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Synopsis of the tribe Zolini in New Zealand (Coleoptera: Carabidae)

André Laroche and Marie-Claude Larivière  
New Zealand Arthropod Collection  
Landcare Research  
Private Bag 92170, Auckland 1142, New Zealand

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*Pseudopterus otiraensis* Laroche and Larivière, new species

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## Synopsis of the tribe Zolini in New Zealand (Coleoptera: Carabidae)

André Larochele

New Zealand Arthropod Collection  
Landcare Research  
Private Bag 92170, Auckland 1142, New Zealand  
LarocheleAndre@hotmail.com

Marie-Claude Larivière

New Zealand Arthropod Collection  
Landcare Research  
Private Bag 92170, Auckland 1142, New Zealand  
LariviereM@landcareresearch.co.nz

**Abstract.** The tribe Zolini (Carabidae: Trechinae) is revised for New Zealand. Two subtribes, five genera, and forty-eight species are recognized. The presence of the subtribe Merizodina is confirmed for New Zealand; it includes three genera (*Maungazolus* n. gen., *Pseudoopterus* Csiki, 1928, and *Synteratus* Broun, 1909). The subtribe Zolina contains two genera (*Oopterus* Guérin-Méneville, 1841 and *Zolus* Sharp, 1886).

One genus and twenty-five species are described as new: *Maungazolus* n. gen.; *Maungazolus acutus* n. sp., *Maungazolus priestleyensis* n. sp., *Maungazolus ranatungae* n. sp., *Maungazolus septempunctatus* n. sp., *Maungazolus tararuaensis* n. sp., *Oopterus anglemensis* n. sp., *Oopterus arthurensis* n. sp., *Oopterus corvinki* n. sp., *Oopterus discoideus* n. sp., *Oopterus garnerae* n. sp., *Oopterus marrisi* n. sp., *Oopterus mohiensis* n. sp., *Oopterus monticola* n. sp., *Oopterus nanus* n. sp., *Oopterus nunni* n. sp., *Oopterus palmai* n. sp., *Oopterus punctatus* n. sp., *Oopterus quadripunctatus* n. sp., *Oopterus taieriensis* n. sp., *Oopterus trechoides* n. sp., *Pseudoopterus fiordlandensis* n. sp., *Pseudoopterus otiraensis* n. sp., *Zolus kauriensis* n. sp., *Zolus unisetosus* n. sp., *Zolus wongi* n. sp.

Lectotypes are designated for *Zolus helmsi* Sharp, 1886 and *Oopterus parvulus* Broun, 1903.

Seven taxa are reinstated as valid genera and previous combinations: *Zolus* Sharp, 1886 and *Pseudoopterus* Csiki, 1928 (previously synonymized with *Oopterus* Guérin-Méneville, 1841); *Oopterus carinatus* Broun, 1882 = *Zolus carinatus* (Broun, 1882); *Oopterus helmsi* (Sharp, 1886) = *Zolus helmsi* Sharp, 1886; *Oopterus latipennis* Broun, 1903 = *Pseudoopterus latipennis* (Broun, 1903); *Oopterus plicaticollis* Blanchard, 1843 = *Pseudoopterus plicaticollis* (Blanchard, 1843); *Oopterus subopacus* (Broun, 1915) = *Zolus subopacus* Broun, 1915.

Three new combinations are established: *Oopterus pallidipes* Broun, 1893 = *Maungazolus pallidipes* (Broun, 1893); *Oopterus parvulus* Broun, 1903 = *Maungazolus parvulus* (Broun, 1903); *Oopterus pygmeatus* Broun, 1907 = *Maungazolus pygmeatus* (Broun, 1907).

Eleven new synonymies are established: *Oopterus basalis* Broun, 1915 and *Oopterus minor* Broun, 1917 = *Maungazolus pygmeatus* (Broun, 1907); *Oopterus nigriritulus* Broun, 1908 and *Oopterus laevigatus* Broun, 1912 = *Oopterus sobrinus* Broun, 1886; *Oopterus sculpturatus ovinotatus* Broun, 1908 = *Oopterus sculpturatus* Broun, 1908; *Oopterus probus* Broun, 1903 and *Oopterus latifossus* Broun, 1917 = *Pseudoopterus latipennis* (Broun, 1903); *Oopterus puncticeps* Broun, 1893 = *Oopterus laevicollis* Bates, 1871; *Zolus atratus* Broun, 1893 and *Zolus femoralis* Broun, 1894 = *Zolus carinatus* (Broun, 1882); *Zolus labralis* Broun, 1921 = *Zolus helmsi* Sharp, 1886.

A revision of all taxa is provided. Descriptions, identification keys, illustrations of male genitalia, habitus photos, distributional data and maps are given. Extensive information on ecology, biology, dispersal power, and collecting techniques is included for each species.

**Key Words.** Taxonomy, new genera and species, keys, geographic distribution, ecology, biology, dispersal power.

### Introduction

The tribe Zolini (Carabidae: Trechinae) is circumantarctic and mostly South Temperate in distribution. It occurs in South America, southern Australia (including Tasmania), New Zealand, some subantarctic islands (Baehr 2016), and China (Deuve 1997).

The New Zealand Zolini were catalogued by Larochele and Larivière (2001) in three genera (*Oopterus* Guérin-Méneville, *Synteratus* Broun, *Zolus* Sharp) assigned to the subtribe Oopterina, recognized by Liebherr and Will (1998). Subsequently, Larochele and Larivière (2007), in their synopsis of supraspecific taxa, retained *Oopterus* and *Synteratus* in the subtribe Zolina, recognized by Arndt et al. (2005).

More recently, Larochelle and Larivière (2016), in their Taxonomic Supplement to the 2001 catalogue, listed 34 zoline species, according to the 2007 classification.

The current taxonomic revision deals with 48 endemic species belonging to five genera and two subtribes: *Oopterus* and *Zolus*, resurrected from synonymy (Zolina); *Maungazolus* new genus, *Pseudoopterus* resurrected from synonymy, and *Synteratus* (Merizodina).

The genus *Oopterus* was described by Guérin-Méneville (1841) based on a single species, *Oopterus clivinoides*. Sharp (1886) erected the genus *Zolus* also based on a single species, *Zolus helmsi*. Broun (1909) described the monotypic genus *Synteratus* based on *Synteratus ovalis*. Csiki (1928) created the genus *Pseudoopterus* to include 27 species previously placed in *Oopterus*. Jeannel (1940) synonymized *Pseudoopterus* and *Zolus* with the genus *Oopterus*. Larochelle and Larivière (2001) did not follow Jeannel's (1940) position and resurrected the genus *Zolus*; they incorrectly synonymized it again with the genus *Oopterus* in 2007.

Johns (1974) provided the first taxonomic review of New Zealand Zolini for species occurring on Subantarctic Islands: *Oopterus clivinoides*, *O. marrineri*, *O. plicaticollis*, *O. strenuus*, and *Synteratus ovalis*.

Although well represented in New Zealand collections, zolines have escaped the attention of taxonomists for decades probably because of their small size and high degree of morphological variation. Between 1881 and 1921, Broun described the bulk of the zolines for New Zealand. Since then, a single new species has been described by Johns (1974; *Oopterus strenuus*). Results from the current revision lead to the description of 24 new species.

This synopsis provides a detailed treatment of the taxonomy of New Zealand Zolini, identification keys to all taxa, and extensive information on species distribution, ecology, biology, dispersal power, and collecting techniques. The male genitalia are described and illustrated, and habitus photos are provided for all taxa for the first time.

This revision is another step in the authors' goal of attaining a comprehensive understanding of the New Zealand carabid fauna within a reasonable time frame, and of making large amounts of information available for practical use by a wide range of users. It follows the publication of a catalogue of New Zealand Carabidae (Larochelle and Larivière 2001), a revision of the tribe Harpalini (Larochelle and Larivière 2005), a synopsis of supraspecific carabid taxa (Larochelle and Larivière 2007), a synopsis of species of the tribes Amarotypini, Cicindelini, Clivinini, Migadopini, Pamborini, Rhysodini, Moriomorphini, and Trechini (Larochelle and Larivière 2013), a synopsis of the genus *Bembidion* Latreille (Larochelle and Larivière 2015), and a taxonomic supplement (2001 to 2015) to the 2001 catalogue (Larochelle and Larivière 2016).

## Materials and Methods

This study is based on the examination of over 5,000 specimens from several hundred New Zealand localities. Most of this material (about 70%) was collected by the authors from 1992 to 2017 and is deposited in the New Zealand Arthropod Collection (NZAC), Auckland.

Other specimens were kindly provided by the following museums and collections: Auckland War Memorial Museum, Auckland, New Zealand (AMNZ); Canterbury Museum, Christchurch, New Zealand (CMNZ); Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, U.S.A. (CMNH); Entomology Research Museum, Lincoln University, Lincoln, New Zealand (LUNZ); John Nunn private collection, Dunedin, New Zealand (JNNZ); Muséum national d'Histoire naturelle, Paris, France (MNHN); Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand (MONZ); The Natural History Museum, London, U.K. (BMNH). Type material has been deposited in some of the above collections.

The morphological terminology used in this work generally follows Larochelle and Larivière (2007, 2013, 2015). Elytral striae refer to engraved lines while rows refer to linear arrangements of coarse punctures. All descriptions are based on the same list of characters so as to be fully comparative between taxa. The microsculpture (Fig. 1–3) of head, pronotum and elytra was examined in great detail and proved highly useful in discriminating species. The male genitalia, also highly diagnostic at the species level, were dissected across numerous populations of each taxon.

In the identification keys to subtribes, genera, and species, additionally helpful but not necessarily exclusive characters are provided in brackets. The taxonomic arrangement of subtribes, genera and species, and the sequence of habitus photos and illustrations of male genitalia, follow the order of taxa in the identification keys. *Zolus unisetosus* new species was added after completion of the manuscript; illustrative material is provided at the end of the synopsis (Fig. 159–161).

Synonyms, new combinations and type data are given for all taxa except for the five subantarctic species revised by Johns (1974). Type data, where provided, are listed in this order: type status followed by sex, acronym of entomological collection or museum serving as repository, and original label data with a forward slash (/) indicating a different label.

The two-letter abbreviation codes of Crosby et al. (1976, 1998) for areas of New Zealand (Fig. 111) were used to record geographic distributions. Full distributional information is given for species known from 10 or fewer localities. Appendix A provides decimal degree coordinates for localities cited in the text. Maps summarizing species distribution are alphabetically arranged, except for *Zolus unisetosus* (Fig. 112–158, 161).

Notes on the ecology, biology and dispersal power are based on an analysis and synthesis of specimen label data and field observations by the authors. The terminology and style of presentation follow Laroche and Larivière (2001, 2003).

Habitus photos were taken by B. E. Rhode. The authors prepared all other illustrations.

## Tribe Zolini

**Description** (New Zealand). Body length 2.8–10.1 mm; not pedunculate. **Head.** Mandibles with setiferous puncture in scrobe. Labrum slightly emarginate anteriorly (rarely subtruncate). Frontal furrows not extended to posterior margin of eyes. Eyes present; a single setiferous puncture (posteriorly) or two punctures on inner side of each eye (without puncture in *Oopterus suavis*). Tempora inflated or not. Clypeus with a setiferous puncture on each side. Antennae submoniliform (subfiliform in *Oopterus arthurensis*, *O. ocularius*, *O. trechoides*, and genus *Zolus*); segment 1 (scape) with a few setae, segment 2 with numerous setae, segments 3–11 densely pubescent; segments 2–10 with verticillate setae. Mentum: medial tooth present; circular foveae absent; two setae present. Mentum-submentum suture present (absent in *Pseudoopterus plicaticollis*). Submentum with four setae. Ligula with two fused setae (*Oopterus*, *Zolus*, *Pseudoopterus* (in part)), four setae (two medial setae fused, two lateral setae free in *Maungazolus*) or six setae (two medial setae fused, four lateral setae free in *Pseudoopterus plicaticollis* and *Synteratus*). Palpi: terminal segment conical, glabrous, obtuse at tip; penultimate maxillary segment with numerous long setae; penultimate labial segment with two setae on anterior margin. **Thorax.** Pronotum with or without lateral groove between lateral margin and laterobasal fovea; usually two setiferous punctures on each side or without puncture (rarely with a single setiferous puncture anteriorly or posteriorly); posterolateral carinae present or absent. Scutellum visible, inserted entirely between elytral bases (invisible, concealed under pronotal base in *Synteratus*). **Legs.** Protibiae without outer apical prolongation. Tarsi pubescent dorsally; basal segments 1+2 of male protarsi asymmetrical, dentate and dilated on inner side; claws entire ventrally; unguitactor plate invisible between tarsal claws. **Elytra.** Fused along suture (hindwings vestigial). Basal margin complete (reaching about scutellum) or incomplete (reaching about stria 3 or 4). Discal setiferous punctures present. Stria 1 recurrent at apex (curving back like a hook as in Trechini and Bembidiini (Tachyina)). Subapical seta present (absent in *Maungazolus pygmeatus* and *Oopterus clivinoides*). Umbilicate series separated into two major groups (four+five), with posterior group rather continuous. Radial field without fine, dense pubescence. Sutural apices obtuse or rounded. Epipleura twisted (with inner fold or plica) near apex. **Abdomen.** Apex invisible dorsally. Sterna IV–VI with paired ambulatory setae only. **Aedeagus.** Basal orifice of aedeagus closed anteriorly (*Oopterus*, *Zolus*) or open anteriorly (*Maungazolus*, *Pseudoopterus*, *Synteratus*). Right paramere curved, very long, narrow, untwisted medially (*Maungazolus*, *Oopterus*, *Pseudoopterus*, *Synteratus*) or rather straight, moderately long and wide, twisted medially (*Zolus*). Left paramere subtriangular.



**References.** Johns 1974: 297–300 (revision, subantarctic islands); Maddison et al. 1999: 103–138 (molecular phylogeny); Laroche and Larivière 2001: 73–79 (catalogue); Roig-Juñent and Cicchino 2001: 651–670 (phylogeny, key to subtribes); Lorenz 2005: 201 (world catalogue); Laroche and Larivière 2007: 44–45 (taxonomy); Maddison and Ober 2011: 229–260 (molecular phylogeny); Baehr 2016: 39–45 (as Zolini or Merizodini; Australia, new taxa); Laroche and Larivière 2016: 20–21 (list).

### Alphabetical checklist of taxa

Valid genus- and species-group taxa are listed alphabetically (A = Adventive, E = Endemic, N = Native, but not endemic to New Zealand).

#### Tribe **Zolini**

##### Subtribe **Merizodina**

Genus ***Maungazolus*** <sup>E</sup> new genus

***acutus*** <sup>E</sup> new species

***pallidipes*** (Broun, 1893) <sup>E</sup>

***parvulus*** (Broun, 1903) <sup>E</sup>

***priestleyensis*** <sup>E</sup> new species

***pygmeatus*** (Broun, 1907) <sup>E</sup>

***ranatungae*** <sup>E</sup> new species

***septempunctatus*** <sup>E</sup> new species

***tararuaensis*** <sup>E</sup> new species

Genus ***Pseudopterus*** Csiki, 1928 <sup>E</sup>

***fiordlandensis*** <sup>E</sup> new species

***latipennis*** (Broun, 1903) <sup>E</sup>

***otiraensis*** <sup>E</sup> new species

***plicaticollis*** (Blanchard, 1843) <sup>E</sup>

Genus ***Synteratus*** Broun, 1909 <sup>E</sup>

***ovalis*** Broun, 1909 <sup>E</sup>

##### Subtribe **Zolina**

Genus ***Oopterus*** Guérin-Ménéville, 1841 <sup>N</sup>

***anglemensis*** <sup>E</sup> new species

***arthurensis*** <sup>E</sup> new species

***clivinoides*** Guérin-Ménéville, 1841 <sup>E</sup>

***collaris*** Broun, 1893 <sup>E</sup>

***corvinki*** <sup>E</sup> new species

***discoideus*** <sup>E</sup> new species

***frontalis*** Broun, 1908 <sup>E</sup>

***fulvipes*** Broun, 1886 <sup>E</sup>

***garnerae*** <sup>E</sup> new species

***laevicollis*** Bates, 1871 <sup>E</sup>

***laeviventris*** (Sharp, 1883) <sup>E</sup>

***lewisi*** (Broun, 1912) <sup>E</sup>

***marrineri*** Broun, 1909 <sup>E</sup>

***marrisi*** <sup>E</sup> new species

***mohiensis*** <sup>E</sup> new species

***monticola*** <sup>E</sup> new species

***nanus*** <sup>E</sup> new species

***nunni*** <sup>E</sup> new species

***ocularius*** (Broun, 1917) <sup>E</sup>

***palmai*** <sup>E</sup> new species

***patulus*** (Broun, 1881) <sup>E</sup>

***punctatus*** <sup>E</sup> new species

- quadripunctatus*<sup>E</sup> new species  
*sculpturatus* Broun, 1908<sup>E</sup>  
*sobrinus* Broun, 1886<sup>E</sup>  
*strenuus* Johns, 1974<sup>E</sup>  
*suavis* Broun, 1917<sup>E</sup>  
*taieriensis*<sup>E</sup> new species  
*trechoides*<sup>E</sup> new species  
 Genus *Zolus* Sharp, 1886<sup>E</sup>  
*carinatus* (Broun, 1882)<sup>E</sup>  
*helmsi* Sharp, 1886<sup>E</sup>  
*kauriensis*<sup>E</sup> new species  
*subopacus* Broun, 1915<sup>E</sup>  
*unisetosus*<sup>E</sup> new species  
*wongi*<sup>E</sup> new species

### Key to subtribes and genera of Zolini (New Zealand)

**Remarks.** The only character distinguishing the genera *Oopterus* and *Zolus* is the shape of the right paramere of the aedeagus. To separate *Zolus* species from *Oopterus* species using external morphology, see the Key to species of *Oopterus* where *Zolus* species are inserted and cross-referenced to the *Zolus* key.

1. Aedeagus (Fig. 15) with basal orifice closed anteriorly; basal bulb without lateral lobes. [Ligula (Fig. 4) with two fused apical setae only; mentum tooth (Fig. 7–9) not bifid] ..... **(Subtribe Zolina) 2**
- Aedeagus (Fig. 16–18) with basal orifice open anteriorly; basal bulb with lateral lobes [Ligula (Fig. 4) with two fused apical setae and mentum tooth (Fig. 10) bifid, or ligula (Fig. 5–6) with four or six apical setae (two medial setae fused, lateral setae free) and mentum tooth (Fig. 7–9) not bifid] ..... **(Subtribe Merizodina) 3**
- 2(1). Right paramere (Fig. 13) of aedeagus rather straight, moderately long and wide, twisted medially. [Rather large, body length 7.0–10.1 mm; color dark; eyes convex; antennae subfiliform; pronotum subquadrate, with lateral grooves and posterolateral carinae; North and South Islands] ..... **Genus *Zolus* Sharp**
- Right paramere (Fig. 14) of aedeagus curved, very long and narrow, not twisted medially. [Smaller, body length 3.4–7.8 mm (rarely over 6.5 mm); color dark or pale; eyes convex or subdepressed; antennae submoniliform (rarely subfiliform); pronotum subquadrate, transverse or cordate, with or without lateral grooves or posterolateral carinae; North, South and Subantarctic Islands] ..... **Genus *Oopterus* Guérin-Ménéville**
- 3(1). Body (Fig. 53) ovate, not narrowed around bases of pronotum and elytra; eyes subdepressed; pronotum trapezoidal, without lateral setiferous punctures; scutellum invisible, concealed under pronotal base; aedeagus (Fig. 18) with basal orifice widely open anteriorly. [Body length 3.0–3.5 mm; ligula with six setae (two medial setae fused, four lateral setae free); Subantarctic Islands (SN)] ..... **Genus *Synteratus* Broun**
- Body (Fig. 54–65) not ovate, but narrowed around bases of pronotum and elytra; eyes convex; pronotum not trapezoidal, with two lateral setiferous punctures; scutellum visible between elytral bases; aedeagus (Fig. 16–17) with basal orifice moderately open anteriorly ..... **4**
- 4(3). Mentum tooth (Fig. 10) bifid; segments 1+2 of male protarsi with two rows of ventral scales; aedeagus with dorsal membranous area moderately wide (Fig. 100–103) and moderately distant from basal bulb (Fig. 16). [Larger, body length 3.7–5.7 mm; ligula (Fig. 4, 6) either with two fused apical setae or with six apical setae (two medial setae fused, four lateral setae free); South Island and Subantarctic Islands] ..... **Genus *Pseudoopterus* Csiki**

- Mentum tooth (Fig. 7–9) not bifid; segments 1+2 of male protarsi with a single row of ventral scales; aedeagus with dorsal membranous area very wide (Fig. 104–110) and very close to basal bulb (Fig. 17). [Smaller, body length 2.8–4.4 mm; ligula (Fig. 5) with four apical setae (two medial setae fused, two lateral setae free); southern North Island (WN), South Island, and Stewart Island] ..... **Genus *Maungazolus* new genus**

### Subtribe *Zolina*

**Description** (New Zealand). Aedeagus with basal orifice closed anteriorly; basal bulb without lateral lobes.

**References.** Jeannel 1940: 93 (as *Oopterini*, new tribe); Liebherr and Will 1998: 107–170 (as *Oopterina*; phylogeny); Larochelle and Larivière 2001: 73–79 (as *Oopterina*; catalogue); Roig-Juñent and Cicchino 2001: 651–670 (as *Zolina*; phylogeny, key to subtribes); Lorenz 2005: 201 (as *Oopterini*, a junior synonym of *Zolina*); Larochelle and Larivière 2007: 44–45 (as *Oopterina*; catalogue), 2016: 20–21 (as *Zolina*; list).

**Remarks.** Two New Zealand genera (*Zolus* Broun, *Oopterus* Guérin-Méneville) share the genitalic characters assigned to *Zolina* by Jeannel (1940; as *Oopterini*), as well as by Roig-Juñent and Cicchino (2001): aedeagus with basal orifice closed anteriorly; basal bulb without lateral lobes. See Roig-Juñent and Cicchino (2001) for comments on the priority of the subtribal name *Zolina* over *Oopterina*.

Genus *Zolus* Sharp, 1886, reinstated  
Fig. 19–23, 66–70, 154–161

*Zolus* Sharp, 1886: 371. Synonymized with *Oopterus* Guérin-Méneville, 1841 by Jeannel (1942: 92); reinstated as full genus by Larochelle and Larivière (2001: 78); incorrectly reinstated as a junior synonym of *Oopterus* by Larochelle and Larivière (2007: 44). **Reinstated as full genus**

**Type species.** *Zolus helmsi* Sharp, 1886, by monotypy.

**Description.** Body length 7.0–10.1 mm; not ovate, narrowed around bases of pronotum and elytra. Color mostly dark. Metallic luster absent. Dorsal surface mostly glabrous. **Head.** Narrow or moderately wide. Mandibles moderately long. Labrum slightly emarginate or subtruncate anteriorly. Eyes convex; a single setiferous puncture posteriorly (two setiferous punctures on inner side of each eye in *Z. subopacus*). Antennae subfiliform. Tempora not inflated. Mentum tooth entire (acute apically). Ligula with two fused setae. **Thorax.** Pronotum subquadrate (cordate in *Z. wongi*); lateral grooves present; setiferous punctures absent on each side (a single puncture present in *Z. opacus* and *Z. unisetosus*); posterolateral carinae present; base narrower than apex, about as wide as apex or wider than apex. Scutellum visible, inserted entirely between elytral bases. **Legs.** Very long (moderately long in *Z. subopacus*). Segments 1+2 of male protarsi with a single row of ventral scales. **Elytra.** Ovate, subovate, or oblong. Basal margin complete, reaching about scutellum (incomplete, reaching about interval 4 in *Z. subopacus*). Shoulders well developed, rounded, obtuse or oblique. Scutellar setiferous pore present, inserted at junction of striae 1+2. Scutellar striole present (obsolete in *Z. subopacus*). Striae complete (almost complete in *Z. subopacus*), consisting of lines; three discal setiferous punctures in stria 3 or on interval 3; recurrent stria directed apically toward stria 5, 6 or 7. Subapical seta present. Apical seta present. Sutural apices rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view: dorsal membranous area moderately wide or very wide (narrow in *Z. subopacus*). Dorsal view (Fig. 15): very wide (moderately wide in *Z. subopacus*); basal orifice wide (narrow in *Z. subopacus*), closed anteriorly, moderately or very distant from membranous area; lateral lobes of basal bulb absent. Parameres with four to seven apical setae. Right paramere rather straight (curved in other zoline genera), moderately long and wide, twisted medially (untwisted in other zoline genera).



**References.** Larochelle and Larivière 2001: 73–79 (as *Ooapterus* and *Zolus*; catalogue), 2007: 44–45 (as *Ooapterus*; description, ecology, geographic distribution, references), 2016: 20–21 (as *Ooapterus*; list).

**Remarks.** The genus *Zolus* Sharp, 1886 was previously synonymized with *Ooapterus*. This taxon is resurrected from synonymy here on the basis of the rather straight, moderately long, wide, and medially twisted right paramere of the aedeagus, a character unifying included species and distinguishing *Zolus* from *Ooapterus*. In addition, *Zolus* species share the following external characters: rather large, body length 7.0–10.1 mm; color dark; eyes convex, antennae subfiliform; pronotum subquadrate, with lateral grooves and posterolateral carinae. The genus *Zolus* now includes three newly described species, two species previously described in *Zolus*, and one species originally described in *Ooapterus*. The taxonomic names *Zolus helmsi* and *Z. subopacus* are here reinstated to their original combinations.

### Key to species of *Zolus*

1. Pronotum with a single setiferous puncture on each side ..... **2**  
— Pronotum without lateral setiferous punctures ..... **3**
- 2(1). Pronotum with a setiferous puncture on each side (posteriorly); head with two setiferous punctures on inner side of each eye; basal margin of elytra incomplete, reaching about interval 4; Fig. 19. [Body length 7.1–7.7 mm; southern South Island (CO, FD, OL, SL)] .....  
..... ***Zolus subopacus* Broun**  
— Pronotum with a setiferous puncture on each side (anteriorly); head with a single setiferous puncture on inner side of each eye (posteriorly); basal margin of elytra complete, reaching about scutellum; Fig. 159. [Body length 9.2–10.1 mm; southwestern South Island (OL, WD)] .....  
..... ***Zolus unisetosus* new species**
- 3(1). Pronotum strongly convex; elytral sides strongly rounded; antennal segment 1 (scape) moderately long, about 2x longer than its maximum width; Fig. 20–21. [North Island] ..... **4**  
— Pronotum moderately convex; elytral sides moderately rounded; antennal segment 1 (scape) very long, about 2.5x longer than its maximum width; Fig. 22–23. [South Island] ..... **5**
- 4(3). Pronotum widest about middle, sides strongly rounded, not sinuate posteriorly, posterolateral angles obtuse, posterolateral carinae moderately long (about half as long as adjoining foveae); elytra oblong, widest before middle, microsculpture moderately transverse, intervals convex; Fig. 20. [Body length 8.0–8.3 mm; northern North Island (northern AK, CL)] .....  
..... ***Zolus kauriensis* new species**  
— Pronotum widest before middle, sides moderately rounded, moderately sinuate posteriorly, posterolateral angles subrectangular, posterolateral carinae very long (about as long as adjoining foveae); elytra ovate, widest about middle, microsculpture very transverse (with microlines), intervals subdepressed; Fig. 21. [Body length 7.3–9.2 mm; North Island (southern AK to WN–WA)] ..... ***Zolus carinatus* (Broun)**
- 5(3). Elytra shiny, microsculpture moderately transverse (brick-like); pronotum subquadrate, widest about middle, sides slightly sinuate posteriorly; head, pronotum, and elytra mostly reddish piceous; Fig. 22. [Body length 7.6–8.9 mm; mostly western South Island (SD to WD)] .....  
..... ***Zolus helmsi* Sharp**  
— Elytra dull, microsculpture isodiametric; pronotum moderately cordate, widest before middle, sides moderately sinuate posteriorly; head, pronotum, and elytra mostly piceous black; Fig. 23. [Body length 7.0–8.3 mm; mostly western South Island (SD to WD)] .....  
..... ***Zolus wongi* new species**

***Zolus subopacus* Broun, 1915, reinstated**

Fig. 19, 66, 157

*Zolus subopacus* Broun, 1915: 277. Holotype: female (BMNH) labeled: "Type (circular red-bordered label; typed) / 3689. [female symbol] (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [OL] Ben Lomond. Dec.1912. (hand-written) / *Zolus subopacus*. [female symbol]. (hand-written)." **Original combination reinstated**

*Oopterus subopacus*: Jeannel 1940: 92.

*Zolus subopacus*: Laroche and Larivière 2001: 79.

*Oopterus subopacus*: Laroche and Larivière 2007: 45.

**Description.** Body length 7.1–7.7 mm. Head, pronotum, elytra, and abdomen mostly dark brown; apex of head reddish; lateral margins, suture, and apex of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and legs reddish; femora dark brown. Microsculpture very strong, isodiametric. Iridescence absent. Dull, without metallic luster. **Head.** Labrum strongly transverse, subtruncate anteriorly. Antennae subfiliform, very long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum slightly convex, impunctate, wrinkled across base, subquadrate, widest about middle; apex emarginate; anterolateral angles well developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, slightly sinuate posteriorly; lateral grooves very deep, very long (about as long as adjoining foveae); a single setiferous puncture on each side (posteriorly); posterolateral angles rectangular; posterolateral carinae blunt, very long (longer than adjoining foveae); laterobasal foveae well defined, impunctate, moderately deep, very wide, oblong, prolonged forward, simple; posterior bead absent; base emarginate, about as wide as pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, subovate, widest about middle. Basal margin incomplete, reaching about interval 4. Shoulders obtuse. Sides moderately rounded. Scutellar striole obsolete. Striae almost complete, feebly impressed, shallow, finely punctate; stria 3 or interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 6. Intervals depressed. Sutural apices strongly rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 66): unusually strongly arcuate, widest medially, narrowed in apical half; base strongly convex dorsally; middle strongly convex dorsally, strongly concave ventrally, with dorsal membranous area narrow (wide in other *Zolus* species) and short; apex slender, moderately concave dorsally, slightly concave ventrally, with extreme tip unusually slender. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, very distant from membranous area. Parameres with four apical setae.

**Material examined.** 59 specimens (AMNZ, BMNH, JNNZ, LUNZ, MONZ NZAC).

**Geographic distribution** (Fig. 157). South Island: CO, FD, OL, SL.

**Ecology.** Lowland, montane, subalpine. Epigeal. Forests (beech, broadleaf, podocarp). Shaded ground. Nocturnal; hides during the day under logs, fallen trees, and stones. Gregarious.

**Biology.** Seasonality: December–March, August. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Lifting logs, fallen trees, and stones; pitfall trapping.

**References.** Larochelle and Larivière 2001: 79 (as *Zolus subopacus*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 45, 118 (as *Oopterus subopacus*; taxonomy), 2016: 21 (as *Oopterus subopacus*; list).

### ***Zolus unisetosus* new species**

Fig. 159, 160, 161

Holotype: male (NZAC) labeled: “NEW ZEALAND OL Mt [= Mount] Aspiring NP [= National Park], Blue Pools walk 350m -44.1623 169.2736 7.III.2017 Larivière, Larochelle (typed) / Wet silver beech forest on river terrace. Under logs and fallen branches. (typed) / HOLOTYPE [male symbol] *Zolus unisetosus* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one female (NZAC) from Cameron Flat, Mount Aspiring National Park (OL) and two females (NZAC) from Mount Kinnaird, Westland National Park (WD), bearing blue paratype labels.

**Description.** Body length 9.2–10.1 mm. Head, pronotum, elytra, and abdomen mostly black piceous; abdomen yellow laterally; antennae, palpi, and legs reddish; apical half of femora pale yellow. Microsculpture moderately deep, isodiametric on head, moderately transverse on pronotum, very deep and strongly isodiametric on elytra. Iridescence absent. Very shiny on head and pronotum, dull on elytra, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae subfiliform, very long: segment 1 (scape) very long, about 2.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes strongly convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum strongly convex, coarsely punctate across base, wrinkled discally and across base, moderately cordate, widest about middle; apex truncate; anterolateral angles poorly developed, rounded; anterior bead complete; sides strongly rounded, moderately sinuate posteriorly; lateral grooves very deep, very long (longer than adjoining foveae); a single setiferous puncture on each side (anteriorly); posterolateral angles rectangular; posterolateral carinae sharp, very long (longer than adjoining foveae); laterobasal foveae well defined, coarsely punctate, very deep and wide, oblong, prolonged forward, simple; posterior bead absent; base depressed throughout (convex medially in other *Zolus* species), emarginate, much wider than pronotal apex, about as wide as elytral base. **Legs.** Very long. **Elytra.** Moderately convex, ovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders slightly rounded. Sides strongly rounded. Scutellar striole present. Striae complete, very deep, impunctate; stria 3 or interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Intervals moderately convex. Sutural apices broadly rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 160): strongly arcuate, moderately widened in apical half; base slightly convex dorsally; middle angulate anteriorly and moderately sinuate dorsally, moderately convex ventrally, with dorsal membranous area very wide and long; apex triangular, strongly convex dorsally, moderately convex ventrally, with extreme tip wide and short. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice wide, closed anteriorly, moderately distant from membranous area. Parameres with six apical setae.

**Material examined.** 12 specimens (CMNZ, NZAC).

**Geographic distribution** (Fig. 161). South Island: OL–Mount Aspiring National Park (Blue Pools Walk; Cameron Flat). WD–Jackson Bay. Westland National Park (Mount Kinnaird). Open Bay Islands.

**Ecology.** Lowland, montane. Epigeal. Wet forests (beech, broadleaf). Shaded. Nocturnal; active at night on trees; hides during the day under logs, fallen branches, and stones.

**Biology.** Seasonality: September, December, August. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

**Dispersal power.** Subapterous (incapable of flight). Fast runner. Regular climber.

**Collecting techniques.** Lifting logs, fallen branches, and stones.

**Remarks.** This species is based on the Latin *uni* (one) and *setosus* (setose), referring to the pronotum with a single setiferous puncture on each side (anteriorly). *Zolus unisetosus* is morphologically close to *Z. wongi*. In addition to diagnostic characters of the male genitalia, *Z. unisetosus* has the following distinguishing features: body length 9.2–10.1 mm; eyes strongly convex; pronotum strongly convex, widest about middle, sides strongly rounded, a single setiferous puncture on each side (anteriorly), base depressed throughout; elytra with intervals moderately convex and sutural apices broadly rounded. *Zolus unisetosus* is restricted to southwestern South Island (OL, WD), while *Z. wongi* occurs mostly in western areas of the South Island (SD to WD).

### ***Zolus kauriensis* new species**

Fig. 20, 67, 156

Holotype: male (NZAC) labeled: “NEW ZEALAND CL (typed) Tapu-Coroglen Saddle 400m 13 Feb 1979 J.S. Dugdale (hand-written) / under stones in bush tunnel (hand-written) / [male symbol] / HOLOTYPE [male symbol] *Zolus kauriensis* Larochelle & Larivière, 2017 (red label; typed).” Paratype: one female (NZAC) from Nihotapu [=Nihotupu], Waitakere Ranges (AK), East side, 29.Nov.1956, K.A.J. Wise, bearing a blue paratype label.

**Description.** Body length 8.0–8.3 mm. Head, pronotum, and elytra mostly piceous black; abdomen mostly dark brown, yellow laterally and apically; lateral margins of elytra reddish; antennae, palpi, and legs entirely reddish. Microsculpture very strong, isodiametric on head, very transverse (with microlines) on pronotum, moderately transverse on elytra. Iridescence absent on head and elytra, very strong on pronotum. Very shiny, without metallic luster. **Head.** Labrum moderately transverse, slightly emarginate anteriorly. Antennae subfiliform, very long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes moderately convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum strongly convex, finely punctate across base, wrinkled (discally, medioapically, and between laterobasal foveae), subquadrate, widest about middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead complete; sides strongly rounded, not sinuate posteriorly; lateral grooves moderately deep, very long (about as long as adjoining foveae); setiferous punctures absent on each side; posterolateral carinae sharp, moderately long (about half as long as adjoining foveae); posterolateral angles obtuse (with extreme tip rounded); laterobasal foveae well defined, finely punctate, moderately deep, very wide, square, prolonged forward, simple; posterior bead absent; base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Very long. **Elytra.** Moderately convex, oblong, widest before middle. Basal margin complete, reaching about scutellum. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Striae complete, very deep, impunctate; stria 3 or interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Intervals slightly to moderately convex from base to apex. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 67): strongly arcuate, not widened in apical half; base moderately biconvex dorsally; middle strongly convex dorsally, slightly convex ventrally, with dorsal membranous area very wide and long; apex subtriangular, slightly convex dorsally, almost straight ventrally, with extreme tip narrow and long. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice wide, closed anteriorly, moderately distant from membranous area. Parameres with five apical setae.

**Material examined.** 2 specimens (NZAC).



**Geographic distribution** (Fig. 156). North Island: AK–Nihotapu, Waitakeres [= Nihotapu, Waitakere Ranges]. CL–Tapu-Coroglen Saddle.

**Ecology**. Lowland (hills). Forests (broadleaf-podocarp). Nocturnal; hides during the day under stones.

**Biology**. Seasonality: November, February. Predacious (based on mouthpart morphology).

**Dispersal power**. Subapterous (incapable of flight). Fast runner.

**Collecting technique**. Lifting stones.

**Remarks**. This species is named after the geographic range of the kauri tree (*Agathis australis*) where the beetle occurs, and the Latin suffix *-ensis*, denoting a place, locality, or country. *Zolus kauriensis* is morphologically close to *Z. carinatus*. In addition to diagnostic characters of the male genitalia, *Z. kauriensis* has the following distinguishing features: pronotum widest about middle, sides strongly rounded, not sinuate posteriorly, lateral grooves moderately deep, posterolateral angles obtuse and posterolateral carinae moderately long (about half as long as adjoining foveae); elytra oblong, widest before middle, microsculpture moderately transverse, intervals convex. The two species are allopatric: *Z. kauriensis* appears to be restricted to northern areas of the North Island, while *Z. carinatus* occurs mostly south of the Central Volcanic Plateau.

### ***Zolus carinatus* (Broun, 1882), reinstated**

Fig. 21, 68, 154

*Oöpterus carinatus* Broun, 1882: 224 (near Wellington; redescribed in 1883: 224 and 1886: 754). Holotype: male (BMNH) labeled: “[Male symbol] (hand-written) / 1339. (typed) / Type (circular red-bordered label; typed) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Zolus carinatus* (hand-written).”

*Zolus atratus* Broun, 1893: 1002. Holotype: female (BMNH) labeled: “Type (circular red-bordered label; typed) / [female symbol] (hand-written) / 1796. (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [TK] Mount Egmont [= Taranaki] (typed) / *Zolus atratus* (hand-written).” **New synonym**

*Zolus femoralis* Broun, 1894: 311. Holotype: female (BMNH) labeled: “Type (circular red-bordered label; typed) / 2658. [male symbol] (hand-written) / Wellington (typed) / 2.9.1893. J. H. Lewis (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Zolus femoralis* (hand-written).” **New synonym**

*Zolus carinatus*: Hutton 1904: 148. **Combination reinstated**

*Pseudoopterus carinatus*: Csiki 1928: 225.

*Oopterus atratus*: Jeannel 1940: 92.

*Oopterus femoralis*: Jeannel 1940: 92.

*Zolus femoralis*: May 1967: 177.

*Zolus atratus*: Townsend 1997: 12.

*Oopterus carinatus*: Laroche and Larivière 2007: 45.

*Oopterus atratus*: Laroche and Larivière 2007: 45.

*Oopterus femoralis*: Laroche and Larivière 2007: 45.

**Description**. Body length 7.3–9.2 mm. Head, pronotum, and elytra mostly piceous black; abdomen mostly dark brown, yellow laterally and apically; lateral margins of elytra reddish; antennae, palpi, and legs reddish; femora pale yellow basally. Microsculpture moderately strong and isodiametric on head, very strong and transverse (with microlines) on pronotum and elytra. Iridescence absent on head, very strong on pronotum and elytra. Very shiny, without metallic luster. **Head**. Labrum moderately transverse, slightly emarginate anteriorly. Antennae subfiliform, very long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes



moderately convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum strongly convex, finely punctate across base, wrinkled (discally, medioapically, and between laterobasal foveae), subquadrate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead complete; sides moderately rounded, moderately sinuate posteriorly; lateral grooves very deep, very long (about as long as adjoining foveae); setiferous punctures absent on each side; posterolateral angles subrectangular; posterolateral carinae sharp, very long (about as long as adjoining foveae); laterobasal foveae well defined, finely punctate, very deep and wide, square, prolonged forward, simple; posterior bead absent; base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Very long. **Elytra.** Moderately convex, ovate, widest about middle (wider at base than in other *Zolus* species). Basal margin complete, reaching about scutellum. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Striae complete, moderately deep, impunctate or finely punctate; stria 3 or interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5, 6 or 7. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 68): strongly arcuate, not widened in apical half; base slightly convex dorsally; middle subparallel, almost straight dorsally, moderately concave ventrally, with dorsal membranous area moderately wide and very long; apex subtriangular, slightly convex dorsally, slightly concave ventrally, with extreme tip narrow and long. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice wide, closed anteriorly, moderately distant from membranous area. Parameres with five to seven apical setae.

**Material examined.** 545 specimens (BMNH, CMNH, CMNZ, JNNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 154). North Island: AK, BP, GB, HB, RI, TK, TO, WA, WI, WN, WO.

**Ecology.** Lowland, montane, subalpine. Epigeal-arboreal. Wet or dry forests (beech, broadleaf, podocarp). Shaded ground. Nocturnal; active at night on trees and logs; hides during the day in fallen branches and in rotten logs. Gregarious.

**Biology.** Seasonality: throughout the year, except June. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Fast runner. Occasional climber on trees and logs.

**Collecting techniques.** Breaking rotten branches and logs; pitfall trapping.

**References.** Laroche and Larivière 2001: 78 (as *Zolus carinatus*, *Z. atratus*, *Z. femoralis*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 45, 118 (as *Oopterus carinatus*, *O. atratus*, *O. femoralis*; taxonomy), 2016: 20 (as *Oopterus carinatus*, *O. atratus*, *O. femoralis*; list).

**Remark.** Examination of the types of *Zolus atratus* and *Z. femoralis* revealed them to be conspecific with *Z. carinatus*.

### ***Zolus helmsi* Sharp, 1886, reinstated**

Fig. 22, 69, 155

*Zolus helmsi* Sharp, 1886: 372. Lectotype (here designated): male (BMNH) labeled: “[male and female symbols] *Zolus helmsi* D.S. [BR] Greymouth. N.Z. types Helms. (hand-written) / Type H.T. (circular red-bordered label; typed) / Greymouth New Zealand. Helms. (white label with red horizontal line; typed) / Sharp Coll. 1905-313. (typed) / LECTOTYPE [male symbol] *Zolus helmsi* Sharp, 1886 designated by Laroche & Larivière, 2017 (red label; typed).” **Original combination reinstated**

*Zolus labralis* Broun, 1921: 599. Holotype: male (BMNH) labeled: "Type (circular red-bordered label; typed) / 4162- [male symbol] (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [BR] Mt. Roberts [= Mount Robert]. 28.12.1915. (hand-written) / *Zolus labralis*. [male symbol] (hand-written)." **New synonym**

*Ooapterus helmsi*: Jeannel 1940: 92.

*Ooapterus labralis*: Jeannel 1940: 92.

*Zolus helmsi*: Johns 1977: 316.

*Zolus labralis*: Townsend 1997: 12.

*Ooapterus helmsi*: Larochelle and Larivière 2007: 45.

*Ooapterus labralis*: Larochelle and Larivière 2007: 45.

**Description.** Body length 7.6–8.9 mm. Head, pronotum, elytra, and abdomen mostly reddish piceous; base of pronotum reddish; lateral margins and suture of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and legs reddish; femora pale yellow. Microsculpture obsolete and isodiametric on head, feeble, very transverse (with microlines) on pronotum, moderately transverse (brick-like) on elytra. Iridescence absent on head and elytra, moderately strong on pronotum. Very shiny, without metallic luster. **Head.** Labrum moderately transverse, subtruncate anteriorly. Antennae subfiliform, very long: segment 1 (scape) very long, about 2.5x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes strongly convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, finely punctate across base and apex, wrinkled across base, subquadrate, widest about middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, slightly sinuate posteriorly; lateral grooves very deep, very long (longer than adjoining foveae); setiferous punctures absent on each side; posterolateral angles rectangular; posterolateral carinae sharp, very long (longer than adjoining foveae); laterobasal foveae well defined, finely punctate, very deep and wide, square, prolonged forward, simple; posterior bead absent; base emarginate, about as wide as pronotal apex and elytral base. **Legs.** Very long. **Elytra.** Moderately convex, subovate, widest before middle. Basal margin complete, reaching about scutellum. Shoulders oblique. Sides moderately rounded. Scutellar striole present. Striae complete, moderately deep, finely punctate; stria 3 or interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Intervals subdepressed. Sutural apices strongly rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 69): strongly arcuate, strongly widened in apical half; base moderately convex dorsally; middle angulate anteriorly and moderately convex dorsally, slightly concave ventrally, with dorsal membranous area moderately wide and very long; apex subtriangular, strongly convex dorsally, almost straight ventrally, with extreme tip wide and rather short. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice wide, closed anteriorly, moderately distant from membranous area. Parameres with five or six apical setae.

**Material examined.** 233 specimens (AMNZ, BMNH, CMNZ, JNNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 155). South Island: BR, MB, NN, SD, WD.

**Ecology.** Lowland, montane, subalpine. Epigeal-arboreal. Wet forests (beech, podocarp, broadleaf). Shaded ground. Nocturnal; active at night on mossy logs and trees; hides during the day under logs, fallen branches, and the loose bark of fallen trees. Gregarious.

**Biology.** Seasonality: September–March, May–August. Teneral: February–March, August. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Fast runner. Occasional climber on logs and trees.

**Collecting techniques.** Lifting logs, fallen branches, and the loose bark of fallen trees; pitfall trapping.

**References.** Larochelle and Larivière 2001: 78–79 (as *Zolus helmsi*, *Z. labralis*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 45, 118 (as *Oopterus helmsi*, *O. labralis*; taxonomy), 2016: 20 (as *Oopterus helmsi*, *O. labralis*; list).

**Remarks.** Sharp described *Z. helmsi* from a pair of specimens, one of which (a male) is here designated as lectotype. The second specimen (a female) is considered to be a paralectotype. These type designations are made to preserve stability of nomenclature in the future. As stated in Broun's description, the male holotype of *Z. labralis* (BMNH) only has four setiferous punctures on the labrum; this represents an anomaly. In all other material seen, the labrum displays six setiferous punctures. Examination of the type of *Z. labralis* revealed it to be conspecific with *Z. helmsi*.

### *Zolus wongi* new species

Fig. 23, 70, 158

Holotype: male (NZAC) labeled: “[NEW ZEALAND BR] Mt Dewar 1000m J.C. Watt (typed) / under bark [of] logs (typed) / Paparoa Range Dec. 1969 (typed) / [male symbol] / HOLOTYPE [male symbol] *Zolus wongi* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one female (NZAC) and one male (LUNZ) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 7.0–8.3 mm. Head, pronotum, elytra, and abdomen mostly piceous black; abdomen yellow laterally; antennae, palpi, and legs reddish; apical half of femora pale yellow. Microsculpture moderately deep, isodiametric on head, moderately transverse on pronotum, very deep and strongly isodiametric on elytra. Iridescence absent. Very shiny on head and pronotum, dull on elytra, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae subfiliform, very long: segment 1 (scape) very long, about 2.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, coarsely punctate across base, wrinkled discally and across base, moderately cordate, widest before middle; apex truncate; anterolateral angles poorly developed, rounded; anterior bead complete; sides moderately rounded, moderately sinuate posteriorly; lateral grooves very deep, very long (longer than adjoining foveae); setiferous punctures absent on each side; posterolateral angles rectangular; posterolateral carinae sharp, very long (longer than adjoining foveae); laterobasal foveae well defined, coarsely punctate, very deep and wide, oblong, prolonged forward, simple; posterior bead absent; base emarginate, much wider than pronotal apex, about as wide as elytral base. **Legs.** Very long. **Elytra.** Moderately convex, ovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders slightly rounded. Sides strongly rounded. Scutellar striole present. Striae complete, very deep, impunctate; stria 3 or interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 70): strongly arcuate, moderately widened in apical half; base slightly convex dorsally; middle angulate anteriorly and moderately sinuate dorsally, slightly concave ventrally, with dorsal membranous area very wide and long; apex subtriangular, strongly convex dorsally, slightly concave ventrally, with extreme tip wide and long. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice wide, closed anteriorly, moderately distant from membranous area. Parameres with six or seven apical setae.

**Material examined.** 402 specimens (AMNZ, CMNZ, JNNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 158). South Island: BR, MB, MC, MK, NC, NN, SD, WD.

**Ecology.** Lowland, montane, subalpine, alpine. Epigeal-arboreal. Wet forests (beech, broadleaf, podocarp), subalpine scrublands, and alpine meadows. Shaded or open ground. Nocturnal; active at night on logs and trees; hides during the day under logs, fallen branches, and stones. Gregarious.

**Biology.** Seasonality: October–August. Teneral: December (BR), February (NN, SD), March (NC), April (WD). Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales) and mites.

**Dispersal power.** Subapterous (incapable of flight). Fast runner. Regular climber on trees and logs.

**Collecting techniques.** Lifting logs, fallen branches, and stones; pitfall trapping.

**Remarks.** This species is named after Philip Wong (Auckland), a highly skilled health specialist and special acquaintance. *Zolus wongi* is morphologically close to *Z. unisetosus*. In addition to diagnostic characters of the male genitalia, *Z. wongi* has the following distinguishing features: body length 7.0–8.3 mm; eyes moderately convex; pronotum moderately convex, widest before middle, sides moderately rounded, setiferous punctures absent on each side, base convex medially; elytra with intervals subdepressed and sutural apices obtusely rounded. *Zolus wongi* occurs mostly in western areas of the South Island (SD to WD), while *Z. unisetosus* is restricted to southwestern South Island (OL, WD).

Genus *Oopterus* Guérin-Ménéville, 1841  
Fig. 24–52, 71–98, 120–148

*Oopterus* Guérin-Ménéville, 1841: 123.

**Type species.** *Oopterus clivinoides* Guérin-Ménéville, 1841, by monotypy.

**Description** (New Zealand). Body length 3.4–7.9 mm, rarely over 6.5 mm (*O. arthurensis*, *O. ocularius*, *O. trechoides*); not ovate, narrowed around bases of pronotum and elytra. Color dark or pale. Metallic luster present or absent. Dorsal surface mostly glabrous. **Head.** Narrow or moderately wide. Mandibles moderately long. Labrum slightly emarginate anteriorly (subtruncate in *Oopterus palmai*). Eyes convex (subdepressed in *O. discoideus*, *O. ocularius*, *O. quadripunctatus*); one or two setiferous punctures on inner side of each eye (without puncture in *O. suavis*). Antennae submoniliform (subfiliform in *O. arthurensis*, *O. ocularius*, *O. trechoides*). Tempora inflated or not. Mentum tooth entire (usually acute, rarely rounded or subtruncate apically). Ligula with two fused setae. **Thorax.** Pronotum transverse, subquadrate or cordate; lateral grooves absent (rarely present); usually two setiferous punctures on each side, otherwise a single setiferous puncture or without setiferous puncture; posterolateral carinae usually present; base narrower than apex, as wide as apex or wider than apex. Scutellum visible, inserted entirely between elytral bases. **Legs.** Moderately long (rarely short or very long). Segments 1+2 of male protarsi with a single row of ventral scales. **Elytra.** Ovate or subovate (oblong in *O. nanus*). Basal margin incomplete, reaching about stria 4 (rarely complete, reaching about scutellum). Shoulders poorly to well developed, rounded or obtuse (oblique in *O. arthurensis*, *O. trechoides*). Scutellar setiferous pore present, inserted at junction of striae 1+2. Scutellar striole present or absent. Striae complete or incomplete, consisting of lines (mostly replaced by rows of coarse punctures in *O. laeviventris*, *O. lewisi*); usually three discal setiferous punctures in stria or row 3, or on interval 3 (four or five punctures in *O. anglemensis*, *O. nanus*, *O. quadripunctatus*; a single puncture in *O. arthurensis*; without or with one to three punctures in *O. punctatus*); recurrent stria directed apically toward stria or row 5, 6 or 7. Subapical seta present (absent in *O. clivinoides*). Apical seta present. Sutural apices rounded or obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae (two additional medial ambulatory setae in *O. clivinoides*, *O. marrineri*); female with four apical ambulatory setae (two additional medial ambulatory setae in *O. clivinoides*). **Aedeagus.** Lateral view: dorsal membranous area narrow (rarely wide). Dorsal view (Fig. 15): moderately or very wide (narrow in *O. clivinoides*, *O. nanus*, *O. patulus*); basal orifice narrow (wide in *O. ocularius*, *O. suavis*),



closed anteriorly, moderately distant from membranous area (close to membranous area in *O. collaris*, *O. fulvipes*, *O. patulus*); lateral lobes of basal bulb absent. Parameres with two to seven apical setae. Right paramere curved, very long, narrow, untwisted medially.

**References.** Johns 1974: 297–300 (revision, subantarctic islands); Laroche and Larivière 2001: 73–79 (catalogue), 2007: 44–45 (description, ecology, geographic distribution, references), 2016: 20–21 (list).

**Remarks.** In the course of this revision, species previously assigned to the genus *Ooapterus* were found to belong to two subtribes and four genera: *Zolina* (*Ooapterus*, *Zolus* reinstated) and *Merizodina* (*Maungazolus* new genus, *Pseudooapterus* reinstated). Three taxa are transferred from *Ooapterus* to *Zolus* (*Ooapterus carinatus* Broun, 1882; *O. helmsi* (Sharp, 1886); *O. subopacus* (Broun, 1915)), three taxa to *Maungazolus* (*Ooapterus pallidipes* Broun, 1893; *O. parvulus* Broun, 1903; *O. pygmeatus* Broun, 1907), and two taxa to *Pseudooapterus* (*Ooapterus plicaticollis* Blanchard, 1843; *O. latipennis* Broun, 1903). The morphological character unifying *Ooapterus* species and distinguishing them from *Zolus* species is the curved, very long and narrow, medially untwisted right paramere of the aedeagus.

### Key to species of *Ooapterus*

**Remarks.** The only character distinguishing the genera *Ooapterus* and *Zolus* is the shape of the right paramere of the male aedeagus. To facilitate identification based on external morphology, *Zolus* species are inserted into the *Ooapterus* key, with cross-references to the *Zolus* key.

- |       |   |   |
|-------|---|---|
| 1.    | Pronotum without setiferous punctures on each side .....  | 2   |
| —     | Pronotum with setiferous punctures on each side .....   | 11  |
| 2(1). | Setiferous punctures absent on inner side of each eye; Fig. 24. [Body length 4.9–5.5 mm; microsculpture absent; basal margin of elytra incomplete, reaching about stria 4; southwestern South Island (FD, OL, SL)] .....  | <b><i>Ooapterus suavis</i> Broun</b>  |
| —     | Setiferous punctures present on inner side of each eye .....  | 3   |
| 3(2). | Two setiferous punctures on inner side of each eye; Fig. 25. [Body length 5.9–6.4 mm; basal margin of elytra complete, reaching about scutellum; South Island (MC, Banks Peninsula)] .....  | <b><i>Ooapterus laevicollis</i> Bates</b>   |
| —     | A single setiferous puncture on inner side of each eye (posteriorly) .....  | 4   |
| 4(3). | Basal margin of elytra complete, reaching about scutellum .....   | 5   |
| —     | Basal margin of elytra incomplete, reaching about stria 4 .....   | 8   |
| 5(4). | Elytral microsculpture present .....  | 6   |
| —     | Elytral microsculpture absent .....   | 7   |
| 6(5). | Rather small, body length 4.5–5.4 mm; interval 3 with four foveate setiferous punctures; Fig. 26. [Southwestern South Island (FD, OL)] .....  | <b><i>Ooapterus quadripunctatus</i> new species</b>   |
| —     | Larger, body length 7.0–9.2 mm; interval 3 or stria 3 with three non-foveate setiferous punctures; Fig. 20–23. [North and South Islands] .....  | <b><i>Zolus carinatus</i>, <i>Z. kauriensis</i>, <i>Z. helmsi</i>, <i>Z. wongi</i></b> ; see Key to species of <i>Zolus</i> |
| 7(5). | Rather small, body length 3.4–4.2 mm; head, pronotum, and elytra mostly testaceous; eyes subdepressed; tempora moderately inflated; pronotum strongly convex, sides strongly rounded, not sinuate posteriorly, laterobasal foveae subrectangular; Fig. 27. [Southwestern South Island (FD)] ..... | <b><i>Ooapterus discoideus</i> new species</b>  |



- Larger, body length 5.7–6.6 mm; head, pronotum, and elytra mostly reddish black; eyes moderately convex; tempora not inflated; pronotum moderately convex, sides moderately rounded, slightly sinuate posteriorly, laterobasal foveae oblong; Fig. 28. [Southwestern South Island (FD)] ..... ***Ooapterus marrisi* new species**
- 8(4). Elytra without microsculpture; elytral striae mostly replaced by rows of coarse punctures; Fig. 29. [Body length 4.1–4.9 mm; western South Island (NN, BR, WD)] ..... ***Ooapterus lewisi* (Broun)**
- Elytra with microsculpture; elytral striae present, consisting of mostly obsolete lines ..... **9**
- 9(8). Rather large, body length 5.4–6.2 mm; pronotum with posterolateral carinae blunt; elytra ovate, microsculpture moderately transverse, sides strongly rounded; Fig. 30. [Southern South Island (SC to FD–SL) and Stewart Island] ..... ***Ooapterus patulus* (Broun)**
- Smaller, body length 4.6–5.0 mm; pronotum with posterolateral carinae sharp; elytra subovate, microsculpture very transverse (with microlines), sides moderately rounded. [North Island] ..... **10**
- 10(9). Pronotum strongly transverse, widest before middle, sides moderately sinuate posteriorly, posterolateral angles rectangular, laterobasal foveae coarsely punctate; elytral shoulders moderately rounded; Fig. 31. [Body length 4.6–5.0 mm; North Island (ND to WN–WA)] ..... ***Ooapterus fulvipes* Broun**
- Pronotum slightly transverse, widest about middle, sides not sinuate, posterolateral angles obtuse, laterobasal foveae impunctate; elytral shoulders obtuse; Fig. 32. [Body length 5.1–6.0 mm; North Island (ND to WN–WA)] ..... ***Ooapterus sobrinus* Broun**
- 11(1). Pronotum with a single setiferous puncture on each side ..... **12**
- Pronotum with two setiferous punctures on each side ..... **19**
- 12(11). Head with a single setiferous puncture on inner side of each eye (posteriorly) ..... **13**
- Head with two setiferous punctures on inner side of each eye ..... **14**
- 13(12). Pronotum with a posterior setiferous puncture on each side; elytra with basal margin incomplete, reaching about stria 4; Fig. 33. [Body length 5.8–6.4 mm; northwestern South Island (BR, NN)] ..... ***Ooapterus collaris* Broun**
- Pronotum with an anterior setiferous puncture on each side; elytra with basal margin complete, reaching about scutellum; Fig. 159. [Body length 9.2–10.1 mm; southwestern South Island (OL, WD)] ..... ***Zolus unisetosus* new species; see Key to species of *Zolus***
- 14(12). Pronotum with an anterior setiferous puncture on each side ..... **15**
- Pronotum with a posterior setiferous puncture on each side ..... **17**
- 15(14). Microsculpture absent on pronotum and elytra; elytral striae mostly replaced by rows of coarse punctures; Fig. 34. [Body length 4.1–5.3 mm; western South Island (NN, WD)] ..... ***Ooapterus laeviventris* (Sharp)**
- Microsculpture present, very transverse (with microlines) on pronotum and elytra; elytral striae present, consisting of finely punctate lines ..... **16**
- 16(15). Rather large, body length 7.9 mm; forebody narrow in comparison to elytra; antennae subfiliform, very long; tempora strongly inflated; pronotum subquadrate, not cordate, posterolateral angles subrectangular; elytral striae mostly obsolete; Fig. 35. [Northwestern South Island (NN, Mount Arthur)] ..... ***Ooapterus arthurensis* new species**

- Smaller, body length 4.3–4.6 mm; forebody wide in comparison to elytra; antennae submoniliform, moderately long; tempora not inflated; pronotum strongly transverse, moderately cordate, posterolateral angles obtuse; elytral striae mostly visible; Fig. 36. [Southwestern South Island (FD, Gilbert Islands)] ..... ***Oofterus corvinki* new species**
- 17(14). Rather large, body length 7.1–7.7 mm; head, pronotum, and elytra dull; elytral microsculpture isodiametric; antennae subfiliform, very long; pronotum with laterobasal foveae simple, lateral grooves very deep and long; Fig. 19. [Southern South Island (CO, FD, OL, SL)] .....  
 ..... ***Zolus subopacus***; see Key to species of *Zolus*
- Smaller, body length 4.8–5.7 mm; head, pronotum, and elytra shiny; elytral microsculpture very transverse (with microlines); antennae submoniliform, moderately long; pronotum with laterobasal foveae double, without lateral grooves ..... **18**
- 18(17). Pronotum with sides moderately rounded, not sinuate posteriorly, laterobasal foveae ill-defined, without posterolateral carinae; elytral striae 5–7 poorly developed, incomplete; Fig. 37. [Body length 5.3–5.7 mm; southern South Island (CO, MK)] ..... ***Oofterus palmai* new species**
- Pronotum with sides strongly rounded, slightly sinuate posteriorly, laterobasal foveae well defined, oblong, posterolateral carinae blunt, very long; elytral striae 5–7 well developed, complete; Fig. 38. [Body length 4.8–5.2 mm; southern South Island (CO, Rock and Pillar Range)] ..... ***Oofterus monticola* new species**
- 19(11). A single setiferous puncture on inner side of each eye (posteriorly); Fig. 39. [Body length 3.9–4.6 mm; Subantarctic Islands (SN)] ..... ***Oofterus strenuus* Johns**
- Two setiferous punctures on inner side of each eye ..... **20**
- 20(19). Elytra (Fig. 12) with apical seta, but without subapical seta; Fig. 40. [Body length 4.5–5.6 mm; basal margin of elytra incomplete, reaching about stria 4; Subantarctic Islands (AN, AU, CA, SN) and Stewart Island] ..... ***Oofterus clivinoides* Guérin-Méneville**
- Elytra (Fig. 11) with both apical and subapical setae ..... **21**
- 21(20). Basal margin of elytra complete, reaching about scutellum ..... **22**
- Basal margin of elytra incomplete, reaching about stria 4 ..... **24**
- 22(21). Eyes moderately convex; pronotum with posterolateral angles rectangular, laterobasal foveae coarsely punctate; microsculpture obsolete on pronotum and elytra; Fig. 41. [Body length 5.0–6.1 mm; southern North Island (TK–HB to WN–WA)] .....  
 ..... ***Oofterus mohiensis* new species**
- Eyes slightly convex; pronotum with posterolateral angles obtuse, laterobasal foveae finely punctate or virtually impunctate; microsculpture strong on pronotum and elytra ..... **23**
- 23(22). Head, pronotum, elytra, and abdomen mostly piceous black; antennae entirely reddish; pronotum with sides moderately rounded, laterobasal foveae finely punctate, prolonged forward; elytral striae 2–7 incomplete; Fig. 42. [Body length 5.3–6.5 mm; southern North Island (WI, WN)] .....  
 ..... ***Oofterus frontalis* Broun**
- Head, pronotum, elytra, and abdomen mostly dark brown; antennae with segments 1–3 reddish and segments 4–11 dark brown; pronotum with sides strongly rounded, laterobasal foveae virtually impunctate, not prolonged forward; all elytral striae complete; Fig. 43. [Body length 5.4–6.5 mm; South Island (MC, Banks Peninsula and the Port Hills, Christchurch)] .....  
 ..... ***Oofterus punctatus* Broun**
- 24(21). Posterolateral angles of pronotum acute, projected laterally ..... **25**
- Posterolateral angles of pronotum subrectangular or obtuse ..... **27**

- 25(24). Forebody narrow in comparison to elytra; antennae subfiliform, very long; tempora strongly inflated; pronotum subquadrate, strongly cordate; elytra subovate; Fig. 44. [Body length 5.9–7.3 mm; southwestern South Island (FD, OL, SL)] ..... ***Oofterus trechoides* new species**
- Forebody wide in comparison to elytra; antennae submoniliform, moderately long; tempora not inflated; pronotum transverse, not cordate; elytra ovate ..... **26**
- 26(25). Pronotum widest about middle, base coarsely punctate, laterobasal foveae subrectangular, posterolateral carinae blunt, very long; elytra strongly convex; Fig. 45. [Body length 5.2–6.3 mm; northwestern South Island (NN)] ..... ***Oofterus sculpturatus* Broun**
- Pronotum widest before middle, base impunctate, laterobasal foveae oblong, without posterolateral carinae; elytra moderately convex; Fig. 46. [Body length 4.6–5.7 mm; southeastern South Island (DN)] ..... ***Oofterus taieriensis* new species**
- 27(24). All elytral striae complete ..... **28**
- Most elytral striae incomplete ..... **31**
- 28(27). Elytra with three setiferous punctures in stria 3 or on interval 3; tempora strongly inflated (about as long as eyes or two-thirds as long) ..... **29**
- Elytra with four or five setiferous punctures in stria 3; tempora moderately inflated (about half as long as eyes) ..... **30**
- 29(28) Rather large, body length 7.4–7.8 mm; tempora about as long as eyes; eyes subdepressed; antennae subfiliform, very long; elytra widest before middle, discal setiferous punctures present on interval 3; Fig. 47. [Southwestern South Island (FD, OL, WD)] ..... ***Oofterus oclarius* (Broun)**
- Smaller, body length 4.9–5.4 mm; tempora about two-thirds as long as eyes; eyes moderately convex; antennae submoniliform, short; elytra widest about middle, discal setiferous punctures present in stria 3; Fig. 48. [Subantarctic Islands (CA)] ..... ***Oofterus marrineri* Broun**
- 30(28). Elytra moderately convex, subovate, sides moderately rounded; pronotum strongly cordate, laterobasal foveae ill-defined; Fig. 49. [Rather large, body length 6.0–6.5 mm; Stewart Island] ..... ***Oofterus anglemensis* new species**
- Elytra subdepressed, oblong, sides subparallel; pronotum not cordate, laterobasal foveae well defined, rectangular; Fig. 50. [Smaller, body length 3.9–5.2 mm; southern South Island (CO, OL)] ..... ***Oofterus nanus* new species**
- 31(27). Head, pronotum, elytra, and abdomen mostly dark reddish; tempora moderately inflated (about half as long as eyes); pronotum strongly convex and cordate, posterolateral carinae blunt, short; elytra strongly convex; Fig. 51. [Body length 4.1–6.2 mm; southwestern South Island (FD, SL)] ..... ***Oofterus garnerae* new species**
- Head, pronotum, elytra, and abdomen mostly piceous black; tempora slightly inflated (about one third as long as eyes); pronotum moderately convex, not cordate, posterolateral carinae absent; elytra moderately convex; Fig. 52. [Body length 4.9–5.8 mm; southeastern South Island (DN, SL)] ..... ***Oofterus nunci* new species**

### ***Oofterus suavis* Broun, 1917**

Fig. 24, 71, 146

*Oofterus suavis* Broun, 1917: 365. Holotype: male (BMNH) labeled: "Type (circular red-bordered label; typed) / 3807. [male symbol] (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [OL] Routeburn. 13.2.1914 (hand-written) / *Oofterus suavis*. [male symbol] (hand-written)."

*Pseudopterus suavis*: Csiki 1928: 226.

*Oopterus suavis*: Hudson 1934: 177.

**Description.** Body length 4.9–5.5 mm. Head, pronotum, elytra, and abdomen mostly reddish piceous; base of pronotum reddish; lateral margins, suture, and apex of elytra reddish; abdomen yellowish laterally and apically; antennae, palpi, and legs reddish; palpi with yellowish tinge; femora pale yellowish, reddish basally. Microsculpture absent. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum moderately transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; setiferous punctures absent on inner side of each eye (present in other zoline species). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum strongly convex, coarsely punctate across base, unwrinkled, slightly transverse, moderately cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, not sinuate posteriorly; lateral grooves moderately deep, very long (about as long as adjoining foveae); setiferous punctures absent on each side; posterolateral angles acute, projected laterally; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, coarsely punctate, very deep and wide, rounded, not prolonged forward, simple; posterior bead absent; base emarginate, wider than pronotal apex, about as wide as elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Stria 1 complete, deep; striae 2–7 incomplete, shallow, finely punctate; interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 71): moderately arcuate, strongly widened in apical half; base moderately biconvex dorsally; middle moderately convex dorsally, moderately concave ventrally, with dorsal membranous area moderately wide and very long; apex subtriangular, strongly concave dorsally, almost straight ventrally, with extreme tip unusually wide and short. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice moderately wide, closed anteriorly, moderately distant from membranous area. Parameres with five apical setae.

**Material examined.** 202 specimens (AMNZ, BMNH, JNNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 146). South Island: FD, OL, SL.

**Ecology.** Lowland, montane, subalpine. Epigeal-arboreal. Forests (beech). Shaded ground. Nocturnal; active at night on mossy trees and logs; hides during the day under the loose bark of fallen trees. Gregarious.

**Biology.** Seasonality: October–March, August. Teneral: December–March. Predacious (based on mouthpart morphology). Defense mechanism: feigns death when disturbed.

**Dispersal power.** Subapterous (incapable of flight). Moderate runner. Regular climber on trees and logs.

**Collecting technique.** Lifting loose bark of fallen trees.

**References.** Larochelle and Larivière 2001: 77 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 21 (list).

**Remark.** *Oopterus suavis* is the only zoline species without setiferous punctures on the inner side of each eye.

***Oofterus laevicollis* Bates, 1871**

Fig. 25, 72, 129

*Oofterus laevicollis* Bates, 1871: 14. Holotype: male (MNHN) labeled: "New Zealand (hand-written) / *Oofterus laevicollis* Bates (hand-written) / Ex Musaeo H. W. Bates 1892 (typed) / Museum Paris ex. Coll. R. Oberthur (typed)."

*Oöfterus puncticeps* Broun, 1893: 1399 ([MC] Port Hills, Christchurch). Holotype: male (BMNH) labeled: "Type (circular red-bordered label; typed) / 2440. (hand-written) / Canterbury (typed) / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Oöfterus puncticeps* (hand-written)." **New synonym**

*Pseudoofterus laevicollis*: Csiki 1928: 225.

*Pseudoofterus puncticeps*: Csiki 1928: 225.

*Oofterus laevicollis*: Hudson 1934: 177.

*Oofterus puncticeps*: Hudson 1934: 177.

**Description.** Body length 5.9–6.4 mm. Head, pronotum, elytra, and abdomen mostly reddish piceous; lateral margins and suture of elytra reddish; abdomen reddish piceous, yellow laterally and apically; antennae, palpi, and legs reddish; femora pale yellow. Microsculpture obsolete and isodiametric on head, strong, moderately transverse on pronotum, very transverse (with microlines) on elytra. Iridescence absent on head and pronotum, very strong on elytra. Very shiny, with metallic luster (aeneous) on elytra. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, finely punctate across base, wrinkled discally, subquadrate, widest about middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead complete; sides moderately rounded, not sinuate posteriorly; lateral grooves absent; setiferous punctures absent on each side; posterolateral angles obtuse; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, finely punctate, very deep and wide, square, prolonged forward, double; posterior bead absent; base emarginate, about as wide as pronotal apex, slightly narrower than elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, subovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders obtuse. Sides moderately rounded. Scutellar striole obsolete. Striae complete, shallow, finely punctate; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 72): strongly arcuate, narrowed in apical half; base strongly convex dorsally; middle strongly sinuate dorsally, moderately convex ventrally, with dorsal membranous area moderately wide and long; apex slender, slightly convex dorsally, moderately concave ventrally, with extreme tip unusually slender. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to left); apex deflected to left; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with three apical setae.

**Material examined.** 85 specimens (AMNZ, BMNH, CMNZ, JNNZ, LUNZ, MNHN, NZAC).

**Geographic distribution** (Fig. 129). South Island: MC–Banks Peninsula. Port Hills.

**Ecology.** Lowland (hills). Epigeal-arboreal. Wet or dry forests (broadleaf, podocarp, beech) and scrublands. Nocturnal; active on tree-trunks at night; hides during the day under logs and in leaf litter.

**Biology.** Seasonality: throughout the year, except September, August. Teneral: November–December, February. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner. Occasional climber on trees.



**Collecting techniques.** Lifting logs; sifting leaf litter; pitfall trapping.

**References.** Larochelle and Larivière 2001: 74, 76 (as *O. laevicollis*, *O. puncticeps*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 20–21 (as *O. laevicollis*, *O. puncticeps*; list).

**Remarks.** Bates' original description was based on a single male. Three specimens, two males and one female, were obtained from the Bates collection in Paris (MNHN); the male bearing Bates' handwritten identification label is believed to be the holotype. Examination of the type of *Oopterus puncticeps* revealed it to be conspecific with *O. laevicollis*.

### ***Oopterus quadripunctatus* new species**

Fig. 26, 73, 142

Holotype: male (NZAC) labeled: “[NEW ZEALAND FD] Mt. [= Mount] Wilmot 1372m (hand-written) / Manapouri Exp. Jan 70 J. McBurney (typed) / [male symbol] / HOLOTYPE [male symbol] *Oopterus quadripunctatus* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: two females (LUNZ, NZAC) from Percy Saddle (North of), Turret Range (FD), bearing blue paratype labels.

**Description.** Body length 4.5–5.4 mm. Head, pronotum, and elytra mostly piceous black; abdomen piceous black to rufous; lateral margins and suture of elytra reddish; antennal segments 1–3, palpi, and legs reddish; antennal segments 4–11 infuscated red. Microsculpture obsolete and isodiametric on head, strong, moderately transverse on pronotum, very isodiametric on elytra. Iridescence absent. Very shiny on head, moderately shiny on pronotum and elytra, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes subdepressed; a single setiferous puncture on inner side of each eye (posteriorly). Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, obsoletely punctate across base, wrinkled discally, subquadrate, moderately cordate, widest before middle; apex truncate; anterolateral angles poorly developed, obtusely rounded; anterior bead complete; sides moderately rounded, moderately sinuate posteriorly; lateral grooves absent; setiferous punctures absent on each side; posterolateral angles obtuse; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, impunctate, very deep, moderately wide, rounded, not prolonged forward, simple; posterior bead absent; base truncate, much narrower than pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, subovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders obtuse. Sides moderately rounded. Scutellar striole obsolete. Striae complete, shallow, finely punctate; interval 3 with four foveate setiferous punctures (without or with 1–5 non-foveate punctures in other *Oopterus* species). Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 73): strongly arcuate, moderately widened in apical half; base rather strongly biconvex dorsally; middle moderately concave dorsally, moderately convex ventrally, with dorsal membranous area very wide and long; apex triangular, straight dorsally, slightly concave ventrally, with extreme tip narrow and long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with four or five apical setae.

**Material examined.** 176 specimens (AMNZ, JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 142). South Island: FD, OL.

**Ecology.** Alpine. Endogean. Grasslands, fellfields, screes. Open ground. Nocturnal; hides during the day under well-embedded stones. Gregarious.

**Biology.** Seasonality: November–February. Teneral: February (FD). Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting technique.** Lifting stones.

**Remarks.** The name of this species is based on the Latin *quadri* (four) and *punctatus* (punctate), referring to the four setiferous punctures on elytral interval 3. *Oopterus quadripunctatus* is morphologically close to *O. discoideus* and *O. marrisi*. In addition to diagnostic characters of the male genitalia, *O. quadripunctatus* has the following distinguishing features: pronotum subquadrate, widest before middle; elytra moderately convex, microsculpture isodiametric, four foveate setiferous punctures on interval 3. All three species occur in southern areas of the South Island.

### *Oopterus discoideus* new species

Fig. 27, 74, 125

Holotype: male (NZAC) labeled: “[NEW ZEALAND FD] Wolfe Flat 600m-680m (typed) / Turret Ra [= Range] (typed) / Manapouri Exp. Jan. 70 J. McBurney (typed) / moss (typed) 70/69 (hand-written) / [male symbol] / HOLOTYPE [male symbol] *Oopterus discoideus* Laroche & Larivière, 2017 (red label; typed).” Paratypes: two females (LUNZ, NZAC) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 3.4–4.2 mm. Head, pronotum, elytra, and abdomen mostly testaceous; disc of head dark rufous; base and disc of pronotum dark rufous; a dark rufous oblong vitta present on each elytron; abdomen dark rufous medially; antennae, palpi, and femora pale yellow; femora (base), tibiae, and tarsi reddish. Microsculpture absent. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes subdepressed; a single setiferous puncture on inner side of each eye (posteriorly). Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum strongly convex, obsoletely punctate across base, wrinkled discally, strongly transverse, widest about middle; apex subtruncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, not sinuate posteriorly; lateral grooves absent; setiferous punctures absent on each side; posterolateral angles obtuse; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, virtually impunctate, very deep and wide, subrectangular, not prolonged forward, double; posterior bead absent; base subtruncate, about as wide as pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Striae complete, very deep, coarsely punctate; striae 2–7 shallower apically; interval 3 with three setiferous punctures. Recurrent stria long, blunt, directed apically toward stria 5. Subapical seta present. Intervals strongly convex. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 74): moderately arcuate, strongly widened in apical half; base strongly biconvex dorsally; middle moderately convex dorsally, slightly concave ventrally, with dorsal membranous area moderately wide and very long; apex triangular, straight dorsally, slightly concave ventrally, with extreme tip narrow, long, and curved downward. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to

left); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with five apical setae.

**Material examined.** 8 specimens (JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 125). South Island: FD–Fiordland National Park (Borland Saddle; Turret Range, Percy Stream; Wilmot Pass, Spey River; Wolfe Flat).

**Ecology.** Montane. Endogean. Wet forests (beech). Shaded ground. Nocturnal; hides during the day in thick leaf litter and moss.

**Biology.** Seasonality: January–February. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Sifting leaf litter and moss.

**Remarks.** This species name is based on the Latin adjective *discoideus* (discoid), referring to the discal color-pattern on head, pronotum, and elytra. *Oopterus discoideus* is morphologically close to *O. marrisi*. In addition to diagnostic characters of the male genitalia, *O. discoideus* has the following distinguishing features: body length 3.4–4.2 mm; head, pronotum, and elytra mostly testaceous; eyes subdepressed; tempora moderately inflated (about half as long as eyes); pronotum strongly convex, sides strongly rounded, not sinuate posteriorly, laterobasal foveae subrectangular. Both species are known only from the Fiordland region (South Island).

### *Oopterus marrisi* new species

Fig. 28, 75, 133

Holotype: male (NZAC) labeled: “[NEW ZEALAND FD] Wilmot Pass. 701m. (hand-written) / Manapouri Exp. Jan 70 (typed) / at night (typed) on moss. (hand-written) / [male symbol] / HOLOTYPE [male symbol] *Oopterus marrisi* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: two males (LUNZ, NZAC) from Murchison Mountains (FD), bearing blue paratype labels.

**Description.** Body length 5.7–6.6 mm. Head, pronotum, elytra, and abdomen mostly reddish black; base of pronotum reddish medially; lateral margins, suture, and extreme apex of elytra reddish; abdomen bright reddish laterally and apically; antennae, palpi, and legs reddish; apical half of femora yellow. Microsculpture absent. Iridescence absent. Very shiny, with metallic luster (aeneous) on pronotum and elytra. **Head.** Labrum moderately transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum moderately convex, finely punctate between laterobasal foveae, wrinkled discally, strongly transverse, widest about middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, slightly sinuate posteriorly; lateral grooves absent; setiferous punctures absent on each side; posterolateral angles subrectangular; posterolateral carinae obsolete; laterobasal foveae well defined, virtually impunctate, very deep and wide, oblong, prolonged forward, double; posterior bead absent; base emarginate, wider than pronotal apex, about as wide as elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Striae 1–4 complete; striae 5–7 incomplete; stria 1 deep; striae 2–4 shallow, finely punctate; striae 5–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, sharp,

directed apically toward stria 5. Subapical seta present. Intervals subdepressed. Sutural apices rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 75): moderately arcuate, widened in apical half; base slightly convex dorsally; middle slightly convex dorsally, strongly convex ventrally, with dorsal membranous area moderately wide and very long; apex subtriangular, slightly convex dorsally, straight ventrally, with extreme tip narrow and rather long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with five to seven apical setae.

**Material examined.** 6 specimens (LUNZ, NZAC).

**Geographic distribution** (Fig. 133). South Island: FD—Fiordland National Park (Borland Valley Bivouac (South of); McKenzie Burn; Murchison Mountains; Wilmot Pass).

**Ecology.** Montane. Endogean. Wet beech forests. Shaded ground. Nocturnal; active at night on moss; hides during the day in thick moss, leaf litter, and under bark.

**Biology.** Seasonality: November–January. Teneral: November. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Sifting moss and leaf litter; lifting bark.

**Remarks.** This species is named after our friend and colleague John M. W. Marris (Lincoln University, Lincoln, Christchurch) for his special help and encouragement in our entomological studies. *Oopterus marrisii* is morphologically close to *O. discoideus*. In addition to diagnostic characters of the male genitalia, *O. marrisii* has the following distinguishing features: body length 5.7–6.6 mm; head, pronotum, and elytra mostly reddish black; eyes moderately convex; tempora not inflated; pronotum moderately convex, sides moderately rounded, slightly sinuate posteriorly, laterobasal foveae oblong. Both species are known only from the Fiordland region (South Island).

### *Oopterus lewisi* (Broun, 1912)

Fig. 29, 76, 131

*Tarastethus lewisi* Broun, 1912: 388. Holotype: female (BMNH) labeled: “Type (circular red-bordered label; typed) / 3172. (hand-written) / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [BR] Greymouth. Lewis. / *Tarastethus lewisi*. (hand-written).”

*Molopsida lewisi*: Britton 1940: 477.

*Oopterus lewisi*: Johns 1980: 57

**Description.** Body length 4.1–4.9 mm. Head, pronotum, elytra, and abdomen mostly piceous black; apex and base of head reddish; base of pronotum reddish; lateral margins, suture, and apex of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and femora pale yellow; femora (base), tibiae, and tarsi reddish. Microsculpture absent. Iridescence absent. Very shiny, with metallic luster (aeneous) on head, pronotum, and elytra. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum strongly convex, obsolete punctate across base, unwrinkled, strongly transverse, slightly cordate, widest about middle; apex subtruncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides strongly

rounded, slightly sinuate posteriorly; lateral grooves absent; setiferous punctures absent on each side; posterolateral angles obtuse; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, obsoletely punctate, very deep and wide, subrectangular, not prolonged forward, double; posterior bead absent; base subtruncate, wider than pronotal apex, about as wide as elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Striae mostly replaced by rows of coarse punctures; stria 1 complete, very deep; rows 2–5 moderately deep, obsolete apically; rows 6–7 obsolete basally and apically; interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward row 5. Subapical seta present. Intervals slightly convex. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 76): moderately arcuate, widest medially, narrowed in apical half; base moderately biconvex dorsally; middle strongly convex dorsally, strongly concave ventrally, with dorsal membranous area moderately wide and very long; apex triangular, slightly concave dorsally, straight ventrally, with extreme tip wide and long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with five apical setae.

**Material examined.** 52 specimens (BMNH, CMNZ, JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 131). South Island: BR, WD.

**Ecology.** Lowland, montane, subalpine. Endogean. Wet forests (podocarp, broadleaf, beech) and scrublands. Shaded ground. Nocturnal; hides during the day under fallen branches, logs, well-embedded stones, and in moss. Gregarious.

**Biology.** Seasonality: October–May. Teneral: March (WD). Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Lifting branches, logs and stones; sifting moss; pitfall trapping.

**References.** Larochelle and Larivière 2001: 75 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 21 (list).

### ***Oopterus patulus* (Broun, 1881)**

Fig. 30, 77, 140

*Tropopterus patulus* Broun, 1881: 655. Holotype: female (BMNH) labeled: “Type (circular red-bordered label; typed) / [female symbol] (hand-written) / 1145 (hand-written) / OTAGO (typed) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Oöpterus patulus* (hand-written).”

*Oöpterus patulus*: Broun 1886: 755.

*Tarastethus patulus*: Sharp 1886: 373.

*Pseudoopterus patulus*: Csiki 1933: 1651.

*Oopterus patulus*: Johns 1974: 301.

**Description.** Body length 5.4–6.2 mm. Head, pronotum, and elytra mostly piceous black; apex and base of head reddish; lateral margins, suture, and apex of elytra reddish; abdomen smoky brown, yellow laterally and apically; antennae, palpi, and legs reddish; femora pale yellow. Microsculpture strong, isodiametric on head, moderately transverse on pronotum and elytra. Iridescence absent. Very shiny, with metallic luster (aeneous) on elytra. **Head.** Labrum moderately transverse, slightly emarginate



anteriorly. Antennae submoniliform, moderately long; segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes moderately convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, finely punctate across base, wrinkled across apex and base, moderately transverse and cordate, widest about middle; apex truncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, not sinuate posteriorly; lateral grooves very long (as long as pronotum), moderately deep; setiferous punctures absent on each side; posterolateral angles obtuse; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, finely punctate, shallow, very wide, subrectangular, somewhat prolonged forward, double; posterior bead absent; base emarginate, about as wide as pronotal apex, slightly narrower than elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides strongly rounded. Scutellar striole obsolete. Striae almost complete, very shallow (almost obsolete), virtually impunctate; interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 77): strongly arcuate, moderately widened in apical half; base slightly convex dorsally; middle slightly concave dorsally, moderately convex ventrally, with dorsal membranous area narrow and very long; apex subtriangular, moderately convex dorsally, moderately concave ventrally, with extreme tip wide, short, and curved downward. Dorsal view: narrow, symmetrical (ostium of membranous area dorsal); apex deflected to left; basal orifice narrow, closed anteriorly, close to membranous area. Parameres with three or four apical setae.

**Material examined.** 390 specimens (AMNZ, BMNH, CMNZ, JNNZ, MNHN, MONZ, NZAC).

**Geographic distribution** (Fig. 140). South Island: CO, DN, FD, OL, SC, SL. Stewart Island.

**Ecology.** Lowland, montane, subalpine. Epigeal-arboreal. Wet forests (beech, broadleaf). Shaded ground. Nocturnal; active at night on trees and moss; hides during the day under the loose bark of fallen trees (beech) and live trees (*Fuchsia*), in fallen rotten branches, under logs and stones. Gregarious.

**Biology.** Seasonality: throughout the year, except June. Teneral: January–March. Predacious (based on mouthpart morphology). Defense mechanism: drops from trees when disturbed. Occasionally infested by fungi (Laboulbeniales).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner. Frequent climber on trees.

**Collecting techniques.** Lifting loose bark of trees; breaking fallen branches; lifting logs and stones.

**References.** Larochelle and Larivière 2001: 76 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 21 (list).

### ***Ooapterus fulvipes* Broun, 1886**

Fig. 31, 78, 127

*Ooapterus fulvipes* Broun, 1886: 936. Holotype: male (BMNH) labeled: “Type (circular red-bordered label; typed) / [male symbol] (hand-written) / 1684. (hand-written) / [TK] Midhirst (typed) / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Ooapterus fulvipes* (hand-written).” Paratype: one female (BMNH) from the same locality as the holotype, bearing a yellow paratype label.

*Pseudooapterus fulvipes*: Csiki 1928: 225.

*Ooapterus fulvipes*: Hudson 1934: 177.

**Description.** Body length 4.6–5.0 mm. Head, pronotum, elytra, and abdomen mostly piceous black; base of head and pronotum reddish; base, lateral margins, suture, and apex of elytra reddish; abdomen yellow laterally and apically; antennae, palpi, and legs pale red; femora pale yellow. Microsculpture mostly absent on head (strong and isodiametric basally), absent on pronotum, strong and very transverse (with microlines) on elytra. Iridescence absent on head and pronotum, very strong on elytra. Very shiny, with metallic luster (aeneous) on elytra. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, coarsely punctate across base, wrinkled discally, strongly transverse, moderately cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, present near anterolateral angles; sides strongly rounded, moderately sinuate posteriorly; lateral grooves moderately to very deep, very long (as long as pronotum); setiferous punctures absent on each side; posterolateral angles rectangular; posterolateral carinae sharp, very long (about as long as adjoining foveae); laterobasal foveae well defined, coarsely punctate, very deep, moderately wide, square, not prolonged forward, simple; posterior bead absent; base emarginate, about as wide as pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, subovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders moderately rounded. Sides moderately rounded. Scutellar striole obsolete. Striae incomplete, mostly obsolete; stria 1 deep; striae 2–4 shallow, virtually impunctate; interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 78): strongly arcuate, moderately widened in apical half; base strongly convex dorsally; middle moderately convex dorsally, rather straight ventrally, with dorsal membranous area moderately wide and rather long; apex subtriangular, subangulate dorsally, slightly concave ventrally, with extreme tip wide and short. Dorsal view: narrow, symmetrical (ostium of membranous area dorsal); apex straight; basal orifice narrow, closed anteriorly, close to membranous area. Parameres with three or four apical setae.

**Material examined.** 77 specimens (AMNZ, BMNH, JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 127). North Island: BP, HB, ND, TK, TO, WA, WN.

**Ecology.** Lowland, montane, subalpine. Epigeal-arboreal. Wet forests (beech, broadleaf, podocarp). Shaded ground. Nocturnal; active at night on tree trunks; hides during the day under the loose bark of fallen trees, in fallen rotten branches and logs. Gregarious.

**Biology.** Seasonality: throughout the year, except October. Teneral: December–March. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner. Occasional climber on trees.

**Collecting techniques.** Lifting loose bark of fallen trees; breaking rotten branches and logs; fogging logs; pitfall trapping.

**References.** Larochelle and Larivière 2001: 74 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 20 (list).

***Ooapterus sobrinus* Broun, 1886**

Fig. 32, 79, 144

*Ooapterus sobrinus* Broun, 1886: 936 ([TK] Taranaki, near Mount Egmont). Holotype: female (BMNH) labeled: "Type (circular red-bordered label; typed) / [female symbol] (hand-written) / 1685. (hand-written) / [TK] Taranaki (hand-written) / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Zolus*. / *Ooapterus sobrinus* (hand-written)."

*Ooapterus nigrutilus* Broun, 1908: 341. Holotype: female (BMNH) labeled: "Type (circular red-bordered label; typed) / 2619. [female symbol] (hand-written) / *Zolus* / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [WN] Karori. Palmerston N. / *Ooapterus nigrutilus* [female symbol] (hand-written)." **New synonym**

*Ooapterus laevigatus* Broun, 1912: 389. Holotype: male [teneral] (BMNH) labeled: "Type (circular red-bordered label; typed) / 3174. [male symbol] (hand-written) / *Zolus* / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [WA] Hastwell. Napier. / *Ooapterus laevigatus* (hand-written)." **New synonym**

*Pseudooapterus sobrinus*: Csiki 1928: 226.

*Pseudooapterus nigrutilus*: Csiki 1928: 225.

*Pseudooapterus laevigatus*: Csiki 1928: 225.

*Ooapterus sobrinus*: Hudson 1934: 177.

*Zolus nigrutilus*: Hudson 1934: 38.

*Ooapterus nigrutilus*: Hudson 1934: 177

*Ooapterus laevigatus*: Hudson 1934: 177.

**Description.** Body length 5.1–6.0 mm. Head, pronotum, elytra, and abdomen mostly black; lateral margins, suture, and apex of elytra reddish; abdomen yellow laterally and apically; antennae and legs pale red; palpi and femora pale yellow. Microsculpture strong and isodiametric on head, very transverse (with microlines), obsolete on pronotum, feeble on elytra. Iridescence absent on head and pronotum, feeble on elytra. Very shiny, with metallic luster (aeneous) on elytra. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes moderately convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, impunctate, wrinkled discally, slightly transverse, widest about middle; apex truncate; anterolateral angles poorly developed, obtusely rounded; anterior bead complete; sides moderately rounded, not sinuate posteriorly; lateral grooves moderately deep, very long (about as long as adjoining foveae); setiferous punctures absent on each side; posterolateral angles obtuse; posterolateral carinae sharp, very long (about as long as adjoining foveae); laterobasal foveae well defined, impunctate, moderately deep and wide, square, not prolonged forward, double; posterior bead absent; base emarginate, about as wide as pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, subovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides moderately rounded. Scutellar striole absent. Striae incomplete, mostly obsolete, virtually impunctate; stria 1 deep; striae 2–4 shallow; interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 79): strongly arcuate, narrowed in apical half; base slightly convex dorsally; middle slightly convex dorsally, moderately convex ventrally, with dorsal membranous area invisible; apex elongate-rounded, slightly concave dorsally and ventrally, with extreme tip unusually wide and short. Dorsal view: narrow, symmetrical (ostium of membranous area dorsal); apex straight; basal orifice narrow, closed anteriorly, close to membranous area. Parameres with three apical setae.

**Material examined.** 52 specimens (BMNH, JNNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 144). North Island: HB, ND, RI, TK, WA, WI, WN.

**Ecology.** Lowland, montane, subalpine. Epigeal-arboreal. Wet forests (beech, broadleaf, podocarp). Shaded ground. Nocturnal; active on trees at night; hides during the day under the loose bark of fallen trees, in fallen rotten branches, in moss growing on logs and trees. Gregarious.

**Biology.** Seasonality: November–June, August. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner. Regular climber on trees and logs.

**Collecting techniques.** Lifting loose bark of fallen trees; breaking rotten branches; sifting moss.

**References.** Larochelle and Larivière 2001: 74–75, 77 (as *O. sobrinus*, *O. laevigatus*, *O. nigrutilus*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 20–21 (*O. sobrinus*, *O. laevigatus*, *O. nigrutilus*; list).

**Remark.** Examination of the types of *Oopterus nigrutilus* and *O. laevigatus* revealed them to be conspecific with *O. sobrinus*.

### ***Oopterus collaris* Broun, 1893**

Fig. 33, 80, 123

*Oöpterus collaris* Broun, 1893: 1002. Holotype: male (BMNH) labeled: “Type (circular red-bordered label; typed) / [male symbol] (hand-written) / 1797. (hand-written) / [NN] Mount Arthur. (hand-written) / *Zolus*. (hand-written) / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Oöpterus collaris* [male symbol] (hand-written).”

*Pseudoopterus collaris*: Csiki 1928: 225.

*Oopterus collaris*: Hudson 1934: 177.

**Description.** Body length 5.8–6.4 mm. Head, pronotum, elytra, and abdomen mostly dark brown; head darker medially; abdomen reddish laterally and apically; antennae, palpi, and legs reddish. Microsculpture obsolete and isodiametric on head, feeble and moderately transverse on pronotum, strong and very transverse (with microlines) on elytra. Iridescence absent on head and pronotum, strong on elytra. Very shiny, without metallic luster. **Head.** Labrum moderately transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, coarsely punctate across base, wrinkled discally, subquadrate, widest about middle; apex truncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, slightly sinuate posteriorly; lateral grooves moderately to very deep, very long (as long as pronotum); a single setiferous puncture on each side (posteriorly); posterolateral angles rectangular; posterolateral carinae sharp, very long (about as long as adjoining foveae); laterobasal foveae well defined, coarsely punctate, moderately deep and wide, oblong, prolonged forward, simple; posterior bead absent; base emarginate, about as wide as pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, subovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides moderately rounded. Scutellar striole present. Striae incomplete; striae 1–3 shallow, finely punctate; striae 4–7 obsolete, impunctate; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 6. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 80): strongly arcuate, not widened in apical half; base moderately biconvex dorsally; middle subparallel, slightly convex dorsally, moderately convex ventrally, with dorsal membranous area moderately wide and very long; apex triangular, slightly concave dorsally, straight ventrally, with extreme tip wide and long. Dorsal

view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, close to membranous area. Parameres with three apical setae.

**Material examined.** 73 specimens (BMNH, JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 123). South Island: BR, NN.

**Ecology.** Lowland, montane, subalpine. Epigeal-arboreal. Wet forests (beech). Shaded ground. Nocturnal; active at night on trees and logs; hides during the day under loose bark of trees, and in moss growing on logs and trees. Gregarious.

**Biology.** Seasonality: October–May. Teneral: December (NN). Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner. Regular climber on trees and logs.

**Collecting techniques.** Lifting loose bark of trees; sifting moss.

**References.** Larochelle and Larivière 2001: 73 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 20 (list).

### ***Oopterus laeiventr*** (Sharp, 1883)

Fig. 34, 81, 130

*Tarastethus laeiventr* Sharp, 1883: 24. Holotype: male (BMNH) labeled: “*Tarastethus laeiventr* [male symbol] type D.S. [BR] Greymouth Helms. (hand-written) / Type H.T. (circular red-bordered label; typed) / Greymouth New Zealand Helms. (white label with red horizontal line; typed) / Sharp Coll. 1905-313. (typed).”

*Molopsida laeiventr*: Britton 1940: 477.

*Oopterus laeiventr*: Johns 1980: 57.

**Description.** Body length 4.1–5.3 mm. Head, pronotum, elytra, and abdomen mostly piceous black; apex of head reddish; lateral margins, suture, and apex of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and legs pale yellow; base of femora piceous black. Microsculpture absent. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) very long, about 2.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum strongly convex, coarsely punctate across base, unwrinkled, strongly transverse, slightly cordate, widest about middle; apex subtruncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; a single setiferous puncture on each side (anteriorly); posterolateral angles obtuse; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, coarsely punctate, very deep and wide, subrectangular, not prolonged forward, double; posterior bead absent; base emarginate, wider than pronotal apex, about as wide as elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders rounded. Sides strongly rounded. Scutellar striole present. Striae mostly replaced by rows of coarse punctures; stria 1 complete, very deep; rows 2–5 moderately deep, obsolete apically; rows 6–7 obsolete basally; interval 3 with three setiferous punctures, close to row 3. Recurrent stria long, sharp, directed apically toward row 5. Subapical seta present. Intervals slightly convex. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 81):



moderately arcuate, moderately widened in apical half; base strongly biconvex dorsally; middle slightly concave dorsally, mostly straight ventrally, with dorsal membranous area very wide and moderately long; apex subtriangular, slightly concave dorsally, straight ventrally, with extreme tip wide and long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with five or six apical setae.

**Material examined.** 157 specimens (AMNZ, BMNH, CMNZ, JNNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 130). South Island: BR, MC, NN, WD.

**Ecology.** Lowland, montane, subalpine. Epigeal-arboreal. Wet forests (beech, podocarp, broadleaf) and scrublands. Shaded ground. Nocturnal; active at night on mossy logs; hides during the day in moss and leaf litter, as well as under logs.

**Biology.** Seasonality: September, November–June. Teneral: February–March (BR). Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner. Occasional climber on logs.

**Collecting techniques.** Pitfall trapping; sifting moss and leaf litter; lifting logs.

**References.** Larochelle and Larivière 2001: 74 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 20 (list).

### ***Oopterus arthurensis* new species**

Fig. 35, 121

Holotype: female (MONZ) labeled: “[NEW ZEALAND NN] Mt. Balloon [= Balloon Hut, Mount Arthur] IN CAVE J.T. Salmon 24.I.48 (hand-written) / [female symbol] / HOLOTYPE [female symbol] *Oopterus arthurensis* Larochelle & Larivière, 2017 (red label; typed).”

**Description.** Body length 7.9 mm. Head, pronotum, elytra, and abdomen mostly rufous; margins and suture of elytra red; antennae, palpi, and legs testaceous. Microsculpture strong, isodiametric on head, very transverse (with microlines) on pronotum and elytra. Iridescence absent on head, very strong on pronotum and elytra. Very shiny, without metallic luster. Forebody narrow in comparison to elytra (as in *O. trechoides*). **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae subfiliform (as in *O. ocularius*, *O. trechoides*, and *Zolus* species), very long: segment 1 (scape) very long, about 2.5x longer than its maximum width. Frontal furrows wide, deep, subparallel. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora strongly inflated (about as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum slightly convex, finely punctate across base, wrinkled in basal half, subquadrate, widest before middle; apex subtruncate; anterolateral angles well developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, moderately sinuate posteriorly; lateral grooves absent; a single setiferous puncture on each side (anteriorly); posterolateral angles subrectangular; posterolateral carinae absent; laterobasal foveae well defined, finely punctate, very deep and wide, oblong, prolonged forward, simple; posterior bead absent; base emarginate, about as wide as pronotal apex, much narrower than elytral base. **Legs.** Very long. **Elytra.** Moderately convex, subovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders oblique. Sides strongly rounded. Scutellar striole present. Stria 1 complete, deep; striae 2–7 incomplete, obsolete; striae 1–2 finely punctate; stria 3 with a single setiferous puncture (anteriorly). Recurrent stria long, sharp, directed apically toward stria 6. Subapical seta present.

Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male unknown; female with four apical ambulatory setae. **Aedeagus.** Male unknown.

**Material examined.** 1 specimen (MONZ).

**Geographic distribution** (Fig. 121). South Island: NN–Mount Arthur, Balloon Hut.

**Ecology.** Subalpine. A beech forest and red tussock area. Found in a cave.

**Biology.** Seasonality: January. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Fast runner (based on leg morphology).

**Remarks.** This species is named after the type locality Mount Arthur (NN) and the Latin suffix *-ensis*, denoting a place, locality, or country. *Oopterus arthurensis* is morphologically close to *O. corvinki* and has the following distinguishing features: body length 7.9 mm; forebody narrow in comparison to elytra; antennae subfiliform, very long; tempora strongly inflated (about as long as eyes); pronotum subquadrate, not cordate, posterolateral angles subrectangular; elytral striae mostly obsolete. The two species are allopatric: *O. arthurensis* is restricted to the northwestern South Island (NN, Mount Arthur), while *O. corvinki* occurs in the southwest of the South Island (FD, Gilbert Islands). *O. arthurensis*, with its darkly colored body and normally developed eyes, is probably not a regular cave-dweller.

### *Oopterus corvinki* new species

Fig. 36, 82, 124

Holotype: male (NZAC) labeled: “NEW ZEALAND FD (typed) Breaksea So Gilbert Is No 6 May 1982 (hand-written) / C.F. Butcher ex litter r2 (hand-written) / [male symbol] / HOLOTYPE [male symbol] *Oopterus corvinki* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: two males (LUNZ, NZAC) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 4.3–4.6 mm. Head reddish, darker medially; pronotum and elytra dark red; abdomen mostly yellow, black anterobasally; lateral margins and a large apical space on each elytron pale yellow; antennae, palpi, and legs reddish; antennal segment 1 (scape) and femora pale yellow. Microsculpture obsolete and isodiametric on head, strong and very transverse (with microlines) on pronotum and elytra. Iridescence absent on head, very strong on pronotum and elytra. Very shiny, with metallic luster (aeneous) on pronotum and elytra. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, impunctate, wrinkled discally, strongly transverse, moderately cordate, widest before middle; apex truncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, moderately sinuate posteriorly; lateral grooves absent; a single setiferous puncture on each side (anteriorly); posterolateral angles obtuse; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, impunctate, shallow, very wide, subrectangular, prolonged forward, double; posterior bead absent; base emarginate, about as wide as pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Stria 1 complete; striae 4–7 incomplete; striae 1–4 moderately deep; striae 5–7 shallow; striae 1–7 finely punctate; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward striae 5 or 6. Subapical seta present. Intervals slightly convex. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 82):

strongly arcuate, narrowed in apical half; base slightly convex dorsally; middle angulate basally and somewhat straight dorsally, moderately convex ventrally, with dorsal membranous area moderately wide and very long; apex subtriangular, straight dorsally, slightly concave ventrally, with extreme tip moderately wide and long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with five apical setae.

**Material examined.** 3 specimens (LUNZ, NZAC).

**Geographic distribution** (Fig. 124). South Island: FD–Breaksea Sound, Gilbert Islands.

**Ecology.** Lowland. Wet forest (beech). Found in leaf litter.

**Biology.** Seasonality: May. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting technique.** Sifting leaf litter.

**Remarks.** This species is named after our friend and colleague Cor J. Vink (Canterbury Museum, Christchurch) for his special help and encouragement in our entomological studies. *Oopterus corvinki* is morphologically close to *O. arthurensis*. In addition to diagnostic characters of the male genitalia, *O. corvinki* has the following distinguishing features: body length 4.3–4.6 mm; antennae submoniliform, moderately long; tempora not inflated; pronotum strongly transverse, moderately cordate, posterolateral angles obtuse; elytral striae mostly visible. The two species are allopatric: *O. corvinki* is restricted to the southwestern South Island (FD, Gilbert Islands), while *O. arthurensis* occurs in the northwest of the South Island (NN, Mount Arthur).

### ***Oopterus palmai* new species**

Fig. 37, 83, 139

Holotype: male (NZAC) labeled: “New Zealand MK (typed) Temple Stream Ohau Valley 11 April 2010 (typed) / Under log, mountain beech forest (typed) / JOHN NUNN (typed) / [male symbol] / HOLOTYPE [male symbol] *Oopterus palmai* Laroche & Larivière, 2017 (red label; typed).” Paratype: one female (NZAC) from the same locality as the holotype, bearing a blue paratype label.

**Description.** Body length 5.3–5.7 mm. Head, pronotum, elytra, and abdomen mostly piceous black; apex and base of head reddish; base of pronotum reddish; lateral margins and suture of elytra reddish; abdomen yellowish laterally and apically; antennae, palpi, and legs reddish; antennal segment 1 (scape) pale yellowish; femora piceous black. Microsculpture strong and isodiametric on head, obsolete and moderately transverse on pronotum, strong and very transverse (with microlines) on elytra. Iridescence absent on head and pronotum, very strong on elytra. Very shiny, without metallic luster. **Head.** Labrum moderately transverse, subtruncate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, subparallel. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, impunctate, wrinkled apically and discally, strongly transverse, widest about middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, not sinuate posteriorly; lateral grooves absent; a single setiferous puncture on each side (posteriorly); posterolateral angles subrectangular; posterolateral carinae absent; laterobasal foveae ill-defined, impunctate, shallow, moderately wide, not prolonged forward, double; base emarginate, about as wide as pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Mod-

erately convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Striae 1–4 complete, shallow, finely punctate; striae 5–7 incomplete, obsolete. Interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 83): strongly arcuate, narrowed in apical half; base strongly biconvex dorsally; middle narrowed from base to apex, moderately convex dorsally, almost straight ventrally, with dorsal membranous area very wide and moderately long; apex triangular, slightly concave dorsally and ventrally, with extreme tip narrow and long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with seven apical setae.

**Material examined.** 24 specimens (JNNZ, NZAC).

**Geographic distribution** (Fig. 139). South Island: CO–Rock and Pillar Range, Six-Mile Creek. MK–Lake Ohau. Ohau Range, Ohau Ski Field. Ohau Valley, Temple Stream.

**Ecology.** Montane, subalpine, alpine. Epigeal. Dry forests (beech); fellfields. Shaded or open ground. Nocturnal; hides during the day under logs and stones. Gregarious.

**Biology.** Seasonality: December, March–April. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Lifting logs and stones.

**Remarks.** This species is named after our friend and colleague Ricardo L. Palma (Museum of New Zealand Te Papa Tongarewa, Wellington) for his special help and encouragement in our entomological studies, and for his many years (1991–2016) as curator of entomology at the Museum of New Zealand. *Oopterus palmai* is morphologically close to *O. monticola*. In addition to diagnostic characters of the male genitalia, *O. palmai* has the following distinguishing features: pronotum with sides moderately rounded, not sinuate posteriorly, posterolateral carinae absent, laterobasal foveae ill-defined; elytral striae 5–7 poorly developed, incomplete. Both species inhabit southern areas of the South Island: *O. palmai* occurs in the Central Otago (CO) and Mackenzie (MK) regions, while *O. monticola* is known only from Central Otago (CO, Rock and Pillar Range).

### *Oopterus monticola* new species

Fig. 38, 84, 135

Holotype: male (NZAC) labeled: “[NEW ZEALAND CO] Rock & Pillar Ra Otago 13.IX.69 J.S. Dugdale (typed) / moss (typed) 69/203 (hand-written) / [male symbol] / HOLOTYPE [male symbol] *Oopterus monticola* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one female (NZAC) and one male (CMNZ) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 4.8–5.2 mm. Head, pronotum, and elytra mostly piceous black; abdomen mostly dark brown, yellow laterally and apically; apex of head reddish; lateral margins and suture of elytra reddish; antennae and legs mostly reddish; antennal segments 1+2 pale yellow; palpi mostly yellow, strongly infuscated; femora dark brown. Microsculpture strong and isodiametric on head, feeble and moderately transverse on pronotum, obsolete and very transverse (with microlines) on elytra. Iridescence absent on head and pronotum, very strong on elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long; segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tem-

pora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, impunctate, wrinkled discally, strongly transverse, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; a single setiferous puncture on each side (posteriorly); posterolateral angles subrectangular; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, impunctate, shallow, moderately wide, oblong, prolonged forward, double; posterior bead absent; base subtruncate, about as wide as pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Striae complete, shallow, finely punctate; striae 5–6 shallower; interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 84): strongly arcuate, strongly widened in apical half; base strongly biconvex dorsally; middle slightly concave dorsally, strongly convex ventrally, with dorsal membranous area very wide and long; apex triangular, slightly biconcave dorsally, moderately concave ventrally, with extreme tip wide and long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with five or six apical setae.

**Material examined.** 6 specimens (CMNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 135). South Island: CO—Rock and Pillar Range (McPhees Rock; Otago Ski Hut).

**Ecology.** Alpine. Epigeal. Herbfields, along seepages and at the edge of a bog. Open ground. Nocturnal; hides during the day in moss.

**Biology.** Seasonality: September, November. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting technique.** Sifting moss.

**Remarks.** The name of this species is based on the Latin noun *mons, montis* (mountain) and the suffix *-cola* (dweller). *Oopterus monticola* is morphologically close to *O. palmi*. In addition to diagnostic characters of the male genitalia, *O. monticola* has the following distinguishing features: pronotum with sides strongly rounded, slightly sinuate posteriorly, posterolateral carinae blunt and very long, laterobasal foveae well defined, oblong; elytral striae 5–7 well developed, complete. Both species occur in the southern South Island: *O. monticola* is restricted to Central Otago (CO, Rock and Pillar Range), while *O. palmi* occurs in the Central Otago (CO) and Mackenzie (MK) regions.

### ***Oopterus strenuus* Johns, 1974**

Fig. 39, 85, 145

*Oopterus strenuus* Johns, 1974: 299. Type locality: Station Point, SN.

**Description.** Body length 3.9–4.6 mm. Head, pronotum, elytra, and abdomen mostly reddish brown; lateral margins, suture, and apex of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and legs reddish; femora yellow. Microsculpture strong and isodiametric on head, strong and moderately transverse on pronotum, obsolete and very transverse (with microlines) on elytra. Iridescence absent on head and pronotum, feeble on elytra. Very shiny, without metallic luster. **Head.**



Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes slightly convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora slightly inflated (about one third as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, impunctate, unwrinkled, subquadrate, widest before middle; apex subtruncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate or not sinuate posteriorly; lateral grooves absent; two setiferous punctures present on each side; posterolateral angles subrectangular; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, impunctate, very deep and wide, oblong, prolonged forward, double; posterior bead absent; base emarginate, slightly narrower than pronotal apex and elytral base. **Legs.** Short. **Elytra.** Moderately convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides strongly rounded. Scutellar striole absent. Striae incomplete; stria 1 deep; striae 2–7 obsolete, impunctate; stria 3 with three setiferous punctures. Recurrent stria long, blunt, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 85): moderately arcuate, not narrowed in apical half; base almost straight dorsally; middle moderately convex dorsally and angulate posteriorly, straight ventrally, with dorsal membranous area very wide and long; apex subtriangular, straight dorsally, slightly concave ventrally, with extreme tip wide and long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with four apical setae.

**Material examined.** 107 specimens (CMNZ, LUNZ, NZAC)

**Geographic distribution** (Fig. 145). Subantarctic Islands: SN–Penguin Creek. Penguin Rookery. Sinkhole Drain. Sinkhole Flat. Station Point.

**Ecology.** Lowland. Epigeal. Wet peaty forests (*Olearia*); penguin colonies and their vicinity. Shaded or open ground. Nocturnal; hides during the day in leaf litter and bird nests. Gregarious.

**Biology.** Seasonality: October, December–January. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting techniques.** Sifting leaf litter; inspecting bird nests.

**References.** Larochelle and Larivière 2001: 77 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 21 (list).

### ***Ooapterus clivinoïdes* Guérin-Méneville, 1841**

Fig. 40, 86, 122

*Ooapterus clivinoïdes* Guérin-Méneville, 1841: 123. Type locality: Auckland Islands [AU].

*Ooapterus guerini* Kirsch, in Kiesenwetter and Kirsch 1877: 158. Type locality: Auckland Islands [AU].  
Synonymized by Gourlay 1950: 181.

*Ooapterus tripunctatus* Broun, 1909: 87. Type locality: Carnley Harbour, Auckland Islands [AU].  
Synonymized by Gourlay 1950: 181.

*Ooapterus tarsalis* Broun, 1909: 89. Type locality: Campbell Island [CA]. Synonymized by Johns 1974: 297.

*Pseudooapterus guerini*: Csiki 1928: 225.

*Pseudooapterus tripunctatus*: Csiki 1928: 226.

*Pseudooapterus tarsalis*: Csiki 1928: 226.

**Description.** Body length 4.5–5.6 mm. Head, pronotum, elytra, and abdomen mostly piceous black; lateral margins and suture of elytra reddish; abdomen yellowish laterally and apically; antennae and legs reddish; palpi yellowish; femora yellowish, reddish basally. Microsculpture strong and isodiametric on head, moderately transverse, strong on pronotum, feeble on elytra. Iridescence absent. Very shiny, with metallic luster (aeneous) on head, pronotum, and elytra. **Head.** Labrum moderately transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora strongly inflated (about two-thirds as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum strongly convex, finely punctate across base, wrinkled between laterobasal foveae, slightly transverse and cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles obtuse; posterolateral carinae absent; laterobasal foveae well defined, finely punctate, very deep and wide, oblong, prolonged forward, simple; posterior bead absent; base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders rounded. Sides strongly rounded. Scutellar striole obsolete. Striae incomplete; stria 1 deep; striae 2–7 finely punctate, obsolete (striae 2–5 shallow medially); stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 7. Subapical seta absent (present in other *Oopterus* species). Intervals depressed. Sutural apices rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical and two medial ambulatory setae; female with four apical and two medial ambulatory setae. **Aedeagus.** Lateral view (Fig. 86): strongly arcuate, not widened in apical half; base slightly convex dorsally; middle subparallel, dorsally angulate, moderately concave anteriorly and straight posteriorly, moderately concave ventrally, with dorsal membranous area narrow and short; apex subtriangular, straight dorsally, slightly concave ventrally, with extreme tip wide and long. Dorsal view: narrow, symmetrical (ostium of membranous area dorsal); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with three or four apical setae.

**Material examined.** 653 specimens (AMNZ, CMNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 122). Stewart Island: Port William. Subantarctic Islands: AN, AU, CA, SN.

**Ecology.** Lowland, montane, subalpine, alpine. Epigeal. Wet forests (broadleaf); peaty scrublands; tussock areas; pastures; fellfields, supralittoral zone; sea beaches; penguin, shag, and seal colonies. Shaded or open ground. Nocturnal; hides during the day under logs, stones, in leaf litter, moss and mat plants, also under cow dung, in turf, among tussock roots, in logs, and under algae. Gregarious.

**Biology.** Seasonality: October–February, April–May, July. Teneral: December–April (AU). Predacious: amphipods, caterpillars. Occasionally infested with fungi (Laboulbeniales).

**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting techniques.** Lifting logs and stones; sifting leaf litter, moss, and mat plants.

**References.** Larochelle and Larivière 2001: 73 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 20 (list).

**Remarks.** *Oopterus clivinooides* is the only *Oopterus* species without an elytral subapical seta. This taxon, common in the Subantarctic Islands, is recorded for the first time from Stewart Island (Port William; CMNZ).

***Oopterus mohiensis* new species**

Fig. 41, 87, 134

Holotype: male (NZAC) labeled: "NEW ZEALAND HB Mohi Bush Sce. Res. [= Scenic Reserve] 300m 21.I.1998 Larochelle and Larivière (typed) / Dry Tawa forest. Under fallen branches. (typed) / [male symbol] / HOLOTYPE [male symbol] *Oopterus mohiensis* Larochelle & Larivière, 2017 (red label; typed)." Paratypes: two males (CMNH, NZAC) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 5.0–6.1 mm. Head, pronotum, elytra, and abdomen mostly piceous black; apex and base of head reddish; base of pronotum reddish; lateral margins and suture of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and legs reddish; antennal segments 1+2 yellow; femora infuscated. Microsculpture mostly absent on head (isodiametric basally), obsolete and very transverse (with microlines) on pronotum and elytra. Iridescence absent on head, feeble on pronotum and elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, subtruncate apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum moderately convex, coarsely punctate across base, unwrinkled, strongly transverse, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles rectangular; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, coarsely punctate, very deep and wide, subrectangular, not prolonged forward, double; posterior bead absent; base emarginate, wider than pronotal apex, about as wide as elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Striae incomplete; stria 1 deep; striae 2–4 shallow, finely punctate; striae 5–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 87): strongly arcuate, not narrowed in apical half; base strongly biconvex dorsally; middle rather straight dorsally, moderately convex ventrally, with dorsal membranous area moderately wide and very long; apex subtriangular, rather straight dorsally, straight ventrally, with extreme tip wide and rather long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with four to six apical setae.

**Material examined.** 38 specimens (AMNZ, CMNH, MONZ, NZAC).

**Geographic distribution** (Fig. 134). North Island: HB, TK, WA, WN.

**Ecology.** Lowland, montane, subalpine, alpine. Epigeal. Wet or dry forests (beech, broadleaf); alpine tussock grasslands. Shaded or open ground. Nocturnal; hides during the day in leaf litter and moss, under stones and fallen branches. Gregarious.

**Biology.** Seasonality: December–March. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Sifting leaf litter and moss; lifting stones and fallen branches; pitfall trapping.

**Remarks.** This species is named after the type locality Mohi Bush Scenic Reserve (HB) and the Latin suffix *-ensis*, denoting a place, locality, or country. *Oofterus mohiensis* is morphologically close to *O. frontalis* and *O. punctatus*. In addition to diagnostic characters of the male genitalia, *O. mohiensis* has the following distinguishing features: microsculpture obsolete on pronotum and elytra; eyes moderately convex; pronotum with posterolateral angles rectangular and laterobasal foveae coarsely punctate. *Oofterus mohiensis* and *O. frontalis* occur in southern areas of the North Island, while *O. punctatus* is known only from Banks Peninsula and the Port Hills in Christchurch (South Island).

### *Oofterus frontalis* Broun, 1908

Fig. 42, 88, 126

*Oofterus frontalis* Broun, 1908: 342. Holotype: female (BMNH) labeled: "Type (circular red-bordered label; typed) / 2620. [female symbol] (hand-written) / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Zolus* (hand-written) / [WN] Wadeston [= Wadestown] Palmerston N. (hand-written) / *Oofterus frontalis* (hand-written)."

*Pseudoofterus frontalis*: Csiki 1928: 225.

*Oofterus frontalis*: Hudson 1934: 38, 177.

**Description.** Body length 5.3–6.5 mm. Head, pronotum, elytra, and abdomen mostly piceous black; apex and base of head reddish; base of pronotum reddish; lateral margins and suture of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and legs reddish; femora infuscated. Microsculpture strong, isodiametric on head, very transverse (with microlines) on pronotum and elytra. Iridescence absent on head, very strong on pronotum and elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, rounded apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, slightly punctate across base, wrinkled discally, strongly transverse, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles obtuse; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, finely punctate, very deep and wide, subrectangular, prolonged forward, double; posterior bead absent; base emarginate, wider than pronotal apex, about as wide as elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Stria 1 complete, deep; striae 2–7 incomplete; striae 2–4 shallow, finely punctate; striae 5–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 88): strongly arcuate, strongly widened in apical half; base moderately biconvex dorsally; middle almost straight dorsally, slightly convex ventrally, with dorsal membranous area moderately wide and short; apex subtriangular, almost straight dorsally, straight ventrally, with extreme tip wide and short. Dorsal view: narrow, symmetrical (ostium of membranous area dorsal); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with four or five apical setae.

**Material examined.** 36 specimens (BMNH, JNNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 126). WI–Palmerston North. WN–Dennan. Kaitoke. Mount Holdsworth. Orongorongo Valley. Wadestown. Wellington. Wilton's Bush.



**Ecology.** Lowland, montane. Epigeal. Wet forests (beech, broadleaf, podocarp) and scrublands. Shaded ground. Nocturnal; hides during the day under stones, in leaf litter; also in flood debris along a stream.

**Biology.** Seasonality: September–April, June–July. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Lifting stones; sifting leaf litter; pitfall trapping; inspecting flood debris.

**References.** Larochelle and Larivière 2001: 74 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 20 (list).

**Remark.** Because *O. frontalis* is only known from specimens collected in the Wellington area, Wadestown is the most likely type locality. The Palmerston North record is plausible but not supported by specimen data.

### *Oopterus punctatus* new species

Fig. 43, 89, 141

Holotype: male (NZAC) labeled: “Under logs *N. fusca* forest Above Long Bay Banks Peninsula [NEW ZEALAND MC] 1.X.1974 (hand-written) R.M. Emberson (typed) / HOLOTYPE [male symbol] *Oopterus punctatus* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one male (NZAC) and one female (CMNZ) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 5.4–6.5 mm. Head, pronotum, elytra, and abdomen mostly dark brown; apex and base of head reddish; base of pronotum reddish; lateral margins and suture of elytra reddish; abdomen reddish laterally and apically; antennal segments 1–3, palpi, tibiae, and tarsi reddish; antennal segments 4–11 dark brown; femora infuscated. Microsculpture strong, isodiametric on head, very transverse (with microlines) on pronotum and elytra. Iridescence absent on head, very strong on pronotum and elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth entire, rounded apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, virtually impunctate, wrinkled discally, strongly transverse, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles obtuse; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, virtually impunctate, very deep and wide, subrectangular, not prolonged forward, double; posterior bead absent; base emarginate, wider than pronotal apex, about as wide as elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders obtuse. Sides strongly rounded. Scutellar striole obsolete. Striae complete; stria 1 deep, striae 2–7 shallow, finely punctate; stria 3 either without setiferous punctures or with one to three punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 89): strongly arcuate, strongly widened in apical half; base moderately biconvex dorsally; middle biconvex dorsally, almost straight ventrally, with dorsal membranous area narrow and long; apex subtriangular, moderately convex dorsally, slightly concave ventrally, with extreme tip narrow and long. Dorsal view: narrow, symmetrical (ostium of membranous area dorsal); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with four or five apical setae.



**Material examined.** 12 specimens (CMNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 141). South Island: MC–Banks Peninsula (Akaroa; Hinewai Scenic Reserve; Long Bay (above); Otepatutu Scenic Reserve; Port Levy). Port Hills, Christchurch.

**Ecology.** Lowland (hills). Epigeal. Forests (broadleaf, podocarp). Shaded ground. Nocturnal; hides during the day under logs and stones.

**Biology.** Seasonality: October, February. Teneral: March. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Lifting logs and stones.

**Remarks.** The name of this species is derived from the Latin adjective *punctatus* (punctate), referring to the strong microsculpture giving a “punctate” appearance to the head of the beetle. *Oopterus punctatus* is morphologically close to *O. frontalis*. In addition to diagnostic characters of the male genitalia, *O. punctatus* has the following distinguishing features: head, pronotum, elytra, and abdomen mostly dark brown; antennal segments 1–3 reddish, segments 4–11 dark brown; pronotum with sides strongly rounded, laterobasal foveae virtually impunctate, not prolonged forward; elytral striae complete and scutellar striole obsolete. The two species are allopatric: *O. punctatus* is known only from Banks Peninsula and the Port Hills in Christchurch (South Island), while *O. frontalis* occurs in southern areas of the North Island (WI, WN).

### *Oopterus trechoides* new species

Fig. 44, 90, 148

Holotype: male (NZAC) labeled: “[NEW ZEALAND FD] Summit Mt. [= Mount] Barber 1342m (handwritten) / Manapouri Exp. Jan 70 (typed) / Under stones (typed) / [male symbol] / HOLOTYPE [male symbol] *Oopterus trechoides* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one female (NZAC) and one male (MONZ) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 5.9–7.3 mm. Head rufous; pronotum and elytra mostly rufopiceous; pronotum reddish basally; abdomen reddish piceous, yellow laterally and apically; antennae, palpi, and legs yellow. Microsculpture strong and isodiametric on head, obsolete on pronotum, strong and very transverse (with microlines) on elytra. Iridescence absent on head and pronotum, very strong on elytra. Very shiny, without metallic luster. Forebody narrow in comparison to elytra (as in *O. arthurensis*). **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae subfiliform (as in *O. arthurensis*, *O. ocularius*, and *Zolus* species), very long: segment 1 (scape) very long, about 2.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora strongly inflated (about as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum moderately convex, finely punctate across base, wrinkled in basal half, subquadrate, strongly cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, obtuse; anterior bead incomplete, obsolete medially; sides strongly rounded, strongly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles acute, projected laterally; posterolateral carinae absent; laterobasal foveae well defined, finely punctate, very deep and wide, oblong, not prolonged forward, simple; posterior bead absent; base emarginate, much narrower than pronotal apex and elytral base. **Legs.** Very long. **Elytra.** Moderately convex, subovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders oblique. Sides strongly rounded. Scutellar striole obsolete. Striae complete; striae 1–3 shallow, finely punctate; striae 4–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, blunt, directed apically toward stria 6. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.**

Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 90): very strongly arcuate, strongly widened both in basal half and apical half; base straight dorsally; middle strongly concave dorsally, moderately convex ventrally, with dorsal membranous area very wide and long; apex subtriangular, moderately sinuate dorsally, moderately concave ventrally, with extreme tip narrow, long, and sinuate. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with two apical setae.

**Material examined.** 17 specimens (AMNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 148). South Island: FD—Fiordland National Park (Eglinton Valley, Mistake Creek; Mackinnon Pass; Mount Barber; Mount Grey [= Mount Gray]; Murchison Mountains, Plateau Creek). OL—Liverpool Stream. SL—Longwood Forest, Bald Hill.

**Ecology.** Subalpine, alpine. Epigeal. Mostly alpine fellfields and grasslands; also wet subalpine forests (beech) and screes. Open or shaded ground. Nocturnal; hides during the day under stones. Gregarious.

**Biology.** Seasonality: December–February. Teneral: January–February. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Fast runner.

**Collecting technique.** Lifting stones.

**Remarks.** The name of this species is derived from *Trechus* (type genus of the tribe Trechini) and the suffix *-oides* (similar), referring to the trechine-like body shape of the beetle. *Ooapterus trechoides* is morphologically close to *O. sculpturatus* and *O. taieriensis*. In addition to diagnostic characters of the male genitalia, *O. trechoides* has the following distinguishing features: forebody narrow in comparison to elytra; antennae, palpi, and legs yellow; antennae subfiliform, very long; tempora strongly inflated (about as long as eyes); pronotum subquadrate, strongly cordate; elytra subovate. The three species are allopatric: *O. trechoides* occurs in the southwest of the South Island (FD, OL, SL), *O. sculpturatus* is restricted to the northwest of the South Island (NN), and *O. taieriensis* is found in the southeast of the South Island (DN).

### ***Ooapterus sculpturatus* Broun, 1908**

Fig. 45, 91, 143

*Ooapterus sculpturatus sculpturatus* Broun, 1908: 344. Holotype: male (BMNH) labeled: “Type (circular red-bordered label; typed) / 2621. [male symbol]. (hand-written) / Walker. 5337. (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Ooapterus sculpturatus* [male symbol] (hand-written).”

*Ooapterus sculpturatus ovinotatus* Broun, 1908: 344. Holotype: male (BMNH) labeled: 2622. [male symbol] (hand-written) / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / var. 5337. [male symbol]. *ovinotatus*. [male symbol]. (hand-written).” **New synonym**

*Pseudooapterus sculpturatus*: Csiki 1928: 226.

*Ooapterus sculpturatus sculpturatus*: Hudson 1934: 177.

*Ooapterus sculpturatus ovinotatus*: Hudson 1934: 177.

*Ooapterus sculpturatus sculpturatus*: May 1967: 177.

**Description.** Body length 5.2–6.3 mm. Head, pronotum, elytra, and abdomen mostly piceous black; apex and base of head reddish; base of pronotum reddish; lateral margins, suture (apical half), and apex of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and legs reddish; femora infuscated. Microsculpture strong, isodiametric on head, very transverse (with microlines) on pronotum

and elytra. Iridescence absent on head, very strong on pronotum and elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, rounded apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, coarsely punctate basally, wrinkled discally, strongly transverse, widest about middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles acute, projected laterally; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, coarsely punctate, very deep and wide, subrectangular, prolonged forward, double; posterior bead absent; base emarginate, wider than pronotal apex, slightly narrower than elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders strongly rounded. Sides strongly rounded. Scutellar striole present. Stria 1 complete, deep; striae 2–7 incomplete; striae 2–4 shallow, finely punctate; striae 5–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 91): moderately arcuate, not widened in apical half; base moderately biconvex dorsally; middle subparallel, slightly concave dorsally, straight ventrally, with dorsal membranous area moderately wide and long; apex triangular, straight dorsally, straight ventrally, with extreme tip wide and short. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with five apical setae.

**Material examined.** 15 specimens (BMNH, JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 143). South Island: NN–Boulder Lake (track). Cobb Reservoir, Lake Sylvester Road. Cobb Valley, Galena Creek. Lake Sylvester (track). Mount Arthur, Summit. Oparara River (mouth). Westport.

**Ecology.** Lowland, montane, subalpine. Endogean. Wet forests (beech). Shaded ground. Nocturnal; hides during the day under well-embedded logs and stones.

**Biology.** Seasonality: November, January–March. Teneral: March. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Lifting logs and stones.

**References.** Larochelle and Larivière 2001: 77 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 21 (list).

**Remark.** Examination of the type of *Oopterus sculpturatus* var. *ovinotatus* revealed it to be *O. sculpturatus sculpturatus*; any differences noted by Broun are taxonomically unimportant and do not warrant the recognition of a subspecies.

### ***Oopterus taiariensis* new species**

Fig. 46, 92, 147

Holotype: male (NZAC) labeled: “NEW ZEALAND DN Taieri Mouth 30 May 2010 (typed) / In flood debris from Taieri River (typed) / J T NUNN (typed) / [male symbol] / HOLOTYPE [male symbol] *Oopterus*

*taieriensis* Larochelle & Larivière, 2017 (red label; typed).” Paratype: one female (NZAC) from the same locality as the holotype, bearing a blue paratype label.

**Description.** Body length 4.6–5.7 mm. Head, pronotum, elytra, and abdomen mostly piceous black; apex and base of head reddish; base of pronotum reddish; lateral margins and suture of elytra reddish; abdomen yellow laterally and apically; antennae, palpi, and legs reddish. Microsculpture strong, isodiametric on head, moderately transverse on pronotum, very transverse (with microlines) on elytra. Iridescence absent on head, moderately strong on pronotum, very strong on elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, much shorter than ligula. **Thorax.** Pronotum moderately convex, impunctate, unwrinkled, strongly transverse, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles acute, projected laterally; posterolateral carinae absent; laterobasal foveae well defined, impunctate, moderately deep, very wide, oblong, prolonged forward, double; posterior bead absent; base emarginate, slightly wider than pronotal apex, slightly narrower than elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Striae shallow, finely punctate; striae 1–4 complete; striae 5–7 incomplete, obsolete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 92): moderately arcuate, narrowed in apical half; base slightly convex dorsally; middle angulate anteriorly and moderately convex dorsally, moderately convex ventrally, with dorsal membranous area moderately wide and very long; apex unusually slender, slightly concave dorsally, strongly concave ventrally, with extreme tip unusually slender and curved downward. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with three or four apical setae.

**Material examined.** 26 specimens (JNNZ, NZAC).

**Geographic distribution** (Fig. 147). South Island: DN–Allison Scenic Reserve. Flagstaff Hill. Leith Stream (Dunedin, town belt). Otago Peninsula, Boulder Beach. Taieri River, Taieri Mouth.

**Ecology.** Lowland. Epigeal. Forests (broadleaf), along streams. Shaded ground. Nocturnal; hides during the day in flood debris and under logs.

**Biology.** Seasonality: January–February, May. Teneral: March, May. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Inspecting flood debris; lifting logs.

**Remarks.** This species is named after the type locality Taieri Mouth (DN) and the Latin suffix *-ensis*, denoting a place, locality, or country. *Oopterus taieriensis* is morphologically close to *O. sculpturatus*. In addition to diagnostic characters of the male genitalia, *O. taieriensis* has the following distinguishing features: pronotum widest before middle, base impunctate, posterolateral carinae absent, laterobasal foveae oblong; elytra moderately convex. The two species are allopatric: *O. taieriensis* is restricted to the southeastern South Island (DN), while *O. sculpturatus* occurs in the northwest of the South Island (NN).

***Ooapterus ocularius* (Broun, 1917)**

Fig. 47, 93, 138

*Zolus ocularius* Broun, 1917: 365. Holotype: male (BMNH) labeled: "Type (circular red-bordered label; typed) / 3808. [male symbol] (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [OL] Mt. [= Mount] Earnslaw. 5.2.1914. (hand-written) / *Zolus ocularius* [male symbol]. (hand-written)."

*Ooapterus ocularius*: Jeannel 1940: 92.

*Zolus ocularius*: Larochelle and Larivière 2001: 79.

*Ooapterus ocularius*: Larochelle and Larivière 2007: 45.

**Description.** Body length 7.4–7.8 mm. Head, pronotum, elytra, and abdomen mostly reddish piceous; lateral margins and suture of elytra reddish; abdomen yellow laterally and apically; antennae, palpi, and legs testaceous. Microsculpture strong and isodiametric on head, feeble and moderately transverse on pronotum, obsolete and very transverse (with microlines) on elytra. Iridescence absent on head and pronotum, feeble on elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae subfiliform (as in *O. arthurensis*, *O. trechoides*, and *Zolus* species), very long: segment 1 (scape) very long, about 2.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes subdepressed; two setiferous punctures on inner side of each eye. Tempora strongly inflated (about as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, much longer than ligula. **Thorax.** Pronotum moderately convex, finely punctate, wrinkled across base, moderately transverse, widest just before middle; apex subtruncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles rectangular; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, finely punctate, very deep and wide, square, prolonged forward, double; posterior bead absent; base subtruncate, slightly wider than pronotal apex, slightly narrower than elytral base. **Legs.** Very long. **Elytra.** Moderately convex, subovate, widest before middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides moderately rounded. Scutellar striole obsolete. Striae complete, shallow, finely punctate; interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 93): strongly arcuate, moderately widened in apical half; base moderately biconvex dorsally; middle moderately concave dorsally, slightly concave ventrally, with dorsal membranous area very wide and long; apex triangular, straight dorsally, slightly concave ventrally, with extreme tip wide and long. Dorsal view: moderately wide, symmetrical (ostium of membranous area dorsal); apex straight; basal orifice wide, closed anteriorly, moderately distant from membranous area. Parameres with five or seven apical setae.

**Material examined.** 15 specimens (AMNZ, BMNH, JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 138). South Island: FD, OL, WD.

**Ecology.** Lowland (hills), montane, subalpine. Endogean. Wet forests (beech). Shaded ground. Nocturnal; hides during the day under well-embedded logs.

**Biology.** Seasonality: December–March. Teneral: December (FD). Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

**Dispersal power.** Subapterous (incapable of flight). Fast runner.

**Collecting techniques.** Lifting logs; pitfall trapping.



**References.** Larochelle and Larivière 2001: 75 (as *Zolus ocularius*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 45, 118 (as *Ooapterus ocularius*; taxonomy), 2016: 21 (as *Ooapterus ocularius*; list).

***Ooapterus marrineri* Broun, 1909**

Fig. 48, 94, 132

*Ooapterus marrineri* Broun, 1909: 88. Type locality: Campbell Island [CA].

*Ooapterus elongellus* Broun, 1909: 89. Type locality: Campbell Island [CA]. Synonymized by Darlington 1964: 336.

*Pseudooapterus marrineri*: Csiki 1928: 225.

*Pseudooapterus elongellus*: Csiki 1928: 225.

*Ooapterus marrineri*: Johns 1974: 297.

**Description.** Body length 4.9–5.4 mm. Head, pronotum, elytra, and abdomen mostly reddish brown (forebody slightly paler); abdomen yellow laterally and apically; lateral margins and suture of elytra reddish; antennae, palpi, and legs reddish. Microsculpture strong, isodiametric on head, moderately transverse on pronotum and elytra. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora strongly inflated (about two-thirds as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, much longer than ligula. **Thorax.** Pronotum moderately convex, impunctate, wrinkled across base, slightly transverse, moderately cordate, widest before middle; apex truncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves shallow, very long (about two-thirds as long as pronotum); two setiferous punctures on each side; posterolateral angles obtuse; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, impunctate, moderately deep and wide, rounded, not prolonged forward, simple; posterior bead absent; base subtruncate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Moderately convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders moderately rounded. Sides strongly rounded. Scutellar striole obsolete. Striae complete, shallow, impunctate or finely punctate; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5 or 6. Subapical seta present. Intervals depressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical and two medial ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 94): moderately arcuate, narrowed in apical half; base strongly biconvex dorsally; middle strongly sinuate dorsally, moderately concave ventrally, with dorsal membranous area moderately wide and long; apex subtriangular, moderately concave dorsally, slightly concave ventrally, with extreme tip wide and long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with two or three apical setae.

**Material examined.** 201 specimens (AMNZ, CMNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 132). Subantarctic Islands: CA.

**Ecology.** Lowland, montane, subalpine, alpine. Epigeal. Supralittoral zone; peaty scrublands; tussock swards; fellfields; mollymawk and penguin colonies. Open or shaded ground. Nocturnal; hides during the day under stones, in leaf litter, under pieces of wood, in/under tussock clumps and moss, and under mat plants. Gregarious.

**Biology.** Seasonality: September–January, May, August. Teneral: December–January. Predacious (based on mouthpart morphology). Occasionally infested with mites.

**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting techniques.** Lifting stones and pieces of wood; sifting leaf litter and moss; inspecting vegetation clumps.

**References.** Larochelle and Larivière 2001: 75 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 21 (list).

### ***Oopterus anglemensis* new species**

Fig. 49, 95, 120

Holotype: male (NZAC) labeled: “[NEW ZEALAND SI] Mt. [= Mount] Anglem, 3000’ Stewart Island (typed) / 28.I.62 G. Kuschel (typed) / [male symbol] / HOLOTYPE [male symbol] *Oopterus anglemensis* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: two females (AMNZ, NZAC) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 6.0–6.5 mm. Head, pronotum, elytra, and abdomen mostly black; base of pronotum reddish; lateral margins and suture of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and legs reddish. Microsculpture strong, isodiametric on head, very transverse (with microlines) on pronotum and elytra. Iridescence absent on head, very strong on pronotum and elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum moderately convex, impunctate, wrinkled discally, strongly transverse and cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, strongly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles subrectangular; posterolateral carinae absent; laterobasal foveae ill-defined, impunctate, shallow, very wide, prolonged forward, double; posterior bead absent; base subtruncate, much narrower than pronotal apex, slightly narrower than elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, subovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides moderately rounded. Scutellar striole obsolete. Striae complete, shallow, finely punctate; stria 3 with four or five setiferous punctures. Recurrent stria long, blunt, directed apically toward stria 5. Subapical seta present. Intervals subdepressed. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 95): moderately arcuate, not widened in apical half; base moderately biconvex dorsally; middle subparallel, almost straight dorsally, slightly concave ventrally, with dorsal membranous area moderately wide and very long; apex subtriangular, slightly biconcave dorsally, slightly concave ventrally, with extreme tip narrow and long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with four or five apical setae.

**Material examined.** 48 specimens (AMNZ, CMNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 120). Stewart Island: Freds Camp. Freshwater. Mount Anglem. Oban. Ocean Beach. Pegasus Creek. Port Pegasus. Port William. Table Hill. Twilight Bay.

**Ecology.** Lowland, montane, subalpine, alpine. Epigean. Wet forests (broadleaf, podocarp). Shaded ground. Nocturnal; hides during the day under logs, as well as in moss and leaf litter. Gregarious.

**Biology.** Seasonality: January–February. Teneral: February. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Lifting logs; sifting moss and leaf litter.

**Remarks.** This species is named after the type locality Mount Anglem (Stewart Island) and the Latin suffix *-ensis*, denoting a place, locality, or country. *Oopterus anglemensis* is morphologically close to *O. nanus*. In addition to diagnostic characters of the male genitalia, *O. anglemensis* has the following distinguishing features: body length 6.0–6.5 mm; pronotum strongly cordate, laterobasal foveae ill-defined; legs moderately long; elytra moderately convex, subovate, sides moderately rounded. The two species are allopatric: *O. anglemensis* is restricted to Stewart Island, while *O. nanus* occurs in southern areas of the South Island (CO, OL).

### ***Oopterus nanus* new species**

Fig. 50, 96, 136

Holotype: male (NZAC) labeled: “[NEW ZEALAND CO] Old Man Ra CO 1615m 26 Feb 74 J.S. Dugdale (hand-written) / ex *Celmisia haastii* (hand-written) / HOLOTYPE [male symbol] *Oopterus nanus* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: two females (LUNZ, NZAC) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 3.9–5.2 mm. Head, pronotum, elytra, and abdomen mostly black; abdomen reddish piceous laterally and apically; antennae, palpi, and legs reddish. Microsculpture strong and isodiametric on head, obsolete and moderately transverse on pronotum, feeble and isodiametric on elytra. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum moderately convex, impunctate, wrinkled discally, strongly transverse, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, not sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles subrectangular; posterolateral carinae absent; laterobasal foveae well defined, impunctate, shallow, very wide, rectangular, not prolonged forward, double; posterior bead absent; base emarginate, much narrower than pronotal apex, slightly narrower than elytral base. **Legs.** Short. **Elytra.** Subdepressed, oblong, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides subparallel. Scutellar striole obsolete. Striae complete, shallow, finely punctate; stria 3 with four unusually large setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5, 6 or 7. Subapical seta present. Intervals depressed. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 96): strongly arcuate, narrowed in apical half; base moderately biconvex dorsally; middle strongly convex dorsally, slightly convex ventrally, with dorsal membranous area very wide and moderately long; apex slender, strongly concave dorsally, slightly concave ventrally, with extreme tip wide, unusually long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with four to six apical setae.

**Material examined.** 196 specimens (AMNZ, JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 136). South Island: CO, OL.

**Ecology.** Alpine. Epigeal. Fellfields; tussock grasslands. Open ground. Nocturnal; hides during the day under stones and in mat plant litter. Gregarious.

**Biology.** Seasonality: November–April. Teneral: January–February. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting techniques.** Lifting stones; sifting plant litter.

**Remarks.** The species name is based on the Latin noun *nanus*, denoting a dwarf, referring to the small size of the beetle. *Oopterus nanus* is morphologically close to *O. anglemensis*. In addition to diagnostic characters of the male genitalia, *O. nanus* has the following distinguishing features: body length 3.9–5.2 mm; pronotum not cordate, laterobasal foveae well defined, rectangular; elytra subdepressed, oblong, sides subparallel. The two species are allopatric: *O. nanus* occurs in southern areas of the South Island (CO, OL), while *O. anglemensis* is restricted to Stewart Island.

### ***Oopterus garnerae* new species**

Fig. 51, 97, 128

Holotype: male (NZAC) labeled: “[NEW ZEALAND FD] Mt. [= Mount] Barber 1350m Wilmot Pass (hand-written) / Wilmot Pass 300m-630m (typed) / Manapouri Exp. Jan 70 A.C. Eyles (typed) / Mats (typed) 70/88 (hand-written) / [male symbol] / HOLOTYPE [male symbol] *Oopterus garnerae* Larochelle & Larivière, 2017 (red label; typed).” Paratype: one male (NZAC) from Lake Hauroko (FD), bearing a blue paratype label.

**Description.** Body length 4.1–6.2 mm. Head, pronotum, elytra, and abdomen mostly dark reddish (forebody slightly paler); disc of head darker; lateral margins, suture, and apex of elytra reddish; abdomen yellow laterally and apically; antennae, palpi, and legs reddish; antennal segments 1+2 pale yellow; femora mostly pale yellow, reddish basally. Microsculpture strong and isodiametric on head, moderately transverse on pronotum, strong and very transverse (with microlines) on elytra. Iridescence absent on head and pronotum, very strong on elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long; segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum strongly convex, impunctate, unwrinkled, strongly transverse and cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, strongly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles subrectangular; posterolateral carinae blunt, short (shorter than adjoining foveae); laterobasal foveae well defined, impunctate, moderately deep, very wide, oblong, prolonged forward, double; posterior bead absent; base emarginate, much narrower than pronotal apex, slightly narrower than elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides strongly rounded. Scutellar striole obsolete. Striae shallow, finely punctate; stria 1 complete; striae 2–7 incomplete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5, 6 or 7. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with

four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 97): moderately arcuate, narrowed in apical half; base slightly convex dorsally; middle angulate anteriorly and slightly convex dorsally, slightly convex ventrally, with dorsal membranous area moderately wide and long; apex triangular, straight dorsally, slightly concave ventrally, with extreme tip narrow and long. Dorsal view: narrow, symmetrical (ostium of membranous area dorsal); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with four to six apical setae.

**Material examined.** 38 specimens (JNNZ, NZAC).

**Geographic distribution** (Fig. 128). South Island: FD, SL.

**Ecology.** Montane, subalpine, alpine. Epigeal. Wet forests (beech); alpine grasslands. Shaded or open ground. Nocturnal; hides during the day in moss and tussock litter.

**Biology.** Seasonality: October–February, April–June. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Sifting moss and tussock litter; pitfall trapping.

**Remarks.** This species is named after our friend and colleague Beulah Garner (The Natural History Museum, London) for facilitating our study of the type material of Carabidae, especially the Broun Collection. *Oopterus garnerae* is morphologically close to *O. nunni*. In addition to diagnostic characters of the male genitalia, *O. garnerae* has the following distinguishing features: head, pronotum, elytra, and abdomen mostly dark reddish; tempora moderately inflated (about half as long as eyes); pronotum strongly convex and cordate, posterolateral carinae blunt and short; elytra strongly convex. The two species are allopatric: *O. garnerae* occurs in the southwest of the South Island (FD, SL), while *O. nunni* is found in the southeast of the South Island (DN, SL).

### ***Oopterus nunni* new species**

Fig. 52, 98, 137

Holotype: male (NZAC) labeled: “NEW ZEALAND SL Catlins SFP [= Catlins State Forest Park], Tawanui Campground 100m 12.I.1999 Larochelle and Larivière (typed) / Wet beech forest – along stream banks – in leaf litter. (typed) / [male symbol] / HOLOTYPE [male symbol] *Oopterus nunni* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one female (NZAC) and one male (MONZ) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 4.9–5.8 mm. Head, pronotum, elytra, and abdomen mostly piceous black; disc of head paler; lateral margins, suture, and apex of elytra reddish yellow; abdomen reddish piceous, yellow laterally and apically; antennae, palpi, and legs reddish; femora pale yellow. Microsculpture strong and isodiametric on head, obsolete and very transverse (with microlines) on pronotum and elytra. Iridescence absent on head, very strong on pronotum and elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora slightly inflated (about one third as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, much longer than ligula. **Thorax.** Pronotum moderately convex, impunctate, wrinkled discally, strongly transverse, widest before middle; apex emarginate; anterolateral angles moderately developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles subrectangular; posterolateral carinae absent; laterobasal foveae well defined, impunctate, moderately deep, very wide, oblong, not



prolonged forward, double; posterior bead absent; base emarginate, much narrower than pronotal apex, slightly narrower than elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders rounded. Sides strongly rounded. Scutellar striole obsolete. Striae incomplete; striae 1–4 shallow, finely punctate; striae 5–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 98): moderately arcuate, not widened in apical half; base strongly biconvex dorsally; middle slightly concave dorsally, moderately convex ventrally, with dorsal membranous area moderately wide and long; apex subtriangular, slightly concave dorsally, moderately concave ventrally, with extreme tip slender and curved downward. Dorsal view: narrow, symmetrical (ostium of membranous area dorsal); apex straight; basal orifice narrow, closed anteriorly, moderately distant from membranous area. Parameres with four to six apical setae.

**Material examined.** 75 specimens (JNNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 137). South Island: DN, SL.

**Ecology.** Lowland. Endogean. Wet forests (beech, broadleaf, podocarp), along streams. Shaded ground. Nocturnal; hides during the day in leaf litter, under well-embedded fallen branches, logs, and stones. Gregarious.

**Biology.** Seasonality: December–March, July. Teneral: February (DN). Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Treading leaf litter into water; lifting fallen branches, logs, and stones; pitfall trapping.

**Remarks.** This species is named after our friend and colleague John Nunn (Dunedin) for his contribution to the building of important reference collections of New Zealand carabids. *Oopterus nunni* is morphologically close to *O. garnerae*. In addition to diagnostic characters of the male genitalia, *O. nunni* has the following distinguishing features: head, pronotum, elytra, and abdomen mostly piceous black; tempora slightly inflated (about one third as long as eyes); pronotum moderately convex, not cordate, posterolateral carinae absent; elytra moderately convex. The two species are allopatric: *O. nunni* is found in the southeast of the South Island (DN, SL), while *O. garnerae* occurs in the southwest of the South Island (FD, SL).

### Subtribe Merizodina

**Description** (New Zealand). Aedeagus with basal orifice open anteriorly; basal bulb with lateral lobes unequal in length.

**References.** Sloane 1920: 139 (Merizodini, new tribe); Jeannel 1940: 93 (as Merizodini); Roig-Juñent and Cicchino 2001: 651–670 (as Merizodina; phylogeny, key to subtribes); Lorenz 2005: 201 (as Merizodini, a junior synonym of Zolina).

**Remarks.** Three New Zealand genera (*Synteratus* Broun, *Pseudoopterus* Csiki, *Maungazolus* new genus) share the genitalic characters assigned to Merizodina by Jeannel (1940) and Roig-Juñent and Cicchino (2001): aedeagus with basal orifice open anteriorly; basal bulb with lateral lobes unequal in length. The genera *Synteratus* and *Pseudoopterus* (taxon previously synonymized with *Oopterus*) are

transferred from subtribe Zolina to subtribe Merizodina. The presence of the latter subtribe is confirmed here for New Zealand.

Genus *Synteratus* Broun, 1909

Fig. 53, 99, 153

*Synteratus* Broun, 1909: 84.

**Type species.** *Synteratus ovalis* Broun, 1909, by monotypy.

**Description.** Body length 3.0–3.5 mm; ovate, not narrowed around bases of pronotum and elytra (as opposed to other zoline genera). Color mostly dark. Metallic luster present. Dorsal surface mostly glabrous. **Head.** Narrow. Mandibles moderately long. Labrum slightly emarginate anteriorly. Eyes subdepressed; a single setiferous puncture on inner side of each eye (posteriorly). Antennae submoniliform. Tempora inflated. Mentum tooth entire (truncate apically). Ligula with six setae (two medial setae fused, four lateral setae free). **Thorax.** Pronotum transverse, trapezoidal; lateral grooves absent; setiferous punctures absent on each side; posterolateral carinae absent; base wider than apex. Scutellum invisible, concealed under pronotal base. **Legs.** Short. Segments 1+2 of male protarsi with a single row of ventral scales. **Elytra.** Oblong. Basal margin complete, reaching about scutellar striole. Shoulders well developed, angular. Scutellar setiferous pore present, inserted at junction of striae 1+2. Scutellar striole present. Striae complete, consisting of lines; two or three discal setiferous punctures in stria 3; recurrent stria directed apically toward stria 5. Subapical seta present. Apical seta present. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view: dorsal membranous area narrow. Dorsal view (Fig. 18): moderately wide; basal orifice wide, open anteriorly, moderately distant from membranous area; lateral lobes of basal bulb widely distant (moderately distant in *Maungazolus* and *Pseudopteris*). Parameres with two or three apical setae. Right paramere curved, very long, narrow, untwisted medially.

**References.** Laroche and Larivière 2001: 77–78 (catalogue), 2007: 45 (description, ecology, geographic distribution, references), 2016: 21 (list).

**Remarks.** The genus *Synteratus* is transferred from the subtribe Zolina to the subtribe Merizodina on the basis of the aedeagus with basal orifice open anteriorly and basal bulb with lateral lobes unequal in length. The morphological characters distinguishing this genus from *Pseudopteris* and *Maungazolus* are: body ovate, not narrowed around bases of pronotum and elytra; eyes subdepressed; pronotum trapezoidal, without lateral setiferous punctures; scutellum invisible, concealed under pronotal base; aedeagus (in dorsal view) with basal lobes widely open behind.

*Synteratus ovalis* Broun, 1909

Fig. 53, 99, 153

*Synteratus ovalis* Broun, 1909: 85. Type locality: The Snares [SN].

**Description.** Body length 3.0–3.5 mm. Head reddish; pronotum and elytra mostly reddish piceous; lateral margins, suture and apex of elytra reddish; abdomen mostly reddish piceous, reddish laterally and apically; antennae, palpi, and legs reddish; femora mostly pale yellow, reddish basally. Microsculpture strong and isodiametric on head, feeble and isodiametric on pronotum, moderately transverse on elytra. Iridescence absent on head and pronotum, moderately strong on elytra. Very shiny, with metallic luster (aeneous) on head, pronotum, and elytra. **Head.** Labrum moderately transverse, slightly emarginate. Antennae submoniliform, short: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes subdepressed; a single setiferous puncture on

inner side of each eye (posteriorly). Tempora slightly inflated (about one third as long as eyes). Mentum: medial tooth entire, truncate apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum moderately convex, finely punctate across base, wrinkled discally, strongly transverse, subtriangular, widest basally; apex subtruncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; setiferous punctures absent on each side; posterolateral angles obtusely rounded; laterobasal foveae ill-defined, finely punctate, shallow, very wide, not prolonged forward, double; posterior bead absent; base emarginate, much wider than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Strongly convex, oblong, widest basally. Basal margin complete, reaching about scutellar striole. Shoulders angular. Sides strongly rounded. Scutellar striole present. Striae complete, shallow, finely punctate; stria 3 with two or three setiferous punctures. Recurrent stria long, blunt. Intervals depressed. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 99): very strongly arcuate, narrowed in apical half; base strongly biconvex dorsally; middle strongly convex dorsally, slightly convex ventrally, with dorsal membranous area narrow anteriorly, moderately wide posteriorly, very long; apex slender, strongly convex dorsally, strongly concave ventrally, with extreme tip slender and curved downward. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to right); basal orifice wide, open anteriorly, moderately distant from membranous area. Parameres with two or three apical setae.

**Material examined.** 187 specimens (AMNZ, CMNZ, JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 153). Subantarctic Islands: SN.

**Ecology.** Lowland. Endogean. Wet peaty forests (*Olearia*). Shaded ground. Nocturnal; hides during the day in leaf litter, under fallen branches and logs, and in rotten pieces of wood. Gregarious.

**Biology.** Seasonality: September–October, December–March. Teneral: December, March, July. Predacious (based on mouthpart morphology). Occasionally infested with mites; regularly infested with fungi (Laboulbeniales).

**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting techniques.** Sifting leaf litter; lifting branches and logs; breaking rotten branches.

**References.** Larochelle and Larivière 2001: 77–78 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 115 (taxonomy), 2016: 21 (list).

Genus *Pseudopterus* Csiki, 1928, reinstated  
Fig. 54–57, 100–103, 149–152

*Pseudopterus* Csiki, 1928: 225. Synonymized with *Oopterus* Guérin-Méneville, 1841 by Jeannel (1940: 92). **Reinstated as full genus**

**Type species.** *Oopterus plicaticollis* Blanchard, 1843, designated by Larochelle & Larivière (2001: 73).

**Description.** Body length 3.7–5.7 mm; not ovate, narrowed around bases of pronotum and elytra. Color dark or pale. Metallic luster present or absent. Dorsal surface mostly glabrous. **Head.** Narrow or moderately wide. Mandibles moderately long. Labrum slightly emarginate. Eyes convex; two setiferous punctures on inner side of each eye (a single puncture posteriorly in *P. otiraensis*). Antennae submoniliform. Tempora inflated. Mentum tooth bifid (entire in other zoline genera). Mentum-submentum suture present as in other zoline genera (absent in *P. plicaticollis*). Ligula with two fused setae (with six setae in *P. plicaticollis*; two medial setae fused, four lateral setae free). **Thorax.** Pronotum cordate;

lateral grooves absent (present in *P. latipennis*); two setiferous punctures on each side; posterolateral carinae present, absent, or obsolete; base narrower than apex or about as wide as apex. Scutellum visible, inserted entirely between elytral bases. **Legs.** Short or moderately long. Segments 1+2 of male protarsi with two rows of ventral scales (with a single row in other zoline genera). **Elytra.** Ovate or subovate. Basal margin complete, reaching about scutellum. Shoulders poorly or well developed, rounded. Scutellar setiferous pore present, inserted at junction of striae 1+2. Scutellar striole present or absent. Striae complete or incomplete, consisting of lines (replaced by rows of coarse punctures in *P. otiraensis*). Three discal setiferous punctures in stria or row 3; recurrent stria directed apically toward stria or row 5 or 7. Subapical seta present. Apical seta present. Sutural apices acute, obtuse, or rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae (two additional medial ambulatory setae in *P. plicaticollis*); female with four apical ambulatory setae. **Aedeagus.** Lateral view: dorsal membranous area moderately wide. Dorsal view (Fig. 16): moderately wide; basal orifice wide, open anteriorly, moderately distant from membranous area; lateral lobes of basal bulb moderately distant (as in *Maungazolus*). Parameres with three or four apical setae. Right paramere curved, very long, narrow, untwisted medially.

**References.** Csiki 1928: 225 (taxonomy); Jeannel 1940: 92 (taxonomy).

**Remarks.** The genus *Pseudopterus* Csiki, 1928 was synonymized with *Oopterus* by Jeannel (1940) without justification. This taxon is resurrected from synonymy here on the basis of the bifid mentum tooth, the two ventral rows of scales on segments 1+2 of the male protarsi, and the aedeagus with its dorsal membranous area moderately wide and moderately distant from the basal bulb. The genus *Pseudopterus* now includes two newly described species as well as two species previously described in *Oopterus*.

### Key to species of *Pseudopterus*

1. A single setiferous puncture on inner side of each eye (posteriorly); elytral striae replaced by rows of coarse punctures; microsculpture absent on elytra; Fig. 54. [Body stout, length 3.7–4.6 mm; western South Island (BR, WD)] ..... ***Pseudopterus otiraensis* new species**
- Two setiferous punctures on inner side of each eye; elytral striae present, consisting of lines; microsculpture present on elytra ..... **2**
- 2(1). Body stout; elytra mostly dark brown, without reddish apical spots; pronotum coarsely wrinkled discally; striae very deep; mentum–submentum suture absent; ligula (Fig. 6) with six apical setae (two medial setae fused, four lateral setae free); Fig. 55. [Body length 4.1–4.5 mm; Subantarctic Islands (AU)] ..... ***Pseudopterus plicaticollis* (Blanchard)**
- Body slender; elytra mostly piceous black, with two reddish apical spots; pronotum finely wrinkled discally; striae shallow; mentum–submentum suture present; ligula (Fig. 4) with two fused apical setae; Fig. 56–57. [Body length 4.5–5.7 mm; South Island] ..... **3**
- 3(2). Elytra moderately convex, with two large reddish apical spots, microsculpture present on entire surface; pronotum with lateral grooves moderately deep, very long, posterolateral angles acute, projected laterally, posterolateral carinae blunt, very long (about as long as adjoining foveae); Fig. 56. [Body length 4.5–5.5 mm; western and southern South Island (NN to OL–CO)] ..... ***Pseudopterus latipennis* (Broun)**
- Elytra strongly convex, with two small reddish apical spots, microsculpture present in apical half only; pronotum without lateral grooves, posterolateral angles rectangular, posterolateral carinae absent; Fig. 57. [Body length 5.3–5.7 mm; southwestern South Island (FD)] ..... ***Pseudopterus fiordlandensis* new species**

***Pseudopterus otiraensis* new species**

Fig. 54, 100, 151

Holotype: male (NZAC) labeled: “NEW ZEALAND WD Arthur’s Pass NP, Kellys Creek x Otira River [= Kelly Creek near Otira River Junction] 4248S 17134E 350m 5.III. 2009 Larochelle and Larivière (typed) / Floodplain Podoc.-brleaf for. [= Podocarp-broadleaf forest] (Fuchsia-Horopito dom. [= dominant]): wet clayish soil. Under large, deeply embedded stones. (typed) / HOLOTYPE [male symbol] *Pseudopterus otiraensis* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one female (NZAC) and one male (AMNZ) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 3.7–4.6 mm. Head and pronotum reddish, dark brown medially; elytra and abdomen dark brown; lateral margins and apex of elytra widely reddish; abdomen reddish laterally and apically; antennae, palpi, and legs reddish; antennal segments 1+2 and femora pale yellowish. Microsculpture absent. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, shallow, subparallel. Eyes slightly convex; a single setiferous puncture on inner side of each eye (posteriorly). Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth bifid, moderately shorter than lateral lobes. Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum strongly convex, coarsely punctate across base, wrinkled discally, strongly transverse, slightly cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, moderately sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles acute, projected laterally; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, coarsely punctate, very deep and wide, square, not prolonged forward, simple; posterior bead absent; base emarginate, about as wide as pronotal apex and elytral base. **Legs.** Short. **Elytra.** Strongly convex, ovate, widest about middle. Shoulders obtuse. Sides strongly rounded. Scutellar striole present. Striae replaced by rows of coarse punctures, deep; row 1 complete; rows 2–7 obsolete apically; row 3 with three setiferous punctures. Recurrent stria long, blunt, directed apically toward row 7. Intervals subdepressed. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 100): moderately arcuate, slightly widened in apical half; base moderately convex dorsally; middle slightly convex dorsally, rather straight ventrally, with dorsal membranous area moderately wide, very long; apex subtriangular, almost straight dorsally, slightly concave ventrally, with extreme tip wide and long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice wide, open anteriorly, moderately distant from membranous area. Parameres with three apical setae.

**Material examined.** 11 specimens (AMNZ, CMNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 151). South Island: BR–Greymouth. WD–Arthur’s Pass National Park (Kelly Creek; Kelly Creek near Otira River Junction). Fox Glacier.

**Ecology.** Lowland, montane. Endogean. Forests (broadleaf, podocarp) and scrublands. Shaded ground. Nocturnal; hides during the day under well-embedded stones. Gregarious.

**Biology.** Seasonality: November–January, March, May. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting techniques.** Lifting stones; pitfall trapping.

**Remarks.** This species is named after the type locality “Kelly Creek near Otira River Junction” (WD) and the Latin suffix *-ensis*, denoting a place, locality, or country. In addition to diagnostic characters of the male genitalia, *Pseudopterus otiraensis* has the following distinguishing features: a single setiferous



ous puncture on inner side of each eye (posteriorly); elytra without microsculpture, striae replaced by rows of coarse punctures. This species occurs in western areas of the South Island (BR, WD).

***Pseudopterus plicaticollis* (Blanchard, 1843), reinstated**

Fig. 55, 101, 152

*Oopterus plicaticollis* Blanchard, 1843: pl. 2, fig. 15 (redescribed in 1853: 44). Type locality: Auckland Islands [AU].

*Oopterus laticollis* Kirsch, in Kiesenwetter and Kirsch 1877: 159. Type locality: Auckland Islands [AU].  
Synonymized by Gourlay 1950: 181.

*Pseudopterus plicaticollis*: Csiki 1928: 225. **Combination reinstated**

*Pseudopterus laticollis*: Csiki 1928: 225.

*Oopterus plicaticollis*: Hudson 1934: 177.

*Oopterus aucklandicus* Brookes, 1951: 23. Type locality: Mount Raynal (Flat Topped Mountain), Auckland Islands [AU]. Synonymized by Johns 1974: 298.

**Description.** Body length 4.1–4.5 mm. Head, pronotum, elytra, and abdomen mostly dark brown; margins of pronotum reddish; lateral margins, suture, and apex of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and legs reddish; femora pale yellow. Microsculpture strong, isodiametric. Iridescence absent. Very shiny, with metallic luster (aeneous) on head, pronotum, and elytra. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth bifid, moderately shorter than lateral lobes. Mentum-submentum suture absent (present in other zoline taxa). Ligula with six setae (two medial setae fused, four lateral setae free; as opposed to two fused setae only in other *Pseudopterus* species). Paraglossae membranous, prominent, about as long as ligula. **Thorax.** Pronotum strongly convex, impunctate, coarsely wrinkled discally (finely wrinkled in other *Pseudopterus* species), strongly transverse, slightly cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles subrectangular; posterolateral carinae obsolete; laterobasal foveae well defined, impunctate, moderately deep, very wide, oblong, prolonged forward, simple; posterior bead absent; base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Moderately convex, ovate, widest about middle. Shoulders oblique. Sides strongly rounded. Scutellar striole absent. Striae complete, deep, impunctate or very finely punctate; stria 3 with three large setiferous punctures (small punctures in other *Pseudopterus* species). Recurrent stria long, blunt, directed apically toward stria 5 or 7. Intervals slightly convex. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical and two medial ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 101): moderately arcuate, moderately widened in apical half; base strongly convex dorsally; middle moderately sinuate dorsally, strongly convex ventrally, with dorsal membranous area moderately wide, very long; apex subtriangular, slightly convex dorsally, moderately concave ventrally, with extreme tip narrow and long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to right); apex deflected to the left; basal orifice wide, open anteriorly, moderately distant from membranous area. Parameres with three or four apical setae.

**Material examined.** 173 specimens (CMNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 152). Subantarctic Islands: AU.

**Ecology.** Lowland, montane, subalpine, alpine. Epigeal. Supralittoral zone; peaty wet forests (*Olearia*, *Metrosideros*), tussock grassfields; herbfields; fellfields. Open ground. Nocturnal; hides during the day in leaf litter, under logs and stones, and in peat. Gregarious.

**Biology.** Seasonality: November, January–February, April, June, August. Teneral: February. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting techniques.** Sifting leaf litter; lifting logs and stones; pitfall trapping; inspecting peat.

**References.** Larochelle and Larivière 2001: 76 (as *Oopterus plicaticollis*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 21 (as *Oopterus plicaticollis*; list).

**Remark.** *Pseudoopterus plicaticollis* is the only New Zealand zoline species lacking a mentum–submentum suture.

### ***Pseudoopterus latipennis* (Broun, 1903), reinstated**

Fig. 56, 102, 150

*Oöpterus latipennis* Broun, 1903: 609. Holotype: male (BMNH) labeled: “Type (circular red-bordered label; typed) / 2615. (hand-written) / [NN] Westport. (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Oöpterus latipennis* (hand-written).”

*Oöpterus probus* Broun, 1903: 610. Holotype: male (BMNH) labeled: “Type (circular red-bordered label; typed) / 2616. [male symbol] (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [NN] Westport. 1902. (hand-written) / *Oöpterus probus*. [male symbol] (hand-written).” **New synonym**

*Oöpterus latifossus* Broun, 1917: 365. Holotype: male (BMNH) labeled: “Type (circular red-bordered label; typed) / 3806. [male symbol] (hand-written) / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [MC] Moa Basin[s] 20.10.1913. (hand-written) / *Oöpterus latifossus*. [male symbol] (hand-written).” **New synonym**

*Pseudoopterus latipennis*: Csiki 1928: 225. **Combination reinstated**

*Pseudoopterus probus*: Csiki 1928: 225.

*Pseudoopterus latifossus*: Csiki 1928: 225.

*Oopterus latipennis*: Hudson 1934: 177.

*Oopterus probus*: Hudson 1934: 177.

*Oopterus latifossus*: Hudson 1934: 177.

**Description.** Body length 4.5–5.5 mm. Head, pronotum, elytra, and abdomen mostly piceous black; apex and base of head reddish; base of pronotum reddish; lateral margins and suture of elytra reddish; apex of elytra with two large reddish apical spots; abdomen yellow laterally and apically; antennae, palpi, and legs testaceous; base of femora reddish. Microsculpture absent on head and pronotum, strong and very transverse (with microlines) on entire elytra. Iridescence absent on head and pronotum, very strong on elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about two-thirds as long as eyes). Mentum: medial tooth bifid, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum moderately convex, coarsely punctate across base, wrinkled discally, strongly transverse and cordate, widest before middle; apex emarginate; anterolateral angles well developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, strongly sinuate posteriorly; lateral grooves moderately deep, very long (as long as pronotum); two setiferous punctures on each side; posterolateral angles acute, projected laterally; posterolateral carinae blunt, very long (about as long as adjoining foveae); laterobasal foveae well defined, coarsely punctate, very deep and wide, oblong, prolonged forward, simple; posterior bead absent; base emarginate, much narrower than pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Moderately convex, subovate, widest about middle. Shoulders moderately rounded. Sides strongly rounded. Scu-

tellar striole absent. Striae shallow, finely punctate; stria 1 complete; striae 2–7 incomplete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 7. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 102): moderately arcuate, slightly widened in apical half; base moderately convex dorsally; middle angulate anteriorly and slightly convex dorsally, moderately concave ventrally, with dorsal membranous area moderately wide, very long; apex subtriangular, almost straight dorsally, straight ventrally, with extreme tip wide and long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice wide, open anteriorly, moderately distant from membranous area. Parameres with three or four apical setae.

**Material examined.** 82 specimens (AMNZ, BMNH, CMNZ, JNNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 150). South Island: BR, CO, MC, NN, OL, WD.

**Ecology.** Lowland, montane, subalpine, alpine. Epigeal-arboreal. Forests (beech, podocarp, broadleaf) and scrublands, along streams and seepages; herbfields. Shaded or open ground. Nocturnal; active at night on moss and trees; hides during the day under stones and in moss. Gregarious.

**Biology.** Seasonality: October–March, May. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner. Occasional climber on trees.

**Collecting techniques.** Lifting stones; sifting moss.

**References.** Laroche and Larivière 2001: 74–76 (as *Oopterus latipennis*, *O. latifossus*, *O. probus*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 20–21 (as *Oopterus latipennis*, *O. latifossus*, *O. probus*; list).

**Remark.** Examination of the types of *Oopterus probus* and *O. latifossus* revealed them to be conspecific with *Pseudoopterus latipennis*.

### ***Pseudoopterus fiordlandensis* new species**

Fig. 57, 103, 149

Holotype: male (NZAC) labeled: “NEW ZEALAND FD Takahe Valley Murchison Mts [= Mountains]11 Dec 1972 A.C. Eyles (typed) / Litter (typed) 72/271 (hand-written) / JOHN NUNN (typed) / [male symbol] / HOLOTYPE [male symbol] *Pseudoopterus fiordlandensis* Laroche & Larivière, 2017 (red label; typed).” Paratype: one female (NZAC) from the same locality as the holotype, bearing a blue paratype label.

**Description.** Body length 5.3–5.7 mm. Head, pronotum, elytra, and abdomen mostly piceous black; base of pronotum reddish; lateral margins and suture of elytra reddish; extreme apex of elytra with two small reddish apical spots; abdomen yellow laterally and apically; antennae, palpi, and legs reddish; femora pale yellow. Microsculpture absent on head, pronotum, and in basal half of elytra, feeble and very transverse (with microlines) in apical half of elytra. Iridescence absent on head, pronotum, and in basal half of elytra, feeble in apical half of elytra. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long; segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about as long as two-thirds of eyes). Mentum: medial tooth bifid, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum moderately convex, coarsely punctate across base, wrinkled discally, strongly transverse, moderately

cordate, widest before middle; apex emarginate; anterolateral angles well developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles rectangular; posterolateral carinae absent; laterobasal foveae well defined, coarsely punctate, very deep and wide, oblong, prolonged forward, simple; posterior bead absent; base emarginate, much narrower than pronotal apex and elytral base. **Legs.** Moderately long. **Elytra.** Strongly convex, subovate, widest about middle. Shoulders moderately rounded. Sides strongly rounded. Scutellar striole present. Striae shallow, finely punctate; striae 1–7 complete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 7. Intervals depressed. Sutural apices acute. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 103): moderately arcuate, slightly widened in apical half; base moderately convex dorsally; middle moderately convex dorsally, strongly concave ventrally, with dorsal membranous area moderately wide and long; apex subtriangular, slightly convex dorsally, straight ventrally, with extreme tip wide and long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice wide, open anteriorly, moderately distant from membranous area. Parameres not seen (lost during dissection).

**Material examined.** 4 specimens (JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 149). South Island: FD—Fiordland National Park (Murchison Mountains; Murchison Mountains, Takahe Valley).

**Ecology.** Montane. Epigeal. Forests (beech). Shaded ground. Nocturnal; hides during the day in leaf litter.

**Biology.** Seasonality: December. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Sifting leaf litter; pitfall trapping.

**Remarks.** The name of this species is based on the geographic region of Fiordland where the beetle occurs, and the Latin suffix *-ensis*, denoting a place, locality, or country. *Pseudopterus fiordlandensis* is morphologically close to *P. latipennis*. In addition to diagnostic characters of the male genitalia, *P. fiordlandensis* has the following distinguishing features: pronotum lacking lateral grooves and posterolateral carinae, posterolateral angles rectangular; elytra strongly convex, microsculpture present in apical half only, striae 1–7 complete, extreme apex with two small reddish spots. The two species are allopatric: *P. fiordlandensis* is known only from the Fiordland region (South Island), while *P. latipennis* occurs both in western and southern areas of the South Island (NN to OL–CO).

Genus *Maungazolus*, new  
Fig. 58–65, 104–110, 112–119

**Type species.** *Oopterus pallidipes* Broun, 1893, by present designation.

**Description.** Body length 2.8–4.4 mm; not ovate, narrowed around bases of pronotum and elytra. Color dark or pale. Metallic luster absent (present in *M. septempunctatus*). Dorsal surface mostly glabrous. **Head.** Moderately wide. Mandibles moderately long. Labrum slightly emarginate anteriorly. Eyes convex; two setiferous punctures on inner side of each eye. Antennae submoniliform. Tempora inflated or not. Mentum tooth entire (acute, rounded, truncate, or slightly emarginate apically). Ligula with four setae (two medial setae fused, two lateral setae free). **Thorax.** Pronotum cordate; lateral grooves absent (present in *M. septempunctatus*); two setiferous punctures on each side; posterolateral carinae absent or obsolete; base narrower than apex. Scutellum visible, inserted entirely between elytral bases.



**Legs.** Short (moderately long in *M. priestleyensis*). Segments 1+2 of male protarsi with a single row of ventral scales. **Elytra.** Ovate or subovate. Basal margin incomplete (reaching about stria 3 or stria 4) or complete (reaching about scutellum). Shoulders poorly or well developed, rounded or obtuse. Scutellar setiferous pore present, inserted at junction of striae 1+2. Scutellar striole present or absent. Striae complete or incomplete, consisting of lines (replaced by rows of coarse punctures in *M. parvulus*); three discal setiferous punctures in stria or row 3 (four punctures in *M. pygmeatus*; seven punctures in *M. septempunctatus*); recurrent stria directed apically toward stria or row 5. Subapical seta present (absent in *M. pygmeatus*). Apical seta present. Sutural apices obtuse or rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae (with two additional medial ambulatory setae in *M. septempunctatus*); female with four apical ambulatory setae. **Aedeagus.** Lateral view: dorsal membranous area very wide (moderately wide or narrow in other zoline genera). Dorsal view (Fig. 17): very narrow (wide in other zoline genera, rarely moderately narrow in *Oofterus* (part)); basal orifice narrow, open anteriorly, very close to membranous area (distant from membranous area in other zoline genera, rarely moderately close); lateral lobes of basal bulb moderately distant. Parameres with two to five apical setae. Right paramere curved, very long, narrow, untwisted medially.

**Remarks.** The generic name is derived from the Maori noun *maunga*, mountain and *Zolus*, the type genus of the tribe Zolini. The morphological characters unifying species of *Maungazolus* are: mentum tooth entire (not bifid); segments 1+2 of male protarsi with a single row of ventral scales; aedeagus with the dorsal membranous area very wide and very close to the basal bulb. The new genus includes five newly described species as well as three species previously described in *Oofterus*.

### Key to species of *Maungazolus*

1. Elytra without subapical seta (Fig. 12), with four setiferous punctures in stria 3; Fig. 58. [Body length 3.0–4.2 mm; pronotum with laterobasal foveae very deep; South Island (BR to FD–SL)] ..... ***Maungazolus pygmeatus* (Broun)**
- Elytra with subapical seta (Fig. 11), with seven or three setiferous punctures in stria 3 or row 3 ..... **2**
- 2(1). Pronotum with sub-basal transverse impression consisting of a row of numerous punctures .. **3**
- Pronotum with sub-basal transverse impression consisting of two foveolae ..... **6**
- 3(2). Elytra with seven setiferous punctures in stria 3; forebody narrow in comparison to elytra; metallic luster present on head, pronotum, and elytra; Fig. 59. [Body length 3.1–4.4 mm; Stewart Island] ..... ***Maungazolus septempunctatus* new species**
- Elytra with three setiferous punctures in stria 3 or row 3; forebody wide in comparison to elytra; metallic luster absent ..... **4**
- 4(3). Pronotum with posterolateral angles subrectangular; elytra with basal margin complete, reaching about scutellum; Fig. 60. [Rather large, body length 4.0–4.3 mm; northwestern South Island (BR, Mount Dewar and Mount Priestley)] ..... ***Maungazolus priestleyensis* new species**
- Pronotum with posterolateral angles acute, projected laterally; elytra with basal margin incomplete, reaching about stria 4. [Smaller, body length 3.5 mm or less] ..... **5**
- 5(4). Antennae with segments 1+2 yellowish and segments 3–11 reddish; head yellowish, infuscated discally; pronotum and elytra yellowish, dark brown discally; elytral sides and apex widely pale yellowish; elytral striae replaced by rows of coarse punctures; mentum (Fig. 8) with medial tooth rounded apically; Fig. 61. [Body length 2.9–3.1 mm; northwestern South Island (BR, NN)] ..... ***Maungazolus parvulus* (Broun)**



- Antennae entirely pale reddish; head, pronotum, and elytra mostly piceous black; elytral sides and apex narrowly pale reddish; elytral striae present, consisting of lines; mentum (Fig. 7) with medial tooth acute apically; Fig. 62. [Body length 2.8–3.5 mm; southwestern South Island (FD)] ..... ***Maungazolus acutus* new species**
- 6(2). Antennae entirely testaceous; eyes moderately convex; tempora not inflated; pronotum widest about middle; rather large, body length 3.8–4.1 mm; Fig. 63. [Northwestern South Island (NN)] ..... ***Maungazolus pallidipes* (Broun)**
- Antennae with segments 1+2 yellow and segments 3–11 reddish; eyes slightly convex; tempora moderately inflated; pronotum widest before middle; smaller, body length 2.9–3.4 mm ..... **7**
- 7(6). Head and pronotum entirely dark brown; elytra yellowish, dark brown on disc; pronotum moderately transverse and cordate; elytral with striae finely punctate and intervals subdepressed; Fig. 64. [Body length 2.9–3.4 mm; southern North Island (WN) and northern South Island (MB, NN, SD)] ..... ***Maungazolus ranatungae* new species**
- Head, pronotum, and elytra mostly testaceous, black on disc; pronotum strongly transverse and cordate; elytra with striae coarsely punctate and intervals moderately convex; Fig. 65. [Body length 3.1–3.3 mm; southern North Island (WN, Tararua Range)] ..... ***Maungazolus tararuaensis* new species**

***Maungazolus pygmeatus* (Broun, 1907), new combination**

Fig. 58, 104, 116

*Oöpterus pygmeatus* Broun, 1907: 57. Holotype: male (BMNH) labeled: “Type (circular red-bordered label; typed) / 2618. [male symbol] (hand-written) / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [CO] Obelisk Pk. [= Peak] Carrick Range (hand-written) / *Oöpterus pygmeatus*. (hand-written).”

*Oöpterus basalis* Broun, 1915: 274. Holotype: male (BMNH) labeled: “Type (circular red-bordered label; typed) / 3684. (hand-written) / [OL] Lomond [= Ben Lomond]. Dec. 1912. (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Oöpterus basalis*. [male symbol] (hand-written).” **New synonym**

*Oöpterus minor* Broun, 1917: 364. Holotype: male (BMNH) labeled: “Type (circular red-bordered label; typed) / 3805. [male symbol]. (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [OL] Mount Dick. 10.3.1914 (hand-written) / *Oöpterus minor*. [male symbol] (hand-written).” **New synonym**

*Pseudoopterus pygmeatus*: Csiki 1928: 225.

*Pseudoopterus basalis*: Csiki 1928: 225.

*Pseudoopterus minor*: Csiki 1928: 225.

*Oopterus pygmeatus*: Hudson 1934: 38, 177.

*Oopterus basalis*: Hudson 1934: 177.

*Oopterus minor*: Hudson 1934: 177.

**Description.** Body length 3.0–4.2 mm. Head, pronotum, elytra, and abdomen mostly piceous black; extreme apex of elytra reddish; abdomen reddish laterally and apically; antennae, palpi, and legs reddish; antennal segments 1+2 and femora pale yellow, femora slightly contrasting with tibiae. Microsculpture obsolete on head, absent on pronotum and elytra. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum moderately or strongly convex, usually coarsely punctate (rarely finely punctate) across base, wrinkled discally, moderately transverse and cordate, widest before middle; apex

subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, not sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles subrectangular; posterolateral carinae absent; laterobasal foveae well defined, usually coarsely punctate (rarely finely punctate or impunctate), very deep, moderately wide, rounded or oblong, not prolonged forward, simple; posterior bead absent; sub-basal transverse impression deep, coarsely punctate (with 8 to 10 punctures); basal transverse impression deep, coarsely punctate (with 8 to 10 punctures); base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Strongly convex, subovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders rounded or obtuse. Sides strongly rounded. Scutellar striae obsolete. Stria 1 complete; striae 2–7 incomplete; striae 1–4 shallow, finely punctate; striae 5–7 obsolete; stria 3 with four setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta absent (present in other *Maungazolus* species). Intervals depressed. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 104): moderately arcuate, very strongly widened in apical half; base strongly biconvex dorsally; middle moderately concave dorsally, strongly convex ventrally, with dorsal membranous area very wide and long; apex subtriangular, unusually short, moderately convex dorsally, very concave ventrally, with extreme tip wide, unusually short and turned downward. Dorsal view: very narrow, almost thin, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, very close to membranous area. Parameres with three or four apical setae.

**Material examined.** 141 specimens (AMNZ, BMNH, JNNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 116). South Island: BR, CO, FD, MC, MK, OL, SL, WD.

**Ecology.** Subalpine, alpine. Epigeal. Mostly alpine fellfields and herbfields; also subalpine shrublands. Open or shaded ground. Nocturnal; active at night on moss; hides during the day under stones, in leaf litter and moss. Gregarious.

**Biology.** Seasonality: October–November, January–March, May. Teneral: October (SL), January (FD, WD). Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

**Dispersal power.** Subapterous (incapable of flight). Slow runner. Occasional climber on moss.

**Collecting techniques.** Lifting stones; sifting leaf litter and moss.

**References.** Larochelle and Larivière 2001: 73, 75–77 (as *Oopterus pygmeatus*, *O. basalis*, *O. minor*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 20–21 (as *Oopterus pygmeatus*, *O. basalis*, *O. minor*; list).

**Remarks.** Examination of the types of *Oopterus basalis* and *O. minor* revealed them to be conspecific with *M. pygmeatus*. This is the most widespread and most variable of all *Maungazolus* species (color; microsculpture of head; convexity; posterolateral angles and laterobasal foveae of pronotum; basal margin and shoulders of elytra). In addition, *M. pygmeatus* is the only *Maungazolus* species lacking the elytral subapical seta.

### ***Maungazolus septempunctatus* new species**

Fig. 59, 105, 118

Holotype: male (NZAC) labeled: “[NEW ZEALAND SI] Table Hill Stewart I. (typed) / 2000’ 16.II.68 J. McBurney (typed) / Mat plants (typed) 68/55 (hand-written) / [male symbol] / HOLOTYPE [male symbol] *Maungazolus septempunctatus* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one female (NZAC) and one male (CMNZ) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 3.1–4.4 mm. Head, pronotum, and elytra mostly piceous black; lateral margins, suture, and extreme apex of elytra reddish; abdomen mostly reddish piceous, reddish laterally and apically; antennae, palpi, and legs reddish; antennal segment 1 (scape) and femora bright yellow, femora strongly contrasting with tibiae. Microsculpture strong and isodiametric on head, absent on pronotum and elytra. Iridescence absent. Very shiny, with metallic luster (aeneous) on head, pronotum, and elytra. Forebody narrow in comparison to elytra (wide in other *Maungazolus* species). **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, shallow, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum strongly convex, coarsely punctate across base, unwrinkled, slightly transverse, strongly cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, strongly sinuate posteriorly; lateral grooves shallow, very long (about as long as adjoining foveae; absent in other *Maungazolus* species); two setiferous punctures on each side; posterolateral angles rectangular; posterolateral carinae absent; laterobasal foveae ill-defined, coarsely punctate, shallow to moderately deep, moderately wide, not prolonged forward, simple; posterior bead absent; sub-basal transverse impression well developed, coarsely punctate (with about 8 punctures); basal transverse impression well developed, coarsely punctate (with about 10 punctures); base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 3. Shoulders rounded. Sides strongly rounded. Scutellar striole present. Striae complete, finely punctate; stria 1 deep; striae 2–7 shallow; stria 3 with seven setiferous punctures. Recurrent stria long, blunt, directed apically toward stria 5. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical and two medial ambulatory setae (without medial setae in other *Maungazolus* species); female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 105): moderately arcuate, not widened in apical half; base slightly convex dorsally; middle slightly convex dorsally, mostly straight ventrally, with dorsal membranous area very wide and long; apex subtriangular, strongly concave dorsally, vaguely slightly convex, with extreme tip wide and short. Dorsal view: very narrow, almost thin, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, very close to membranous area. Parameres with two or three apical setae.

**Material examined.** 11 specimens (CMNZ, JNNZ, NZAC).

**Geographic distribution** (Fig. 118). Stewart Island: Mount Anglem. Table Hill.

**Ecology.** Alpine. Epigeal. Herbfields. Open ground. Nocturnal; hides during the day in mat plants. Gregarious.

**Biology.** Seasonality: February. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting technique.** Sifting mat plants.

**Remarks.** The species name is derived from the Latin words *septem* (seven) and *punctatus* (punctate), referring to the presence of seven setiferous punctures in elytral stria 3. In addition to diagnostic characters of the male genitalia, *Maungazolus septempunctatus* has the following distinguishing features: metallic luster present on head, pronotum, and elytra; forebody narrow in comparison to elytra; seven setiferous punctures in elytral stria 3. *Maungazolus septempunctatus* is restricted to Stewart Island, while other *Maungazolus* species occur on the South Island and in southern areas of the North Island.

***Maungazolus priestleyensis* new species**

Fig. 60, 106, 115

Holotype: male (NZAC) labeled: “[NEW ZEALAND BR] Mt Priestly [= Mount Priestley] 915m J.G. McBurney (typed) / 10 Dec 1969 Litter (typed) 69/241 (hand-written) / TENERAL (typed) / [male symbol] / HOLOTYPE [male symbol] *Maungazolus priestleyensis* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one female (NZAC) from the same locality as the holotype and one male (MONZ) from Mount Dewar (BR), bearing blue paratype labels.

**Description.** Body length 4.0–4.3 mm. Head, pronotum, and elytra mostly dark reddish (forebody slightly paler); lateral margins, suture, and extreme apex of elytra pale reddish; abdomen mostly reddish piceous, reddish laterally and apically; antennae, palpi, and legs reddish; femora pale yellow, slightly contrasting with tibiae. Microsculpture absent. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, moderately long: segment 1 (scape) moderately long, about 2x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum strongly convex, coarsely punctate across base, virtually unwrinkled, strongly transverse and cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, strongly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles subrectangular; posterolateral carinae absent; laterobasal foveae well defined, coarsely punctate, very deep, moderately wide, rounded, not prolonged forward, simple; posterior bead absent; sub-basal transverse impression well developed, coarsely punctate (with 10 to 12 punctures); basal transverse impression well developed, coarsely punctate (with about 10 punctures); base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Moderately long (short in other *Maungazolus* species). **Elytra.** Strongly convex, subovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders rounded. Sides strongly rounded. Scutellar striole absent. Stria 1 complete; striae 2–7 incomplete; striae 1–4 deep, coarsely punctate; striae 5–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals 1–3 slightly convex, 4–7 depressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 106): moderately arcuate, strongly widened in apical half; base moderately convex dorsally; middle biconvex dorsally, strongly convex ventrally, with dorsal membranous area very wide and long; apex subtriangular, strongly convex dorsally, slightly convex ventrally, with extreme tip wide and very long. Dorsal view: very narrow, almost thin, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, very close to membranous area. Parameres with two or three apical setae.

**Material examined.** 5 specimens (MONZ, NZAC).

**Geographic distribution** (Fig. 115). South Island: BR–Mount Dewar. Mount Priestley.

**Ecology.** Montane. Epigeal. Wet forest (beech). Shaded ground. Nocturnal; hides during the day in leaf litter and moss.

**Biology.** Seasonality: December. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Moderate runner.

**Collecting techniques.** Sifting leaf litter and moss.



**Remarks.** This species is named after the type locality, Mount Priestley (BR) and the Latin suffix *-ensis*, denoting a place, locality, or country. *Maungazolus priestleyensis* is morphologically close to *M. acutus* and *M. parvulus*. In addition to diagnostic characters of the male genitalia, *M. priestleyensis* has the following distinguishing features: pronotum with posterolateral angles subrectangular; elytra with basal margin complete, reaching about scutellum; body length 4.0–4.3 mm. *Maungazolus priestleyensis* is so far known from Mount Dewar and Mount Priestley (BR) only, while *M. parvulus* and *M. acutus* are more broadly distributed on the South Island in the northwest (BR, NN) and southwest (FD), respectively.

***Maungazolus parvulus* (Broun, 1903), new combination**

Fig. 61, 114

*Oöpterus parvulus* Broun, 1903: 610. Lectotype (here designated): male (BMNH) labeled: “[male symbols] / Type (circular red-bordered label; typed) / 2617. [male symbol] (hand-written) / New Zeal. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [NN] Westport 1902. / *Oöpterus parvulus* (hand-written) / LECTOTYPE [male symbol] *Oopterus parvulus* Broun, 1903 designated by Laroche & Larivière, 2017 (red label; typed). **New combination**

*Pseudoopterus parvulus*: Csiki 1928: 225.

*Oopterus parvulus*: Hudson 1934: 177.

**Description.** Body length 2.9–3.1 mm. Head yellowish, infuscated discally; pronotum and elytra yellowish, dark brown discally; elytra with suture reddish, sides and apex widely yellowish; abdomen mostly dark brown, yellowish laterally and apically; antennal segments 1+2, palpi, and legs yellowish; antennal segments 3–11 reddish. Microsculpture absent. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora slightly inflated (about one third as long as eyes). Mentum: medial tooth entire, rounded apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum strongly convex, coarsely punctate across base and finely punctate apically, unwrinkled, strongly transverse and cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, not sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles acute, projected laterally; posterolateral carinae obsolete; laterobasal foveae well defined, coarsely punctate, moderately deep and wide, rounded, not prolonged forward, simple; posterior bead absent; sub-basal transverse impression well developed, coarsely punctate (with about 10 punctures); basal transverse impression well developed, coarsely punctate (with about 10 punctures); base subtruncate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders rounded. Sides strongly rounded. Scutellar striole obsolete. Striae replaced by rows of coarse punctures, very deep; row 1 complete; rows 2–7 incomplete; row 3 with three setiferous punctures. Recurrent stria long, blunt, directed apically toward row 5. Subapical seta present. Intervals moderately convex. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Not seen (no specimen available for dissection).

**Material examined.** 4 specimens (BMNH, NZAC).

**Geographic distribution** (Fig. 114). South Island: BR–Punakaiki. NN–Westport.

**Ecology.** Lowland. Epigeal. Wet forests (beech). Shaded ground. Nocturnal; hides during the day in moss, and under logs and stones.

**Biology.** Seasonality: October. Teneral: March (BR). Predacious (based on mouthpart morphology).



**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting techniques.** Sifting moss; lifting logs and stones.

**References.** Larochelle and Larivière 2001: 76 (as *Oopterus parvulus*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 21 (as *Oopterus parvulus*; list).

**Remark.** *Oopterus parvulus* was described by Broun (1903: 610) based on two male syntypes mounted together on a white rectangular label (BMNH); the male on the left is selected as the lectotype, while the male on the right becomes a paralectotype. These type designations are made to preserve stability of nomenclature in the future.

### ***Maungazolus acutus* new species**

Fig. 62, 107, 112

Holotype: male (NZAC) labeled: “NEW ZEALAND FD Takahe Valley Murchison Mts [= Mountains] 11 Dec 1972 A.C. Eyles (typed) / Litter (typed) 72/271 (hand-written) / [male symbol] / HOLOTYPE [male symbol] *Maungazolus acutus* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one female (NZAC) and one male (AMNZ) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 2.8–3.5 mm. Head, pronotum, and elytra mostly piceous black; elytra with suture reddish, sides and apex narrowly pale reddish; abdomen mostly reddish black, reddish laterally and apically; antennae, palpi, and legs pale reddish; femora mostly bright yellow, strongly contrasting with tibiae, reddish basally. Microsculpture feeble and isodiametric on head, absent on pronotum and elytra. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora slightly inflated (about one third as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum strongly convex, coarsely punctate across base, wrinkled discally, strongly transverse, moderately cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, slightly sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles unusually acute, projected laterally; posterolateral carinae absent; laterobasal foveae well defined, coarsely punctate, very deep, moderately wide, rounded, not prolonged forward, simple; posterior bead absent; sub-basal transverse impression well developed, coarsely punctate (with about 10 punctures); basal transverse impression well developed, coarsely punctate (with about 8 punctures); base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders rounded. Sides strongly rounded. Scutellar striole present. Striae finely punctate; stria 1 complete, deep; striae 2–4 incomplete, shallow; striae 5–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals depressed. Sutural apices obtuse. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 107): slightly arcuate, moderately widened in apical half; base mostly straight dorsally; middle strongly convex dorsally, mostly straight ventrally, with dorsal membranous area very wide and long; apex subtriangular, slightly convex dorsally, straight ventrally, with extreme tip wide and short. Dorsal view: very narrow, almost thin, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, very close to membranous area. Parameres with four apical setae.

**Material examined.** 79 specimens (AMNZ, JNNZ, LUNZ, NZAC).

**Geographic distribution** (Fig. 112). South Island: FD.

**Ecology.** Lowland, montane, subalpine, alpine. Epigeal-arboreal. Wet subalpine forests (beech); alpine herbfields and fellfields. Shaded or open ground. Nocturnal; active at night on trees; hides during the day in leaf litter, tussock litter, moss, and under stones. Gregarious.

**Biology.** Seasonality: December–February, April. Teneral: November. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Slow runner. Occasional climber on trees.

**Collecting techniques.** Sifting leaf litter, tussock litter, and moss; lifting stones.

**Remarks.** The name of this species is derived from the Latin adjective *acutus* (acute), referring to the shape of the posterolateral angles of the pronotum. *Maungazolus acutus* is morphologically close to *M. parvulus*. In addition to diagnostic characters of the male genitalia, *M. acutus* has the following distinguishing features: antennae entirely pale reddish; head, pronotum, and elytra mostly piceous black; elytra with sides and apex narrowly pale reddish, striae present, finely punctate, and intervals depressed; mentum with medial tooth acute apically. The two species are allopatric: *M. acutus* is known only from the Fiordland region (southwestern South Island), while *M. parvulus* occurs in the northwest of the South Island (BR, NN).

#### ***Maungazolus pallidipes* (Broun, 1893), new combination**

Fig. 63, 108, 113

*Oöpterus pallidipes* Broun, 1893: 1003. Holotype: female [teneral] (BMNH) labeled: “Type (circular red-bordered label; typed) / [female symbol] (hand-written) / 1798 (hand-written) / New Zealand. Broun Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Oöpterus pallidipes* (hand-written).”

*Pseudoopterus pallidipes*: Csiki 1928: 225.

*Oopterus pallidipes*: Hudson 1934: 177.

**Description.** Body length 3.8–4.1 mm. Head reddish, infuscated discally; pronotum pale reddish, brownish discally; elytra reddish, brownish discally, sides and apex widely pale yellow; abdomen mostly dark reddish, pale reddish laterally and apically; antennae, palpi, and legs testaceous; femora pale yellow, strongly contrasting with tibiae. Microsculpture absent. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Mentum: medial tooth entire, truncate apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum strongly convex, coarsely punctate across base and finely punctate apically, wrinkled discally, slightly transverse, moderately cordate, widest about middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, not sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles rectangular; posterolateral carinae obsolete; laterobasal foveae well defined, coarsely punctate, moderately deep and wide, rounded, not prolonged forward, simple; posterior bead absent; sub-basal transverse impression replaced by two foveolae; basal transverse impression well developed, coarsely punctate (with about 10 punctures); base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders rounded. Sides strongly rounded. Scutellar striole present. Striae coarsely punctate; stria 1 complete, very deep; striae 2–4 incomplete, moderately deep; striae 5–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals moderately convex. Sutural apices rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambula-

tory setae. **Aedeagus.** Lateral view (Fig. 108): strongly arcuate, very strongly widened in apical half; base moderately convex dorsally; middle moderately sinuate dorsally, strongly convex ventrally, with dorsal membranous area very wide and long; apex triangular, slightly concave dorsally, moderately concave ventrally, with extreme tip narrow and short. Dorsal view: very narrow, almost thin, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, very close to membranous area. Parameres with two apical setae.

**Material examined.** 149 specimens (BMNH, JNNZ, LUNZ, MONZ, NZAC).

**Geographic distribution** (Fig. 113). South Island: NN.

**Ecology.** Montane, subalpine, alpine. Epigeal-arboreal. Wet forests (beech); alpine tussock grasslands and fellfields. Shaded (usually) or open ground. Nocturnal; active at night on mossy, logs, and trees; hides during the day in moss and leaf litter. Gregarious.

**Biology.** Seasonality: November–March. Teneral: March, May. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Slow runner. Occasional climber on trees.

**Collecting techniques.** Sifting moss and leaf litter.

**References.** Larochelle and Larivière 2001: 75–76 (as *Oopterus pallidipes*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 21 (as *Oopterus pallidipes*; list).

**Remark.** Broun (1887: 604) cited *Oopterus pallidipes* from Mount Arthur, NN, without providing any description. This comment and Broun's annotation of his personal copy of his manual suggest Mount Arthur, NN, as the type locality.

### ***Maungazolus ranatungae* new species**

Fig. 64, 109, 117

Holotype: male (NZAC) labeled: “[NEW ZEALAND MB] Fell Pk. [= Mount Fell] 1296m (typed) / Richmond Ra. [= Range] (typed) / 13 March 69 J.C. Watt (typed) / Litter (typed) 69/113 (hand-written) / [male symbol] / HOLOTYPE [male symbol] *Maungazolus ranatungae* Larochelle & Larivière, 2017 (red label; typed).” Paratypes: one female (NZAC) and one male (LUNZ) from the same locality as the holotype, bearing blue paratype labels.

**Description.** Body length 2.9–3.4 mm. Head and pronotum dark brown; elytra yellowish, dark brown discally, base dark brown medially, sides and apex widely pale yellow; abdomen mostly reddish piceous, reddish laterally and apically; antennae, palpi, and legs reddish; antennal segments 1+2 yellow; femora bright yellow, strongly contrasting with tibiae. Microsculpture absent. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) short, stout, about 1.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth entire, slightly emarginate apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum strongly convex, coarsely punctate across base, unwrinkled, moderately transverse and cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, not sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles subrectangular; posterolateral carinae absent; laterobasal foveae well defined, coarsely punctate, very deep, moderately wide, rounded, not prolonged forward, simple; posterior bead absent; sub-basal

transverse impression replaced by two foveolae; basal transverse impression well developed, coarsely punctate (with 10 to 12 punctures); base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Strongly convex, subovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders rounded. Sides strongly rounded. Scutellar striole present. Striae finely punctate; stria 1 complete, very deep; striae 2–5 incomplete, shallow; striae 6–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, blunt, directed apically toward stria 5. Subapical seta present. Intervals subdepressed. Sutural apices obtusely rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female with four apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 109): rather strongly arcuate, not widened in apical half; base moderately convex dorsally; middle slightly concave dorsally, slightly convex ventrally, with dorsal membranous area very wide and long; apex subtriangular, moderately convex dorsally, slightly concave ventrally, with extreme tip wide and short. Dorsal view: very narrow, almost thin, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, very close to membranous area. Parameres with two apical setae.

**Material examined.** 49 specimens (LUNZ, NZAC).

**Geographic distribution** (Fig. 117). North Island: WN–Tararua Range (Dundas Ridge Hut; Otaki Forks, Judd Ridge). South Island: MB–Mount Fell. Mount Johnson. NN–Abel Tasman National Park, Moa Park. SD–Mount Stokes.

**Ecology.** Montane, alpine. Epigeal. Mostly forests (beech); tussock grasslands. Shaded or open ground. Nocturnal; hides during the day in leaf litter and tussock litter. Gregarious.

**Biology.** Seasonality: October–December, March. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting techniques.** Sifting leaf litter and tussock litter.

**Remarks.** This species is named after Dhahara Ranatunga (Auckland War Memorial Museum, Auckland) for her special help in our entomological studies. *Maungazolus ranatungae* is morphologically close to *M. tararuaensis*. In addition to diagnostic characters of the male genitalia, *M. ranatungae* has the following distinguishing features: head and pronotum dark brown; elytra yellowish, dark brown discally; abdomen mostly reddish piceous; mentum tooth slightly emarginate apically; pronotum moderately transverse and cordate, coarsely punctate across base; elytra with striae finely punctate and intervals subdepressed. *M. ranatungae* occurs in the south of the North Island (WN) and northern areas of the South Island (MB, NN, SD), while *M. tararuaensis* is only found in the south of the North Island (WN). *M. ranatungae* is the only zoline species known from both North and South Islands.

### ***Maungazolus tararuaensis* new species**

Fig. 65, 110, 119

Holotype: male (NZAC) labeled: “NEW ZEALAND WN Dendan Tararua FP [= Forest Park] 4 Jun 1984 (hand-written) / J. Nunn (typed) / [male symbol] / HOLOTYPE [male symbol] *Maungazolus tararuaensis* Laroche & Larivière, 2017 (red label; typed).” Paratype: one male (NZAC) from Field’s Hut [= Field Hut], Tararua FP [= Forest Park] (WN), bearing a blue paratype label.

**Description.** Body length 3.1–3.3 mm. Head, pronotum, elytra, and abdomen mostly testaceous; disc of head, pronotum, elytra, and abdomen black; suture of elytra reddish to black; antennae, palpi, and legs reddish; antennal segments 1+2 and femora bright yellow, femora strongly contrasting with tibiae. Microsculpture absent. Iridescence absent. Very shiny, without metallic luster. **Head.** Labrum strongly transverse, slightly emarginate anteriorly. Antennae submoniliform, short: segment 1 (scape) short,



stout, about 1.5x longer than its maximum width. Frontal furrows wide, deep, convergent. Eyes slightly convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about half as long as eyes). Mentum: medial tooth entire, acute apically, moderately shorter than lateral lobes. Paraglossae membranous, prominent, slightly longer than ligula. **Thorax.** Pronotum strongly convex, finely punctate across base, wrinkled discally, strongly transverse and cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, not sinuate posteriorly; lateral grooves absent; two setiferous punctures on each side; posterolateral angles subacute; posterolateral carinae obsolete; laterobasal foveae well defined, virtually impunctate, very deep, moderately wide, oblong, not prolonged forward, simple; posterior bead absent; sub-basal transverse impression replaced by two foveolae; basal transverse impression poorly developed, virtually impunctate (with about 10 obsolete punctures); base emarginate, much narrower than pronotal apex, about as wide as elytral base. **Legs.** Short. **Elytra.** Strongly convex, ovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders rounded. Sides strongly rounded. Scutellar striole obsolete. Striae coarsely punctate; stria 1 complete, very deep; striae 2–7 incomplete; striae 2–5 moderately deep; striae 6–7 obsolete; stria 3 with three setiferous punctures. Recurrent stria long, sharp, directed apically toward stria 5. Subapical seta present. Intervals moderately convex. Sutural apices rounded. **Abdomen.** Last visible sternum (sternum VII): male with two apical ambulatory setae; female unknown. **Aedeagus.** Lateral view (Fig. 110): strongly arcuate, very strongly widened in apical half; base moderately convex dorsally; middle strongly convex dorsally, slightly convex ventrally, with dorsal membranous area very wide and long; apex subtriangular, slightly concave dorsally, moderately concave ventrally, with extreme tip wide and short. Dorsal view: very narrow, almost thin, asymmetrical (ostium of membranous area deflected to right); apex straight; basal orifice narrow, very close to membranous area. Parameres with four or five apical setae.

**Material examined.** 3 specimens (JNNZ, NZAC).

**Geographic distribution** (Fig. 119). North Island: WN–Tararua Range (Dennan; Field Hut).

**Ecology.** Montane. Forests (beech). Epigeal. Shaded ground. Nocturnal; hides during the day in leaf litter.

**Biology.** Seasonality: January, June. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous (incapable of flight). Slow runner.

**Collecting technique.** Sifting leaf litter.

**Remarks.** This species is named after the Tararua Range (WN) where the beetle occurs, and the Latin suffix *-ensis*, denoting a place, locality, or country. *Maungazolus tararuaensis* is morphologically close to *M. ranatungae*. In addition to diagnostic characters of the male genitalia, *M. tararuaensis* has the following distinguishing features: head, pronotum, and elytra mostly testaceous; disc of head, pronotum, elytra, and abdomen black; mentum tooth acute apically; pronotum strongly transverse and cordate, finely punctate across base; elytra with striae coarsely punctate and intervals moderately convex. *Maungazolus tararuaensis* is only found in the south of the North Island (WN), while *M. ranatungae* occurs both in the south of the North Island (WN) and in northern areas of the South Island (MB, NN, SD).

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**Appendix A.** Geographic coordinates of localities in decimal degrees.

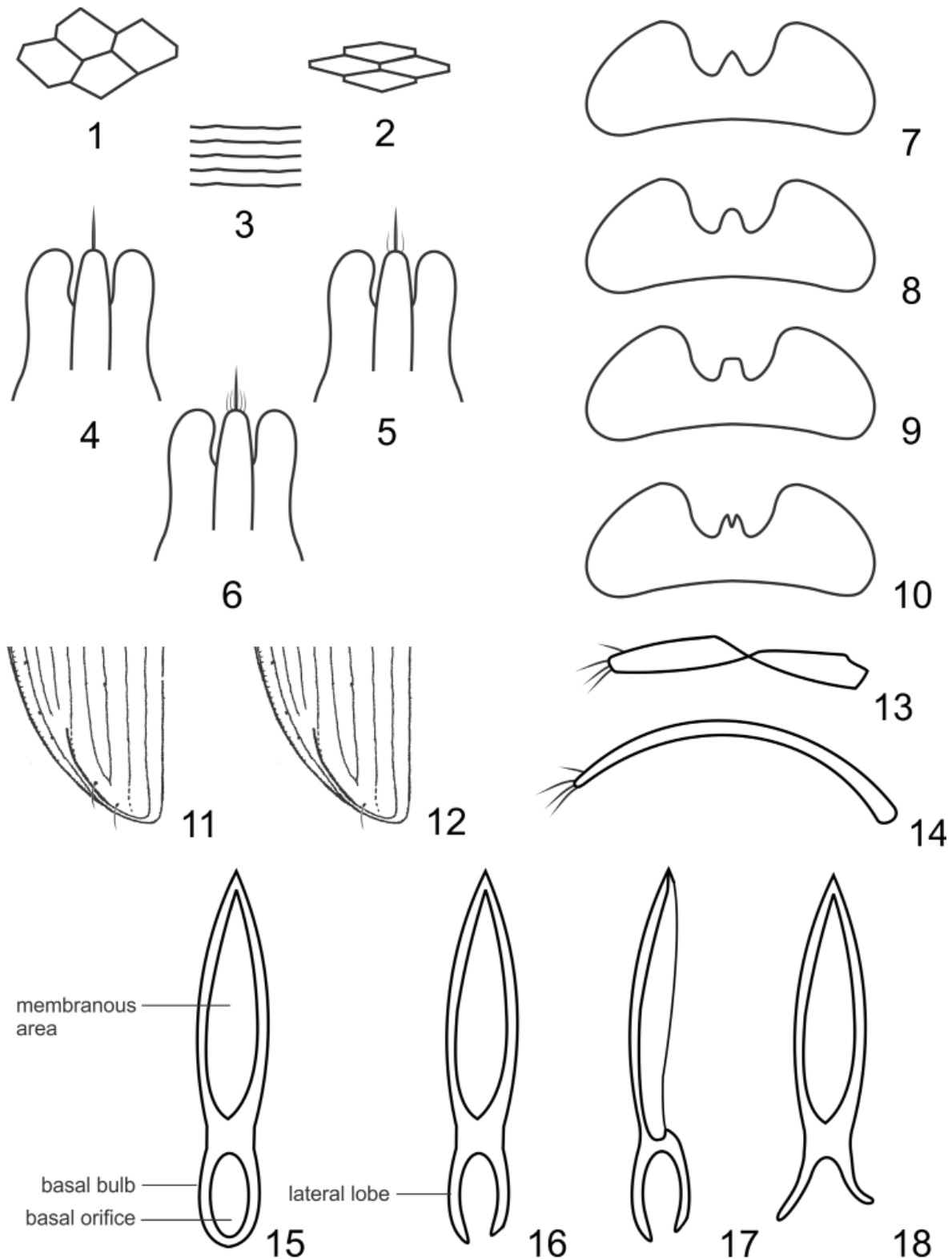
Abel Tasman National Park	NN	-40.9139	172.9473
Akaroa	MC	-43.8049	172.9669
Allison Scenic Reserve	DN	-46.1300	170.1000
Arthur's Pass National Park	MC/NC/WD	-42.9436	171.5666
Auckland Islands	AU	-50.5800	166.1600
Bald Hill, Longwood Forest	SL	-46.1685	167.8321
Balloon Hut, Mount Arthur	NN	-41.1691	172.6224
Banks Peninsula	MC	-43.8825	173.0089
Ben Lomond	OL	-45.0086	168.6142
Blue Pools walk	OL	-44.1623	169.2736
Borland Saddle	FD	-45.7407	167.3736
Borland Valley	FD	-45.7500	167.5184
Boulder Beach, Otago Peninsula	DN	-45.8985	170.6035
Boulder Lake	NN	-40.8943	172.5826
Cameron Flat	OL	-44.1570	169.3058
Campbell Island	CA	-52.5163	169.1552
Canterbury	NC/MC/SC	-43.0000	172.0000
Carnley Harbour	AU	-50.8500	166.1300
Carrick Range	CO	-45.1318	169.0847
Catlins State Forest Park	SL	-46.4800	169.3300
Christchurch	MC	-43.5160	172.5242
Cobb Reservoir	NN	-41.1223	172.6565
Cobb Valley	NN	-41.0847	172.5575
Dennan, Tararua Forest Park	WN	-40.9248	175.2641
Dundas Ridge, Tararua Range	WN	-40.7245	175.4571
Eglinton Valley	FD	-45.1417	167.8995
Field Hut, Tararua Forest Park	WN	-40.9078	175.2562
Fiordland National Park	FD	-45.3800	167.2800
Flagstaff Hill	DN	-45.8326	170.4662
Fox Glacier	WD	-43.4660	170.0199
Freds Camp	SI	-46.9289	167.9769
Freshwater	SI	-46.8100	167.8600
Galena Creek, Cobb Valley	NN	-41.1037	172.6672
Gilbert Islands, Breaksea Sound	FD	-45.5993	166.6693

Greymouth	BR	-42.4610	171.2046
Hastwell	WA	-40.7209	175.6952
Hinewai Scenic Reserve, Banks Peninsula	MC	-43.8000	173.0100
Hollyford	OL	-44.7595	168.1407
Jackson Bay	WD	-43.9728	168.6161
Judd Ridge, Tararua Range	WN	-40.9020	175.2450
Kaitoke	WN	-41.0840	175.1678
Karori	WN	-41.2875	174.7378
Kelly Creek	WD	-41.2537	172.2126
Kelly Creek-Otira River Junction	WD	-41.2537	172.2126
Lake Hauroko	FD	-45.9912	167.3842
Lake Ohau	MK	-44.2300	169.8500
Lake Sylvester	NN	-41.1065	172.6286
Leith Stream	DN	-45.8315	170.5016
Liverpool Stream	OL	-44.4297	168.6488
Long Bay, Banks Peninsula	MC	-43.8885	172.8548
Longwood Forest	SL	-46.2747	167.8305
Mackinnon Pass	FD	-44.8025	167.7661
McKenzie Burn	FD	-45.2597	167.4119
McPhees Rock, Rock and Pillar Range	CO	-45.4600	169.9800
Midhirst	TK	-39.2927	174.2667
Mistake Creek, Eglinton Valley	FD	-44.8799	168.0348
Moa Basins	MC	-43.0913	171.2517
Moa Park, Abel Tasman National Park	NN	-40.9358	172.9369
Moa Stream	MC	-43.1263	171.2867
Mohi Bush Scenic Reserve	HB	-39.8572	176.9004
Mount Anglem	SI	-46.7405	167.9164
Mount Arthur	NN	-41.2179	172.6815
Mount Barber	FD	-45.5018	167.2135
Mount Dewar	BR	-42.0823	171.5451
Mount Dick	OL	-45.2644	168.6828
Mount Earnslaw	OL	-44.6239	168.3969
Mount Egmont/Taranaki	TK	-39.2962	174.0638
Mount Fell	MB	-41.4476	173.4094



Mount Gray	FD	-45.5526	167.2480
Mount Holdsworth	WN	-40.8734	175.4168
Mount Johnson	MB	-41.4700	173.4200
Mount Kinnaird	WD	-43.7524	169.4477
Mount Priestley	BR	-42.0730	171.5460
Mount Raynal	AU	-50.7100	166.0600
Mount Robert	BR	-41.8323	172.8111
Mount Stokes	SD	-41.0904	174.1019
Mount Wilmot	FD	-45.5140	167.1784
Murchison Mountains	FD	-45.2602	167.5512
Napier	HB	-39.5025	176.8926
Nihotupu, Waitakere Ranges	AK	-39.9600	174.5800
Oban	SI	-46.8988	168.1273
Obelisk Peak	OL	-45.3230	169.2071
Ocean Beach	SI	-46.9707	168.1771
Ohau Range	MK	-44.2995	169.7720
Ohau Ski Field	MK	-44.2203	169.7784
Ohau Valley	MK	-44.2879	170.0969
Old Man Range	CO	-45.3668	69.2035
Oparara River	NN	-41.2000	172.1000
Open Bay Islands	WD	-43.8612	168.8807
Orongorongo Valley	WN	-41.3530	174.9617
Otago	CO/DN/OL	-45.5000	170.0000
Otago Peninsula	DN	-45.8874	170.6798
Otago Ski Hut, Rock and Pillar Range	CO	-45.4373	170.1225
Otaki Forks	WN	-40.8333	175.2500
Otepatutu Scenic Reserve, Banks Peninsula	MC	-43.7438	173.0022
Palmerston North	WI	-40.3556	175.6165
Pegasus Creek	SI	-47.1436	167.7028
Penguin Creek	SN	-48.0131	166.6041
Penguin Rookery	SN	-48.0105	166.5888
Percy Saddle	FD	-45.5638	167.3145
Plateau Creek, Murchison Mountains	FD	-45.2406	167.5303

Port Hills, Christchurch	MC	-43.6600	172.6000
Port Levy, Banks Peninsula	MC	-43.6490	172.8206
Port Pegasus	SI	-47.2182	167.6829
Port William	SI	-46.8451	168.0866
Punakaiki	BR	-42.1080	171.3359
Richmond Range	MB	-41.4500	173.3800
Rock and Pillar Range	CO	-45.3934	170.1145
Routeburn	OL	-44.7280	168.1960
Sinkhole Drain	SN	-48.0105	166.5888
Sinkhole Flat	SN	-48.0105	166.3600
Six-Mile Creek, Rock and Pillar Range	CO	-45.4449	170.1146
Spey River	FD	-45.5494	167.2142
Station Point	SN	-48.0150	166.6060
Stewart Island	SI	-46.9962	167.8842
Table Hill	SI	-47.0396	167.8425
Taieri Mouth	DN	-46.0546	170.1934
Taieri River	DN	-46.0384	170.1819
Takahe Valley	FD	-45.2891	167.6574
Tapu-Coroglen Saddle	CL	-36.9881	175.5866
Tararua Forest Park/Range	WN	-40.9000	175.3300
Tawanui Campground, Catlins State Forest Park	SL	-46.4588	169.4937
Temple Stream, Ohau Valley	MK	-44.1207	169.8347
The Snares	SN	-48.0210	166.6027
Turret Range	FD	-45.5312	167.3401
Twilight Bay	SI	-47.1620	167.6990
Wadestown	WN	-41.2629	174.7740
Waitakere Ranges	AK	-36.9924	174.5203
Wellington	WN	-41.2783	174.7771
Westport	NN	-41.7526	171.5834
Wilmot Pass	FD	-45.5081	167.1925
Wilton's Bush	WN	-41.2700	174.7500
Wolfe Flat, Turret Range	FD	-45.5200	167.3200



**Figures 1–18.** Microsculpture: **1)** isodiametric; **2)** moderately transverse; **3)** very transverse. Ligula: **4)** with two fused setae; **5)** four setae (medial setae fused); **6)** six setae (medial setae fused). Mentum tooth: **7)** entire, acute; **8)** entire, rounded; **9)** entire, truncate; **10)** bifid. Elytral apex: **11)** subapical seta present; **12)** subapical seta absent. Right paramere: **13)** straight, twisted medially; **14)** curved, untwisted. Aedeagus, dorsal: **15)** basal orifice closed anteriorly; **16–18)** basal orifice open anteriorly.



19



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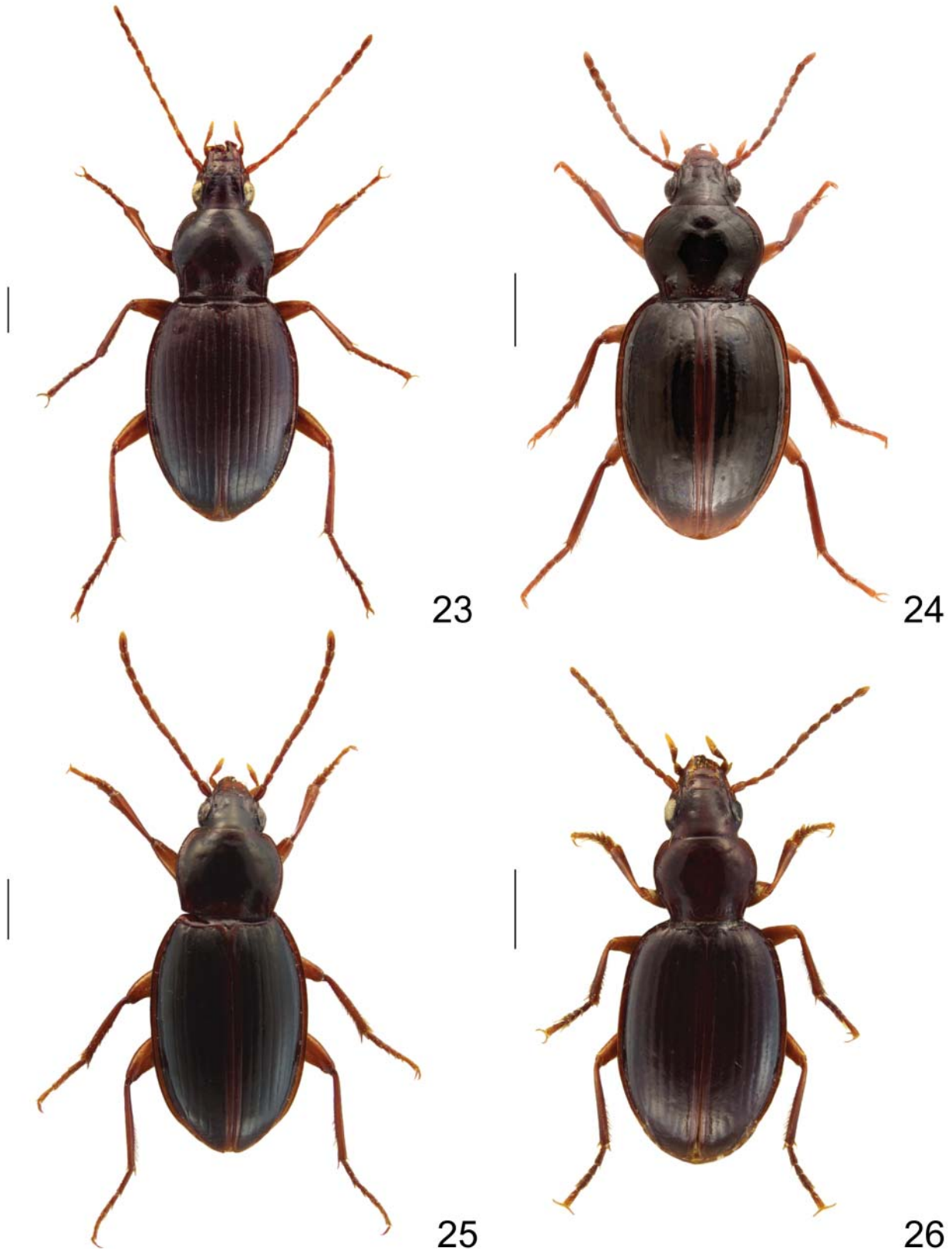


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**Figures 19–22.** Dorsal habitus. 19) *Zolus subopacus*. 20) *Z. kauriensis* new species, teneral. 21) *Z. carinatus*. 22) *Z. helmsi*. Scale line = 1 mm.



**Figures 23–26.** Dorsal habitus. 23) *Zolus wongi* new species. 24) *Oopterus suavis*. 25) *O. laevicollis*. 26) *O. quadripunctatus* new species. Scale line = 1 mm.





27



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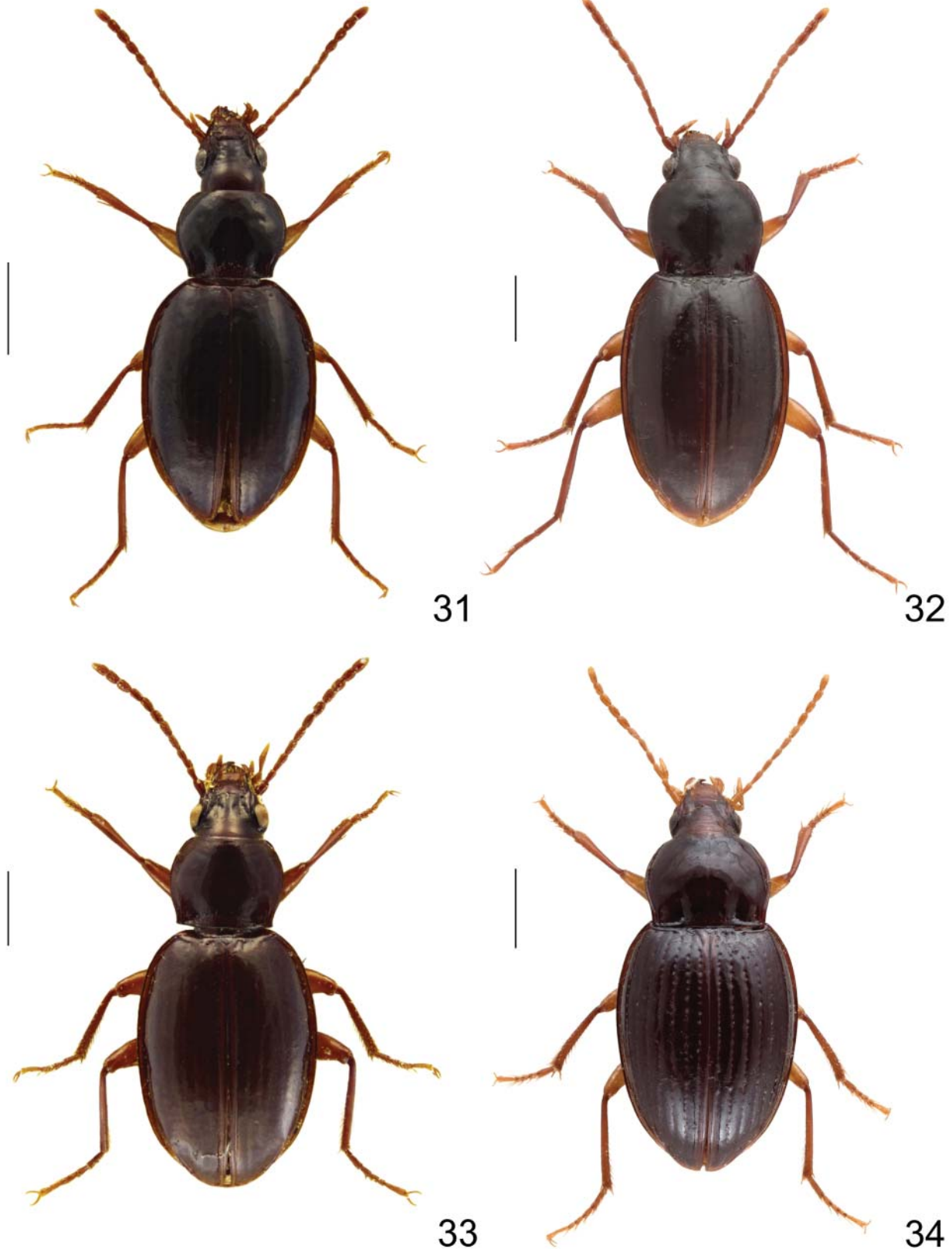


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**Figures 27–30.** Dorsal habitus. 27) *Oopterus discoideus* new species. 28) *O. marrisi* new species. 29) *O. lewisi*. 30) *O. patulus*. Scale line = 1 mm.



Figures 31–34. Dorsal habitus. 31) *Oopterus fulvipes*. 32) *O. sobrinus*. 33) *O. collaris*. 34) *O. laeiventris*. Scale line = 1 mm.



35



36

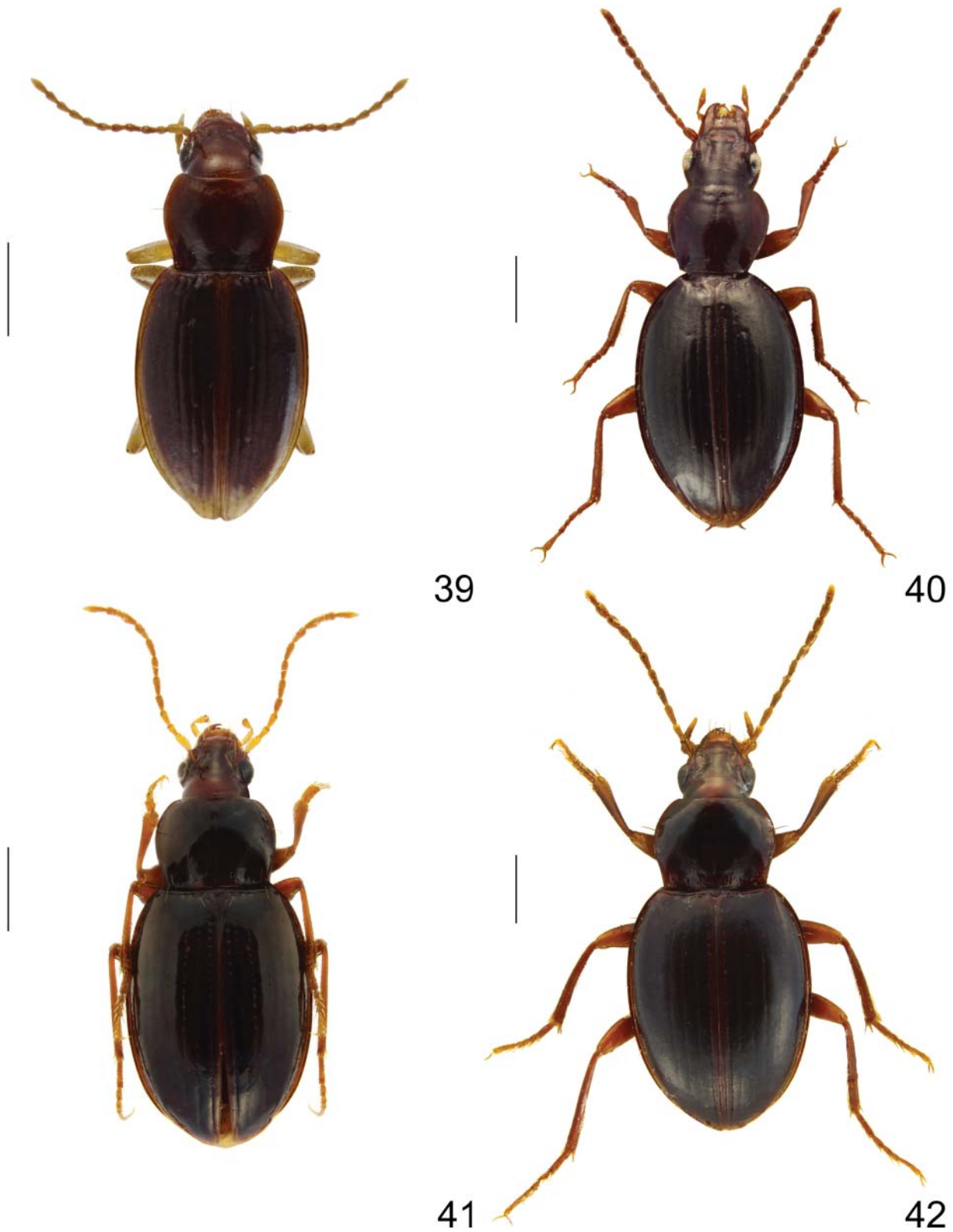


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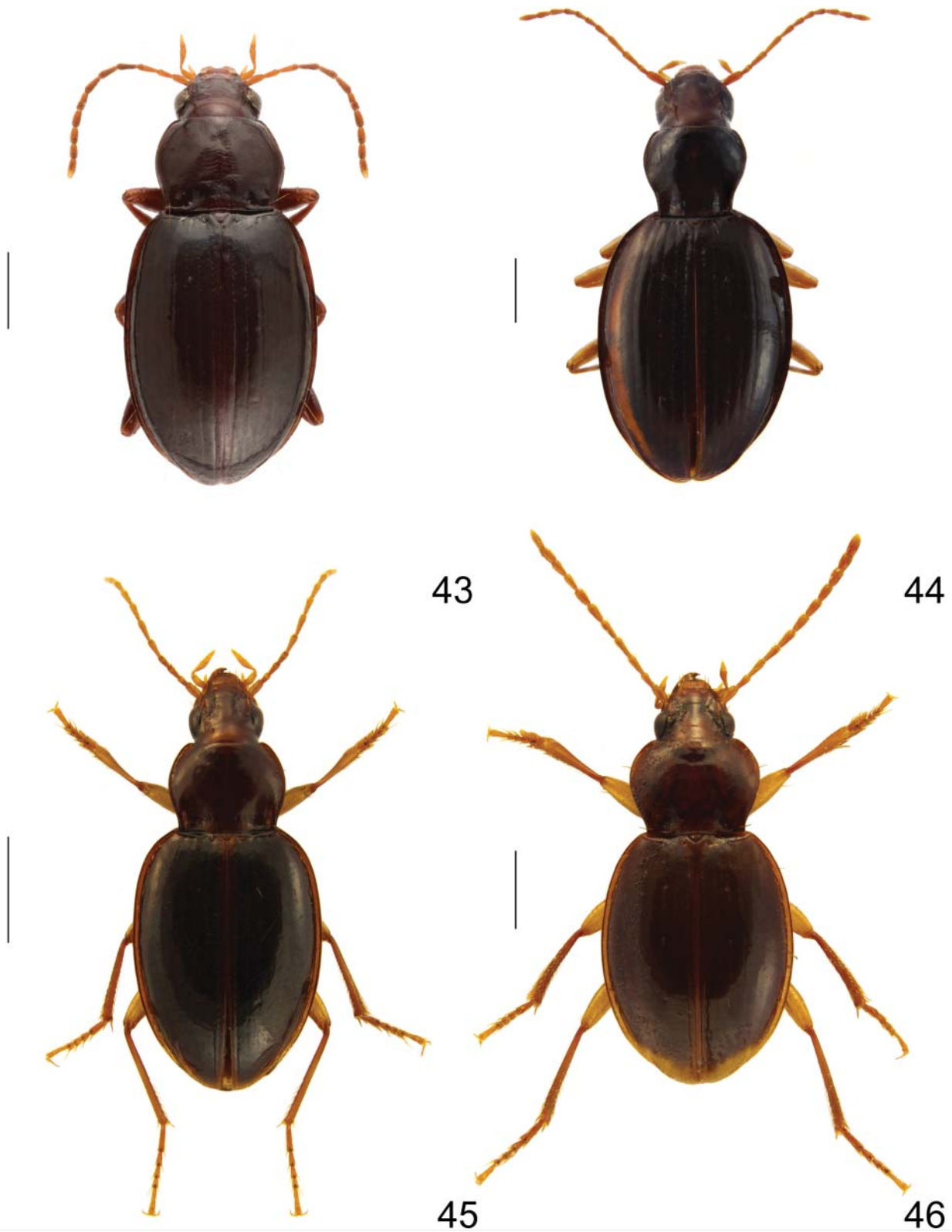
38

**Figures 35–38.** Dorsal habitus. 35) *Oopterus arthurensis* new species. 36) *O. corvinki* new species. 37) *O. palmai* new species. 38) *O. monticola* new species. Scale line = 1 mm.



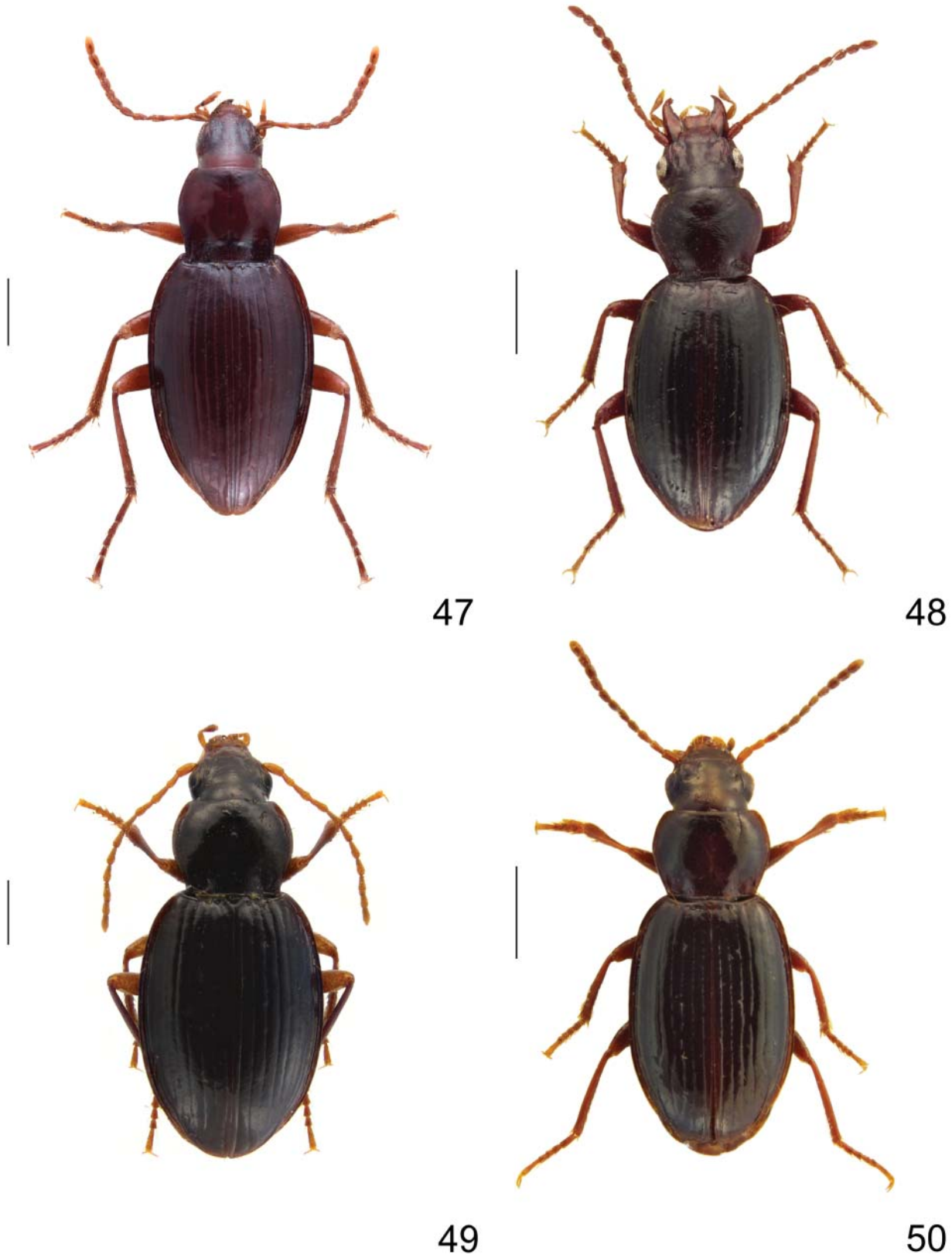
**Figures 39–42.** Dorsal habitus. 39) *Ooapterus strenuus*. 40) *O. clivinoides*. 41) *O. mohiensis* new species. 42) *O. frontalis*. Scale line = 1 mm.





**Figures 43–46.** Dorsal habitus. 43) *Oopterus punctatus* new species. 44) *O. trechoides* new species. 45) *O. sculpturatus*. 46) *O. taieriensis* new species. Scale line = 1 mm.





**Figures 47–50.** Dorsal habitus. 47) *Oopterus ocularius*. 48) *O. marrineri*. 49) *O. anglemensis* new species. 50) *O. nanus* new species. Scale line = 1 mm.



51



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54

**Figures 51–54.** Dorsal habitus. 51) *Oopterus garnerae* new species. 52) *O. nunni* new species. 53) *Synteratus ovalis*. 54) *Pseudoopterus otiraensis* new species. Scale line = 1 mm.



Figures 55–58. Dorsal habitus. 55) *Pseudopterus plicaticollis*. 56) *P. latipennis*. 57) *P. fiordlandensis* new species. 58) *Maungazolus pygmeatus*. Scale line = 1 mm.



59



60



61



62

Figures 59–62. Dorsal habitus. 59) *Maungazolus septempunctatus* new species. 60) *M. priestleyensis* new species. 61) *M. parvulus*. 62) *M. acutus* new species. Scale line = 1 mm.





63



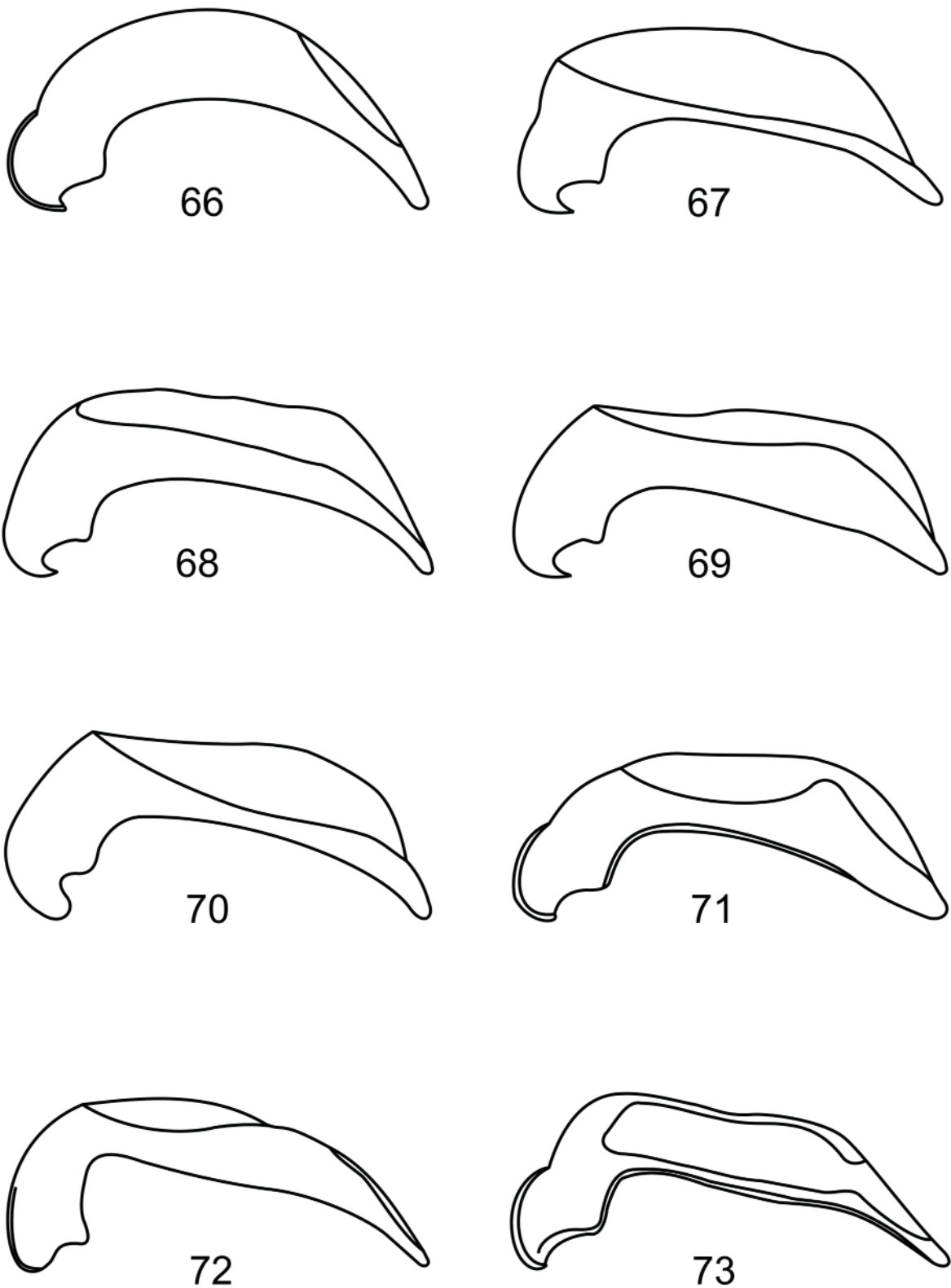
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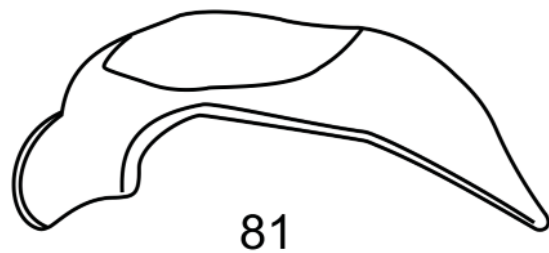
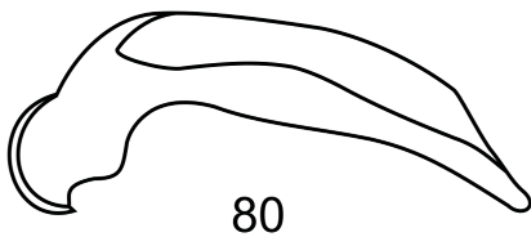
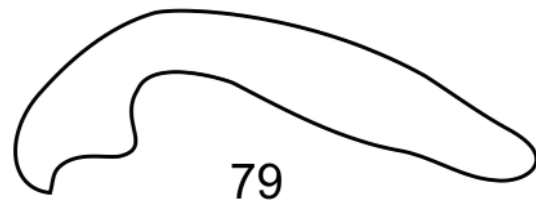
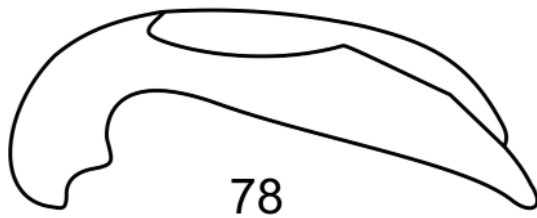
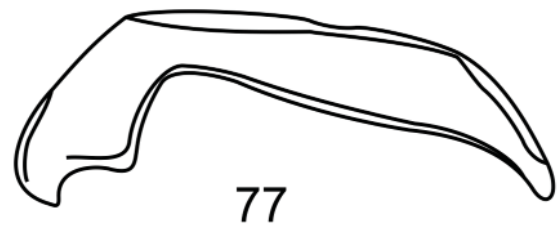
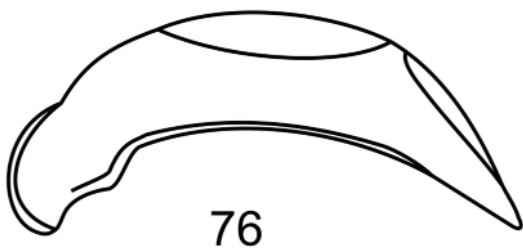
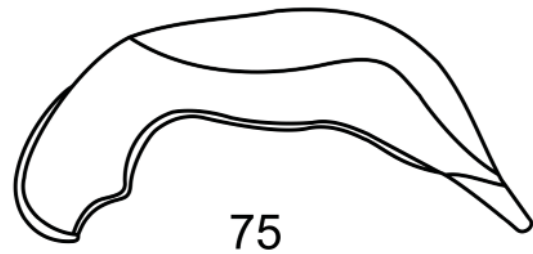
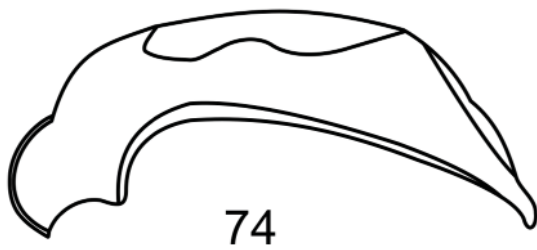
65

**Figures 63–65.** Dorsal habitus. **63)** *Maungazolus pallidipes*. **64)** *M. ranatungae* new species. **65)** *M. tararuaensis* new species. Scale line = 1 mm.

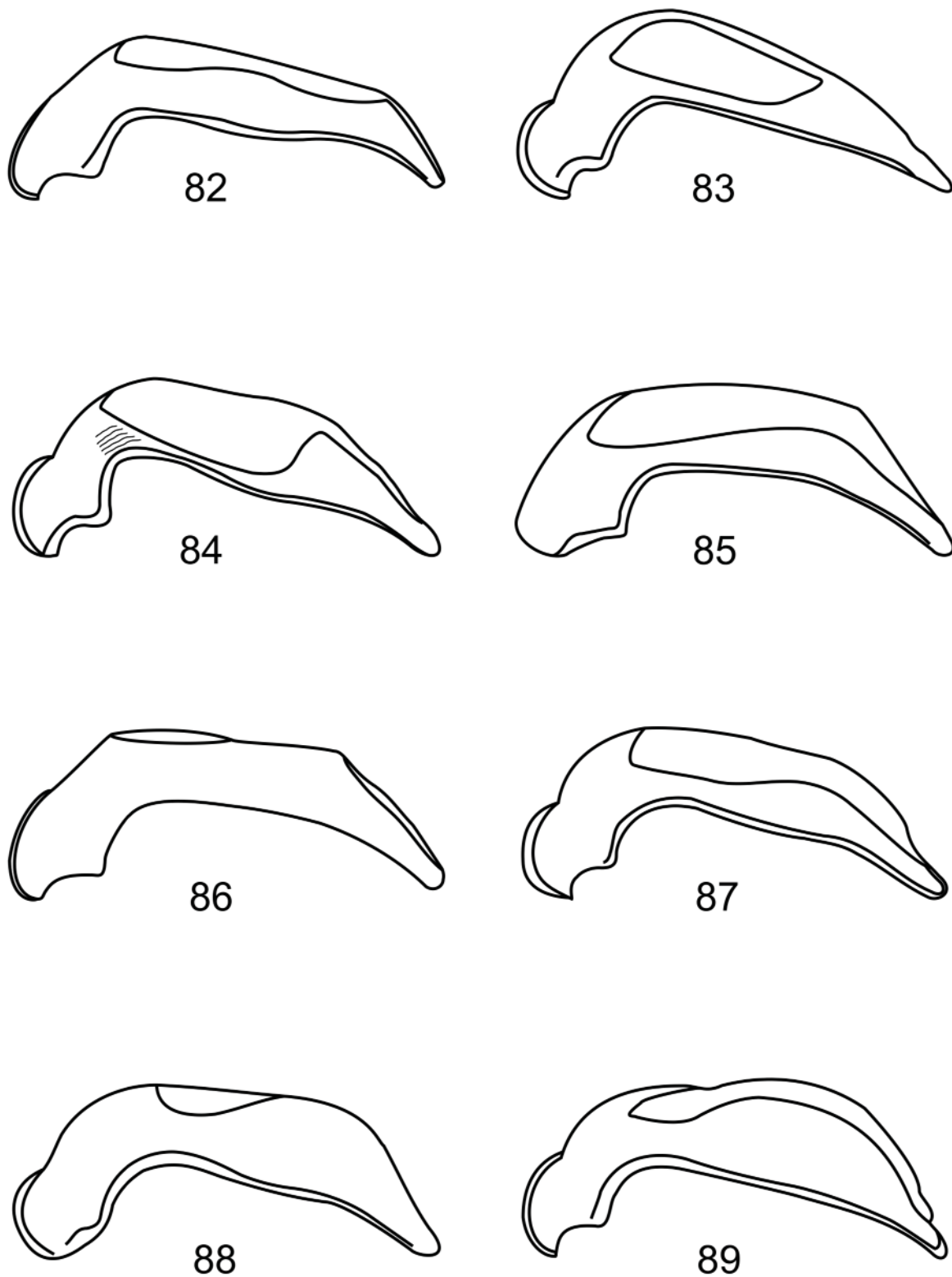




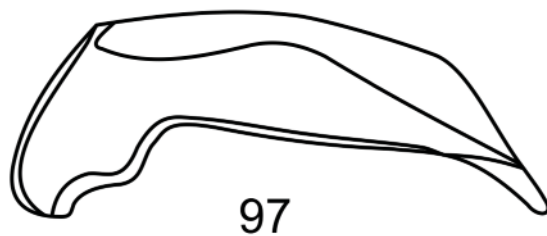
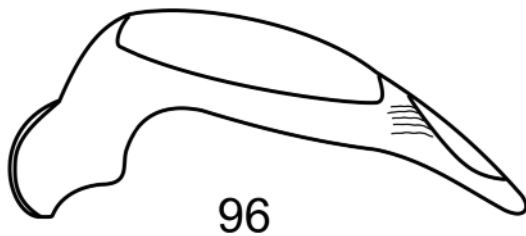
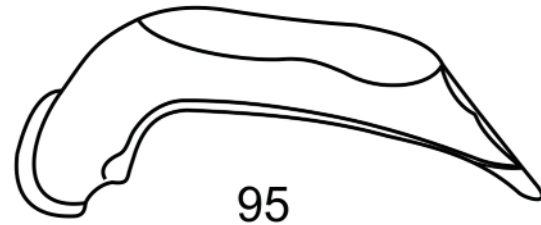
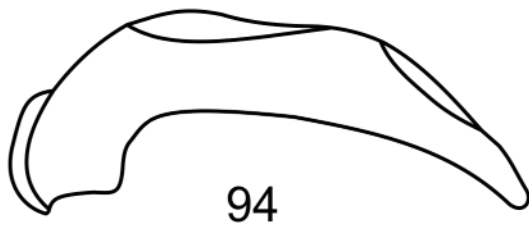
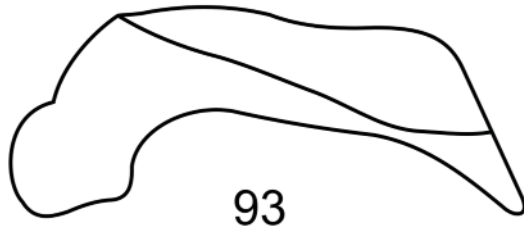
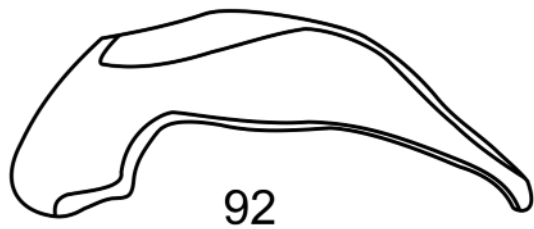
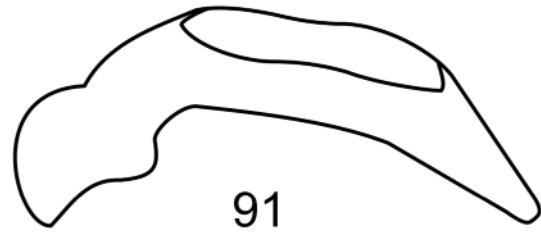
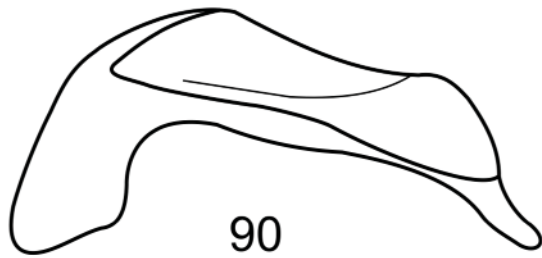
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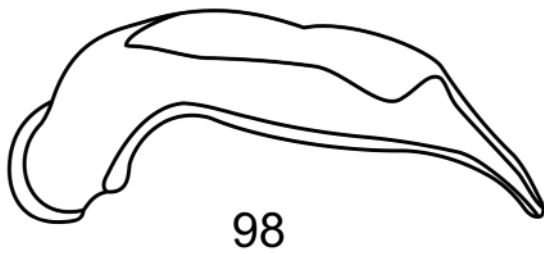
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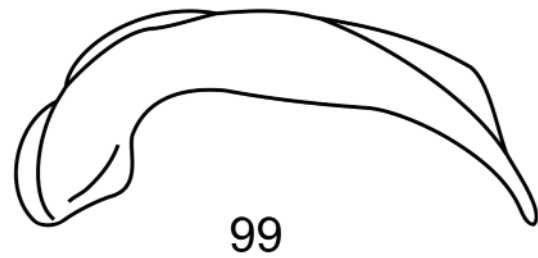
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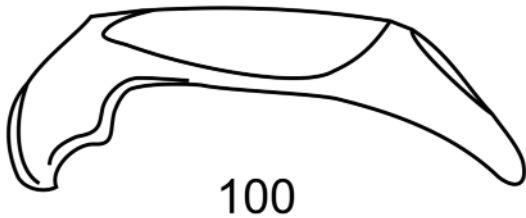
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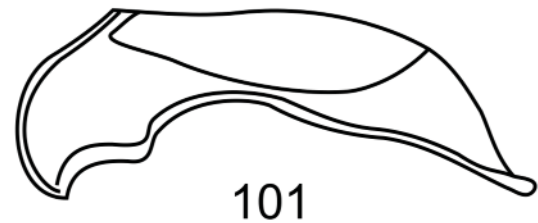
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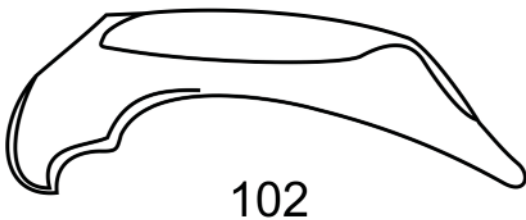
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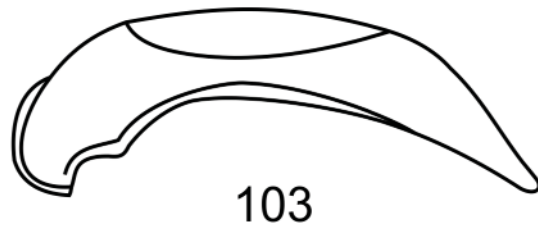
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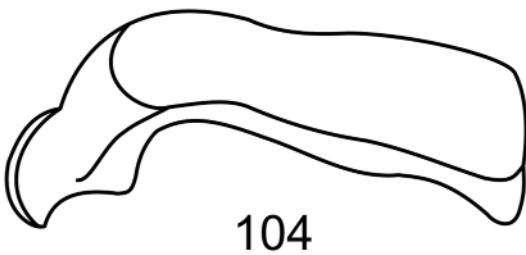
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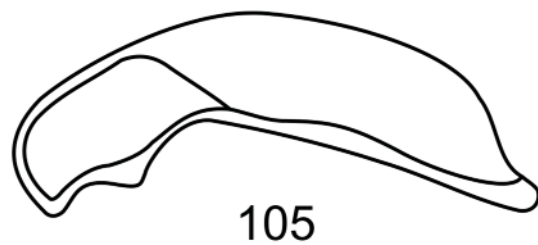
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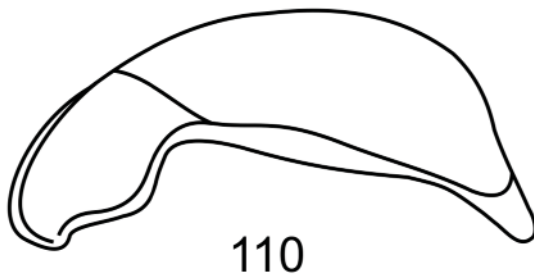
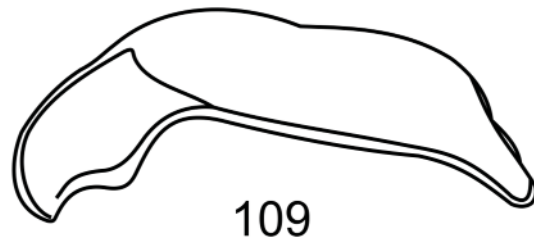
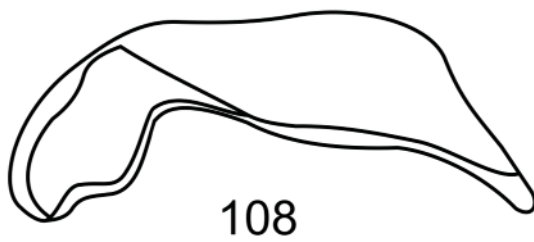
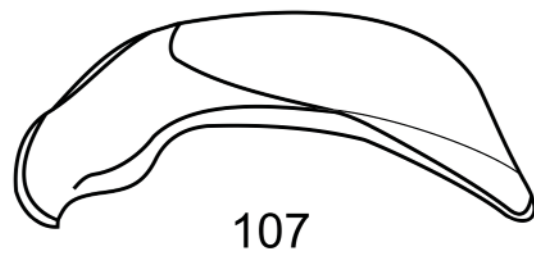
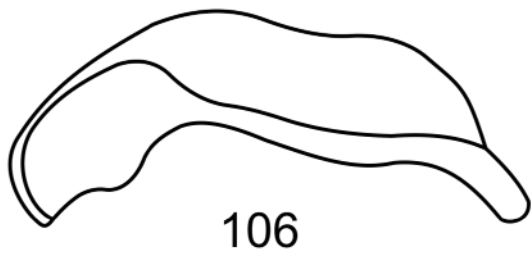
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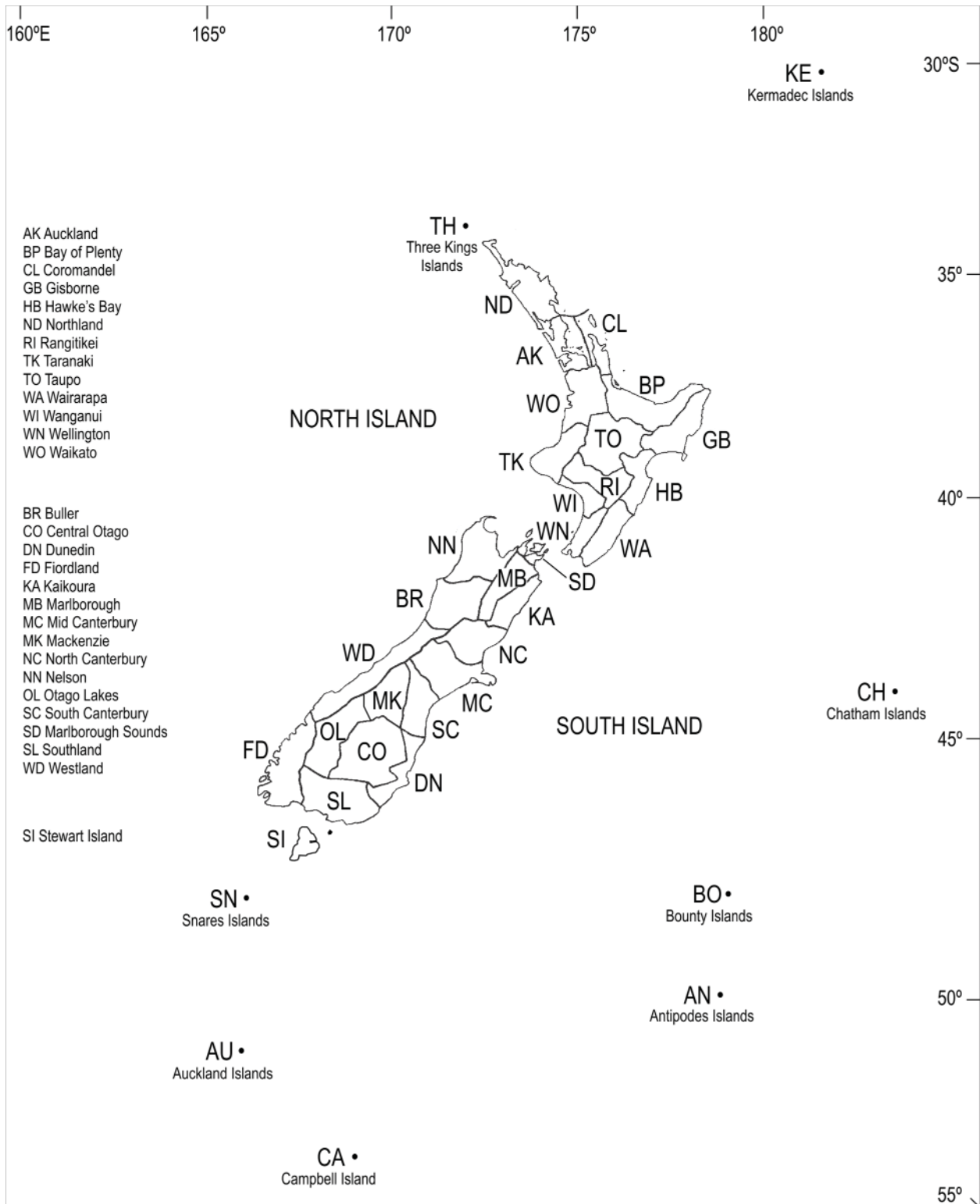
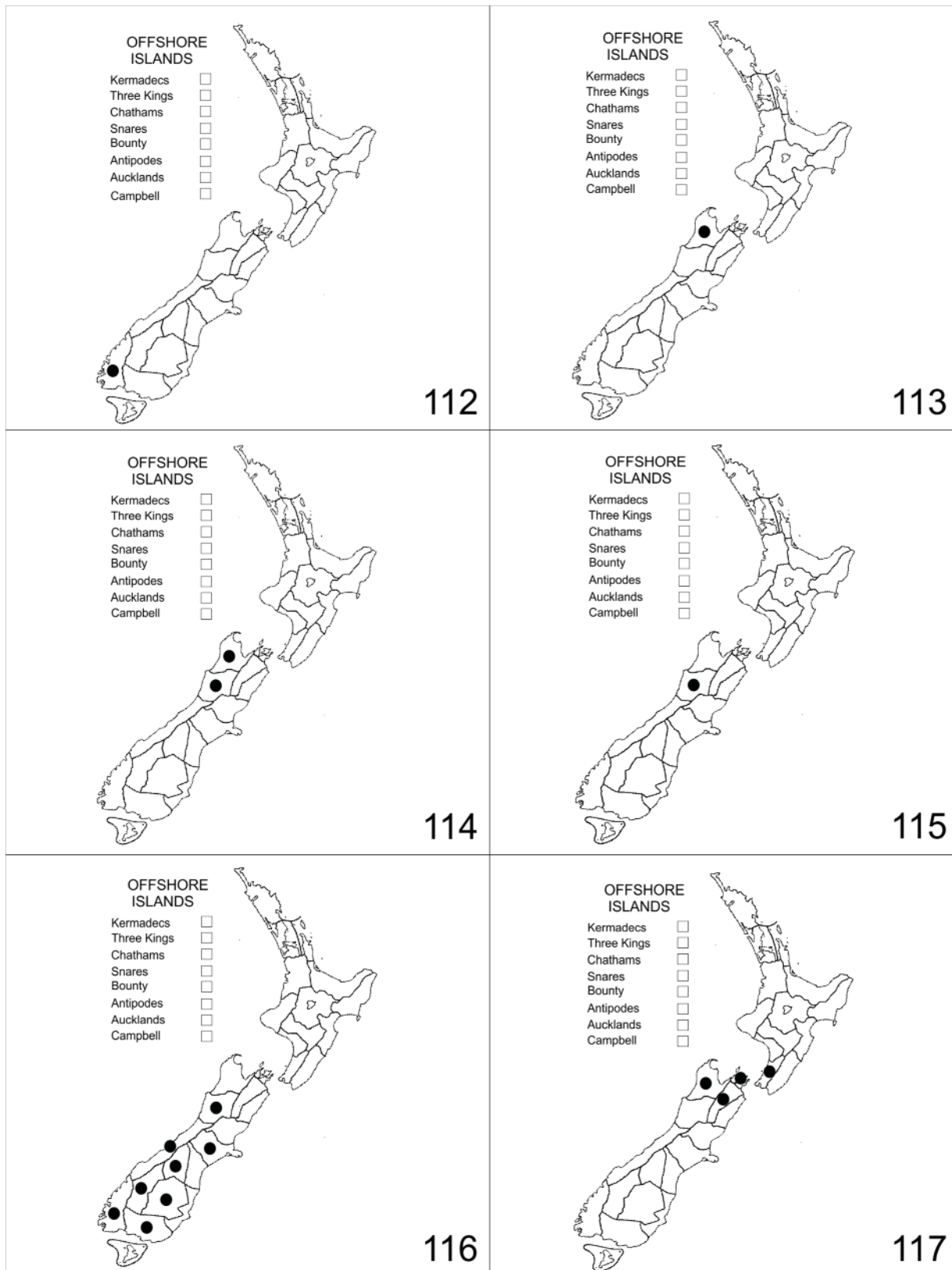
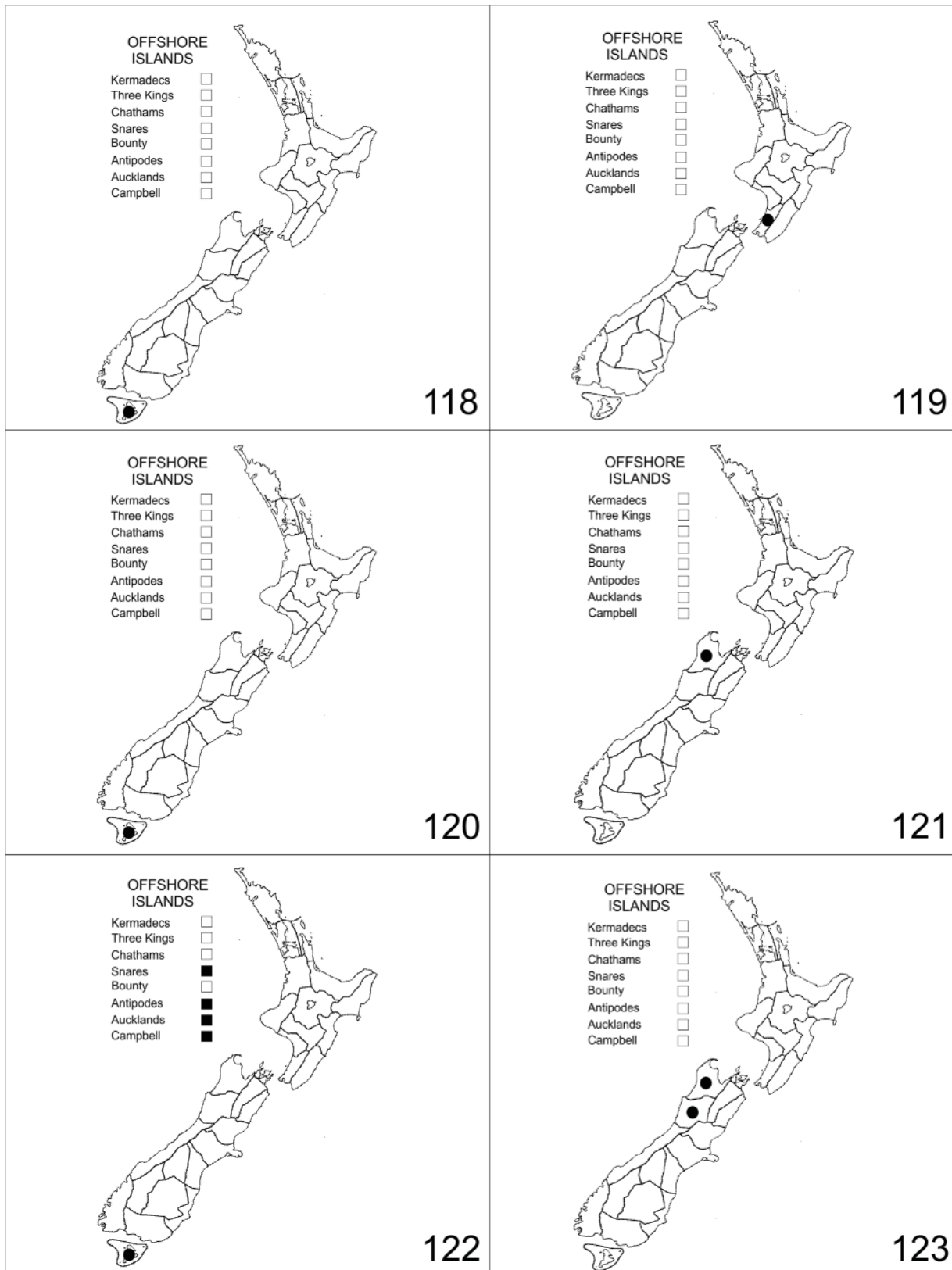


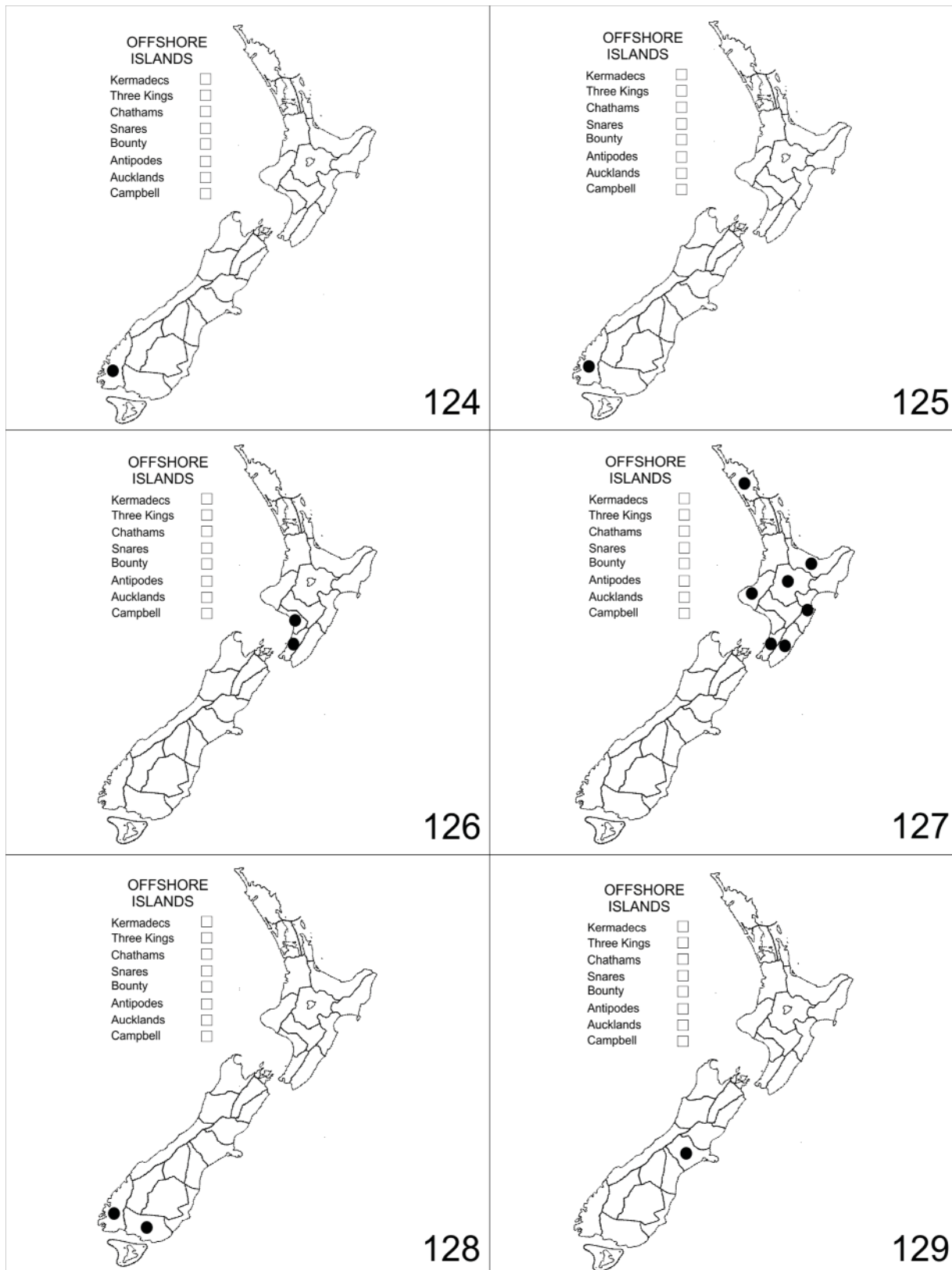
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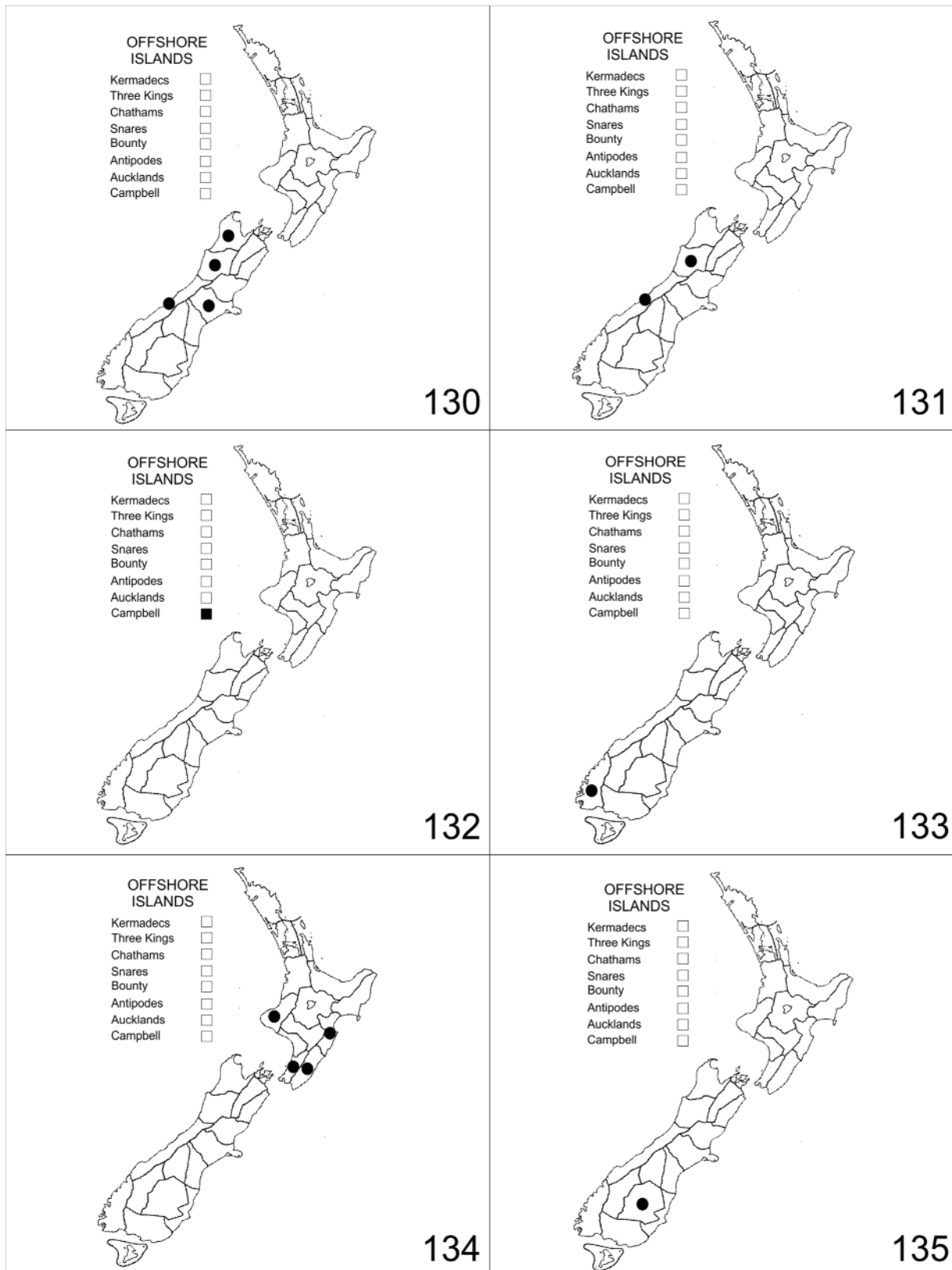


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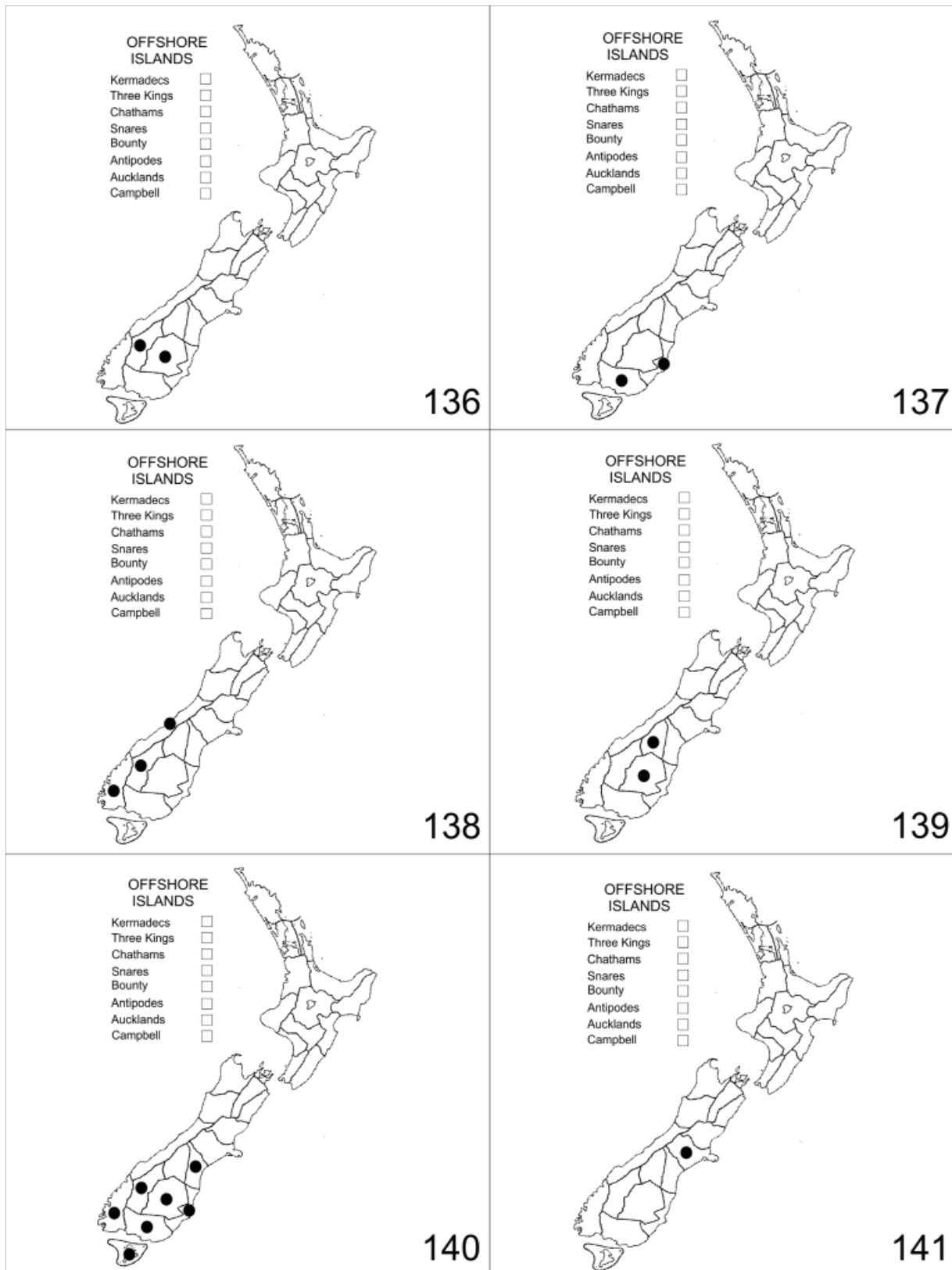


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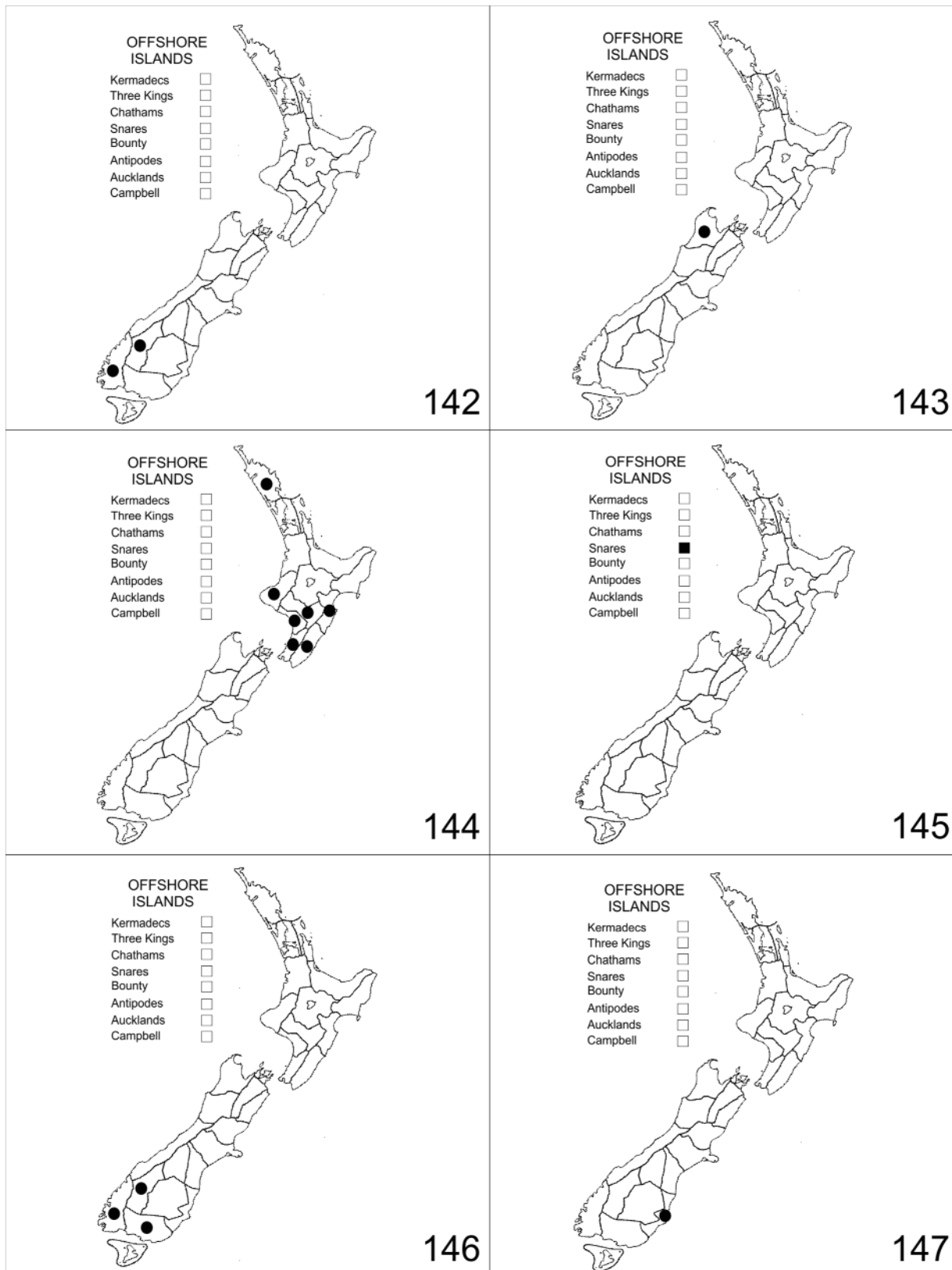




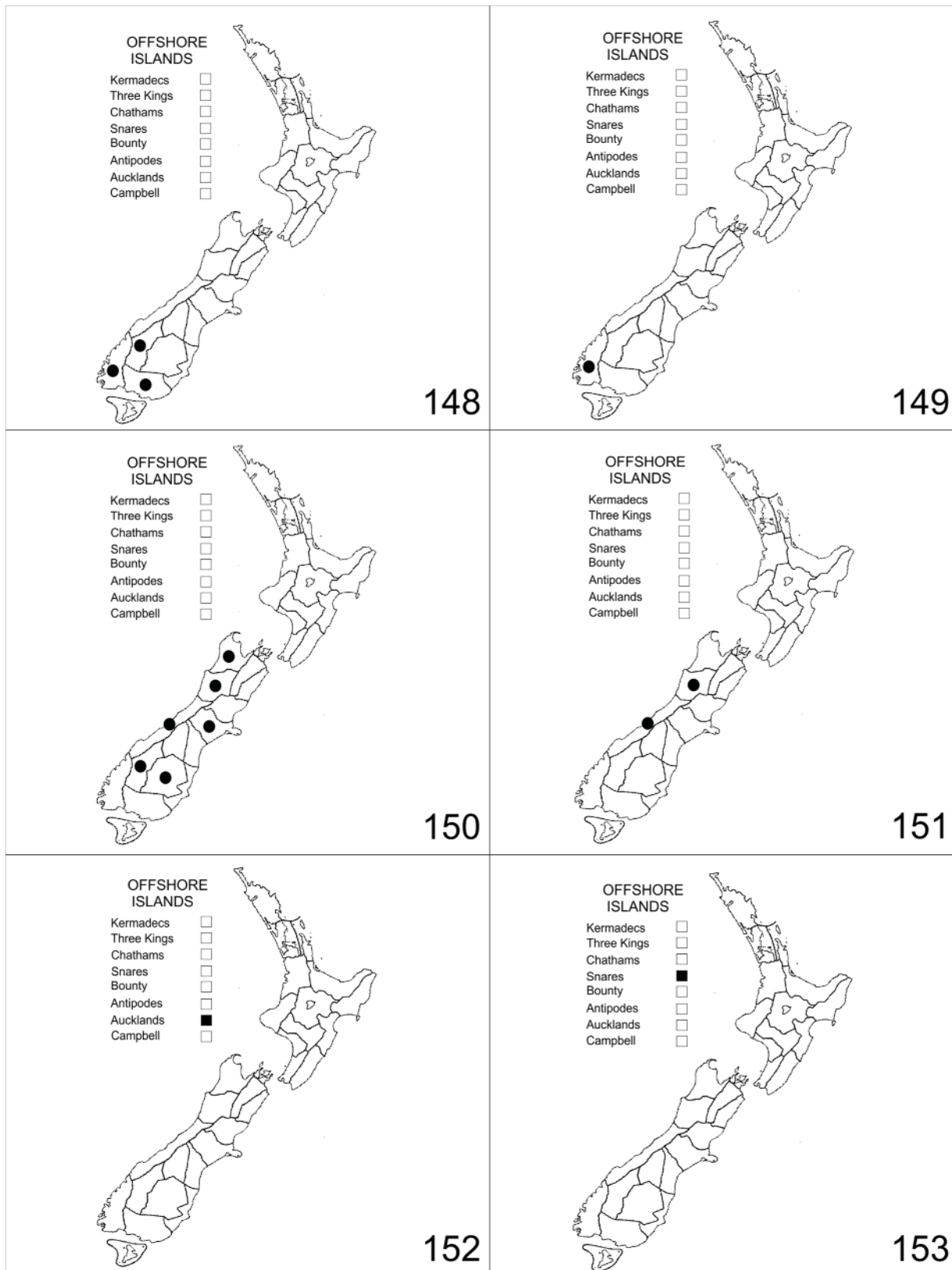
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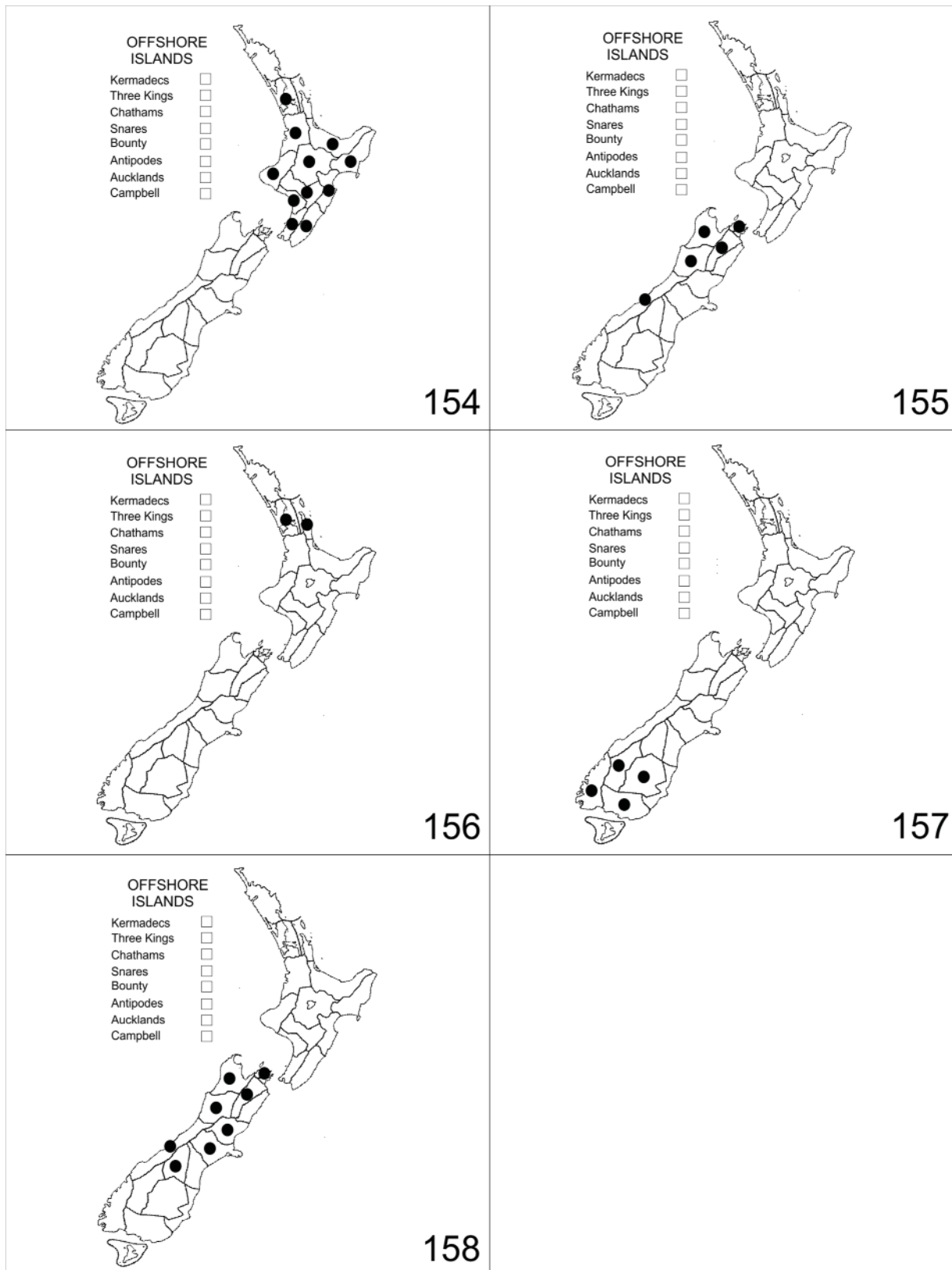
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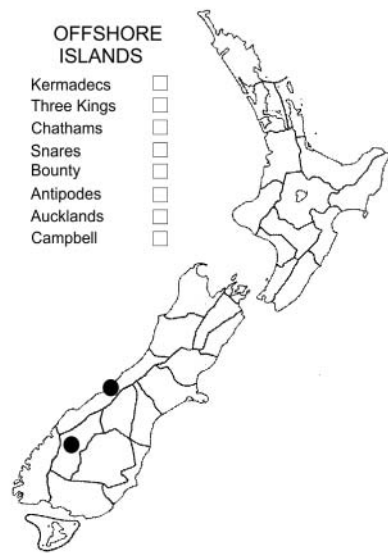
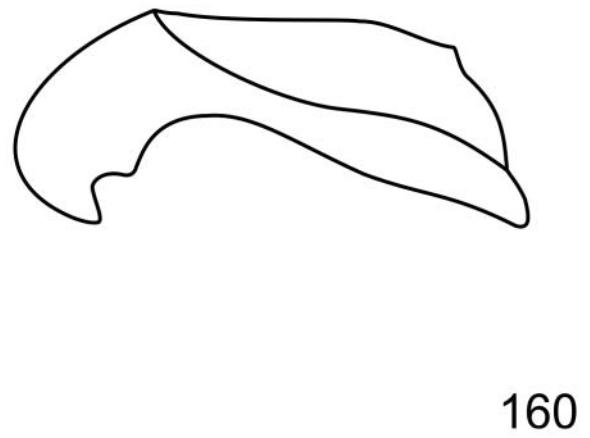


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