



## New species of *Prosopogmus* Chaudoir, 1865 from Western Australia (Coleoptera: Carabidae: Pterostichini)

Kipling Will

Essig Museum of Entomology, University of California

Corresponding author: [kipwill@berkeley.edu](mailto:kipwill@berkeley.edu)

Kipling Will  <https://orcid.org/0000-0002-7056-9011>



© Copyright of this paper is retained by its authors, who, unless otherwise indicated, license its content under a CC BY 4.0 license

---

### Abstract

Two new species, *Prosopogmus guthrieae* **sp. nov.**, with type locality 275 km NE of Meekatharra, Western Australia and *P. cassicus* **sp. nov.**, with type locality, Mt. Trafalgar, Western Australia, are described. These species join the two previously described *Prosopogmus* species known from Western Australia, *P. insperatus* Sloane, 1896, and *P. occidentalis* (W.J. Macleay, 1888). A neotype is designated to replace the missing holotype specimen of *P. insperatus*. Habitus and male genitalia images, and a key for identifying the Western Australian species of *Prosopogmus* are provided.

Cite this paper as: Will K (2024). New species of *Prosopogmus* Chaudoir, 1865 from Western Australia (Coleoptera: Carabidae: Pterostichini). *Australian Journal of Taxonomy* xx: 1–10. doi: <https://doi.org/10.54102/ajt.t1ae4>  
urn:lsid:zoobank.org:pub:71596185-C29A-4ADE-BCC3-2A78C7234965

---

### Introduction

*Prosopogmus* Chaudoir, 1865, with the addition of the species described here, includes 34 species. These are found in Australia, including Tasmania and Lord Howe Is. (24 species), the Indonesian province of Maluku (1 species), New Guinea (3 species), New Caledonia (6 species), New Zealand (1 species introduced from Australia). The bulk of the species diversity is in eastern mainland Australia and Tasmania. Fewer species are found in the drier interior and Western Australia. Most of the currently valid species are treated in various keys and reviews, with keys for species in New Guinea covered by Darlington (1971), for New Caledonia by Will (2011), and many of the described Australian species included in the key by Sloane (1920). Based on the number of apparently undescribed species housed in collections, particularly from forested areas of eastern

Australia, *Prosopogmus* and other related Australian euchroine genera require modern revision. As the number of species of *Prosopogmus* in Western Australia is low, any additions are notable. Herein, I describe two Western Australian species of *Prosopogmus*, providing diagnoses and a key for identification of the four species currently known from the state.

### Methods

*Specimens and data.* Label data of holotypes is given verbatim in quotation marks. Separate labels are indicated by double forward slashes (//). Paratype label data is standardized, e.g., latitude and longitude for labels that have a period used separate degrees and minutes and labels written as degree, minute, second are all reported here as decimal degrees.

---

This paper was submitted on 20 October 2024 and published on [publishedDate]. It was reviewed by Dave Seldon and Borislav Gueorguiev, and edited by Subject Editor Nicole Gunter under the guidance of Associate Editor Mark Harvey. *Australian Journal of Taxonomy*. ISSN: 2653-4649 (Online).

Fifty-two specimens of the species treated here were examined from the following collections:

**ANIC**, Australian National Insect Collection, Canberra;

**EMEC**, Essig Museum of Entomology, Berkeley, CA;

**MCZ**, Museum of Comparative Zoology, Cambridge, MA;

**QM**, Queensland Museum, Brisbane;

**SAMA**, South Australian Museum, Adelaide;

**WAM**, Western Australian Museum, Perth;

**ZSM**, Zoologische Staatssammlung, Munchen.

*Images.* Habitus, pronotal, and aedeagal photos of beetles were taken as image stacks, aligned and assembled with Helicon Focus version 5.3, and image files were edited to enhance clarity using standard image editing software.

*Dissection and measurements.* Male genitalia were prepared using the same methods as Will (2020). Measurements were made using an ocular reticle. Standard body length (SBL) is the sum of the distance from the base of the labrum to just anterior of the occipital suture + the length of the pronotum along its midline + the length of the left elytron from the basal margin where it meets the scutellum to the apex of the elytron. The widths of the pronotum and elytra are the widest points of each when viewed dorsally. The ocular ratio is the width over the eyes divided by the width between the eyes measured at the level of the anterior supraocular setae when viewed dorsally. Measurements and ratios are given for a range of all specimens measured then the measurement of the type is given in parentheses.

## Discussion

The relationships among *Prosopogmus* species are not well understood. The four Western Australia species are very similar in their external characteristics, form of male aedeagus, and features of the female reproductive tract. This similarity is consistent with them being members of a closely related group.

The modest number of specimens used in this study was assembled from seven different institutional collections. Other major collections were also checked, and none had additional material. Most of the specimens were collected during a few periods of recent effort. It is possible to suggest that these beetles are rare, but the paucity of specimens more likely reflects the limited sampling in the northern regions of Western Australia and the habitats and behaviors of the beetles. Despite having full-size flight wings and presumably being able to fly, only a single specimen is reported to have been taken at lights, a fairly common sampling method. This one light-trapped specimen was taken at a location where many other specimens were found while headlamp searching not far from the light. Habitat data from labels includes beetles being found in leaf litter along

water courses, in erosion channels, and in gorges, typically taken at night during headlamp searches. These habitats are relatively more mesic refuges in the region that may be challenging for collectors to access but are very likely to yield more undescribed insect species if systematically sampled.

## Taxonomy

### Key to adults of *Prosopogmus* species of Western Australia

- 1 Disc of elytra, pronotum, and head lacking evident microsculpture; hind angle of pronotum (Fig. 3C) usually with small but evident denticle  
***P. insperatus* Sloane, 1896**
- 1 Disc of elytra with evident, mesh microsculpture, pronotum and head with or without microsculpture; hind angle of pronotum with or without a denticle **2**
- 2 Pronotum and head with evident mesh microsculpture; apices of elytral intervals 5 and 7 enclosing 6 (Fig. 4B) ***P. cassiculus* sp. nov.**
- 2 Pronotum without or with shallowly impressed, very little evident, mesh microsculpture and head without mesh microsculpture; apices of elytral intervals 6 and 8 enclosing 7 or intervals 6, 7, 8 anastomosed (Fig. 4A) **3**
- 3 Large, apparent body length 8–9 mm; pronotum (Fig. 3A) smooth along base except for a few irregular punctures in the basal impressions in some individuals; tarsi dorsally with scattered small setae ***P. guthrieae* sp. nov.**
- 3 Small, apparent body length 6–7 mm; pronotum (Fig. 3D) coarsely punctate along base, in, and lateral of the basal impressions; tarsi dorsally glabrous ***P. occidentalis* (Macleay, 1888)**

### *Prosopogmus* Chaudoir, 1865

Type species: *Feronia* (*Prosopogmus*) *impressifrons* Chaudoir, 1865

= *Ceneus* Chaudoir, 1865

= *Ophryosternus* Chaudoir, 1873

= *Hormochilus* Chaudoir, 1874

**Diagnosis.** Distinguished from all other Australian Pterostichini genera by the combination of narrow, elongate, well-impressed frontal impressions on the head extended from the clypeus to the level of the anterior supraorbital seta; three setigerous punctures on elytral interval 3, the puncture nearest the base close to or touching stria 3 and the two apical punctures close to or touching stria 2 (only one or two setae present in the eastern species *P. monochrous* (Chaudoir, 1865) and *P. suspectus* (Chaudoir, 1878); ventrites 4–6 basally, transversely sulcate; and metacoxal anterior sulcus more or

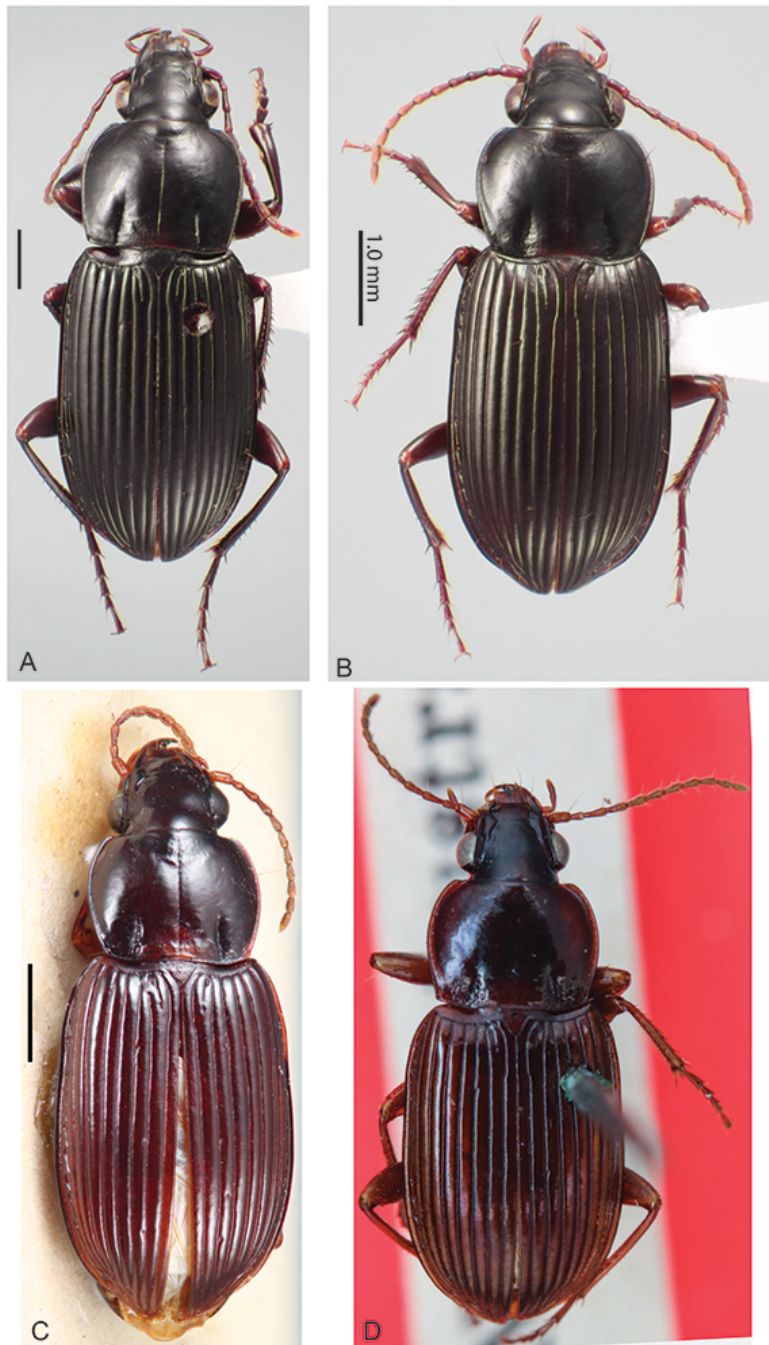


Figure 1. Habitus images. (A) *Prosopogmus guthrieae*; (B) *P. cassiculus*; (C) *P. insperatus*, neotype; (D) *P. occidentalis*, syntype (calibrated scale not available). All scale bars 1.0 mm.

less curved, ended medially in coxa. Some species look very similar to species of *Simodontus* Chaudoir, 1843. In *Simodontus* the frontal impressions are not evident or if evident then punctiform or broad and shallow, not impressed and elongate as in *Prosopogmus*, and all three punctures of elytral interval 3 are close to or touching stria 3.

**Description.** Will (2011) provided a redescription of the genus.

***Prosopogmus guthrieae* Will, sp. nov.**

Figs. 1A, 2A-B, 3A, 4A, 5

urn:lsid:zoobank.org:act:0EE64599-62CE-4A70-9D44-8BA925E9A313

**Holotype.** ♂, deposited WAM. “-25.11222 / 120.72111, AUSTRALIA:Western Australia, 275 km NE of Meekatharra, 638 m. 20.v.2013” // “N. Guthrie, (WP-49) Deep leaf litter” // “Western Australia Museum Entomology Reg. No. E122987” // “HOLOTYPE *Prosopogmus guthrieae*, K.Will 2024”

**Paratypes.** Western Australia: 1 ♀, EMEC: -28.53867, 115.50328, Mullewa Caravan park, 263m. headlamp search, near wet seep, 6.x.2010 K.Will [AUS2010.x.6.2]// EMEC1139650. 1 ♂, EMEC: -27.82868/114.72803, Murchison

River, north bank track east of Galena Bridge, headlamp, 184m. 21.ii.2017 K.Will, J.K.Liebherr, N.Guthrie, [AUS2017.ii.21.6], EMEC347156. 2 ♂♂, WAM: same data as holotype, Western Australia Museum Entomology Reg. Nos 122988, 122986. 1 ♀, WAM: same data as holotype, Western Australia Museum Entomology Reg. No. 122989. 1 ♀, WAM: Carnarvon Range, Little Sandy Desert -25.25133, 120.65036 (WGS84) 10 August 2012, Site 11-12, N.A. Guthrie, collected from live vertebrate trap//Floor of gorge, scattered Eucalyptus open woodland, understory mixed shrubs, sedges, and grasses, Western Australian Museum Reg. no. 84099, N.G.ENTO#0015, EMEC1139653. 4 sex unknown, ANIC: Wiluna, Oct 1 1931// Australia Harvard Exp., Darlington. 5 ♀♀, MCZ: Wiluna, Oct 1 1931, Australia Harvard Exp., Darlington, MCZ:ENT:820537–820541. 1 ♀, MCZ: Yandil, Wiluna, Oct 1 1931, Australia Harvard Exp., Darlington, MCZ:ENT:820536. 1 ♂, MCZ: L. Violet, Wiluna, Oct 3 1931, Australia Harvard Exp., Darlington, MCZ:ENT:820535.

**Diagnosis.** In addition to the features given in the key that separate the Western Australia species, *P. guthrieae* (Fig. 1A) is recognizable from all other *Prosopogmus* species by the combination of the dorsally setose tarsomeres, full flight wing, moderately large size, impunc-

tate pronotal base, and elytral intervals 6 and 8 enclosing 7 or 6, 7, and 8 anastomosed (Fig. 4A). At the Galena Bridge, Murchison River site, a very similar looking species of *Simodontus* was found with *P. guthrieae*. They are readily distinguishable by the characters discussed under the genus diagnosis.

**Description.** *Size.* SBL 8.4–9.6 mm (9.0 mm). Maximum pronotal width 2.5–3.0 mm (2.8 mm). Maximum elytral width 3.1–3.7 mm (3.6 mm). *Color.* Head, pronotum and elytra castaneous to piceus. Head and pronotum often darker than elytra. Antennae and mouth parts lighter colored, rufous. *Luster.* Very glossy throughout. *Microsculpture.* Head without evident microsculpture. Pronotum without or with very faintly evident microsculpture on the disc and more evident, though still very faint, microsculpture laterally. Elytra with distinct mesh microsculpture throughout.

*Head.* Typical form for genus, moderately large relative to pronotum. Eyes prominent but somewhat variable, ocular ratio 1.46–1.64 (1.50). Shallow and variably present constriction behind eyes. Mouth parts. Mentum



Figure 2. Male aedeagus. Left lateral view (A, C, E) and ventral view of tip (B, D, F). (A-B) *Prosopogmus guthrieae*; (C-D) *P. cassiculus*; (E-F) *P. insperatus*. All scale bars 0.5 mm.

with medial tooth emarginate, a pair of paramedial setae and small, deep paramedial punctures; submentum with a single lateral seta; gula narrow. Antennae. Moderately elongate, just reaching pronotal base.

**Thorax.** Pronotum (Fig. 3A). Slightly wider than long; anterior angles slightly produced; lateral margins smoothly, very shallowly arcuate; hind angles broadly obtuse; deep, linear, converging medial basal pronotal impressions; lateral pronotal impressions absent, slightly or notably convex laterad medial impressions; base impunctate. Elytra. All striae deeply impressed; short angular base of stria 1 present but not connected to remaining length of stria; parascutellar stria present and joined to stria 1; parascutellar punctures present; intervals slightly convex, more convex laterally and apically. Elytral intervals 6 and 8 enclosing 7 or intervals 6,7 and 8 anastomosed (Fig. 4A). Basal margin evident throughout, slightly arcuate; humeral angles not produced, with a very small, rounded tubercle. Wing. Flight wing full-size. Sterna. Prosternal process shallowly margined at apex; metasternum and metepisternum long. metepisternum very shallowly and sparsely punctate or nearly impunctate. Metasternum impunctate or with a few, very shallow punctures. Legs. Three male protarsomeres expanded, with ventral pads of squamous setae, female protarsomeres unmodified; meso and metatarsomeres elongate and metatarsomere 1 laterally sulcate.

**Abdomen.** Ventrites. Basolaterally coarsely punctate; last ventrite with two setae in males and four in females. Genitalia. Male. (Figs 2A-B) Median lobe with ostium dorsal, blade long, tip dorso-ventrally thin, asymmetrically pointed with deep incision. Female. Gonocoxite 1 with one apical seta; gonocoxite 2 with one medial and two lateral ensiform setae, subapical furrow with two nematiform setae, gonocoxite 2 short, robust with rounded apex. Bursa gooseneck form with apical end oriented posteriorly, elongate spermatheca broadly attached on dorsoposterior face of apex of bursa, spermatheca with appended gland with uniformly broad duct connecting at midpoint, without duct digital diverticulum, with elongate spermathecal gland duct diverticulum.

**Distribution and habitat.** Of the four *Prosopogmus* species known from Western Australia *P. guthrieae* has the southernmost distribution (Fig. 5). Records extend from the northern edge of the near-coast woodland scrub in the vicinity of Kalbarri to the southwestern edge of the Little Sandy Desert, where it is sympatric with *P. insperatus*. Collections of *P. guthrieae* suggest these beetles are primarily nocturnally active and associated with leaf litter in moist habitats.

**Etymology.** The specific epithet *guthrieae* is treated as a noun in the genitive case and is in honor of Nadine Guthrie, a carabidologists from WA and collector of the holotype specimen of this species.

## *Prosopogmus cassiculus* Will, sp. nov.

Figs 1B, 2C-D, 3B, 4B, 5

urn:lsid:zoobank.org:act:7CA93931-FA93-4BD0-97B9-327A07AE114E

**Holotype.** ♂, deposited ANIC, Reg. no. 25-081674. "16.17S 124.04E [-16.2833, 124.0667] WA, CALM Site 14/3, Mt. Trafalgar, Jan. 1989, N. McKenzie" // "Berlaseate ANIC 1283 closed forest litter" // "HOLOTYPE *Prosopogmus cassiculus* K.Will 2024"

**Paratypes.** Western Australia, -16.367, 125.200, CALM Site 25/2, Charnley River, 2 km SW Rolly Hill, i.1989, N. McKenzie, ♀ ANIC, Reg. no. 25-081675. -14.583, 125.750, 9 km W by S of Walsh Point, Admiralty Gulf, 14.v.1983, J. Balderson, ♀ ANIC, Reg. no. 25-081676. -14.817, 126.933, Woorakin Creek, Drysdale River, 14.xiii.1975, S.M. Slack-Smith, A26 C2-6, Western Australian Museum Reg. no. E122992, ♀, WAM.

**Diagnosis.** Separated from all other *Prosopogmus* by the combination of the microsculpture evident throughout dorsally, small size, elytra lacking any paler regions or markings (Fig. 1B), legs piceous or rufobrunneous, elytral punctures not foveate, pronotum with hind angles obtusely angled, and elytral intervals 5 and 7 enclosing 6 (Fig. 4B), and intervals 8 and 9 of approximately equal width.

**Description.** *Size.* SBL 6.1–6.8 mm (6.3 mm). Maximum pronotal width 1.9–2.2 mm (1.9 mm). Maximum elytral width 2.5–2.7 mm (2.5 mm). *Color.* Head, pronotum and elytra piceous. Head and pronotum darker than elytra. Antennae and mouth parts piceous to deep rufous. Luster. Head and pronotum slightly glossy and elytra noticeably more matte. *Microsculpture.* Head and pronotum with shallowly impressed but evident microsculpture. Elytra with distinct mesh microsculpture throughout.

**Head.** Typical form for genus, moderately large relative to pronotum. Eyes prominent ocular ratio 1.43–1.52 (1.43). Very shallow and variably present constriction behind eyes. Mouth parts. Mentum with medial tooth short, shallowly or very shallowly emarginate, a pair of paramedial setae and small, deep paramedial punctures; submentum with a single lateral seta; gula narrow. Antennae. Moderately elongate, just reaching pronotal base.

**Thorax.** Pronotum (Fig. 3B). Wider than long; anterior angles not produced; lateral margins smoothly arcuate; hind angles broadly obtuse; deep, linear, converging medial basal pronotal impressions; lateral pronotal impressions absent, slightly convex laterad medial impressions; without or with shallow punctulae in medial impressions and laterally along base. Elytra. All striae deeply impressed; short angular base of stria 1 present but not connected to remaining length of stria; parascutellar stria present and joined to stria 1; parascutellar punctures present; intervals convex, more convex laterally and apically. Elytral intervals 5 and 7 enclosing 6 (Fig. 4B). Basal margin evident throughout, slightly arcuate;



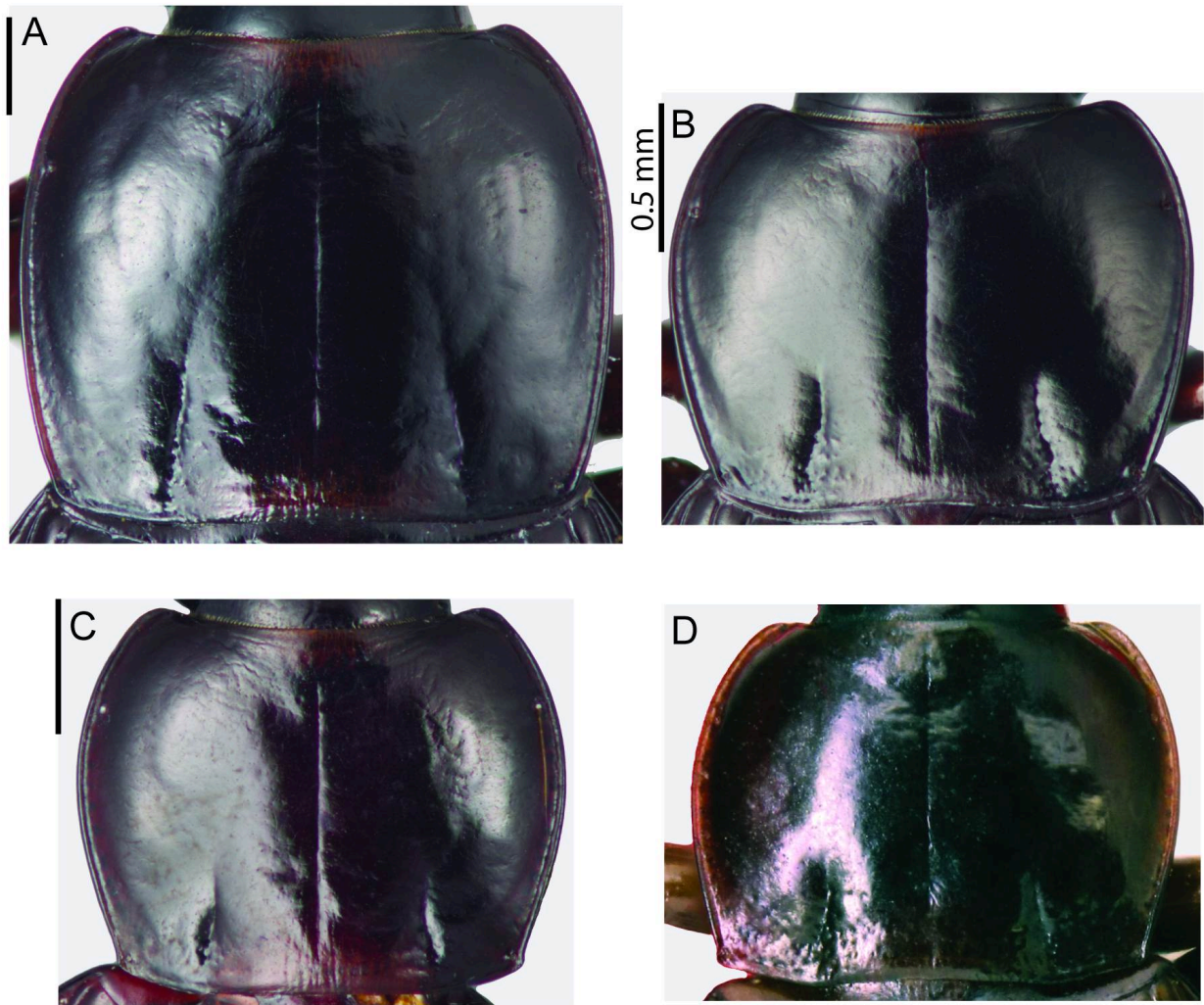


Figure 3. Pronota. (A) *Prosopogmus guthrieae*; (B) *P. cassiculus*; (C) *P. insperatus*; (D) *P. occidentalis* syntype (no calibrated scale available). All scale bars 0.5 mm.

humeral angles not produced, with a very small, sharp tubercle. Wing. Flight wing full-size. Sterna. Prosternal process very shallowly margined at apex or impressed margin lacking. Metasternum and metepisternum long. Metasternum and metepisternum coarsely, moderately punctate or with few scattered puncture to nearly impunctate. Legs. Three male protarsomeres expanded, with ventral pads of squamous setae, female protarsomeres unmodified; meso and metatarsomeres elongate and metatarsomere 1 laterally with very shallow sulcus.

**Abdomen.** Ventrites. Basolaterally very coarsely punctate; last ventrite with two setae in males and four in females. Genitalia. Male. (Figs 2C-D) Median lobe with ostium dorsal, blade very short, tip dorso-ventrally thin, broadly asymmetrically pointed with very shallow sinuation. Female. Gonocoxite 1 with one apical seta; gonocoxite 2 with one medial and two lateral ensiform setae, subapical furrow with two nematiform setae, gonocoxite 2 short, robust with rounded apex. Bursa gooseneck form with apical end oriented posteriorly, very broad

and elongate spermatheca broadly attached on dorso-posterior face of apex of bursa, spermatheca with appended gland with uniformly broad duct connecting at midpoint, without duct digital diverticulum, with elongate spermathecal gland duct diverticulum.

**Distribution and habitat.** The few records of *P. cassiculus* are all from the tropical Kimberley region (Fig. 5). Two of the specimens were taken from leaf litter samples in closed forest.

**Etymology.** The specific epithet *cassiculus* is Latin for a small net and referring to the net-like mesh of microsculpture apparent on the dorsal surface of these beetles. It is treated as an adjective in the nominative singular.

### *Prosopogmus insperatus* Sloane, 1896

Figs 1C, 3C, 2E-F, 4C, 5

**Neotype designation.** *Prosopogmus insperatus* was described from a single, teneral specimen collected at Palm

Creek, Northern Territory during the W.A. Horn expedition (Sloane 1896). Based only on Sloane's description it is not possible to definitively distinguish *Prosopogmus cassiculus* sp. nov., specimens collected in Western Australia (see specimens examined below), and other, yet-to-be-described specimens in museum collections from localities in northern New South Wales and across Queensland. To proceed with any study of species in the genus, recourse to the type specimen for this species is needed. However, Sloane (1920: 160) noted that the type specimen of *P. insperatus* was missing. Additionally, in his unpublished notes held at ANIC, he wrote that specimens of the species were unavailable at the time of his preparation of his 1920 treatment of *Prosopogmus*. There is no further mention of this species in his notes. Moore (1987) listed the type as possibly being in the DEIB collection (Deutsches Entomologisches Institut, Eberswalde, Germany, now Senckenberg Deutsches Entomologisches Institut (SDEI)), the intended place of deposition of the Horn expedition material. Moore's entry includes an asterisk that denotes he did not see or verify the existence of the holotype. A recent check of the SDEI holdings confirmed that the type is not present (M. Schröter (SDEI) pers. com. Dec. 2022). Sloane's collection housed at ANIC was carefully checked in August 2024 and no specimens matching the description of *P. insperatus* were found. All of this indicates that the holotype specimen is irretrievably lost. No specimens of *Prosopogmus* from the region near Palm Creek have been found in any museum collections. A card mounted female specimen of *P. insperatus*, identified as such by Sloane, deposited in the SAMA carabid collection, labelled: "Fortescue R. / Hammersley Range / N.W.A. ; W. D. Dodd" // "Seems conspecific with / *Prosopogmus* / *insperatus* Sl. / Id. By T. G. Sloane" // "SAMA / 25-51013" was found. This specimen matches Sloane's original description, is tagged with Sloane's handwritten note identifying it as *P. insperatus*, and therefore is considered consistent with his concept of the species. To stabilize the concept of this species and allow for differentiating it from other, similar species, this specimen (Fig. 1C) is designated the neotype under Article 75 of The Code (ICZN 1999) with type locality: Fortescue River, WA.

**Diagnosis.** Separated from all other *Prosopogmus* by the combination of the absence of dorsal microsculpture, small size, elytra lacking any pale markings, legs piceous

or brunneous, elytral punctures not foveate, pronotum with hind angles obtusely angled, and elytral intervals 5 and 7 enclosing 6 or 6 and 7 of nearly same length (Fig. 4C), and intervals 8 and 9 of approximately equal width medially.

**Redescription.** *Size.* SBL 5.9–6.6 mm (6.6 mm). Maximum pronotal width 1.8–2.0 mm (2.0 mm). Maximum elytral width 2.3–2.6 mm (2.6 mm). *Color.* Head, pronotum and elytra piceous. Head and pronotum darker than elytra. Antennae and mouth parts paler rufous to brunneous. *Luster.* Head, pronotum, and elytra very glossy. *Microsculpture.* Head, pronotum and elytral disk without evident microsculpture. Elytra with very faintly visible microsculpture on lateral intervals and in apical third, more evident in females than males.

*Head.* Typical form for genus, moderately large relative to pronotum. Eyes moderately prominent ocular ratio 1.40–1.50 (1.44). Very shallow and variably present constriction behind eyes. Mouth parts. Mentum with medial tooth short, shallowly emarginate, a pair of paramedial setae and small, deep paramedial punctures; submentum with a single lateral seta; gula narrow. Antennae. Moderately elongate, just reaching pronotal base.

*Thorax.* Pronotum (Fig. 3C). Wider than long; anterior angles not produced; lateral margins smoothly arcuate; hind angles broadly obtuse, usually with small evident denticle; deep, linear, converging medial basal pronotal impressions; lateral pronotal impressions absent, slightly convex laterad medial impressions; without or with shallow punctulae in medial impressions, lateral of medial impressions, and laterally along base. Elytra. All striae deeply impressed; short angular base of stria 1 present but not connected to remaining length of stria; parascutellar stria present and joined to stria 1; parascutellar punctures present; intervals convex, more convex laterally and apically. Elytral intervals 5 and 7 enclosing 6 or 6 and 7 nearly same length (Fig. 4C). Basal margin evident throughout, slightly arcuate; humeral angles not produced, with or without a very small tuber-

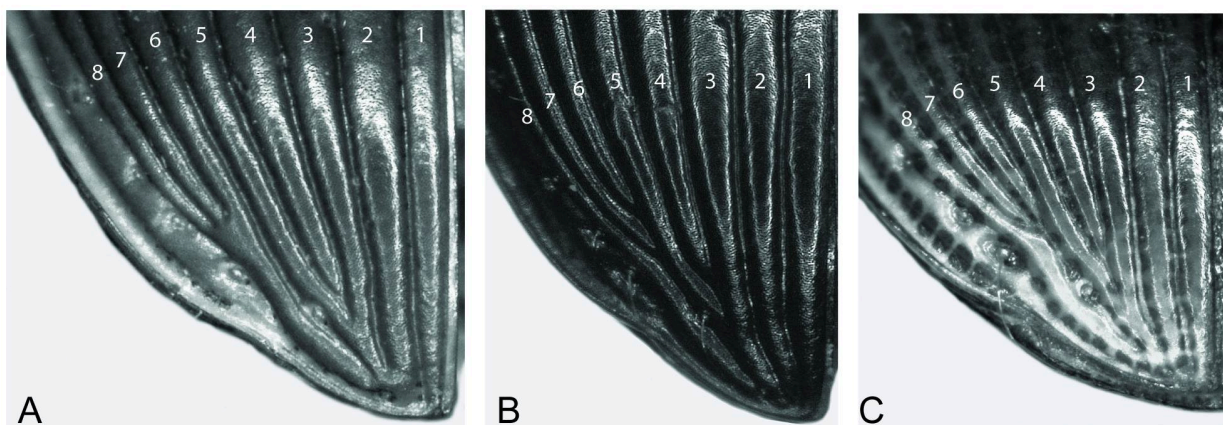


Figure 4. Apical portion of left elytron. (A) *Prosopogmus guthrieae*; (B) *P. cassiculus*; (C) *P. insperatus*.



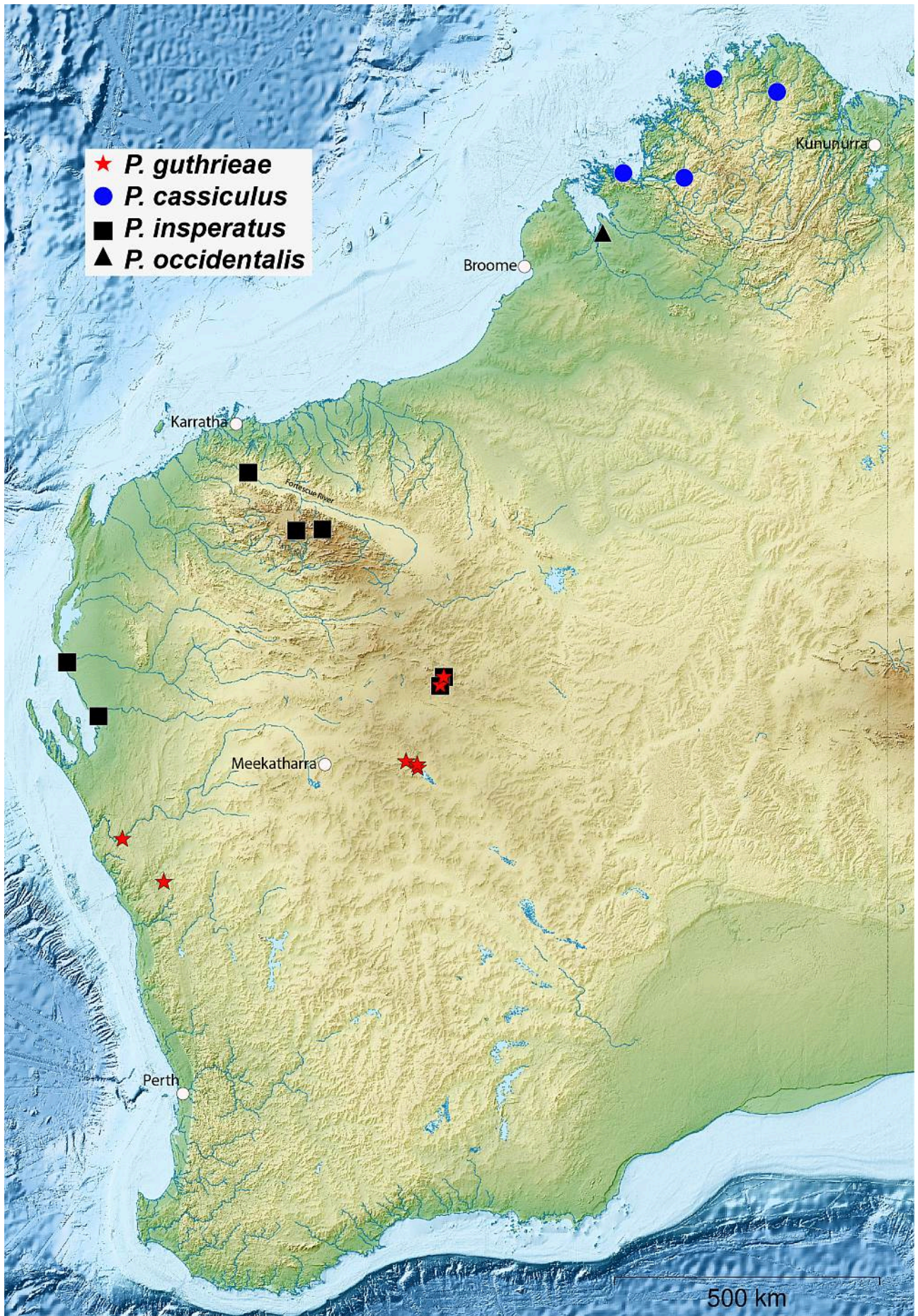




Figure 5. Map of Western Australia showing localities of specimens examined for this study.

cle. Wing. Flight wing full-size. Sterna. Prosternal process margined at apex. Metasternum and metepisternum long. Metasternum and metepisternum shallowly, sparsely punctate or with few scattered puncture to nearly impunctate. Legs. Three male protarsomeres expanded, with ventral pads of squamous setae, female protarsomeres unmodified; meso and metatarsomeres elongate and without sulci.

**Abdomen.** Ventrites. Basolaterally very densely punctate; last ventrite with two setae in males and four in females. Genitalia. Male. (Figs 2E-F) Median lobe with ostium dorsal, blade very short, tip dorso-ventrally thin, broadly asymmetrically pointed with shallow sinuation. Female. Gonocoxite 1 with one apical seta; gonocoxite 2 with one medial and two lateral ensiform setae, sub-apical furrow with two nematiform setae, gonocoxite 2 short, robust with rounded apex. Bursa gooseneck form with apical end oriented posteriorly, very broad and elongate spermatheca broadly attached on dorso-posterior face of apex of bursa, spermatheca with appended gland with uniformly broad duct connecting at midpoint, without duct digital diverticulum, with elongate spermathecal gland duct diverticulum.

**Specimens examined.** In addition to the neotype noted above- 18 ♀♀, 13 ♂♂ specimens from the following localities (Fig. 5) were examined. -22.60157 117.96729, 20.5 km ENE Tom Price, 730 m, 1 ♂, 5 ♀♀, EMEC; -21.58788 117.07106 Millstream-Chichester National Park, 298 m, 6 ♂♂, 6 ♀♀, EMEC; 1 ♀, 1 ♂, ANIC; -22.58268 118.45874, Karijini National Park, 2 ♂♂, EMEC; -25.77465 114.28228, Woomeral River, 2 ♀♀, EMEC; -25.26167 120.65028, Serpent's Glen, 665 m, 1 ♀, WAM; -25.11222 120.72111, 275 km NE of Meekatharra, 638 m. 5 km E Carnarvon, 1 ♀, WAM; -25.25789 120.65183, Carnarvon Range, Little Sandy Desert, 658 m, 1 ♂, WAM; -24.86338 113.70137, 5 km E Carnarvon, 2 ♂♂, 2 ♀♀, ZSM.

**Distribution and habitat.** *Prosopogmus insperatus* has a widespread distribution from coastal localities, across the Pilbara region, and to the edge of the Little Sandy Desert (Fig. 5) where it is sympatric with *P. guthrieae*. Based on the published record of the lost type specimen, the species also ranges into south-central Northern Territory. Like other Western Australian species in the genus, *P. insperatus* appears to be associated with leaf litter in relatively mesic habitats.

### *Prosopogmus occidentalis* (W.J. Macleay, 1888)

Figs 1D, 3D, 5

*Simodontus occidentalis* Macleay, 1888 (orig. comb.)

**Diagnosis.** Separated from all other *Prosopogmus* by the combinations of the absence of microsculpture on

the head, small size, elytra lacking any paler regions or markings, legs piceous or brunneous, elytral punctures not foveate, pronotum with hind angles obtusely angled, elytral intervals 6 and 8 enclosing 7, and intervals 8 and 9 of approximately equal width medially.

Two syntypes from King Sound, WA in ANIC (Fig. 1D). Images provided by ANIC for study. No additional specimens of *P. occidentalis* are known.

### Acknowledgments

I thank Lingzi Zhou and Adam Slipinski (ANIC) for being very responsive to my numerous requests for information on Sloane's notebooks, specimens, and types. The image of the syntype of *P. occidentalis* is courtesy of A. Slipinski. Ditta Balke (ZSM), Crystal Maier (MCZ), Karin Koch (QM), Ben Parslow (SAMA), and Nikolai Tatarinic (WAM) have been gracious hosts to their institution's collections and/or provided loans of specimens critical to this study. I thank Nadine Guthrie (Perth, WA) and Jim Liebherr for being extraordinary field companions during trips to the Pilbara region that yielded many of the specimens for this study. This study was funded in part by the Gorgon Barrow Island Net Conservation Benefits Fund administered by the WA Department of Parks and Wildlife and approved by the Minister for Environment after considering advice from the Gorgon Barrow Island Net Conservation Benefits Advisory Board. Supportive funds were also provided by the Fortescue Marsh Biodiversity Project, a project funded by the Fortescue Mining Group Social Investment Fund and managed through the Foundation for the WA Museum.

### References

- Darlington PJ (1971) The Carabid Beetles of New Guinea. Part IV. General Considerations; Analysis and History of Fauna; Taxonomic Supplement. Bulletin of the Museum of Comparative Zoology 142: 129–337.
- ICZN (1999) International Code of Zoological Nomenclature. Fourth edition. London, U.K. [available online at <http://www.iczn.org/iczn/index.jsp>]: International Trust for Zoological Nomenclature.
- Moore BP (1987) Rhysodidae and Carabidae. In Zoological Catalogue of Australia. In: vol. 4 (Coleoptera: Archostemata, Myxophaga and Adepaga) (eds DW Walton) pp. 20–230. Australian Government Publishing Service, Canberra, ACT.
- Sloane TG (1896) Carabidae. pp. 380–384 in B. Spencer (ed.) Report of the Work of the Horn Scientific Expedition to Central Australia. Pt II, Zoology Melbourne: Melville, Mullin & Slade.

Sloane TG (1920) The Carabidae of Tasmania. Proceedings of the Linnean Society of New South Wales 45: 113–178.

Will KW (2011) Taxonomic review of the Pterostichini and Loxandrini fauna of New Caledonia (Coleoptera, Carabidae). ZooKeys, 337–397.

Will KW (2020) Phylogeny and classification of the genus-group taxa of Loxandrina (Coleoptera, Carabidae, Abacetini). Deutsche Entomologische Zeitschrift 67, 151–182.



This paper was typeset using Prince

[www.princexml.com](http://www.princexml.com)