobasally, anteriad to scutellum; punctation, vestiture as on head; scutellum trapezoidal, with central depression, punctate. Elytra: wider than pronotum opposite humeri, widest at apical \( \frac{1}{12} \); basal lobe broadly rounded in discal \( \frac{1}{12} \), slightly extending laterad to scutellum; lateral margins broadly bisinuate; margin serrulate from basal \( \frac{1}{12} \), becoming serrate in apical \( \frac{1}{12} \); apices separately rounded; surface irregularly punctate, moderately rugose; sparsely setose lateroapically. Underside: prosternum with apical margin broadly, shallowly convex; process with small, obtuse lateral lobes; suture between prosternum and hypomeron slightly sulcate; surface coarsely, shallowly punctate; moderately clothed with elongate recumbent setae. Legs: femora flattened, widest in middle; tibiae straight, slightly distally dilated; punctate, sparsely setose. Genitalia as in Fig. 33.

Male Variation
Paratype slightly larger, 6.1 by 2.4 mm.

Female Variation
Three paratypes vary in size: 5.0–5.6 by 1.8–2.0 mm; antennae (Fig. 34): segment 2 with width subequal to length; 3 triangularly serrate, longer than wide; 4–10 roundly serrate, wider than long; 11 oblong, curved.

Material Examined (Types)
Holotype \( \sigma \) in ANIC: 'AUSTRALIA: N.S.W.; Fowlers Gap, 26 km E.; 30.58S.-141.41E.;'2.10.82; E-Y: AU-14; groundtraps, 10 days; leg. Endrody-Younga'. Paratypes: 1 \( \sigma \), 3 \( \varphi \), same data as holotype, in TMP and CLBC.

Etymology
The name is a combination of the Greek prefix apan (hidden) and suffix chila (lip) for the labrum hidden beneath the clypeus.

Checklist of the Higher Taxa of Australian Buprestidae
Family BUPRESTIDAE Eschscholtz, 1829, p. 239 (Buprestides)
Subfamily POLYCESTINAE Lacordaire, 1857, p. 61 (Polycestides)
Tribe Astraesini Cobos, 1980, p. 28
Synonym: Buprestes (part) Carter & Théry, 1929, p. 270
Synonym: Asthraeus Imhoff, 1856, p. 46 (sic)
Synonym: Conognatha auctorum
Subgenus Astraeus
Subgenus Depollus Barker, 1975, p. 107
Tribe Xyroscelini Cobos, 1955, p. 19
Synonym: Xiroscelini Cobos, 1955, p. 19 (sic)
Synonym: Ptosimae Carter & Théry, 1929, p. 269
Genus Xyroscelis Thomson, 1878, p. 78
Tribe Prospherini Cobos, 1980, p. 84
Synonym: Polycaste (part) Carter & Théry, 1929, p. 269
Genus *Prospheres* Thomson, 1878, p. 61 (rev. Levey 1978a)
    Synonym: *Prospheres* Thomson, 1878, p. 61 (sic)
Tribe Polycestini
    Synonym: Polycestae (part) Carter & Théry, 1929, p. 269
Genus *Strigoptera* Dejean, 1837, p. 89
Genus *Polycesta* Solier, 1833, p. 281
Subfamily MASTOGENINAE LeConte & Horn, 1883, p. 199 (as tribe)
Tribe Mastogenini
    Genus *Mastogenius* Solier, 1851, p. 507
    Genus *Helferella* Cobos, 1957, p. 91 (Williams, personal communication)
Subfamily CHALCOPHORINAE Lacordaire, 1857, p. 14 (Chalcophoridae vrais)
Tribe Epistomentini Levey, 1978b, p. 155
    Genus *Cyria* Solier, 1833, p. 269
        Synonym: *Euchloris* Billberg teste Mannerheim, 1837, p. 30
        Synonym: *Cyriorides* Carter, 1920, p. 222 (Levey 1978b)
        Synonym: *Xenocyria* Obenberger, 1947, p. 129 (Levey 1978b)
    Genus *Cyrioxus* Hoscheck, 1925, p. 157
    Genus *Diadoxus* Thomson, 1878, p. 15
        Synonym: *Stigmodes* auctorum
        Synonym: *Anthaxia* auctorum
    Genus *Araucariana* Levey, 1978b, p. 156
Tribe Chalcophorini
    Genus *Cyphogastra* Deyrolle, 1864, p. 36
        Synonym: *Chalcophora* auctorum
    Genus *Paracupta* Deyrolle, 1864, p. 33
    Genus *Iridotaenia* Deyrolle, 1864, p. 25
        Synonym: *Paracupta* auctorum
    Genus *Chrysodema* Laporte & Gory, 1835, p. 1
        Synonym: *Evides* Mannerheim, 1837, p. 40 (not Thomson)
        Synonym: *Chrysoderma* Carter & Théry, 1929, p. 266 (sic)
    Genus *Chalcotaenia* Deyrolle, 1864, p. 12
        Synonym: *Chalcophora* auctorum
    Genus *Pseudotaenia* Kerremans, 1903, p. 81
        Subgenus *Pseudotaenia*
            Subgenus *Chalcophorotaenia* Obenberger, 1928, p. 28
    Genus *Chalcophorellini* Toyama, 1986, p. 189
    Genus *Austrophorella* Toyama, 1986, p. 190
Tribe Julodimorphini Kerremans, 1902, p. 16 (Julodimorphites)
    Synonym: *Julodimorphae* Carter & Théry, 1929, p. 271
    Genus *Julodimorpha* Thomson, 1878, p. 51
Subfamily BUPRESTINAE Lacordaire, 1857, p. 33 (Buprestides vrais)
Tribe Bubastini Obenberger, 1920a, p. 89
    Synonym: *Buprestes* (part) Carter & Théry, 1929, p. 270
    Genus *Neobubastes* Blackburn, 1892, p. 213
        Synonym: *Castelnaudina* Obenberger, 1924, p. 17 (Carter 1940)
        Synonym: *Castelnaudia* Obenberger, 1923, p. 14 (name preocc.)
    Genus *Notobubastes* Carter, 1924, p. 24
    Genus *Euryspilus* Lacordaire, 1857, p. 44
        Synonym: *Eurybia* Gory & Laporte, 1838, p. 1
        Synonym: *Neurybia* Théry, 1910, p. 18
    Genus *Bubastes* Laporte & Gory, 1836, p. 1
        Synonym: *Neraldus* Théry, 1910, p. 17
Genus *Eububastes* Obenberger, 1928, p. 186
Genus *Strandiola* Obenberger, 1920a, p. 161
   Synonym: *Strandiala* Obenberger, 1920a, p. 161 (sic)
Tribe Dicercini Kerremans, 1903, p. 124 (Dicercites)
   Synonym: Buprestes (part) Carter & Théry, 1929, p. 270
Genus *Nesotrinchus* Obenberger, 1924, p. 12
   Synonym: *Haplotrinchus* (part) Kerremans, 1903, p. 126
   Synonym: *Nosotrinchus* (sic), Théry, 1925, p. 225; 1943, p. 646
Genus *Microcastalia* Heller, 1891, p. 135
   Synonym: Buprestes (part) Carter & Théry, 1929, p. 270
Genus *Neobuprestis* Kerremans, 1903, p. 136
   Synonym: *Sphenoptera* auctorum
   Synonym: *Strigoptera* auctorum
Genus *Nascio* Gory & Laporte, 1837, p. 1
   Synonym: *Geronia* Dejean, 1837, p. 89
Genus *Nascioides* Kerremans, 1903, p. 147
Genus *Balthasarella* Obenberger, 1958, p. 487
Genus *Buprestina* Obenberger, 1923, p. 16
Genus *Buprestodes* Carter, 1924, p. 23
Tribe Melanophilini Bedel, 1921, p. 171
   Synonym: Anthaxiae (part) Carter & Théry, 1929, p. 270
Genus *Torresita* Gemminger & Harold, 1869, p. 1382 (non desc.)
   Synonym: *Plagiope* Saunders, 1868, p. 12 (non desc., name preocc.)
Genus *Pseudanilara* Théry, 1908, p. 32
   Synonym: *Neotorresita* Obenberger, 1923, p. 19 (Carter 1929a, 1940)
Genus *Melobasis* Gory & Laporte, 1837, p. 118 (Buprestis, 9th division)
   Synonym: *Abrobapta* Dejean, 1837, p. 90
   Subgenus *Melobasis*
   Subgenus *Dicercopygus* Deyrolle, 1864, p. 68 (as genus)
   Subgenus *Paramelobasis* Théry, 1923, p. 58
   Subgenus *Briseis* Kerremans, 1893, p. 110 (as genus)
Tribe Anthaxiini Gory & Laporte, 1837, p. 1 (Anthaxiines)
   Synonym: Anthaxiae (part) Carter & Théry, 1929, p. 270
Genus *Theryaxia* Carter, 1929b, p. 549
Genus *Anilara* Thomson, 1879, p. 28
Genus *Notographus* Thomson, 1879, p. 26
   Synonym: *Notograpthus* Macleay, 1872, p. 243 (name preocc.)
Genus *Anthaxoschema* Obenberger, 1923, p. 23
Genus *Australorhipis* Bellamy, new genus
Genus *Curis* Gory & Laporte, 1838, p. 47 (Stigmodera part) (Obenberger 1956b)
   Synonym: *Selagis* Dejean, 1834, p. 93
   Synonym: *Neocuropsis* Obenberger, 1923, p. 22 (Carter 1940)
Genus *Neocuris* Fairmaire, 1877, p. 334
   Synonym: *Maoriella* Obenberger, 1924 p. 19 (name preocc.)
Tribe Stigmoderini Lacordaire, 1857, p. 33 (Stigmoderites)
   Synonym: Stiginoderae Carter & Théry, 1929, p. 271
Genus *Hypostigmodera* Blackburn, 1892, p. 215
Genus *Stigmodera* Eschscholtz, 1829, p. 9
   Synonym: *Polychroma* Dejean, 1836, p. 89
Subgenus *Stigmodera*

Subgenus *Themognatha* Solier, 1833, p. 291 (as genus)

Subgenus *Stigmoderoides* Théry, 1937, p. 24

Subgenus *Castiarina* Gory & Laporte, 1838, p. 4 (as genus)

Genus *Calodema* Gory & Laporte, 1838, p. 70

Genus *Metaxymorpha* Parry, 1848, p. 82

Synonym: *Semnopharus* van de Poll, 1886, p. 239

Subfamily **CHRYSOBOTHРИNAE** Gory & Laporte, 1837, p. 1 (Chrysobothrites)

Tribe Chrysobothrini

Synonym: Chrysobothres Carter & Théry, 1929, p. 269

Genus *Chrysobothris* Eschscholtz, 1829, p. 9

Synonym: *Amblis* Gistel, 1834, p. 10

Synonym: *Odontomus* Kirby, 1837, p. 156 (as subgenus)

Synonym: *Enocys* Gistel, 1856, p. 415

Synonym: *Knowltonia* Fisher, 1935, p. 117

Tribe Actenodini Kerremans 1893, p. 112

Synonym: Actenodae Carter & Thiry, 1929, p. 269

Genus *Merimna* Thomson, 1878, p. 42

Genus *Belionota* Eschscholtz, 1829, p. 9

Subfamily **AGRILINAE** Gory & Laporte, 1837, p. 1 (Agrilites)

Synonym: Agrili Carter & Théry, 1929, p. 268

Tribe Coraebini Bedel, 1921, p. 170

Genus *Synechocera* Deyriolle, 1864, p. 115

Genus *Pseudosynechocera* Obenberger, 1943, p. 33

Genus *Paracephala* Thomson, 1878, p. 91

Genus *Meliboethon* Obenberger, 1920b, p. 170

Genus *Dinoccephalia* Obenberger, 1923, p. 39

Genus *Alcinous* Kerremans (Deyriolle) 1893, p. 122

Synonym: *Cisseis* (part) Gory & Laporte, 1839, p. 1

Genus *Coraebus* Gory & Laporte, 1839, p. 1 (see comments)

Genus *Cissis* Gory & Laporte, 1839, p. 1

Synonym: *Diphucrania* (part) Dejean, 1833, p. 81 (name preocc.)

Synonym: *Cinyra* auctorum

Synonym: *Coraebus* auctorum

Subgenus *Cisseis*

Subgenus *Pachycisseis* Théry, 1929, p. 268

Subgenus *Neospades* Blackburn, 1887, p. 251 (as genus)

Genus *Cisseioides* Kerremans, 1893, p. 118

Synonym: *Brachycisseis* (part) Théry, 1931, p. 26

Genus *Hypocisseis* Thomson, 1879, p. 49

Synonym: *Maschaliz* Waterhouse, 1887b, p. 293

Synonym: *Coraebus* auctorum

Genus *Ethon* Gory & Laporte, 1839, p. 1

Genus *Amorphosoma* Laporte, 1835, p. 166 (see comments)

Synonym: *Discoderes* auctorum

Genus *Polyonychus* Chevrolat, 1837, p. 102 (see comments)

Synonym: *Discoderes* auctorum

Tribe Agrilini

Genus *Agrilus* Curtis, 1825, No. 67

Synonym: *Anambus* C. G. Thomson, 1864, p. 38

Synonym: *Engyaulus* Waterhouse, 1889, p. 50

Synonym: *Teres* Harris, 1829, p. 2

Synonym: *Uragrilus* Semonov-Tian-Shianskij, 1935, p. 276

Synonym: *Paradomorphus* Waterhouse, 1887a, p. 183
Subfamily TRACHYINAE Gory & Laporte, 1840, p. 1 (Trachysites)
    Synonym: Traches Carter & Théry, 1929, p. 269
Tribe Aphanisticini Jacquetin du Val, 1859–1863, p. 104 (Aphanisticites)
    Genus Aphanisticus Latreille, 1829, p. 448
    Genus Endelus Deyrolle, 1864, p. 219
Tribe Germaricini Cobos, 1979, p. 428
    Genus Germarica Blackburn, 1887, p. 257
Tribe Trachyini
    Genus Habroloma C. G. Thomson, 1864, p. 42 (as subgenus of Trachys)
    Genus Trachys Fabricius, 1801, p. 201.

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