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A revised taxonomy for Australian *Teneropsis* Chapin and *Cregya* LeConte (Coleoptera: Cleridae: Korynetinae)

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ABSTRACT

The taxonomic status of Australian species presently assigned to the genera *Teneropsis* Chapin and *Cregya* LeConte is assessed. Two new genera are erected: *Gnidmus* gen. nov. for *Gnidmus jocosus* (Schenkling) comb. nov. (transferred from *Teneropsis*); *Hautenerus* gen. nov. for *Hautenerus australicus* (Lea) comb. nov. (transferred from *Teneropsis*), *Hautenerus kioloa* (Kolibáč) comb. nov. (transferred from *Cregya*) and *Hautenerus leichhardti* sp. nov. The three previously described species are redescribed. The systematic position of these taxa is discussed. Additionally, *Tarsostenus hilaris* (Westwood) comb. nov. is transferred from *Tarsostenosis* Heller and a revised key to Australian genera of Korynetinae is provided.

❑ new genera, new species, Australia, Coleoptera, Cleridae, Korynetinae.

Teneropsis Chapin was erected for its type species, *T. sibuyanus* Chapin, 1924, from the Philippines. Corporaal (1949) transferred twenty Indo-Australian species of *Pelonium* Spinola to *Teneropsis* despite having knowledge of only eight of them. *Pelonium australicum* Lea and *P. jocosum* Schenkling, the only two Australian species, were among those he had not examined. Corporaal (1950) listed 62 species, predominantly from South America, within *Cregya* LeConte. These had been originally described in *Pelonium* or *Enoplium* Latreille. The only Australian species, *Cregya kioloa* Kolibáč, 2003, was described from Kioloa State Forest, New South Wales. The status, and generic assignment of these Australian species is assessed, and the resulting revised taxonomy presented herein.

MATERIALS AND METHODS

Several Australasian and New World genera assigned by Opitz (2010) to Tarsosteninae and Peloniinae were considered before concluding that new genera were required for the species under study. Specimens in my private collection (JSBC) representing the type species of four genera were examined: *Cregya oculata* (Say), *Corinthiscus insignicornis* Fairmaire & Germain, *Neopylus nahuelbutensis* Solervicens, and *Boschella fasciata* (LeConte). High resolution photographs (courtesy G. Yang) of the type specimen of *Teneropsis sibuyanus* (USNM Type No. 40620) facilitated recognition of taxonomically significant pronotal characters (Fig. 1A, B) in that genus. Type species of *Pelonium* and *Muisca* were not available, so instead *P. geniculatum* (Klug) and *M. dilatata* (Chevrolat) were studied as representatives of those genera. Barr (1980), Chapin (1924), Opitz (2002, 2009, 2012), Peracchi (1964), Pic (1950), Schenkling (1916) and Westwood (1876) were consulted for characters of *Anisophyllus* Westwood, *Boschella* Barr, *Cregya*, *Exochonotus* Barr, *Paracregya* Peracchi, *Paratenerus* Chapin, *Pelonium*, *Phymatophaea* Pascoe, *Pyticeropsis* Schenkling, *Riotenerus* Pic and *Theresamora* Pic.

Judgement of genus-limits was primarily based on discrete or meristic characters such as number of antennomeres and tibial spurs, size of eye facets (whether fine or coarse), presence/absence of protibial spines and denticles of claws; the discrete states of which are considered by recent clerid workers to be stable among clerid genera (see Opitz 2010 for example). Continuous characters such as eye separation, shape of terminal palpomeres, degree of closure

of procoxal cavities, prominence of lateral pronotal tubercle and arrangement of elytral punctation (ranging from striate to scattered) were also considered if a character-state was deemed to be expressed at an extremity of a given characters range.

A Nikon SMZ1500 stereo dissecting microscope fitted with an eyepiece graticule was used to examine and measure specimens. Specimen images were constructed with the aid of Helicon Focus montage software from photographs taken through the SMZ1500 with a Prior Proscan II stepping-motor and a Nikon DS U2/DS-Ri1 digital image capture system. Within antennal descriptions, antennomere is abbreviated to 'A'. The antennal scape is referred to as A1 and the pedicel as A2.

Abbreviations of insect collections: ANIC, Australian National Insect Collection, CSIRO, Canberra, ACT; NMV, Museum Victoria, Melbourne; JSBC, Private collection of author, Brisbane, Queensland; SAMA, South Australian Museum, Adelaide; SDEI, Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany; USNM, Smithsonian National Museum of Natural History, Washington D.C., USA.

SYSTEMATICS

Subfamily classification

The two most recent hypotheses for the classification of clerid taxa with reduced fourth tarsomeres (Kolibáč, 1997; Opitz 2010) differ greatly. Kolibáč (1997) could not identify synapomorphies individually for Enopliinae, Epiphloeinae, Tarsosteninae and Korynetinae, so synonymised the former three with the latter. Opitz (2009, 2010), on the other hand, recognises the four abovementioned subfamilies plus two more that he proposed (Neorthopleurinae and Peloniinae). Despite being defined by the synapomorphous reduced fourth tarsomere, the inclusive Korynetinae of Kolibáč (1997) remains somewhat unsatisfactory because relationships between its 125 genera are in no way indicated. The subfamilies of Opitz's (2010) 'split' classification, though satisfying the need for a more detailed classification, are not all well-defined in terms of synapomorphies and most, with the exception of Epiphloeinae, are not well-supported by molecular evidence (Gunter *et al.* 2013).

Of the Cleridae with reduced fourth tarsomeres, species of Tarsosteninae and Peloniinae are those with antennae inserted near the middle of the ocular notch and pronota devoid of a basal commissure (Opitz 2010), these being character-states of the taxa treated in this paper. The separation of these two subfamilies, however, is primarily achieved by the treatment of a continuous character (length of antennal club relative to length of preceding segments) as discrete (i.e. antennal club shorter or longer than preceding segments). The use of continuous characters in phylogenetic analyses is a frequently debated underlying issue in systematics (Smith & Hendricks 2013). Such character-state gradients are reminiscent of the transformation-series referred to by Kolibáč (1997) in support of a more broadly-defined concept of Korynetinae. Therefore, for practical reasons, the taxa treated below are assigned to Korynetinae *sensu lato.*

Genus-level taxonomy

In all the Australian species under study the antennae are 11-segmented, the lateral pronotal margin is tuberculate and the pronotal hind margin is devoid of a commissure. They therefore cannot be assigned to *Teneropsis* which has 10-segmented antennae (Chapin 1924), evenly curved lateral pronotal margins (Fig. 1A) and a partial commissure at the pronotal hind margin (Fig. 1B); the latter being a defining character of the subfamily Enopliinae (Opitz 2010). Likewise, *Cregya kioloa* should be removed from *Cregya* due to differences in number of antennomeres and tibial spurs (*C. kioloa* has 11 antennomeres, no protibial spurs and one mesotibial spur; *C. oculata* has 10 antennomeres, one protibial spur and two mesotibial spurs). Of the taxa studied, only *Cregya kioloa, Teneropsis australicum* plus species of the genera *Muisca* Spinola, *Paratenerus* and *Exochonotus* have dentate claws. *Muisca dilatata* differs from the Australian species in having closed procoxal cavities, non-seriate elytral punctation and a tibial spur formula of 1–2–2, *Exochonotus* differs in having trigonal terminal maxillary palpomeres and elytral punctures with internal nodules while *Paratenerus* differs in size of eye facets, form of maxillary palpomeres and antennomeres (see below). In terms of number of matching

character states, *Teneropsis joccosum* is closest to *Neopylus nahuelbutensis*, however its neatly striate elytral punctation, trigonal terminal maxillary palpomeres and large eyes prevent its inclusion in that genus. *Pelonium*, which *T. joccosum* resembles, differs by its spinose protibiae and in the number of tibial spurs. Two new genera are therefore required to accommodate the Australian species.

Revised key to genera of Australian Korynetinae *sensu lato*

1. Fourth tarsomeres reduced, cylindrical. [Korynetinae] 2
— Fourth tarsomeres not reduced, similar to third tarsomeres. [Other clerid subfamilies].
2. Pronotal base with transverse furrow (i.e., commissure of Opitz 2010) spanning entire width. 3
— Pronotal base without transverse furrow spanning entire width. 7
3. Antennae with 11 segments, procoxal cavities posteriorly closed. 4
— Antennae with <11 segments; procoxal cavities posteriorly open. 6
4. Antennae clavate; body compact. 5
— Antennae serrate or pectinate; body elongate. . . . . *Tenerus* Laporte
5. Pronotum and elytra conspicuously punctate. . . . . *Opetiopalpus* Spinola
— Pronotum and elytra not conspicuously punctate. . . . . *Necrobia* Olivier
6. Antennae with 10 segments. . . . . *Teneromimus* Gahan
— Antennae with 9 segments. . . . . *Novemera* Opitz
7. Claw with basal denticle. 8
— Claw simple, without basal denticle. . . . 9
8. Pronotal lateral margins evenly curved, serially nodulate; body compact. . . . . *Crobenia* Blackburn
— Pronotal lateral margins tuberculate, without nodules; body elongate. . . . . *Hautenerus* gen. nov.
9. Inside margins of elytral punctures with two or more nodules. 10
— Inside margins of elytral punctures plain, without nodules. 13
10. Procoxal cavities posteriorly widely open. . . . . *Apteropilo* Lea
— Procoxal cavities posteriorly closed or almost closed. 11
11. Nodules of elytral punctures on horizontal and vertical axes; mesocoxal cavities laterally closed . . . . . *Apopylus* Kolibáč
— Nodules of elytral punctures on horizonal axis only; mesocoxal cavities laterally open. 12
12. Elytra with one or more transverse fascia of pale setae. . . . . *Parapylus* Blackburn
— Elytra lacking ornamentation. . . . . *Pylus* Newman*
13. Procoxal cavities posteriorly closed. . . . . *Tarsostenodes* Blackburn
— Procoxal cavities posteriorly open. . . . 14
14. Elytral base with setal tuft. . . . . *Blackburniella* Chapin
— Elytral base lacking setal tuft. 15
15. Eyes large, narrowly separated; pronotal lateral tubercle large, positioned near middle. . . . . *Gnidmus* gen. nov.
— Eyes small, widely separated; pronotal lateral tubercle small, positioned nearer to base. 16
16. Prothorax transverse to quadrate . . . . . *Thriocerodes* Wolcott & Dybas
— Prothorax elongate. . *Tarsostenus* Spinola**

* Opitz (2012) separated *Pylus* into three monotypic genera based on the tibial spur formula: *Pylus* (2–2–2 or 2–2–1), *Fallopylus* Opitz (1–2–1 or 1–2–2) and *Pseudopylus* Opitz (0–0–0). I have included only *Pylus* in the above key as the type species of *Pseudopylus*, *Pylus okei* Elston, appears to have been misidentified by both Opitz (2012) and Kolibáč (2003) while the number of tibial spurs, the character on which the separation of *Fallopylus* and *Pylus* was based, is inconsistently given for both genera throughout Opitz' (2012) paper.

** Opitz (2012) transferred the Australian species *Blackburniella hilaris* to *Tarsostenosis* Heller, which he differentiated from *Tarsostenus* by the absence of 2° setae on the elytra. However, I have observed 1° and 2° elytral setae on '*hilaris*' specimens and therefore propose this species is better placed in *Tarsostenus.*

Family CLERIDAE
Subfamily KORYNETINAE *sensu lato*

***Gnidmus* gen. nov.**

Type species: *Pelonium jocosum* Schenkling, 1908, by present designation.

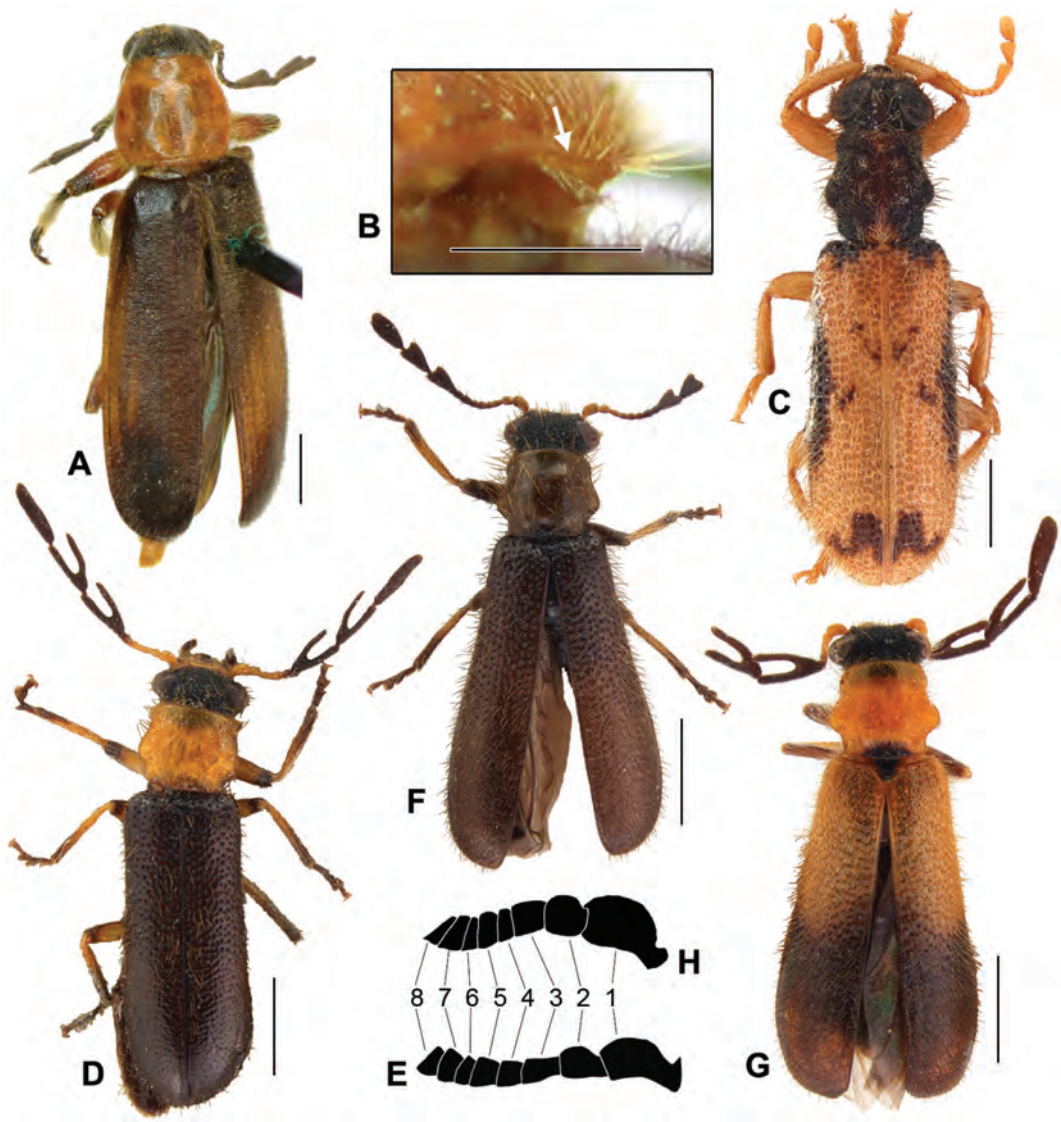

FIG. 1. **A, B:** *Teneropsis sibuyanus* Chapin, 1924, holotype, **A,** habitus; **B**, pronotal hind angle showing partial commissure. **C**, *Gnidmus jocosus* (Schenkling, 1908) comb. nov., holotype, habitus. **D, E**: *Hautenerus australicus* (Lea, 1906) comb. nov., male holotype, **D,** habitus; **E**, male antennomeres 1–8. **F**, *H. kioloa* (Kolibáč, 2003) comb. nov., female holotype, habitus. **G, H**: *H. leichhardti* sp. nov., male holotype, **G**, habitus; **H**, male antennomeres 1–8. Scale bars: B = 0.5 mm; A and C–G = 1 mm.

Diagnosis. Eyes coarsely facetted, separated by less than one eye width; antennae 11-segmented; terminal maxillary palpomeres securiform. Prothorax with lateral tubercle; pronotal commissure absent; procoxal cavities open posteriorly. Tibial spur formula 1–2–2; tarsal pulvillar formula 3–3–3 (possibly appearing 3–3–2); claws without basal denticle.

The large size of the coarsely-facetted eyes and absence of internal nodules of the elytral punctures differentiates *Gnidmus* from all other Australian korynetine genera.

Description. *Head*. Eyes bulging laterally, deeply emarginate, coarsely facetted, separated by less than one eye width (about half an eye width in

the type species); both terminal palpomeres securiform; gular sutures strongly convergent. Antennae 11-segmented, reaching near pronotal base (not beyond); flagellomeres filiform; terminal 3 segments forming a conspicuous club (about as long as combined length of preceding segments in the type species), A9-10 elongate-triangular and A11 elongate-ovoid (possibly females only). *Thorax*. Prothorax approximately as long as wide (very slightly longer than wide in type species), laterally with bulging tubercle; lateral carina clearly delimited from base to pinnacle of tubercle, carina convergent with posterior hypomeral margin at prothoracic hind angle (pronotal commissure absent); procoxal cavities widely open posteriorly. Elytra elongate, gradually (and only slightly) widening towards apices, lateral profile of disc cylindrical; transition from disc to apical slope sudden, occurring near apical quarter; surface punctation circular, arranged in ten rows (rows confused in parts). Legs moderately short; femora swollen; tibiae without longitudinal carinae; tibial spur formula 1–2–2; tarsi with diminutive basitarsi, tarsal pulvillar formula 3–3–3 (possibly appearing 3–3–2), claws without basal denticle.

Etymology. *Gnidmus*, an anagram of the proper name Sigmund, is named for Sigmund Schenkling, the German entomologist who described the type species. Gender: masculine.

Remarks. I consider the New World genus *Pelonium* a possible sister taxon. *Pelonium* shares with *Gnidmus* large eyes, 11-segmented antennae, a laterally tuberculate pronotum, simple claws and elytral punctures lacking internal nodules and contains species whose elytra displays comparable disruption colouration to that of *Gnidmus joccosus* (*P. maculicolle* Schaeffer and *P. crurale* Barr for example). *Pelonium* differs from *Gnidmus* in having externally spinose protibiae and a tibial spur formula of 0–1–1.

Gnidmus jocosus (Schenkling, 1908) comb. nov.

(Fig. 1C)

Pelonium jocosum Schenkling, 1908: 705.

Material examined. HOLOTYPE, SDEI-Col-01993, probable ♀, Kuranda, F.P. Dodd.

Status and condition of type specimen. Schenkling (1908) inferred that *P. jocosum* was based on a single specimen when he wrote 'doch wahrscheinlich ist das eine vorliegende Exemplar ein female und das male besitzt vielleicht ahnliche Fuhler wie australicum' [this specimen is probably a female, and the male possibly has similar antennae to that of *P. australicum*]. Lectotype designation is therefore not necessary as the SDEI specimen can be considered the holotype, fixed by monotypy (ICZN 1999: Article 73.1.2). The specimen is glued to a card and in good condition with no broken appendages. There is dried glue along part of the left elytron.

Redescription. *Measurements*. Total length 5.8 mm; elytral length 3.8 mm, elytral basal width 1.5 mm; pronotal length 1.25 mm, pronotal width 1.22 mm; head width 1.2 mm, frons width 0.2 mm.

Head. Cranium black to dark brown, supra-antennal elevations, clypeus, mandibles and vertex (faintly) medially deep reddish, anteclypeus and labrum dark orange, antennae and palpi pale orange; vertex and frons with a dense network of heavy, mostly irregular-shaped, punctures; frons narrow due to large size of eyes, weakly convex medially, slightly impressed on each side below eyes; clypeus smooth; frons with yellowish multi-directional setae, clypeus with yellowish anteriorly directed setae, eyes with darker erect setae. Antennae with A1 about twice as long as broad; A2 barrel-shaped, half as long as A1; A3 slender and about 1.3 times longer than A2; A4, A5, and A7 about two-thirds as long as A3; A6 and A8 about half as long as A3; A9–11 (club) of similar length, each about as long as A5–7 combined (A9–11 combined as long as A1–6 combined); A9–10 strongly dilated apically; A11 sub-ovoid/elongate; antennomeres with sparse yellowish apically-directed setae, A9–11 additionally with dense cover of very short setae. Inside edges of terminal maxillary palpomeres as long as, or slightly longer than, apical edges.

Thorax. Prothorax slightly elongate, predominantly black to black-brown, disc slightly paler medially, a yellowish triangular mark at base; lateral tubercles widest posterior of middle; discal sculpturing similar to head (a dense matrix of irregular punctate impressions entirely covering dorsum), hypomeron smooth;

dorsum vested with yellowish long sub-posteriorly directed semi-erect setae and shorter multi-directional setae, setae at highest point forming subtle tuft-like clusters. Elytra predominantly orange-yellow with dark brown markings (each elytron with a large maculate area running from extreme base, around humeri and extending along lateral flank to apical third, an isolated irregularly curved maculation touching the suture positioned at the upper arc of the apical slope, plus two or three small discal flecks just anterior to the middle); scutellum orange; punctation reaching apex, rows 1–3 confused in basal half, individual punctures mostly separated by one puncture-diameter or less; pleurae reasonably broad until apical curve, terminating near posterior limit of preapical maculation. Pterothoracic sterna honey-coloured orange. Legs (including tarsi) entirely pale orange, well-vested with long erect and shorter semi-erect, orange setae; tibiae reasonably short, stocky, protibiae slightly thicker than other tibiae, internal surface of pro- and mesotibiae straight, that of metatibiae slightly curved, outer surface of protibiae smooth (not spinose), pulvilli of third tarsomeres very large, those of second tarsomeres less broad though distinct, those of basitarsomeres minute.

Abdomen. Sternites pale orange, ventrites 1–3 with thin paler band along external margins.

Remarks. Despite extensive collecting in the Kuranda region of north Queensland over more recent years, particularly by Queensland Museum entomologists, no further specimens of *Gnidmus jocosus* have been found.

Hautenerus gen. nov.

Type species: *Pelonium australicum* Lea, 1906, by present designation.

Diagnosis. Eyes coarsely facetted, well separated; antennae 11-segmented (3-segmented club sexually dimorphic); terminal maxillary palpomeres elongate, sub-securiform. Prothorax with prominent lateral tubercle, pronotal commissure absent, procoxal cavities open posteriorly. Tibial spur formula (partial) 0–1–?; tarsal pulvillar formula 3–3–2; claws with basal denticle.

The basal denticle of the tarsal claw, antennal club as long or longer than combined length of preceding segments and absence of internal nodules of the elytral punctures separates *Hautenerus* from any other Australian korynetine genus.

Description. *Head*. Eyes separated by more than one eye width, bulging laterally, deeply emarginated, coarsely facetted; terminal palpomeres elongate, sub-securiform, terminal edge oblique; antennae 11-segmented, reaching back beyond pronotal base; flagellomeres filiform (often compact in males); terminal 3 segments forming a conspicuous club longer than combined length of preceding segments, females with A9–10 triangular and A11 ovoid, males with A9–10 strongly pectinate and A11 oblong-elongate; gular sutures strongly convergent. *Thorax*. Prothorax slightly transverse, laterally with bulging tubercle; lateral carina clearly delimited along its length, convergent with posterior hypomeral margin at prothoracic hind angle (pronotal commissure absent); procoxal cavities widely open posteriorly. Elytra elongate, subparallel, slightly widened in apical half; punctation shallow, circular, not arranged in rows, terminating before apex; pleurae slender. Legs well-proportioned, not particularly long or short; tibiae without longitudinal carinae; tibial spur formula 0–1–? (? = 0 or 1; the distal ends of the metatibiae are not clear on any of the three specimens); tarsi with diminutive basitarsi, tarsal pulvillar formula 3–3–2, claws with basal denticle.

Etymology. From the Latin *haut*, 'not comparable', combined with the clerid genus *Tenerus* (the opposite of *Teneropsis*, which suggests a resemblance). Gender: masculine.

Remarks. Having 11-segmented antennae with A3-8 compact and A9–10 pectinate, claws with a basal tooth and parallel-sided elytra, *Paratenerus*, represented only by *P. mindanensis* Chapin from the Philippines, is a potential sister group to *Hautenerus*. Opitz' (2010) listing of this genus under Peloniinae, however, cannot be confirmed as Chapin does not describe the form of the pronotal hind margin and the unique type of *P. mindanensis* is missing from the USNM (S. Lingafelter, pers. comm.). If truly belonging to the tarsostenine/peloniine complex of genera then *Paratenerus* would differ from *Hautenerus* primarily by its more finely facetted eyes, terminal maxillary palpomeres more digitiform than securiform, antennomeres 9 and 10 more (if the *P. mindanensis* type is a

female) or less (if a male) pectinate and the elytra weakly costate.

It is unknown whether the hind wing venation described below based on the holotype of *Cregya kioloa* is consistent within the genus, hence it is not included in the generic diagnosis.

Key to species of *Hautenerus* gen. nov.

1. Pronotum orange (Fig. 1D, G).. 2
— Pronotum brown (Fig. 1F). . . . . *H. kioloa* (Kolibáč,)
2. Elytra entirely dark brown (Fig. 1D); third antennal segment of male about 2 times longer than broad (Fig. 1E). . . . . *H. australicus* (Lea)
— Basal half of elytra orange, apical half dark brown (Fig. 1G); third antennal segment of male about 1.3 times longer than broad (Fig. 1H). . . . . *H. leichhardti* sp. nov.

Hautenerus australicus (Lea, 1906) comb. nov.

(Figs 1D, E)

Pelonium australicum Lea, 1906: 223.

Material examined. HOLOTYPE: ♂, SAMA-25- 021909, Sydney, NSW.

Status and condition of type specimen. Lea (1906) did not explicitly designate a holotype, but he does clearly refer to a single specimen in his description. The SAMA specimen therefore qualifies as the holotype, fixed by monotypy (ICZN 1999: Article 73.1.2). This specimen, though glued rather messily to a rectangular cardboard mount, is relatively clean and in good condition, with only the right hind tarsus missing.

Redescription of male. *Measurements*. Total length 4.8 mm; head width 1mm, frons width 0.5 mm; pronotal width 1.1 mm, pronotal length 0.9 mm; elytral width 1.2 mm, elytral length 3.4 mm.

Head. Cranium black (except clypeus orange), anteclypeus, mandibles (in part), external mouthparts (except terminal palpomeres) and A1–6 orange, labrum, tips of mandibles, terminal palpomeres and A7–11 dark brown; vertex and frons with dense network of circular to irregular-shaped punctation, each puncture with an associated semi-erect yellowish seta; eyes, labrum, mouthparts and antennal flagellomeres also with yellowish setae, antennal club more densely vested with a coat of shorter, darker, setae and occasional longer setae. Antennae (Fig. 1E) with A1 about 1.8 times longer than broad, bulging; A2 less broad, globular; flagellum compact; A3 longer than broad (about 2 times); A4–5 sub-quadrate; A6–8 broader than long, A6 and 8 shorter than A7; A9–11 (see Fig. 1D) forming a massive club, A9 about 0.8 times as long as preceding segments combined, A9–10, subequal in length, pectinate, extension of each as long as stem, A11 sub-oblong, about 4.5 times longer than broad, about 1.2 times longer than A10.

Thorax. Prothorax entirely orange; pronotal lateral tubercle prominent, widest near middle; disc smooth in general appearance despite numerous small, shallow, seta-associated punctures; dorsum with yellowish, long and short, semi-erect, setae (many setae rubbed off holotype). Elytra entirely dark brown; punctures mostly separated by more than one puncture diameter (though sometimes less), ceasing just posterior of elytral mid-length, innermost punctures ending slightly before outermost; disc sparsely vested with yellowish semi-decumbent setae and black erect setae; apical curve starting at about apical quarter, apices rounded. Pterothoracic sterna black. Legs: basal four-fifths of femora and basal half (or more) of tibiae yellow; apical one-fifth of femora, apical half (or less) of tibiae, plus tarsi, brown.

Abdomen. Sternites dark brown.

Remarks. Similarities in size, elytral colouration and surface sculpturing of the unique holotypes of *Pelonium australicum* and *Cregya kioloa*, which were collected within about 250 km from each other, provided reason to consider that they might represent conspecific insects. The only notable differences between the two specimens relate to antennal form, the colour of pronotum and legs plus a slight difference in prominence of the lateral pronotal tubercle. Within Cleridae, the same kind of sex-correlated antennal dimorphism to that seen in *Hautenerus* is known within the genera *Chariessa, Pelonides* and *Pelonium* (Opitz 2002), and examples of sex-correlated dichromatism include *Tillus elongatus* (Linnaeus) and *Nelsonoplium jeannae* Barr (Gerstmeier 1998; Rifkind 2013). Despite this, *Hautenerus kioloa* comb. nov. must remain valid as evidence for conspecificity with *H.*

australicus comb. nov. is weak in the absence of additional specimens.

Hautenerus kioloa (Kolibáč, 2003) comb. nov.

(Fig. 1F)

Cregya kioloa Kolibáč, 2003: 74.

Material examined. HOLOTYPE: ♀, ANIC unreg., 35 30′S, 150 18′E, Kioloa S.F., 15km NE Batemans Bay, NSW, Oct. 1986, M.G. Robinson, flight intercept trap.

Status and condition of type specimen. The holotype was fixed by original designation by Kolibáč (2003). There are three rectangular card-mounts on the pin. On the top card is the specimen, which is clean and with the hind legs, abdomen, right hind wing and left terminal antennomere detached. The detached antennomere, hind legs and hind wing are glued to the middle card and the abdomen and dissected genitalia are glued to the lowest card.

Redescription of female. *Measurements*. Total length 4.2 mm; head width 0.9 mm, frons width 0.43 mm; pronotal width 0.95 mm, pronotal length 0.8 mm; elytral width 1.0 mm, elytral length 3 mm.

Head. Cranium black, anteclypeus, mandibles, external mouthparts brownish, antennae with A1–2 pale brown, A3–8 graduating in tone from pale brown to almost black-brown, A9–11 (club) black-brown; vertex and frons with dense network of circular to irregular-shaped punctation, each puncture with an associated semi-erect yellowish seta; eyes, labrum, mouthparts and antennal flagellomeres also with yellowish setae; antennal club more densely vested with a coat of shorter, darker, and occasional longer, setae. Antennae with A1 about 1.8 times longer than broad, bulging; A2 slightly less broad, globular; flagellum filiform; A3, A5, A7 and A8 longer than broad (A3 more slender than other segments); A4 and A6 subquadrate; A9–11 forming a large club, A9 and A10 each about as long as A1–3 combined, A11 slightly longer, A9–10 strongly dilated apically, A11 sub-ovoid/ elongate.

Thorax. Prothorax predominantly pale brown, a small area at base blackish; pronotal lateral tubercle prominent, widest just behind middle; lateral carina well-defined; disc smooth in general appearance despite numerous small, shallow, seta-associated punctures; surface more heavily sculptured along basal collar (most visible at black maculated area); dorsum with yellowish, long and short, semi-erect, setae. Elytra entirely dark brown; discal punctures mostly separated by more than one puncture diameter (though sometimes less), punctation ceasing just posterior of elytral mid-length, innermost punctures ending slightly before middle and outermost punctures; disc sparsely vested with yellowish semi-decumbent setae and black erect setae; apical curve starting at about apical quarter, apices rounded. Hind wing with CuA1+2 broken at the base, AA undivided and CuA2 and MP4 cross-veins complete. Pterothoracic sterna black. Legs with coxae, femora, apical third to half of tibiae and tarsi dark brown, basal half to two-thirds of tibiae pale brown.

Abdomen. Sternites dark brown.

Remarks. Kolibáč (2003: 75) provided illustrations of the internal copulatory organs and hindwing of the female holotype. See earlier remarks under *Hautenerus australicus* for comment on the status of *H. kioloa*.

Hautenerus leichhardti sp. nov.

(Fig. 1G, H)

Material examined. HOLOTYPE: ♂, MV-COL-67617, Mt Tamborine, Qld, Nov. 1978, C. Deane, F.E. Wilson Collection.

Status and condition of type specimen. The holotype is a clean specimen; it and its detached hind legs are glued to a point-mount; the terminal segment is missing from the left antenna.

Description of male. *Measurements*. Total length 4.8 mm; ocular head width 1mm, frons width 0.5 mm; greatest pronotal width 1.1 mm, pronotal length 0.95 mm; basal elytral width 1.15 mm, elytral length 3.5 mm.

Head. Cranium black (except clypeus and gula orange), anteclypeus, mandibles (in part), external mouthparts (except terminal palpomeres) and antennal flagellum orange, labrum, tips of mandibles, terminal palpomeres and terminal three antennomeres (club) dark brown; vertex and frons with dense network of circular to irregular-shaped punctation, each puncture with an associated semi-erect yellowish seta; eyes, labrum, mouthparts and antennal flagellomeres also with yellowish setae, antennal club

with denser vestiture of shorter, darker, setae and occasional longer setae. Antennae (Fig. 1H) with A1 about 1.4 times longer than broad, bulging; A2 less broad, globular; flagellum compact; A3 longer than broad (about 1.3 times); A4–8 broader than long, A4–7 of similar length, A8 shorter; A9–11 (see Fig. 1G) forming a massive club, A9 about 1.3 times longer than preceding segments combined, A9–10, subequal in length, pectinate, extension of each as long as stem, A11 sub-oblong, slightly less than 4 times longer than broad, about 1.2 times longer than A10.

Thorax. Prothorax almost entirely orange, with just a short black transverse basal maculation about three times wider than diameter of scutellum; pronotal lateral tubercle prominent, widest near middle, disc smooth in general appearance despite numerous small, shallow, seta-associated punctures, surface more heavily sculptured along basal collar (most visible at black maculated area); pronotum with yellowish, long and short, semi-erect, setae dorsally and laterally, those following lateral carina most prominent in dorsal view. Elytra with basal half dull orange, apical half black-brown, scutellum black; punctures mostly separated by more than one puncture diameter (though sometimes less), ceasing just posterior of limit of orange area, lateral punctures extending more posteriorly than innermost punctures; fine, dense, yellowish, semi-decumbent, posteriorly-directed discal setae plus longer, more occasional, black, erect setae on disc and along margins; pleurae reaching near start of apical curve; apical curve starting at about apical third of elytra, apices rounded. Pterothoracic sterna black. Legs (metathoracic legs detached and glued to card, only partly observable) with procoxae yellow, mesocoxae brownish, femora mostly brown (profemora yellow basally), tibiae mostly yellow, apical quarter brown, tarsi brown.

Abdomen. Sternites dark brown.

Etymology. In the spirit of discovery, I name this new species after Friedrich Wilhelm Ludwig Leichhardt, pioneering explorer, to whom this commemorative issue is dedicated.

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