12-29-2017

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

André Larochelle
New Zealand Arthropod Collection, LarochelleAndre@hotmail.com

Marie-Claude Lariviè re
New Zealand Arthropod Collection, LariviereM@landcareresearch.co.nz

Follow this and additional works at: https://digitalcommons.unl.edu/insectamundi

Part of the Ecology and Evolutionary Biology Commons, and the Entomology Commons

Larochelle, André and Lariviè re, Marie-Claude, "Synopsis of the tribe Zolini in New Zealand (Coleoptera: Carabidae)" (2017). Insecta Mundi. 1116.
https://digitalcommons.unl.edu/insectamundi/1116

This Article is brought to you for free and open access by the Center for Systematic Entomology, Gainesville, Florida at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Insecta Mundi by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
Synopsis of the tribe Zolini in New Zealand (Coleoptera: Carabidae)

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

Date of Issue: December 29, 2017

*Pseudoopterus otiraensis* Larochelle and Larivière, new species

**Center for Systematic Entomology, Inc., Gainesville, FL**
Synopsis of the tribe Zolini in New Zealand (Coleoptera: Carabidae)

André Larochelle
New Zealand Arthropod Collection
Landcare Research
Private Bag 92170, Auckland 1142, New Zealand
LarochelleAndré@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 ranatunga n. sp., Maungazolus septempunctatus n. sp., Maungazolus tararuaensis n. sp., Oopterus anglemensis n. sp., Oopterus arthurensis n. sp., Oopterus corvinki n. sp., Oopterus discoides 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 orioensis 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 nigritulus 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).

More recently, Larochelle and Larivièrè (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, Pseu-
doopterus 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 Larivièrè (2001) did not follow Jean-
nel’s (1940) position and resurrected the genus Zolus; they incorrectly synonymized it again with the genus Oopterus in 2007.


Although well represented in New Zealand collections, zolines have escaped the attention of tax-
onomists 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 Larivièrè 2001), a revision of the tribe Harpalini (Larochelle and Larivièrè 2005), a synopsis of supraspecific carabid taxa (Larochelle and Larivièrè 2007), a synopsis of species of the tribes Amarotypini, Cicindelini, Clivinini, Migadopini, Pamborini, Rhysodini, Mori-
mmorphini, and Trechini (Larochelle and Larivièrè 2013), a synopsis of the genus Bembidion Latreille (Larochelle and Larivièrè 2015), and a taxonomic supplement (2001 to 2015) to the 2001 catalogue (Larochelle and Larivièrè 2016).

Materials and Methods

This study is based on the examination of over 5,000 specimens from several hundred New Zea-
land 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 Larivièrè (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 Larochelle 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 Pseudepterus plicaticollis). Submentum with four setae. Ligula with two fused setae (Oopterus, Zolus, Pseudepterus (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 Pseudepterus 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; unguitractor 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. Epipleurae 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, Pseudepterus, Synteratus). Right paramere curved, very long, narrow, untwisted medially (Maungazolus, Oopterus, Pseudepterus, Synteratus) or rather straight, moderately long and wide, twisted medially (Zolus). Left paramere subtriangular.

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 E new genus
  acutus E new species
  pallidipes (Broun, 1893) E
  parvulus (Broun, 1903) E
  priestleyensis E new species
  pygmeatus (Broun, 1907) E
  ranatunga E new species
  septempunctatus E new species
  tararuensis E new species
Genus Pseudoopterus Csiki, 1928 E
  fiordlandensis E new species
  latipennis (Broun, 1903) E
  otiraensis E new species
  plicaticollis (Blanchard, 1843) E
Genus Synteratus Broun, 1909 E
  ovalis Broun, 1909 E
Subtribe Zolina
Genus Oopterus Guérin-Méneville, 1841 N
  anglemensis E new species
  arthurensis E new species
  clivinoides Guérin-Méneville, 1841 E
  collaris Broun, 1893 E
  corvinki E new species
  discoideus E new species
  frontalis Broun, 1908 E
  fulvipes Broun, 1886 E
  garnerae E new species
  laevicollis Bates, 1871 E
  laeviventris (Sharp, 1883) E
  lewisi (Broun, 1912) E
  marrineri Broun, 1909 E
  marrisi E new species
  mohiensis E new species
  monticola E new species
  nanus E new species
  nunni E new species
  ocularius (Broun, 1917) E
  palmai E new species
  patulus (Broun, 1881) E
  punctatus E 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)

---

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

---

2(2). 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-Méneville

---

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

---

3(2). 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 genital 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 Oopterus and Zolus; catalogue), 2007: 44–45 (as Oopterus; description, ecology, geographic distribution, references), 2016: 20–21 (as Oopterus; list).

Remarks. The genus Zolus Sharp, 1886 was previously synonymized with Oopterus. This taxon is resurrected from synonymy here on the basis of the rather straight, moderately long, wide, and medi-  
ally twisted right paramere of the aedeagus, a character unifying included species and distinguishing Zolus from Oopterus. In addition, Zolus species share the following external characters: rather large, body length 7.0–10.1 mm; color dark; eyes convex, antennae sub  
filiform; 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 Oopterus. 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

Oopterus subopacus: Jeannel 1940: 92.
Zolus subopacus: Larochelle and Larivière 2001: 79.
Oopterus subopacus: Larochelle 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 prontal 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.


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

Collecting techniques. Lifting logs, fallen trees, and stones; pitfall trapping.
**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 uni-setosus 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 (posterolaterally). Tempora not infrated. **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. **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. Epigean. 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).

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


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 striae 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 [= Nihotupu, Waitakere Ranges]. CL–Tapu-Coroglen Saddle.


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


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

*Pseudoopterus carinatus*: Csiki 1928: 225.

*Oopterus atratus*: Jeannel 1940: 92.

*Oopterus femoralis*: Jeannel 1940: 92.


*Zolus atratus*: Townsend 1997: 12.

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

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

*Oopterus femoralis*: Larochelle 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 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. Epigean-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).


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

References. Larochelle 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


Oopterus helmsi: Jeannel 1940: 92.
Oopterus labralis: Jeannel 1940: 92.
Oopterus helmsi: Larochelle and Larivière 2007: 45.
Oopterus 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, subquadrature, 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.


Collecting techniques. Lifting logs, fallen branches, and the loose bark of fallen trees; pitfall trapping.
Insecta Mundi 0594, December 2017

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. **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. Epigean-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. Tenerals: 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-Méneville, 1841

Fig. 24–52, 71–98, 120–148

Oopterus Guérin-Méneville, 1841: 123.

Type species. Oopterus clivinoides Guérin-Méneville, 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 in flated 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 striae 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.


**Remarks.** In the course of this revision, species previously assigned to the genus *Oopterus* were found to belong to two subtribes and four genera: *Zolina* (*Oopterus*, *Zolus* reinstated) and *Merizodina* (*Maungazolus* new genus, *Pseudoopterus* reinstated). Three taxa are transferred from *Oopterus* to *Zolus* (*Oopterus carinatus* Broun, 1882; *O. helmsi* (Sharp, 1886); *O. subopacus* (Broun, 1915)), three taxa to *Maungazolus* (*Oopterus pallidipes* Broun, 1893; *O. parvulus* Broun, 1903; *O. pygmeatus* Broun, 1907), and two taxa to *Pseudoopterus* (*Oopterus plicaticollis* Blanchard, 1843; *O. latipennis* Broun, 1903). The morphological character unifying *Oopterus* 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 *Oopterus***

**Remarks.** The only character distinguishing the genera *Oopterus* 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 *Oopterus* 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)] ................................................................. *Oopterus suavis* Broun
   — 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)] ..................................................................................... *Oopterus laevicollis* Bates
   — 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)] .......... *Oopterus quadripunctatus* new species
   — 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] ......................................................... *Zolus carinatus*, *Z. kauriensis*, *Z. helmsi*, *Z. wongi*; see Key to species of *Zolus*

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)] ................................................................. *Oopterus discoideus* new species
— 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)] .................................................. Oopterus 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)] .............................................................. Oopterus 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] ........................................ Oopterus 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)] ...... ................................................ Oopterus 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)] ........................................ Oopterus 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)] .......................................................... Oopterus 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)] ......................... Oopterus 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)] .................................................. Oopterus 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)]

**Oopterus 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(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)]

**Oopterus 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)]

**Oopterus 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)]

— Two setiferous punctures on inner side of each eye

**Oopterus strenuus** Johns

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]

**Oopterus clivinoides** Guérin-Méneville

— Elytra (Fig. 11) with both apical and subapical setae

**Oopterus punctatus** Broun

21(20). Basal margin of elytra complete, reaching about scutellum

— Basal margin of elytra incomplete, reaching about stria 4

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)]

**Oopterus 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(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)]

**Oopterus 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)]

**Oopterus punctatus** Broun

24(21). Posterolateral angles of pronotum acute, projected laterally

— Posterolateral angles of pronotum subrectangular or obtuse

25

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)] ............................................................

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)] ...............................................

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)] ......................................................................................................................

27(24). All elytral striae complete ..........................................................................................................

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) ........................................................................................................

— Elytra with four or five setiferous punctures in stria 3; tempora moderately inflated (about half as long as eyes) .........................................................................................................................

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)] .................................................................

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)] ..........Oopterus 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] ......................................................................................................................

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)] .................................................................

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)] .................................................................

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)] .................................................................

Oopterus suavis Broun, 1917

Fig. 24, 71, 146

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 striae present. Stria 1 complete, deep; striae 2–7 incomplete, shallow, finely punctate; 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.


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.
**Oopterus laevicollis** Bates, 1871

*Fig. 25, 72, 129*


**New synonym**


*Pseudoopterus puncticeps*: Csiki 1928: 225.

*Oopterus laevicollis*: Hudson 1934: 177.

*Oopterus 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 strioie 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). Epigean-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’ hand-written 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


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 striae 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.


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 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 3.4–4.2 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; posteralateral angles obtuse; posteralateral 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 prontal 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 (JNZ, 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


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


**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 marrisi* is morphologically close to *O. discoideus*. In addition to diagnostic characters of the male genitalia, *O. marrisi* 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


*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, obsoletely punctate across base, unwrinkled, strongly transverse, slightly cordate, widest about middle; apex truncate; 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. Endogeian. 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.


**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


*Oöpterus patulus*: Broun 1886: 755.

*Tarastethus patulus*: Sharp 1886: 373.

*Pseudoopterus patulus*: Csiki 1933: 1651.


**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
total, 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 prontal apex, slightly narrower than elytral base. Legs. Moderately long. Elytra. Moderately
Sides strongly rounded. Scutellar striae obsolete. Striae almost complete, very shallow (almost obsolete),
virtually impunctate; interval 3 with three setiferous punctures. Recurrent stria long, sharp, directed
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.

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. Tenerals: 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).

Oópterus fulvipes Broun, 1886
Fig. 31, 78, 127

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

Pseudooópterus fulvipes: Csiki 1928: 225.
Oópterus 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, moderately transverse, digitally, moderately cordate, widest before middle; apex subtruncated; 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 fovea 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. Epigean-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.


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).
**Oöpterus sobrinus** Broun, 1886

Fig. 32, 79, 144


New synonym


New synonym

Pseudoopterus sobrinus: Csiki 1928: 226.
Pseudoopterus nigritulus: Csiki 1928: 225.
Pseudoopterus laevigatus: Csiki 1928: 225.

**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, feebly 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. **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. Epigean-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.


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. nigritulus; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2016: 20–21 (O. sobrinus, O. laevigatus, O. nigritulus; list).

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

Oopterus collaris Broun, 1893

Fig. 33, 80, 123


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: median 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 striae 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 stria 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 delected 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. Epigean-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.


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 laeviventris** (Sharp, 1883)

Fig. 34, 81, 130


**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 striae 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. Epigean-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.


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


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 subtruncated; 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 subtrangular; 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 striae 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


**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 dis tally, 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 setae 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 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 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. Microstructure 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.** Moder-

**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. Epigean. 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 subtruncated; 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 subtruncated, 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 striae 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 setae 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. Epigean. 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. palmai*. 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. palmai* 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; posteralateral angles subrectangular; posteralateral 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. 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. Epigean. 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.


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).

Oopterus clivinoides Guérin-Méneville, 1841
Fig. 40, 86, 122

Oopterus clivinoides Guérin-Méneville, 1841: 123. Type locality: Auckland Islands [AU].
Pseudoopterus guerini: Csiki 1928: 225.
Pseudoopterus tripunctatus: Csiki 1928: 226.
Pseudoopterus 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 striae 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. Epigean. 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.


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 clivinoides 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 Scenic Reserve 300m 21.1.1998 Larochelle and Larivière (typed) / Dry Tawa forest. Under fallen branches. (typed) / HOLOTYPE 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 striae 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 arculate, 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. Epigean. 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.


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. *Oopterus 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. *Oopterus 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).

*Oopterus frontalis* Broun, 1908
Fig. 42, 88, 126


*Pseudoopterus frontalis*: Csiki 1928: 225.

*Oopterus 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 punctuate 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.


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).

Ecology. Lowland, montane. Epigean. 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.


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 one third of 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 towards 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.


**Biology.** Seasonality: October, February. Tenerals: 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 striae 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. Epigean. Mostly alpine fellfields and grasslands; also wet subalpine forests (beech) and screes. Open or shaded ground. Nocturnal; hides during the day under stones. Gregarious.


**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. *Oopterus trechooides* is morphologically close to *O. sculpturatus* and *O. taieriensis*. In addition to diagnostic characters of the male genitalia, *O. trechooides* 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. trechooides* 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).

**Oopterus sculpturatus** Broun, 1908


Pseudoopterus sculpturatus: Csiki 1928: 226.

*Oopterus sculpturatus sculpturatus* Hudson 1934: 177.

*Oopterus sculpturatus ovinotatus* Hudson 1934: 177.

*Oopterus 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 setigerous 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 setigerous 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 striae present. Stria 1 complete, deep; striae 2–7 incomplete; striae 2–4 shallow, finely punctate; striae 5–7 obsolete; stria 3 with three setigerous 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).


**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. Tenerals: 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 taieriensis** 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*
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, strongly, 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 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 setae 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 curved 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.


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).
**Oopterus ocularius** (Broun, 1917)

Fig. 47, 93, 138


*Oopterus ocularius*: Jeannel 1940: 92.


*Oopterus ocularius*: Larochelle and Larivièrè 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; posteronlerateral angles rectangular; posteronlerateral 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; basil 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.


**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 Oopterus ocularius; taxonomy), 2016: 21 (as Oopterus ocularius; list).

**Oopterus marrineri** Broun, 1909

Fig. 48, 94, 132

*Oopterus marrineri* Broun, 1909: 88. Type locality: Campbell Island [CA].  
*Oopterus elongellus* Broun, 1909: 89. Type locality: Campbell Island [CA]. Synonymized by Darlington 1964: 336.  
*Pseudoopterus marrineri*: Csiki 1928: 225.  

**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 corphate, 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 striae 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 subtrianugular, 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. Epigean. 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.

**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


**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.

**Elytra.** Moderately convex, subovate, widest about middle. Basal margin incomplete, reaching about stria 4. Shoulders obtuse. Sides moderately rounded. Scutellar striae obsolete. Striae complete, shallow, finely punctate; stria 3 with four or five setiferous punctures. Recurrent stria long, blunt, directed apically toward stria 5. Subapical setae 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.


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 subtruncated; 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.


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


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 striae 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. Epigean. Wet forests (beech); alpine grasslands. Shaded or open ground. Nocturnal; hides during the day in moss and tussock litter.


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], Tawarui 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; posterolateral 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. Endogelean. 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.


**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, posteralateral 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 Merizo dinia. 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. 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 *Pseu doopterus*). Parameres with two or three apical setae. Right paramere curved, very long, narrow, untwisted medially.


**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 *Pseudoopterus* 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.


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

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


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


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 striae 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 *Pseudoopterus* 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 *Pseudoopterus* now includes two newly described species as well as two species previously described in *Oopterus*.

**Key to species of Pseudoopterus**

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)] .......................... *Pseudoopterus 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)] ................................. *Pseudoopterus 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)] .......
   .......................................................................................... *Pseudoopterus 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)] ...........
   ........................................................................ *Pseudoopterus fiordlandensis* new species
Pseudoopterus 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] Pseudoopterus 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 arculate, 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.


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, Pseudoopterus otiraensis has the following distinguishing features: a single setifer-
Pseudoopterus plicaticollis (Blanchard, 1843), reinstated

Fig. 55, 101, 152

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

Pseudoopterus plicaticollis: Csiki 1928: 225. Combination reinstated


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 Pseudoopterus species). Paraglossae membranous, prominent, about as long as ligula. Thorax. Pronotum strongly convex, impunctate, coarsely wrinkled discally (finely wrinkled in other Pseudoopterus 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 obsolete. 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 Pseudoopterus 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. Epigean. 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.

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


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-
Insecta Mundi 0594, December 2017 • 59

**The Tribe Zolini in New Zealand**

The tribe Zolini is a group of beetles characterized by specific morphological features. In this segment, we focus on the description and characteristics of the species within the tribe Zolini found in New Zealand.

### Material Examined
82 specimens from various collections (AMNZ, BMNH, CMNZ, JNNZ, LUNZ, MONZ, NZAC).

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

### Ecology
Lowland, montane, subalpine, alpine. Epigean-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
Larochelle 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


### 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).


**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. *Pseudoopterus 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 *Oopterus* (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 *Oopterus*.

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


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. Microweltsculpture obsolete on head, absent on pronotum and elytra. Iridescence absent. Very shiny, without metallic luster. Head. Labrum strongly transverse, slightly emarginate anteriorly. Antennae submo- niliform, 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 medi-
ally; 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
striole obsolete. Stria 1 complete; striae 2–7 incomplete; striae 1–4 shallow, finely punctate; striae 5–7
obscure; 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, unusu-
ally 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. Epigean. 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. Tenerals: October (SL), January (FD,

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

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

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

McBurney (typed) / Mat plants (typed) 68/55 (hand-written) / [male symbol] / HOLOTYPE [male symbol]
Maungazolus septempunctatus Larochelle & Lariviére, 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 striae 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 obtuse; emarginate. 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.


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


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; posteralateral angles subrectangular; posteralateral 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. 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.


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


*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 lobeae veae 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.


**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). **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 setae 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. Epigean-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.


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

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: median 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. Basal margin incomplete. Scutellar striae 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-
ory 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 (ostiun 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. Epigean-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. Tenerals: 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 moniliform, 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 mar-
gin 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, asymmetri-
cal (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. Epigean. 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, Auck-
land) 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 Dennan Tararua FP [= Forest Park] 4 Jun 1984
Larochelle & 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 foveae; 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 strile obsolete. Striae coarsely punctate; stria 1 complete, very deep; striae 2–7 incomplete; striae 1 moderately deep; striae 2–5 moderately deep; striae 6–7 obsolete; stria 3 with three setiferous punctures. **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). Epigean. 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 tararuensis* is morphologically close to *M. ranatungae*. In addition to diagnostic characters of the male genitalia, *M. tararuensis* 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 tararuensis* 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).

**Acknowledgments**

For the opportunity to examine material in their care, the authors thank J. M. W. Marris (Entomology Research Museum, Lincoln University, Lincoln, New Zealand), J. W. Early and D. Ranatunga (Auckland War Memorial Museum, Auckland, New Zealand), R. L. Palma and P. Sirvid (Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand), J. Nunn (Dunedin, New Zealand), C. J. Vink (Canterbury Museum, Christchurch, New Zealand), R. Davidson (Carnegie Museum of Natural
The authors wish to thank the following peer reviewers for their helpful comments and suggestions to improve the manuscript: R. Davidson (Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, U.S.A.) and R. J. B. Hoare (Landcare Research, Auckland, New Zealand).

The authors are indebted to B. E. Rhode (Landcare Research, Auckland, New Zealand) for her excellent habitus photos, and to G. Hall and S. Tassell (Landcare Research, Auckland, New Zealand) for technical assistance with the curation of NZAC and material borrowed from other collections.

Most of this research was done using the authors’ personal time and resources. Partial financial support – most fieldwork, photographic services, part-time contribution by the second author – was also received from the Characterising Land Biota research program through Core funding for Crown Research Institutes from the Ministry of Business, Innovation and Employment’s Science and Innovation Group.

The authors are delighted to dedicate this work to John Nunn (Dunedin) in acknowledgment of his collegial support and his contribution to the building of invaluable reference collections of New Zealand Zolini, without which several new species could not have been described.

Literature Cited


Hudson, G. V. 1934. New Zealand beetles and their larvae: an elementary introduction to the study of our native Coleoptera. Ferguson and Osborn; Wellington. 236 p. + 18 pl.


Received September 6, 2017; Accepted October 7, 2017.

Review Editor Jiri Zidek.
### Appendix A. Geographic coordinates of localities in decimal degrees.

<table>
<thead>
<tr>
<th>Location</th>
<th>Code</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abel Tasman National Park</td>
<td>NN</td>
<td>-40.9139</td>
<td>172.9473</td>
</tr>
<tr>
<td>Akaroa</td>
<td>MC</td>
<td>-43.8049</td>
<td>172.9669</td>
</tr>
<tr>
<td>Allison Scenic Reserve</td>
<td>DN</td>
<td>-46.1300</td>
<td>170.1000</td>
</tr>
<tr>
<td>Arthur’s Pass National Park</td>
<td>MC/NC/WD</td>
<td>-42.9436</td>
<td>171.5666</td>
</tr>
<tr>
<td>Auckland Islands</td>
<td>AU</td>
<td>-50.5800</td>
<td>166.1600</td>
</tr>
<tr>
<td>Bald Hill, Longwood Forest</td>
<td>SL</td>
<td>-46.1685</td>
<td>167.8321</td>
</tr>
<tr>
<td>Balloon Hut, Mount Arthur</td>
<td>NN</td>
<td>-41.1691</td>
<td>172.6224</td>
</tr>
<tr>
<td>Banks Peninsula</td>
<td>MC</td>
<td>-43.8825</td>
<td>173.0089</td>
</tr>
<tr>
<td>Ben Lomond</td>
<td>OL</td>
<td>-45.0086</td>
<td>168.6142</td>
</tr>
<tr>
<td>Blue Pools walk</td>
<td>OL</td>
<td>-44.1623</td>
<td>169.2736</td>
</tr>
<tr>
<td>Borland Saddle</td>
<td>FD</td>
<td>-45.7407</td>
<td>167.3736</td>
</tr>
<tr>
<td>Borland Valley</td>
<td>FD</td>
<td>-45.7500</td>
<td>167.5184</td>
</tr>
<tr>
<td>Boulder Beach, Otago Peninsula</td>
<td>DN</td>
<td>-45.8985</td>
<td>170.6035</td>
</tr>
<tr>
<td>Boulder Lake</td>
<td>NN</td>
<td>-40.8943</td>
<td>172.5826</td>
</tr>
<tr>
<td>Cameron Flat</td>
<td>OL</td>
<td>-44.1570</td>
<td>169.3058</td>
</tr>
<tr>
<td>Campbell Island</td>
<td>CA</td>
<td>-52.5163</td>
<td>169.1552</td>
</tr>
<tr>
<td>Canterbury</td>
<td>NC/MC/SC</td>
<td>-43.0000</td>
<td>172.0000</td>
</tr>
<tr>
<td>Carnley Harbour</td>
<td>AU</td>
<td>-50.8500</td>
<td>166.1300</td>
</tr>
<tr>
<td>Carrick Range</td>
<td>CO</td>
<td>-45.1318</td>
<td>169.0847</td>
</tr>
<tr>
<td>Catlins State Forest Park</td>
<td>SL</td>
<td>-46.4800</td>
<td>169.3300</td>
</tr>
<tr>
<td>Christchurch</td>
<td>MC</td>
<td>-43.5160</td>
<td>172.5242</td>
</tr>
<tr>
<td>Cobb Reservoir</td>
<td>NN</td>
<td>-41.1223</td>
<td>172.6565</td>
</tr>
<tr>
<td>Cobb Valley</td>
<td>NN</td>
<td>-41.0847</td>
<td>172.5575</td>
</tr>
<tr>
<td>Dennan, Tararua Forest Park</td>
<td>WN</td>
<td>-40.9248</td>
<td>175.2641</td>
</tr>
<tr>
<td>Dundas Ridge, Tararua Range</td>
<td>WN</td>
<td>-40.7245</td>
<td>175.4571</td>
</tr>
<tr>
<td>Eglinton Valley</td>
<td>FD</td>
<td>-45.1417</td>
<td>167.8995</td>
</tr>
<tr>
<td>Field Hut, Tararua Forest Park</td>
<td>WN</td>
<td>-40.9078</td>
<td>175.2562</td>
</tr>
<tr>
<td>Fiordland National Park</td>
<td>FD</td>
<td>-45.3800</td>
<td>167.2800</td>
</tr>
<tr>
<td>Flagstaff Hill</td>
<td>DN</td>
<td>-45.8326</td>
<td>170.4662</td>
</tr>
<tr>
<td>Fox Glacier</td>
<td>WD</td>
<td>-43.4660</td>
<td>170.0199</td>
</tr>
<tr>
<td>Freds Camp</td>
<td>SI</td>
<td>-46.9289</td>
<td>167.9769</td>
</tr>
<tr>
<td>Freshwater</td>
<td>SI</td>
<td>-46.8100</td>
<td>167.8600</td>
</tr>
<tr>
<td>Galena Creek, Cobb Valley</td>
<td>NN</td>
<td>-41.1037</td>
<td>172.6672</td>
</tr>
<tr>
<td>Gilbert Islands, Breaksea Sound</td>
<td>FD</td>
<td>-45.5993</td>
<td>166.6693</td>
</tr>
<tr>
<td>Location</td>
<td>Region</td>
<td>Latitude</td>
<td>Longitude</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Greymouth</td>
<td>BR</td>
<td>-42.4610</td>
<td>171.2046</td>
</tr>
<tr>
<td>Hastwell</td>
<td>WA</td>
<td>-40.7209</td>
<td>175.6952</td>
</tr>
<tr>
<td>Hinewai Scenic Reserve, Banks Peninsula</td>
<td>MC</td>
<td>-43.8000</td>
<td>173.0100</td>
</tr>
<tr>
<td>Hollyford</td>
<td>OL</td>
<td>-44.7595</td>
<td>168.1407</td>
</tr>
<tr>
<td>Jackson Bay</td>
<td>WD</td>
<td>-43.9728</td>
<td>168.6161</td>
</tr>
<tr>
<td>Judd Ridge, Tararua Range</td>
<td>WN</td>
<td>-40.9020</td>
<td>175.2450</td>
</tr>
<tr>
<td>Kaitoke</td>
<td>WN</td>
<td>-41.0840</td>
<td>175.1678</td>
</tr>
<tr>
<td>Karori</td>
<td>WN</td>
<td>-41.2875</td>
<td>174.7378</td>
</tr>
<tr>
<td>Kelly Creek</td>
<td>WD</td>
<td>-41.2537</td>
<td>172.2126</td>
</tr>
<tr>
<td>Kelly Creek-Otira River Junction</td>
<td>WD</td>
<td>-41.2537</td>
<td>172.2126</td>
</tr>
<tr>
<td>Lake Hauroko</td>
<td>FD</td>
<td>-45.9912</td>
<td>167.3842</td>
</tr>
<tr>
<td>Lake Ohau</td>
<td>MK</td>
<td>-44.2300</td>
<td>169.8500</td>
</tr>
<tr>
<td>Lake Sylvester</td>
<td>NN</td>
<td>-41.1065</td>
<td>172.6286</td>
</tr>
<tr>
<td>Leith Stream</td>
<td>DN</td>
<td>-45.8315</td>
<td>170.5016</td>
</tr>
<tr>
<td>Liverpool Stream</td>
<td>OL</td>
<td>-44.4297</td>
<td>168.6488</td>
</tr>
<tr>
<td>Long Bay, Banks Peninsula</td>
<td>MC</td>
<td>-43.8885</td>
<td>172.8548</td>
</tr>
<tr>
<td>Longwood Forest</td>
<td>SL</td>
<td>-46.2747</td>
<td>167.8305</td>
</tr>
<tr>
<td>Mackinnon Pass</td>
<td>FD</td>
<td>-44.8025</td>
<td>167.7661</td>
</tr>
<tr>
<td>McKenzie Burn</td>
<td>FD</td>
<td>-45.2597</td>
<td>167.4119</td>
</tr>
<tr>
<td>McPhees Rock, Rock and Pillar Range</td>
<td>CO</td>
<td>-45.4600</td>
<td>169.9800</td>
</tr>
<tr>
<td>Midhirst</td>
<td>TK</td>
<td>-39.2927</td>
<td>174.2667</td>
</tr>
<tr>
<td>Mistake Creek, Eglinton Valley</td>
<td>FD</td>
<td>-44.8799</td>
<td>168.0348</td>
</tr>
<tr>
<td>Moa Basins</td>
<td>MC</td>
<td>-43.0913</td>
<td>171.2517</td>
</tr>
<tr>
<td>Moa Park, Abel Tasman National Park</td>
<td>NN</td>
<td>-40.9358</td>
<td>172.9369</td>
</tr>
<tr>
<td>Moa Stream</td>
<td>MC</td>
<td>-43.1263</td>
<td>171.2867</td>
</tr>
<tr>
<td>Mohi Bush Scenic Reserve</td>
<td>HB</td>
<td>-39.8572</td>
<td>176.9004</td>
</tr>
<tr>
<td>Mount Anglem</td>
<td>SI</td>
<td>-46.7405</td>
<td>167.9164</td>
</tr>
<tr>
<td>Mount Arthur</td>
<td>NN</td>
<td>-41.2179</td>
<td>172.6815</td>
</tr>
<tr>
<td>Mount Barber</td>
<td>FD</td>
<td>-45.5018</td>
<td>167.2135</td>
</tr>
<tr>
<td>Mount Dewar</td>
<td>BR</td>
<td>-42.0823</td>
<td>171.5451</td>
</tr>
<tr>
<td>Mount Dick</td>
<td>OL</td>
<td>-45.2644</td>
<td>168.6828</td>
</tr>
<tr>
<td>Mount Earnslaw</td>
<td>OL</td>
<td>-44.6239</td>
<td>168.3969</td>
</tr>
<tr>
<td>Mount Egmont/Taranaki</td>
<td>TK</td>
<td>-39.2962</td>
<td>174.0638</td>
</tr>
<tr>
<td>Mount Fell</td>
<td>MB</td>
<td>-41.4476</td>
<td>173.4094</td>
</tr>
<tr>
<td>Location</td>
<td>Type</td>
<td>Longitude</td>
<td>Latitude</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Mount Gray</td>
<td>FD</td>
<td>-45.5526</td>
<td>167.2480</td>
</tr>
<tr>
<td>Mount Holdsworth</td>
<td>WN</td>
<td>-40.8734</td>
<td>175.4168</td>
</tr>
<tr>
<td>Mount Johnson</td>
<td>MB</td>
<td>-41.4700</td>
<td>173.4200</td>
</tr>
<tr>
<td>Mount Kinnaird</td>
<td>WD</td>
<td>-43.7524</td>
<td>169.4477</td>
</tr>
<tr>
<td>Mount Priestley</td>
<td>BR</td>
<td>-42.0730</td>
<td>171.5460</td>
</tr>
<tr>
<td>Mount Raynal</td>
<td>AU</td>
<td>-50.7100</td>
<td>166.0600</td>
</tr>
<tr>
<td>Mount Robert</td>
<td>BR</td>
<td>-41.8323</td>
<td>172.8111</td>
</tr>
<tr>
<td>Mount Stokes</td>
<td>SD</td>
<td>-41.0904</td>
<td>174.1019</td>
</tr>
<tr>
<td>Mount Wilmot</td>
<td>FD</td>
<td>-45.5140</td>
<td>167.1784</td>
</tr>
<tr>
<td>Murchison Mountains</td>
<td>FD</td>
<td>-45.2602</td>
<td>167.5512</td>
</tr>
<tr>
<td>Napier</td>
<td>HB</td>
<td>-39.5025</td>
<td>176.8926</td>
</tr>
<tr>
<td>Nihotupu, Waitakere Ranges</td>
<td>AK</td>
<td>-39.9600</td>
<td>174.5800</td>
</tr>
<tr>
<td>Oban</td>
<td>SI</td>
<td>-46.8988</td>
<td>168.1273</td>
</tr>
<tr>
<td>Obelisk Peak</td>
<td>OL</td>
<td>-45.3230</td>
<td>169.2071</td>
</tr>
<tr>
<td>Ocean Beach</td>
<td>SI</td>
<td>-46.9707</td>
<td>168.1771</td>
</tr>
<tr>
<td>Ohau Range</td>
<td>MK</td>
<td>-44.2995</td>
<td>169.7720</td>
</tr>
<tr>
<td>Ohau Ski Field</td>
<td>MK</td>
<td>-44.2203</td>
<td>169.7784</td>
</tr>
<tr>
<td>Ohau Valley</td>
<td>MK</td>
<td>-44.2879</td>
<td>170.0969</td>
</tr>
<tr>
<td>Old Man Range</td>
<td>CO</td>
<td>-45.3668</td>
<td>69.2035</td>
</tr>
<tr>
<td>Oparara River</td>
<td>NN</td>
<td>-41.2000</td>
<td>172.1000</td>
</tr>
<tr>
<td>Open Bay Islands</td>
<td>WD</td>
<td>-43.8612</td>
<td>168.8807</td>
</tr>
<tr>
<td>Orongorongo Valley</td>
<td>WN</td>
<td>-41.3530</td>
<td>174.9617</td>
</tr>
<tr>
<td>Otago</td>
<td>CO/DN/OL</td>
<td>-45.5000</td>
<td>170.0000</td>
</tr>
<tr>
<td>Otago Peninsula</td>
<td>DN</td>
<td>-45.8874</td>
<td>170.6798</td>
</tr>
<tr>
<td>Otago Ski Hut, Rock and Pillar Range</td>
<td>CO</td>
<td>-45.4373</td>
<td>170.1225</td>
</tr>
<tr>
<td>Otaki Forks</td>
<td>WN</td>
<td>-40.8333</td>
<td>175.2500</td>
</tr>
<tr>
<td>Otepatutu Scenic Reserve, Banks Peninsula</td>
<td>MC</td>
<td>-43.7438</td>
<td>173.0022</td>
</tr>
<tr>
<td>Palmerston North</td>
<td>WI</td>
<td>-40.3556</td>
<td>175.6165</td>
</tr>
<tr>
<td>Pegasus Creek</td>
<td>SI</td>
<td>-47.1436</td>
<td>167.7028</td>
</tr>
<tr>
<td>Penguin Creek</td>
<td>SN</td>
<td>-48.0131</td>
<td>166.6041</td>
</tr>
<tr>
<td>Penguin Rookery</td>
<td>SN</td>
<td>-48.0105</td>
<td>166.5888</td>
</tr>
<tr>
<td>Percy Saddle</td>
<td>FD</td>
<td>-45.5638</td>
<td>167.3145</td>
</tr>
<tr>
<td>Plateau Creek, Murchison Mountains</td>
<td>FD</td>
<td>-45.2406</td>
<td>167.5303</td>
</tr>
<tr>
<td>Location</td>
<td>Code</td>
<td>Latitude</td>
<td>Longitude</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Port Hills, Christchurch</td>
<td>MC</td>
<td>-43.6600</td>
<td>172.6000</td>
</tr>
<tr>
<td>Port Levy, Banks Peninsula</td>
<td>MC</td>
<td>-43.6490</td>
<td>172.8206</td>
</tr>
<tr>
<td>Port Pegasus</td>
<td>SI</td>
<td>-47.2182</td>
<td>167.6829</td>
</tr>
<tr>
<td>Port William</td>
<td>SI</td>
<td>-46.8451</td>
<td>168.0866</td>
</tr>
<tr>
<td>Punakaiki</td>
<td>BR</td>
<td>-42.1080</td>
<td>171.3359</td>
</tr>
<tr>
<td>Richmond Range</td>
<td>MB</td>
<td>-41.4500</td>
<td>173.3800</td>
</tr>
<tr>
<td>Rock and Pillar Range</td>
<td>CO</td>
<td>-45.3934</td>
<td>170.1145</td>
</tr>
<tr>
<td>Routeburn</td>
<td>OL</td>
<td>-44.7280</td>
<td>168.1960</td>
</tr>
<tr>
<td>Sinkhole Drain</td>
<td>SN</td>
<td>-48.0105</td>
<td>166.5888</td>
</tr>
<tr>
<td>Sinkhole Flat</td>
<td>SN</td>
<td>-48.0105</td>
<td>166.3600</td>
</tr>
<tr>
<td>Six-Mile Creek, Rock and Pillar Range</td>
<td>CO</td>
<td>-45.4449</td>
<td>170.1146</td>
</tr>
<tr>
<td>Spey River</td>
<td>FD</td>
<td>-45.5494</td>
<td>167.2142</td>
</tr>
<tr>
<td>Station Point</td>
<td>SN</td>
<td>-48.0150</td>
<td>166.6060</td>
</tr>
<tr>
<td>Stewart Island</td>
<td>SI</td>
<td>-46.9962</td>
<td>167.8842</td>
</tr>
<tr>
<td>Table Hill</td>
<td>SI</td>
<td>-47.0396</td>
<td>167.8425</td>
</tr>
<tr>
<td>Taieri Mouth</td>
<td>DN</td>
<td>-46.0546</td>
<td>170.1934</td>
</tr>
<tr>
<td>Taieri River</td>
<td>DN</td>
<td>-46.0384</td>
<td>170.1819</td>
</tr>
<tr>
<td>Takahe Valley</td>
<td>FD</td>
<td>-45.2891</td>
<td>167.6574</td>
</tr>
<tr>
<td>Tapu-Coroglen Saddle</td>
<td>CL</td>
<td>-36.9881</td>
<td>175.5866</td>
</tr>
<tr>
<td>Tararua Forest Park/Range</td>
<td>WN</td>
<td>-40.9000</td>
<td>175.3300</td>
</tr>
<tr>
<td>Tawanui Campground, Catlins State Forest Park</td>
<td>SL</td>
<td>-46.4588</td>
<td>169.4937</td>
</tr>
<tr>
<td>Temple Stream, Ohau Valley</td>
<td>MK</td>
<td>-44.1207</td>
<td>169.8347</td>
</tr>
<tr>
<td>The Snares</td>
<td>SN</td>
<td>-48.0210</td>
<td>166.6027</td>
</tr>
<tr>
<td>Turret Range</td>
<td>FD</td>
<td>-45.5312</td>
<td>167.3401</td>
</tr>
<tr>
<td>Twilight Bay</td>
<td>SI</td>
<td>-47.1620</td>
<td>167.6990</td>
</tr>
<tr>
<td>Wadestown</td>
<td>WN</td>
<td>-41.2629</td>
<td>174.7740</td>
</tr>
<tr>
<td>Waitakere Ranges</td>
<td>AK</td>
<td>-36.9924</td>
<td>174.5203</td>
</tr>
<tr>
<td>Wellington</td>
<td>WN</td>
<td>-41.2783</td>
<td>174.7771</td>
</tr>
<tr>
<td>Westport</td>
<td>NN</td>
<td>-41.7526</td>
<td>171.5834</td>
</tr>
<tr>
<td>Wilmot Pass</td>
<td>FD</td>
<td>-45.5081</td>
<td>167.1925</td>
</tr>
<tr>
<td>Wilton's Bush</td>
<td>WN</td>
<td>-41.2700</td>
<td>174.7500</td>
</tr>
<tr>
<td>Wolfe Flat, Turret Range</td>
<td>FD</td>
<td>-45.5200</td>
<td>167.3200</td>
</tr>
</tbody>
</table>
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.
Figures 31–34. Dorsal habitus. 31) Oopterus fulvipes. 32) O. sobrinus. 33) O. collaris. 34) O. laeviventris. 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.
Figures 82–89. Aedeagi, lateral. 82) Ooporterus corvinki new species. 83) O. palmai new species. 84) O. monticola new species. 85) O. strenuus. 86) O. clivinoides. 87) O. mohiensis new species. 88) O. frontalis. 89) O. punctatus new species.
Figure 111. Map of New Zealand, outlying islands, areas and area codes.
Taxonomic Index

Names in **bold** indicate valid taxa.

**acutus new species, Maungazolus 67**
**anglemensis new species, Oopterus 48**
**arthurensis new species, Oopterus 32**
atratus Broun, Zolus 11
aucklandicus Brookes, Oopterus 57
basalis Broun, Oopterus 62
carinatus Broun, Oopterus 11
**carinatus (Broun), Zolus 11**
crivinoides Guérin-Méneville, Oopterus 37
collaris Broun, Oopterus 30
corvinki new species, Oopterus 33
discoideus new species, Oopterus 23
elongellus Broun, Oopterus 47
femoralis Broun, Zolus 11
**fiordlandensis new species, Pseudoopterus 59**
frontalis Broun, Oopterus 40
fulvipes Broun, Oopterus 27
garnerae new species, Oopterus 50
guerini Kirsch, Oopterus 37
**helmsi Sharp, Zolus 12**
**kauriensis new species, Zolus 10**
labralis Broun, Zolus 12
**laevicollis Bates, Oopterus 21**
laevigatus Broun, Oopterus 29
**laeviventris (Sharp), Oopterus 31**
laeviventris Sharp, Tarastethus 31
laticollis Kirsch, Oopterus 57
latifossus Broun, Oopterus 58
latipennis Broun, Oopterus 58
**latipennis (Broun), Pseudoopterus 58**
lewisi (Broun), Oopterus 25
lewisi Broun, Tarastethus 25

**marrineri Broun, Oopterus 47**
marrisi new species, Oopterus 24
Maungazolus new genus 60
Merizodina 52
minor Broun, Oopterus 62
**mohiensis new species, Oopterus 39**
monticola new species, Oopterus 35
nanus new species, Oopterus 49
nigritulus Broun, Oopterus 29
nunni new species, Oopterus 51
ocularius (Broun), Oopterus 46
ocularius Broun, Zolus 46
Oopterina 6
Oopterus Guérin-Méneville 15
otiraensis new species, Pseudoopterus 56
ovalis Broun, Synteratus 53
ovinotatus Broun, Oopterus sculpturatus 43

pallidipes (Broun), Maungazolus 68
pallidipes Broun, Oopterus 68
palmai new species, Oopterus 34
parvulus (Broun), Maungazolus 66
parvulus Broun, Oopterus 66
patulus (Broun), Oopterus 26
patulus Broun, Tropopterus 26
plicaticollis Blanchard, Oopterus 57
plicaticollis (Blanchard), Pseudoopterus 57
priestleyensis new species, Maungazolus 65
probus Broun, Oopterus 58
Pseudoopterus Csiki 54
punctatus new species, Oopterus 41
puncticeps Broun, Oopterus 21
pygmeatus (Broun), Maungazolus 62
pygmeatus Broun, Oopterus 62

quadripunctatus new species, Oopterus 22
ranatungae new species, Maungazolus 69

sculpturatus ovinotatus Broun, Oopterus 43
sculpturatus Broun, Oopterus 43
sculpturatus sculpturatus Broun, Oopterus 43
septempunctatus new species, Maungazolus 63
sobrinus Broun, Oopterus 29
strenuus Johns, Oopterus 36
suavis Broun, Oopterus 19
subopacus Broun, Zolus 8
Synteratus Broun 53

taieriensis new species, Oopterus 44
tararuensis new species, Maungazolus 70
tarsalis Broun, Oopterus 37
trechoides new species, Oopterus 42
tripunctatus Broun, Oopterus 37
unisetosus new species, Zolus 9
wongi new species, Zolus 14
Zolina 6
Zolini 3
Zolus Sharp 6