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

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Prosthodrus waimana Larochelle and Larivière, new species

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

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Abstract. The tribe Platynini (Coleoptera: Carabidae: Harpalinae) is revised for New Zealand. Eight genera and forty-three species are recognized.

Four genera and sixteen species are described as new: *Ctenognathus davidsoni* Larochele and Larivière **new species**, *Ctenognathus earlyi* Larochele and Larivière **new species**, *Ctenognathus garnerae* Larochele and Larivière **new species**, *Ctenognathus hoarei* Larochele and Larivière **new species**, *Ctenognathus kaikoura* Larochele and Larivière **new species**, *Ctenognathus marieclaudiae* Larochele **new species**, *Ctenognathus perumalae* Larochele and Larivière **new species**, *Ctenognathus takahe* Larochele and Larivière **new species**, *Ctenognathus tawanui* Larochele and Larivière **new species**, *Ctenognathus tepaki* Larochele and Larivière **new species**, *Ctenognathus urewera* Larochele and Larivière **new species**, *Kiwiplatynus* Larochele and Larivière **new genus**, *Kiwiplatynus taranaki* Larochele and Larivière **new species**, *Kupeplatynus* Larochele and Larivière **new genus**, *Maoriplatynus* Larochele and Larivière **new genus**, *Maoriplatynus marrisi* Larochele and Larivière **new species**, *Prospodrus mangamuka* Larochele and Larivière **new species**, *Prospodrus sirvidi* Larochele and Larivière **new species**, *Prospodrus waimana* Larochele and Larivière **new species**, *Tuiplatynus* Larochele and Larivière **new genus**.

Lectotypes are designated for twelve taxa: *Anchomenus adamsi* Broun, 1886, *Anchomenus colenisonis* White, 1846, *Anchomenus feredayi* Bates, 1874, *Anchomenus helmsi* Sharp, 1881, *Anchomenus intermedius* Broun, 1908, *Anchomenus macrocoelis* Broun, 1908, *Anchomenus munroi* Broun, 1893, *Anchomenus sophronitis* Broun, 1908, *Colpodes crenatus* Chaudoir, 1878, *Colpodes neozelandicus* Chaudoir, 1878, *Ctenognathus littorellus* Broun, 1908, and *Ctenognathus pictonensis* Sharp, 1886.

Six **new combinations** are established: *Ctenognathus bidens* (Chaudoir, 1878) = *Kiwiplatynus bidens* (Chaudoir, 1878); *Ctenognathus crenatus* (Chaudoir, 1878) = *Kupeplatynus crenatus* (Chaudoir, 1878); *Ctenognathus lucifugus* (Broun, 1886) = *Kupeplatynus lucifugus* (Broun, 1886); *Ctenognathus sulcitaris* (Broun, 1880) = *Kupeplatynus sulcitaris* (Broun, 1880); *Ctenognathus libitus* (Broun, 1914) = *Tuiplatynus libitus* (Broun, 1914); *Ctenognathus sophronitis* (Broun, 1908) = *Tuiplatynus sophronitis* (Broun, 1908).

Fifteen **new synonymies** are established: *Ctenognathus littorellus* Broun, 1908 = *Ctenognathus adamsi* (Broun, 1886); *Anchomenus parabilis* Broun, 1880 = *Ctenognathus cardiophorus* (Chaudoir, 1878); *Anchomenus integratus* Broun, 1908 = *Ctenognathus colenisonis* (White, 1846); *Anchomenus macrocoelis* Broun, 1908 = *Ctenognathus edwardsii* (Bates, 1874); *Ctenognathus actochares* Broun, 1894 = *Ctenognathus elevatus* (White, 1846); *Anchomenus punctulatus* Broun, 1877, *Anchomenus montivagus* Broun, 1880, *Anchomenus perrugithorax* Broun, 1880, *Anchomenus politulus* Broun, 1880, *Anchomenus suborbithorax* Broun, 1880, and *Colpodes neozelandicus* Chaudoir, 1878 = *Ctenognathus novaezelandiae* (Fairmaire, 1843); *Ctenognathus simmondsi* Broun, 1912 = *Ctenognathus pictonensis* Sharp, 1886; *Anchomenus (Platynus) cheesemani* Broun, 1880 and *Calathus deformipes* Broun, 1880 = *Kupeplatynus crenatus* (Chaudoir, 1878); *Anchomenus munroi* Broun, 1893 = *Kupeplatynus lucifugus* (Broun, 1886). *Ctenognathus elevatus* (White, 1846), previously synonymized with *Ctenognathus novaezelandiae* (Fairmaire, 1843), is reinstated as full species.

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.

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Introduction

The tribe Platynini (Carabidae: Harpalinae) is worldwide in distribution. Members of this group occur throughout New Zealand, except on subantarctic islands. They are mostly forest-dwellers and are especially abundant in the vicinity of streams.

The New Zealand Platynini were catalogued by Laroche and Larivière (2001) in eight genera: “*Anchomenus*” Bonelli, *Cerabilia* Laporte de Castelnau, *Ctenognathus* Fairmaire, *Laemostenus* Bonelli, *Notagonum* Darlington, *Platynus* Bonelli, *Prospodrus* Britton, and *Zabronothus* Broun.

New Zealand species previously recorded in the genus “*Anchomenus*” were transferred to the genus *Ctenognathus* by Liebherr (2005) and Laroche and Larivière (2007).

The genus *Laemostenus* belongs to the tribe Sphodrini considered separate from the tribe Platynini by Lorenz (2005), Bouchard et al. (2011), and Bousquet (2012). Laroche and Larivière (2016) adopted this position in their Taxonomic Supplement to the 2001 New Zealand catalogue.

One species of *Notagonum*, *N. marginellum* (Erichson, 1842), was deleted from the New Zealand fauna by Laroche and Larivière (2007); this species occurs in Tasmania, southern mainland Australia, and on Lord Howe Island (Baehr 2016).

The genus *Zabronothus* was synonymized with *Cerabilia* by Laroche and Larivière (2007). Subsequently, *Cerabilia* was transferred from Platynini to Loxandriini (Will 2011) and then to Abacetini (Will 2015).

These taxonomic changes resulted in four genera (*Ctenognathus*, *Notagonum*, *Platynus*, *Prospodrus*) and 41 species of Platynini being recorded from New Zealand in Laroche and Larivière (2016).

Between 1877 and 1921, Broun described the bulk of the platynines for New Zealand. Since then, only two species have been described for this country, *Prospodrus waltoni* Britton, 1959 and *P. occultus* Britton, 1960.

The current taxonomic revision adds four genera to the fauna (*Kiwiplatynus* new genus, *Kupeplatynus* new genus, *Maoriplatynus* new genus, *Tuiplatynus* new genus) and deals with 43 endemic species, 16 of which are new to science.

This synopsis provides a detailed treatment of the taxonomy of New Zealand Platynini, 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 (Laroche and Larivière 2001), a revision of the tribe Harpalini (Laroche and Larivière 2005), a synopsis of supraspecific carabid taxa (Laroche and Larivière 2007), a synopsis of species of the tribes Amarotypini, Cindelini, Clivinini, Migadopini, Pamborini, Rhysodini, Moriomorphini, and Trechini (Laroche and Larivière 2013), a synopsis of the genus *Bembidion* Latreille (Laroche and Larivière 2015), a taxonomic supplement (2001 to 2015) to the 2001 catalogue (Laroche and Larivière 2016), and a synopsis of the tribe Zolini (Laroche and Larivière 2017).

Materials and Methods

This study is based on the examination of about 15,000 specimens from several hundred New Zealand localities. Most of this material (about 70%) was collected by the authors from 1992 to 2018 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 Collection, Lincoln University, Lincoln, New Zealand (LUNZ); John Nunn private collection, Dunedin, New Zealand (JNNZ); Muséum national d’Histoire naturelle, Paris, France (MNHN); Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand (MONZ); The Natural History Museum, London, U.K. (BMNH). Type material has been deposited in some of the above collections.

The morphological terminology used in this work generally follows Larochelle and Larivière (2007, 2013, 2015, 2017). All descriptions are based on the same list of characters so as to be fully comparative between taxa. The microsculpture (Fig. 1–4) of the head, pronotum, and elytra, the mentum tooth (Fig. 14–18), and the metatarsomeres 4 (Fig. 29–31), were examined in great detail and proved highly useful in discriminating taxa. The male genitalia, also highly diagnostic at the species level, were dissected across numerous populations of each taxon.

In the identification keys to genera and species, additionally helpful but not necessarily exclusive characters are provided in brackets. The taxonomic arrangement of genera and species, and the sequence of habitus photos and illustrations of male genitalia, follow the order of taxa in the identification keys.

Synonyms, new combinations, and type data are given for all taxa. Type data 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. 123) were used to record geographic distributions. Full distributional information is given for species known from 10 or fewer localities. Appendix 1 provides decimal degree coordinates for localities cited in the text. Maps summarizing species distribution are alphabetically arranged (Fig. 124–166).

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 Platynini

Description (New Zealand). Body length 7.0–26.2 mm; not pedunculate. **Head.** Mandibles with setiferous puncture in scrobe. Labrum subtruncate or emarginate anteriorly. Eyes present, touching buccal fissures or separated from them; two setiferous punctures on inner side of each eye (a single posterior puncture in *Kupeplatynus*). Tempora inflated or not. Clypeus with a setiferous puncture on each side. Antennae filiform; segments 1–3 with a few setae, segments 4–11 densely pubescent; segments 3–10 with verticillate setae. Mentum: medial tooth present; two circular foveae; usually two long setae (two, four or six long setae in *Prospodrus*; 10–18 short setae in addition to the two long setae in *Tuiplatynus*). Mentum-submentum suture present. Submentum with two to twelve long setae (twelve short setae in addition to two long setae in *Maoriplatynus*). Ligula with two setae. Paraglossae glabrous (pubescent in *Prospodrus*). Palpi: terminal segment obtuse or truncate apically; terminal and penultimate maxillary segments glabrous; penultimate labial segment with two setae on anterior margin. **Thorax.** Pronotum with a single setiferous puncture (anteriorly) or with two setiferous punctures on each side (anteriorly and posteriorly). Scutellum visible, inserted entirely between elytral bases. **Legs.** Metacoxae with two posteroventral setae (three or four setae in *Kiwiplatynus* and *Kupeplatynus*). Protibiae without outer apical prolongation. Tarsi glabrous dorsally; basal segments 1–3 of male protarsi dilated, with two rows of ventral scales; metatarsomeres 4 bilobed apically; claws entire ventrally; unguitactor plate invisible between tarsal claws. **Elytra.** Usually fused along suture (hindwings vestigial, or, in some *Notagonum*, about half developed), or free along suture (hindwings fully developed, in some *Notagonum* and in *Platynus*). Basal margin usually complete, reaching about scutellum (incomplete in *Kupeplatynus* (in part) and *Prospodrus* (in part)). Interval 3 without setiferous punctures or with one to three setiferous punctures. Umbilicate series with 13–25 setiferous punctures. Radial field without fine dense pubescence. Apices usually obtuse or rounded, rarely mucronate or truncate-emarginate (turned upward in *Maoriplatynus*). Epipleura simple (without inner fold or plica) near apex. **Abdomen.** Apex invisible dorsally. Sterna IV–VI: both sexes usually with two long apical ambulatory setae (additional long ambulatory setae in *Kiwiplatynus*). Sternum VII: male with two or four long apical ambulatory setae; female usually with four, eight, or ten long apical ambulatory setae (rarely with two or six long apical ambulatory setae). Sterna V–VII: both sexes with additional numerous short setae in *Maoriplatynus*. **Aedeagus.** Lateral view: moderately or strongly arcuate (slightly arcuate in *Maoriplatynus*); basal lobe of basal bulb usually present (absent in *Maoriplatynus* and *Ctenognathus* (in part)); internal sac unarmed (armed with scale-like sclerites in *Kiwiplatynus* and *Kupeplatynus* (in part)). Dorsal view: narrow to very wide, asymmetrical (ostium of membranous area deflected to the left) or symmetrical (ostium dorsal); basal bulb moderately distant from membranous area or close to it. Parameres: left paramere larger, oval; right paramere slender, often shorter.

References. Darlington 1952: 89–252 (revision, New Guinean Platynini), 1956: 1–10 (key, Australian genera); Lindroth 1966: 552–648, 1968: 649–650 (revision, North American Platynini); Habu 1978: 1–447 (revision, Japanese Platynini); Liebherr and Zimmerman 1998: 137–172 (cladistics analysis, phylogeny, biography, Hawaiian Platynini), 2000: 1–494 (revision, Hawaiian Platynini); Larochelle and Larivière 2001: 128–140 (catalogue); Liebherr 2005: 263–295 (revision, Vanuatu Platynini); Larochelle and Larivière 2007: 78–82 (taxonomy), 2016: 36–38 (list).

Alphabetical checklist of taxa

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

Tribe Platynini

Genus *Ctenognathus* Fairmaire, 1843^E

adamsi (Broun, 1886)^E

arnaudensis (Broun, 1921)^E

cardiophorus (Chaudoir, 1878)^E

colenisonis (White, 1846)^E

davidsoni Larochelle and Larivière^E, new species

earlyi Larochelle and Larivière^E, new species

edwardsii (Bates, 1874)^E

elevatus (White, 1846)^E

garnerae Larochelle and Larivière^E, new species

helmsi (Sharp, 1881)^E

hoarei Larochelle and Larivière^E, new species

intermedius (Broun, 1908)^E

kaikoura Larochelle and Larivière^E, new species

marieclaudiae Larochelle^E, new species

novaezealandiae (Fairmaire, 1843)^E

oreobius (Broun, 1886)^E

otagoensis (Bates, 1878)^E

perumalae Larochelle and Larivière^E, new species

pictonensis Sharp, 1886^E

sandageri (Broun, 1882)^E

takahe Larochelle and Larivière^E, new species

tawanui Larochelle and Larivière^E, new species

tepaki Larochelle and Larivière^E, new species

urewera Larochelle and Larivière^E, new species

xanthomelus (Broun, 1908)^E

Genus *Kiwiplatynus* Larochelle and Larivière^E, new genus

bidens (Chaudoir, 1878)^E

taranaki Larochelle and Larivière^E, new species

Genus *Kupeplatynus* Larochelle and Larivière^E, new genus

crenatus (Chaudoir, 1878)^E

lucifugus (Broun, 1886)^E

sulcitaris (Broun, 1880)^E

Genus *Maoriplatynus* Larochelle and Larivière^E, new genus

marrisi Larochelle and Larivière^E, new species

Genus *Notagonum* Darlington, 1952^N

chathamense (Broun, 1909)^E

feredayi (Bates, 1874)^E

lawsoni (Bates, 1874)^E

submetallicum (White, 1846)^E

- Genus *Platynus* Bonelli, 1810^N
macropterus (Chaudoir, 1879)^E
- Genus *Prospodrus* Britton, 1959^E
mangamuka Larochelle and Larivière^E, new species
occultus Britton, 1960^E
sirvidi Larochelle and Larivière^E, new species
waimana Larochelle and Larivière^E, new species
waltoni Britton, 1959^E
- Genus *Tuiplatynus* Larochelle and Larivière^E, new genus
libitus (Broun, 1914)^E
sophonitis (Broun, 1908)^E

Key to genera of Platynini (New Zealand)

1. Eyes (Fig. 8) touching buccal fissures; hindwings fully developed or half developed; scutellar striole of elytra very long **2**
- Eyes (Fig. 9) separated from buccal fissures; hindwings vestigial; scutellar striole of elytra short or moderately long **3**
- 2(1). Meso- and metatarsomeres 1–4 (Fig. 28) tricarinate dorsally; forebody narrow in comparison to elytra; body without metallic luster. [Larger, body length 13.0–14.2 mm; North Island, South Island, and Stewart Island] **Genus *Platynus* Bonelli**
- Meso- and metatarsomeres 1–4 (Fig. 27) not carinate dorsally; forebody moderately wide in comparison to elytra; body with metallic luster. [Smaller, body length 7.3–10.4 mm; North Island, South Island, Stewart Island, and Offshore Islands (TH, CH)] **Genus *Notagonum* Darlington**
- 3(1). Paraglossae (Fig. 12) pubescent; prosternal lobe compressed into a vertical ridge. [Body length 14.0–26.2 mm; mentum tooth bifid; abdominal sterna V–VII without short setae; North Island] **Genus *Prospodrus* Britton**
- Paraglossae (Fig. 13) glabrous; prosternal lobe not compressed into a vertical ridge **4**
- 4(3). Abdominal sterna V–VII (Fig. 34) with numerous short setae in addition to long ambulatory setae; elytral apices turned upward; mentum tooth bifid (Fig. 14); aedeagus (in lateral view) slightly arcuate (Fig. 90). [Body length 12.5–12.7 mm; Three Kings Islands (TH)] **Genus *Maoriplatynus* Larochelle and Larivière, new genus**
- Abdominal sterna V–VII without short setae; elytral apices not turned upward; mentum tooth entire, subtruncate (Fig. 16), acute (Fig. 18), or emarginate (Fig. 15); aedeagus (in lateral view) more strongly arcuate **5**
- 5(4). Cleaning organ of protibiae (Fig. 26) with three clip setae; metacoxae with three or four posteroventral setae (Fig. 23); neck constriction deep dorsolaterally (Fig. 5) **6**
- Cleaning organ of protibiae (Fig. 25) with two clip setae; metacoxae with two posteroventral setae (Fig. 24); neck constriction shallow (Fig. 6) or absent (Fig. 7) dorsolaterally **7**
- 6(5). Abdominal sterna V–VI (Fig. 32) of both sexes with three to five long apical ambulatory setae; two setiferous punctures on each side of each eye; forebody narrow in comparison to elytra; interval 3 of elytra with one or two setiferous punctures; mentum tooth (Fig. 15) emarginate apically. [Body length 16.0–19.3 mm; northern North Island] **Genus *Kiwiplatynus* Larochelle and Larivière, new genus**
- Abdominal sterna V–VI (Fig. 33) of both sexes with two long apical ambulatory setae; a single setiferous puncture on each side of each eye (posteriorly); forebody wide in comparison to elytra; interval 3 of elytra without setiferous punctures; mentum tooth (Fig. 18) entire, acute apically. [Body length 12.3–20.2 mm; northern North Island] . . **Genus *Kupeplatynus* Larochelle and Larivière, new genus**

- 7(5). Mentum (Fig. 21) with numerous short setae (10–18) in addition to two long setae; circular foveae (Fig. 19) large. [Body length 10.0–12.3 mm; southern South Island]
 **Genus *Tuiplatynus* Larochelle and Larivière, new genus**
 — Mentum (Fig. 22) with two long setae only; circular foveae (Fig. 20) small. [Body length 7.0–13.9 mm; Three Kings Islands (TH), North Island, South Island, and Stewart Island]
 **Genus *Ctenognathus* Fairmaire**

Genus *Platynus* Bonelli, 1810

Fig. 37, 80, 159

Platynus Bonelli 1810: Tabula Synoptica.

Type species. *Carabus angusticollis* Fabricius, 1801 (= *Carabus assimilis* Paykull, 1790), by subsequent monotypy in Germar (1817: 303).

Description (New Zealand). Body length 13.0–14.2 mm. Color mostly dark. Metallic luster absent. Dorsal surface mostly glabrous. Forebody narrow in comparison to elytra. **Head.** Narrow. Mandibles moderately long. Labrum emarginate anteriorly. Eyes strongly convex, touching buccal fissures; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction deep dorsolaterally. Mentum tooth entire, rounded apically; two small circular foveae; two long setae. Submentum with four long setae. Palpi with terminal segment truncate apically. Ligula with two setae. Paraglossae glabrous. **Thorax.** Pronotum subquadrate, strongly cordate; two setiferous punctures (anterior and posterior) on each side. Prosternum glabrous apically, not compressed into a vertical ridge. **Legs.** Very long. Metacoxae with two posteroventral setae. Metafemora with two posteroventral setae. Protibiae with dorsal longitudinal groove; cleaning organ with two clip setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 strongly bilobed and asymmetrical apically. Metatarsomeres 5 setose ventrally. **Elytra.** Oblong. Free along suture (hindwings fully developed). Shoulders broad, rounded. Basal margin complete, reaching about scutellum. Sides widest about middle. Scutellar setiferous pore visible. Scutellar striole very long. Striae complete, consisting of impressed lines. Interval 3 with three setiferous punctures. Umbilicate series with 15–19 setiferous punctures. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view: moderately arcuate; basal lobe of basal bulb present; internal sac without scale-like sclerites. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to the left); basal bulb close to membranous area.

References. Larochelle and Larivière 2001: 138–139 (catalogue), 2007: 82 (description, ecology, geographic distribution, references), 2016: 38 (list).

Remark. This worldwide genus is represented by a single species, which occurs on the North Island, South Island, and Stewart Island.

Platynus macropterus (Chaudoir, 1879)

Fig. 37, 80, 159

Colpodes macropterus Chaudoir, 1879: 370. Holotype: male (MNHN) labeled “Ex Musaeo Chaudoir (typed) / HOLOTYPE (red label; hand-written) / *macropterus* Chaud. Nouv. Zélande Guerin (hand-written) / Holotype (red label; typed) / Holotype (typed) *Colpodes macropterus* Chd G.G. Perrault (hand-written) / G.G. Perrault det. 1988 (typed).”

Anchomenus haasti Broun, 1882: 217 (redescribed in 1883: 217 and 1886: 747). Synonymized by Larochelle and Larivière (2001: 138).

Ctenognathus macropterus: Hutton 1904: 144.

Agonum (Platynus) haasti: Csiki 1931: 853.

Colpodes haasti: Johns 1980: 62.

Platynus macropterus: Liebherr 1998: 987, 997.

Description. Body length 13.0–14.2 mm. Head, pronotum, and elytra piceous black; abdomen dark brown; antennal segments 1–4 piceous black, 5–11 reddish; palpi reddish; femora and tibiae piceous black; tarsi reddish.

Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra. Iridescence absent. Very shiny. **Head.** Mandibles moderately curved anteriorly. Labrum moderately transverse, slightly emarginate anteriorly. **Thorax.** Pronotum subdepressed, impunctate, deeply wrinkled on disc and across base, narrow, widest before middle; apex slightly emarginate; anterolateral angles poorly developed, rounded; anterior bead complete; sides strongly rounded anteriorly, strongly sinuate posteriorly; lateral beads complete; lateral depressions moderately wide anteriorly, much widened posteriorly; posterolateral angles subrectangular; laterobasal foveae very deep and wide, prolonged forward; posterior bead incomplete, obsolete medially; base emarginate. **Legs.** Metatarsomeres 5 setose ventrally (with short setae). **Elytra.** Subdepressed, not sloping down toward apex, oblong. Sides slightly rounded. Scutellar striole impunctate. Striae deep, impunctate. Intervals subdepressed; interval 3 with three shallow, minute setiferous punctures. Subapical sinuations feeble. **Aedeagus.** Lateral view (Fig. 80): base strongly convex dorsally, with basal lobe narrow; middle moderately wide in apical half, moderately convex dorsally, strongly concave ventrally, with dorsal membranous area moderately wide in apical half and very long; apex strongly rounded dorsally, slightly concave ventrally, with extreme tip moderately wide and very long.

Material examined. 157 specimens (AMNZ, BMNH, CMNH, JNNZ, LUNZ, MNHN, MONZ, NZAC).

Geographic distribution (Fig. 159). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WN. South Island: BR, CO, DN, FD, KA, MB, MC, MK, NC, NN, OL, SD, SL, WD. Stewart Island.

Ecology. Lowland, montane. Epigeal, arboreal. Mostly wet open forests (broadleaf, podocarp, beech), swamp forests, shrublands, scrublands, forest edges, and tree plantations (pine); tussock grasslands and pastures. Associated with streams. Mostly open ground. Nocturnal; hides during the day under logs and stones.

Biology. Seasonality: September–March, May, July–August. Teneral: November–January, March. Predacious (based on mouthpart morphology). Predators: Feral cats. Occasionally infested with mites and fungi (Laboulbeniales). Defense mechanism: when alarmed, the adult emits a burnt chocolate-like smell.

Dispersal power. Macropterous. Occasional flier to artificial lights. Swift runner. Occasional climber (on trees). Favored by human activities.

Collecting techniques. Turning logs and stones.

References. Larochelle and Larivière 2001: 138–139 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 114 (list), 2016: 38 (list).

Genus *Notagonum* Darlington, 1952

Fig. 38–41, 81–84, 155–158

Notagonum Darlington, 1952: 127.

Type species. *Notagonum externum* Darlington, 1952, by original designation.

Description (New Zealand). Body length 7.3–10.4 mm. Color mostly dark. Metallic luster present. Dorsal surface mostly glabrous. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long. Labrum emarginate or subtruncate anteriorly. Eyes strongly convex, touching buccal fissures; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum tooth entire, acute apically; two small circular foveae; two long setae. Submentum with four long setae. Palpi with terminal segment obtuse apically. Ligula with two setae. Paraglossae glabrous. **Thorax.** Pronotum transverse, cordate, subquadrate, or rectangular; two setiferous punctures (anterior and posterior) on each side. Prosternum glabrous apically, not compressed into a vertical ridge. **Legs.** Moderately long (very long in *N. submetallicum*). Metacoxae with two posteroventral setae. Metafemora with two posteroventral setae. Pro-tibiae with dorsal longitudinal groove; cleaning organ with two clip setae. Meso- and metatarsomeres 1–4 poorly developed, not carinate dorsally, shallowly bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous or setose ventrally. **Elytra.** Oblong (pear-shaped in *N. chathamense*). Free along suture (hindwings fully developed) or fused (hindwings about half developed in *N. chathamense*). Basal margin complete, reaching about scutellum. Shoulders broad (narrow in *N. chathamense*), rounded. Sides widest behind middle. Scutellar setiferous pore visible. Scutellar striole very long. Striae complete, consisting of

impressed lines. Interval 3 with three setiferous punctures. Umbilicate series with 15–19 setiferous punctures. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view: moderately or strongly arcuate; basal lobe of basal bulb present; internal sac without scale-like sclerites. Dorsal view: narrow, symmetrical (ostium of membranous area dorsal); basal bulb close to membranous area.

References. Laroche and Larivière 2001: 137–138 (catalogue), 2007: 81 (description, ecology, geographic distribution, references), 2016: 38 (list); Baehr 2016: 1–24 (revision, *Notagonum-submetallicum*-complex).

Remarks. The genus *Notagonum* is known from Indonesia, New Guinea, Fiji, Samoa, New Caledonia, Australia (including Tasmania), Norfolk Island, Lord Howe Island, and New Zealand where it is represented by four endemic species occurring on the North Island, South Island, Stewart Island, and two offshore islands (TH, CH). *Notagonum* Darlington seems to be a genus of convenience or a paraphyletic taxon (Darlington 1952; Lieberr 2005). *Notagonum marginellum* (Erichson, 1842) was deleted from the New Zealand fauna by Laroche and Larivière (2007: 81); this species occurs in Tasmania, southern mainland Australia, and on Lord Howe Island (Baehr 2016: 1).

Key to species of *Notagonum*

1. Microsculpture of elytra moderately transverse (Fig. 3) 2
- Microsculpture of elytra isodiametric (Fig. 2) 3
- 2(1). Pronotum subquadrate, apex subtruncate, anterolateral angles poorly developed, sides moderately rounded, not sinuate posteriorly, lateral depressions narrow anteriorly and gradually widened posteriorly; elytra pear-shaped, shoulders moderately rounded, sides strongly rounded; Fig. 38. [Body length 7.3–8.2 mm; hindwings about half developed; Chatham Islands (CH)] *Notagonum chathamense* (Broun)
- Pronotum moderately cordate, apex moderately emarginate, anterolateral angles well developed, sides strongly rounded and subangulate anteriorly, slightly sinuate posteriorly, lateral depressions moderately wide throughout; elytra oblong, shoulders strongly rounded, sides slightly rounded; Fig. 39. [Body length 7.8–8.6 mm; hindwings fully developed; North Island (ND to WN–WA)] *Notagonum lawsoni* (Bates)
- 3(1). Smaller, body length 7.3–8.4 mm; head, pronotum, and elytra mostly black; antennae black (base of segments reddish); legs black; pronotum rectangular, widest about middle, lateral depressions narrow anteriorly and gradually widened posteriorly; legs moderately long; elytral striae finely punctate; Fig. 40. [South Island (SD to FD–SL) and Stewart Island] *Notagonum feredayi* (Bates)
- Larger, body length 8.6–10.4 mm; head greenish black, pronotum and elytra mostly greenish brown; antennal segments 1–3 yellowish, 4–11 brownish; legs yellowish; pronotum slightly cordate, widest before middle, lateral depressions wide throughout; legs very long; elytral striae impunctate; Fig. 41. [North Island, South Island, and offshore islands (CH, TH)] . . *Notagonum submetallicum* (White)

Notagonum chathamense (Broun, 1909)

Fig. 38, 81, 155

Anchomenus chathamensis Broun, 1909: 147. Holotype: “[male symbol]. [CH] Chatham Islands” (BMNH, could not be located).

Agonum (*Anchomenus*) *chathamense* [sic]: Csiki 1931: 865.

Notagonum chathamensis [sic]: Watt 1980: 334.

Description. Body length 7.3–8.2 mm. Head, pronotum, and elytra mostly piceous black; lateral margins of pronotum and elytra narrowly reddish; abdomen dark rufous; antennae, palpi, and legs dark rufous. Microsculpture isodiametric on head, very transverse (with microlines) on pronotum, and moderately transverse on elytra. Iridescence present on pronotum. Very shiny, with moderate metallic luster (bronze). **Head.** Mandibles moderately curved anteriorly. Labrum moderately transverse, slightly emarginate anteriorly. **Thorax.** Pronotum

moderately convex, impunctate, feebly wrinkled on disc, moderately wide, subquadrate, widest before middle; apex subtruncate; anterolateral angles poorly developed, rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, not sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, gradually widened posteriorly; posterolateral angles obtuse; laterobasal foveae very deep, moderately wide, not prolonged forward; posterior bead incomplete, obsolete medially; base subtruncate. **Legs.** Moderately long. Metatarsomeres 5 glabrous ventrally. **Elytra.** Slightly convex, sloping down toward apex, pear-shaped. Fused along suture (hindwings about half as long as elytra). Shoulders narrow, moderately rounded. Sides strongly rounded. Scutellar striole impunctate. Striae deep, impunctate. Intervals slightly convex; interval 3 with three deep, large (foveate) setiferous punctures. Umbilicate series with 15–16 setiferous punctures. Subapical sinuations feeble. **Aedeagus.** Lateral view (Fig. 81): strongly arcuate; base moderately convex dorsally, with basal lobe very wide; middle strongly convex dorsally, strongly concave ventrally, without visible dorsal membranous area; apex subtriangular, straight dorsally, slightly concave ventrally, with extreme tip narrow and moderately long.

Material examined. 103 specimens (AMNZ, JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 155). Offshore Islands: CH.

Ecology. Lowland. Epigeal, arboreal. Wet forests (broadleaf) and shrublands; boggy pastures. Shaded or open ground; wet soil. Nocturnal; hides during the day under logs and stones. Gregarious.

Biology. Seasonality: October–November, January–March. Teneral: January–February. Predacious (based on mouthpart morphology). Occasionally infested with mites and fungi (Laboulbeniales).

Dispersal power. Brachypterous (hindwings half as long as elytra), incapable of flight. Moderate runner. Regular climber (on trees and logs).

Collecting techniques. Turning logs and stones; pitfall trapping.

References. Laroche and Larivière 2001: 137 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 114 (list), 2016: 38 (list).

Remarks. The holotype of *Anchomenus chathamensis* could not be located in BMNH where Broun's specimens can usually be found. However, there is no ambiguity regarding the identity of this taxon; the original description can only apply to the species as currently understood. In addition to diagnostic characters of the male genitalia, *Notagonum chathamense* has the following distinguishing features: pronotum subquadrate, apex subtruncate, anterolateral angles poorly developed, sides moderately rounded and not sinuate posteriorly, lateral depressions narrow anteriorly, gradually widened posteriorly; elytra pear-shaped, fused along the suture, shoulders moderately rounded, sides strongly rounded. This species is restricted to the Chatham Islands (CH).

Notagonum lawsoni (Bates, 1874)

Fig. 39, 82, 157

Anchomenus Lawsoni Bates, 1874: 240 (re-described in 1875: 304). Holotype: male (MNHN) labeled “[AK] Auckland (hand-written) / *Anchom. Lawsoni* Bates (hand-written).”

Agonum (Europhilus) lawsoni: Csiki 1931: 870.

Notagonum lawsoni: Watt 1982: 297.

Description. Body length 7.8–8.6 mm. Head, pronotum, and elytra mostly dark rufous; lateral margins of pronotum widely reddish, of elytra narrowly reddish; abdomen dark rufous; antennae dark rufous; palpi dark rufous (terminal segment reddish in apical third); legs dark rufous. Microsculpture isodiametric on head, very transverse (with microlines) on pronotum, and moderately transverse on elytra. Iridescence present on pronotum. Very shiny; metallic luster (bronze) feeble on head, moderate on pronotum and elytra. **Head.** Mandibles moderately curved anteriorly. Labrum moderately transverse, slightly emarginate anteriorly. **Thorax.** Pronotum moderately convex, impunctate, feebly wrinkled on disc, moderately cordate, widest before middle; apex moderately emarginate; anterolateral angles well developed, rounded; anterior bead complete; sides strongly rounded and subangulate anteriorly, slightly sinuate posteriorly; lateral beads complete; lateral depressions moderately wide; posterolateral angles obtuse; laterobasal foveae very deep, moderately wide, not prolonged forward; posterior bead incomplete, obsolete medially; base subtruncate. **Legs.** Moderately long. Metatarsomeres 5 glabrous

ventrally. **Elytra.** Subdepressed, sloping down toward apex, oblong. Free along suture (hindwings fully developed). Shoulders broad, strongly rounded. Sides slightly rounded. Scutellar setiferous pore visible. Scutellar striole impunctate. Striae deep, impunctate. Intervals slightly convex; interval 3 with three shallow, minute setiferous punctures. Umbilicate series with 15–18 setiferous punctures. Subapical sinuations feeble. **Aedeagus.** Lateral view (Fig. 82): strongly arcuate; base strongly convex dorsally, with basal lobe moderately wide; middle gradually widened from base to apex, slightly convex dorsally, moderately concave ventrally, with dorsal membranous area visible in basal half; apex subtriangular, straight dorsally and ventrally, with extreme tip very wide and moderately long.

Material examined. 1151 specimens (AMNZ, CMNH, JNNZ, LUNZ, MNHN, MONZ, NZAC).

Geographic distribution (Fig. 157). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO.

Ecology. Lowland, montane. Epigeal, fossorial, arboreal, planticolous. Eutrophic marshes and ponds (*Typha*, *Juncus*, Cyperaceae); swamp forests (broadleaf, podocarp) crossed by streams; edges of streams, ponds, and lakes. Open or shaded ground; wet soil. Nocturnal; hides during the day at the base of plants, in leaf litter, under fallen branches, logs, and stones. Gregarious.

Biology. Seasonality: Throughout the year. Teneral: November, January–February, April. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

Dispersal power. Macropterous. Occasional flier to artificial lights at night. Moderate runner. Occasional climber (on trees, shrubs, herbaceous plants).

Collecting techniques. Pitfall trapping; pan trapping (yellow pan traps); treading plants into water; sifting leaf litter; examining the bases of plants; turning fallen branches, logs, and stones.

References. Laroche and Larivière 2001: 137 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 114 (list), 2016: 38 (list).

***Notagonum feredayi* (Bates, 1874)**

Fig. 40, 83, 156

Anchomenus Feredayi Bates, 1874: 240 (redescribed 1875: 303). Lectotype (here designated): male (MNHN) labeled “[MC] Christchurch N. Zeal. (hand-written) / *Anchom. Feredayi* Bates (hand-written) / LECTOTYPE [male symbol] *Anchomenus feredayi* Bates, 1874 designated by Laroche & Larivière, 2021 (red label; typed).”

Agonum (Europhilus) feredayi: Csiki 1931: 869.

Description. Body length 7.3–8.4 mm. Head, pronotum, and elytra mostly black; abdomen black; antennae black (base of segments reddish); palpi black, except apical third of terminal segment reddish; legs black. Microsculpture isodiametric on head, very transverse (with microlines) on pronotum, and isodiametric on elytra. Iridescence present on pronotum. Very shiny; metallic luster (bronze) moderate on head and pronotum, strong on elytra. **Head.** Mandibles moderately curved anteriorly. Labrum moderately transverse, subtruncate anteriorly. **Thorax.** Pronotum moderately convex, impunctate, feebly wrinkled on disc and mediobasally, very wide, rectangular, widest about middle; apex slightly emarginate; anterolateral angles poorly developed, rounded; anterior bead complete; sides strongly rounded, not sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, gradually widened posteriorly; posterolateral angles obtuse; laterobasal foveae very deep, moderately wide, prolonged forward; posterior bead incomplete, obsolete medially; base subtruncate. **Legs.** Moderately long. Metatarsomeres 5 glabrous ventrally. **Elytra.** Moderately convex, sloping down toward apex, oblong. Free along suture (hindwings fully developed). Shoulders broad, strongly rounded. Sides slightly rounded. Scutellar striole finely punctate (impunctate in other species). Striae shallow, finely punctate (impunctate in other species). Intervals depressed; interval 3 with three shallow, minute setiferous punctures. Umbilicate series with 15–16 setiferous punctures. Subapical sinuations strong (feeble in other species). **Aedeagus.** Lateral view (Fig. 83): moderately arcuate; base moderately convex dorsally, with basal lobe very wide; middle moderately convex dorsally, moderately concave ventrally, with narrow dorsal membranous area; apex slender, slightly concave dorsally, slightly concave ventrally, with extreme tip narrow and moderately long.

Material examined. 1088 specimens (AMNZ, CMNH, CMNZ, JNNZ, LUNZ, MNHN, MONZ, NZAC).

Geographic distribution (Fig. 156). South Island: BR, CO, DN, FD, KA, MB, MC, MK, NC, NN, OL, SC, SD, SL, WD. Stewart Island.

Ecology. Lowland, montane, subalpine, alpine. Epigeal, planticolous. Edges of streams, rills, seepages, lakes, ponds, and tarns; boggy pastures, swamps, wet tussock grasslands, and alpine meadows. Mostly open ground; wet soil. Nocturnal; hides during the day under logs and stones. Gregarious.

Biology. Seasonality: September–May, July–August. Teneral: October–February. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

Dispersal power. Macropterous, probably capable of flight. Moderate runner. Regular climber (on trees and plants).

Collecting techniques. Turning logs and stones; pitfall trapping.

References. Laroche and Larivière 2001: 137 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 114 (list), 2016: 38 (list).

Remarks. Bates described *Anchomenus feredayi* from two specimens, one of which (a male) could be seen (MNHN) and is here designated as lectotype. This type designation is made to preserve stability of nomenclature in the future.

Notagonum submetallicum (White, 1846)

Fig. 41, 84, 158

Colpodes submetallicus White, 1846: 2. Holotype: “New Zealand” (BMNH, could not be located).

Colpodes (?) *submetallicus*: Chaudoir 1859: 359.

Anchomenus submetallicus: Bates 1874: 241.

Agonum (*Europhilus*) *submetallicum*: Csiki 1931: 873.

Notagonum submetallicum: Darlington 1956: 6.

Notagonum (“*Agonum*”) *submetallicum*: Darlington 1961: 21.

Notagonum submetallicum: Moore in Moore et al. 1987: 221.

Description. Body length 8.6–10.4 mm. Dorsal surface with a greenish tinge. Head black; pronotum and elytra mostly brown; lateral margins of pronotum widely yellowish, of elytra narrowly reddish yellow; abdomen greenish; antennal segments 1–3 yellowish, 4–11 brownish; palpi brownish; legs yellowish. Microsculpture isodiametric on head, very transverse (with microlines) on pronotum, and isodiametric on elytra. Iridescence present on pronotum. Very shiny; metallic luster (bronze) moderate on head, strong on pronotum and elytra. **Head.** Mandibles moderately curved anteriorly. Labrum moderately transverse, slightly emarginate anteriorly. **Thorax.** Pronotum slightly convex, impunctate, strongly wrinkled on disc and mediobasally, very wide, slightly cordate, widest before middle; apex moderately emarginate; anterolateral angles well developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, not sinuate posteriorly; lateral beads complete; lateral depressions very wide; posterolateral angles obtusely rounded; laterobasal foveae moderately deep and wide, prolonged forward; posterior bead incomplete, obsolete medially; base subtruncate. **Legs.** Very long. Metatarsomeres 5 setose ventrally (with short setae). **Elytra.** Subdepressed, sloping down toward apex, oblong. Free along suture (hindwings fully developed). Shoulders broad, strongly rounded. Sides slightly rounded. Scutellar striae impunctate. Striae shallow, impunctate. Intervals depressed; interval 3 with three shallow, minute setiferous punctures. Umbilicate series with 16–19 setiferous punctures. Subapical sinuations feeble. **Aedeagus.** Lateral view (Fig. 84): moderately arcuate, slender; base strongly convex dorsally, with basal lobe narrow; middle wider basally and apically, moderately convex dorsally, strongly concave ventrally, with dorsal membranous area narrow; apex slender, moderately concave dorsally, slightly concave ventrally, with extreme tip narrow and moderately long.

Material examined. 906 specimens (AMNZ, BMNH, CMNH, JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 158). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO. South Island: BR, CO, DN, FD, KA, MB, MC, MK, NC, NN, OL, SC, SD, SL, WD. Offshore Islands: CH, TH.

Ecology. Lowland, montane, subalpine. Epigeal, fossorial, arboreal. Edges of eutrophic marshes, ponds (*Juncus*, Gramineae) and slow rivers. Open ground; wet, soft, muddy soil. Nocturnal; hides during the day at the base of plants, in soil cracks and burrows, under vegetal debris, embedded logs, branches, and stones. Gregarious.

Biology. Seasonality: Throughout the year. Teneral: February–March. Predacious (based on mouthpart morphology). Food: Sandhoppers; strawberry seeds (occasionally). Predators: Starlings. Occasionally infested with mites and fungi (Laboulbeniales).

Dispersal power. Macropterous. Frequent flier to artificial lights at night. Abundant in seashore drift (indirect evidence of flight). Swift runner. Occasional climber (on trees and shrubs).

Collecting techniques. Treading the vegetation into water; examining cracks and burrows at the base of plants; turning vegetal debris, embedded logs, branches, and stones.

References. Larochele and Larivière 2001: 138 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 114 (list), 2016: 38 (list); Baehr 2016: 5–6 (taxonomy).

Remarks. The holotype of *Colpodes submetallicus* could not be located in BMNH where White's specimens can usually be found. However, there is no ambiguity regarding the identity of this taxon; the original description can only apply to the species as currently understood. In addition to diagnostic characters of the male genitalia, *Notagonum submetallicum* has the following distinguishing features: large in size, body length 8.6–10.4 mm; head greenish black; pronotum and elytra mostly greenish brown; antennal segments 1–3 yellowish, 4–11 brownish; legs yellowish; pronotum slightly cordate and widest before middle, lateral depressions wide throughout; legs very long; elytral striae impunctate. This species occurs on the Three Kings Islands (TH), North Island, South Island, and the Chatham Islands (CH). According to Baehr (2016: 1, 4, 6), *Notagonum submetallicum* is a species endemic to New Zealand, while *Notagonum marginicolle* (Macleay, 1871) is a separate valid species occurring in eastern and southwestern Australia.

Genus *Prospodrus* Britton, 1959

Fig. 42–46, 85–89, 160–164

Prospodrus Britton, 1959: 106.

Type species. *Prospodrus waltoni* Britton, 1959, by monotypy.

Description. Body length 14.0–26.2 mm. Color mostly dark. Metallic luster present or absent. Dorsal surface mostly glabrous. Forebody very wide in comparison to elytra. **Head.** Very wide. Mandibles very long. Labrum emarginate anteriorly (biconcave in *P. waltoni*). Eyes strongly convex (moderately convex in *P. mangamuka*), separated from buccal fissures; two setiferous punctures on inner side of each eye. Tempora inflated. Neck constriction deep dorsolaterally. Mentum tooth bifid apically (as in *Maoriplatynus*); two large circular foveae; two, four, or six long setae. Submentum with four, six, or eight long setae. Palpi with terminal segment truncate apically (obtuse in *P. mangamuka*). Ligula with two setae. Paraglossae pubescent (glabrous in other genera). **Thorax.** Pronotum subquadrate, trapezoid, or cordate; two setiferous punctures (anterior and posterior) on each side. Prosternum glabrous apically, compressed into a vertical ridge (not compressed in other genera). **Legs.** Very long (moderately long in *P. mangamuka*). Metacoxae with two posteroventral setae. Metafemora with three posteroventral setae. Protibiae with or without dorsal longitudinal groove; cleaning organ with three clip setae. Meso- and metatarsomeres 1–4 poorly developed, not carinate dorsally, obsoletely bisulcate laterally. Metatarsomeres 4 strongly bilobed and asymmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Subovate (oblong in *P. mangamuka*). Fused along suture (hindwings vestigial). Basal margin incomplete, reaching about stria 3 or 4 (complete, reaching about scutellum in *P. waltoni*). Shoulders narrow, rounded or angulate. Sides widest about or behind middle. Scutellar setiferous pore visible. Scutellar striole short to very long. Striae complete, consisting of impressed lines. Interval 3 without or with one to three obsolete setiferous punctures. Umbilicate series with 17–24 setiferous punctures. Apices rounded or obtuse (truncate-emarginate in *P. mangamuka*). **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female usually with four long apical ambulatory setae (two long apical ambulatory setae in *P. waltoni*). **Aedeagus.** Lateral view: moderately or strongly arcuate; basal lobe of basal bulb

present; internal sac without scale-like sclerites. Dorsal view: narrow or moderately wide, symmetrical (ostium of membranous area dorsal) or asymmetrical (ostium deflected to the left); basal bulb moderately distant from membranous area.

References. Larochelle and Larivière 2001: 139 (catalogue), 2007: 82 (description, ecology, geographic distribution, references), 2016: 38 (list).

Remarks. This genus was transferred by Casale (1988: 919) from the tribe Prospodrinini to the tribe Platynini. *Prospodrus* species occur throughout the North Island although they were considered rare and thought to be cave-dwellers before their ecological requirements became better known. The species live in colonies in dense forests gullies and ravines, along rills and seepages, and hide under embedded stones during the day. They are quick to dive into nearby water when disturbed.

Key to species of *Prospodrus*

1. Pronotum subquadrate; elytra oblong; antennae moderately long; eyes moderately large and convex; larger, body length 23.0–26.2 mm; Fig. 42. [Northern North Island (ND, AK, CL)] *Prospodrus mangamuka* Larochelle and Larivière, new species
- Pronotum cordate or trapezoidal; elytra subovate; antennae very long; eyes small, strongly convex; smaller, body length 20.1 mm or less 2
- 2(1). Pronotum strongly cordate; eyes small, very convex; tempora strongly inflated, very long; mentum with six long setae; Fig. 43. [Body length 17.0–20.1 mm; mostly western North Island (AK–CL to WI)] *Prospodrus waltoni* Britton
- Pronotum trapezoidal or subcordate; eyes larger, moderately convex; tempora moderately inflated, moderately long; mentum with two long setae 3
- 3(2). Pronotum subcordate and narrow, sides moderately sinuate posteriorly, anterolateral angles angulate; antennae, palpi, and legs reddish; microsculpture of elytra isodiametric; Fig. 44. [Body length 14.0–16.1 mm; southern North Island (RI–HB to WN–WA)] *Prospodrus sirvidi* Larochelle and Larivière, new species
- Pronotum trapezoidal and wide, sides not sinuate posteriorly, anterolateral angles rounded; antennae and palpi reddish brown, legs dark brown; microsculpture of elytra moderately transverse 4
- 4(3). Pronotum feebly wrinkled medially and laterally, posterior bead complete; Fig. 45. [Body length 16.1–18.0 mm; eastern central North Island (BP, TO, GB (East Cape area))] *Prospodrus waimana* Larochelle and Larivière, new species
- Pronotum deeply wrinkled throughout, posterior bead obsolete medially; Fig. 46. [Body length 16.3–19.0 mm; eastern central North Island (RI, HB, GB)] *Prospodrus occultus* Britton

Prospodrus mangamuka Larochelle and Larivière, new species

Fig. 42, 85, 160

Prospodrus mangamuka Larochelle and Larivière, new species. Holotype: male (NZAC) labeled “NEW ZEALAND ND Mataraua For. [=Forest], Waoku Coach Rd Wlky =[Walkway], Wekaweka Rd Entry Point 400– 600m 9.II.1995 Larivière, Larochelle (typed) / Makamaka cloud forest; wet muddy: Under logs. (typed) / HOLOTYPE [male symbol] *Prospodrus mangamuka* Larochelle & Larivière, 2021 (red label; typed).” Paratypes: one female (NZAC) from Mangamuka Gorge Walkway (ND) and one male (CMNZ) from Waipoua Forest (ND), bearing blue paratype labels.

Description. Body length 23.0–26.2 mm. Head, pronotum, and elytra black; abdomen black or dark brown; antennal segments 1–4 reddish black, segments 5–11 reddish brown; palpi dark rufous; legs dark brown. Microsculpture obsolete on head and pronotum, isodiametric on elytra. Dull on head, pronotum, and elytra, without metallic luster. **Head.** Mandibles slightly curved anteriorly. Labrum strongly transverse, slightly to moderately emarginate anteriorly. Antennae moderately long (very long in other species). Eyes moderately large and convex. Tempora moderately inflated (about half as long as eyes). Mentum with four setae. Submentum with four setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum moderately convex, impunctate, feebly wrinkled medially, wide, subquadrate, widest before middle; apex strongly emarginate; anterolateral angles well

developed, rounded; anterior bead incomplete, obsolete medially; sides slightly rounded anteriorly, not sinuate posteriorly; lateral beads incomplete, obsolete around posterolateral angles; lateral depressions narrow anteriorly, widened posteriorly; posterolateral angles obtusely rounded; laterobasal foveae very deep and wide, rounded, not prolonged forward; posterior bead absent; base emarginate. **Legs.** Moderately long. Protibiae without dorsal longitudinal groove. **Elytra.** Slightly convex, not sloping down toward apex (sloping down in other species), oblong (subovate in other species), widest about middle. Basal margin incomplete, reaching about stria 3. Shoulders moderately rounded. Sides slightly rounded. Scutellar striole very long, impunctate. Striae shallow, finely punctate. Intervals moderately to strongly convex; interval 3 with two obsolete setiferous punctures. Umbilicate series with 23–24 setiferous punctures. Subapical sinuations moderately strong. Apices truncate-emarginate. **Abdomen.** Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 85): moderately arcuate, stout; base strongly convex dorsally, with basal lobe moderately wide; middle subparallel, slightly convex dorsally, slightly concave ventrally, with dorsal membranous area short, moderately wide toward base dorsally; apex moderately concave dorsally, strongly concave ventrally, with extreme tip narrow, very long, and strongly curved downward. Dorsal view: moderately wide, symmetrical (ostium of membranous area dorsal).

Material examined. 26 specimens (AMNZ, CMNZ, LUNZ, NZAC).

Geographic distribution (Fig. 160). North Island: AK, CL, ND.

Ecology. Lowland. Fossorial, amphibious. Margins of rills (about 1–2 m wide) crossing dense wet forests (broad-leaf, podocarp). Associated with gullies and ravines. Shaded ground; wet, stony, gravelly or muddy soil. Nocturnal; hides during the day under embedded stones.

Biology. Seasonality: December–July. Teneral: February–March, June–July. Predacious (based on mouthpart morphology). Defense mechanism: when alarmed, the adult escapes by running and diving into the water.

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

Collecting techniques. Turning embedded stones; pitfall trapping.

Remarks. The species is named after a geographic area (Mangamuka Gorge) where the beetle is especially abundant, and is applied as a noun in apposition. In addition to diagnostic characters of the male genitalia, *Prospodrus mangamuka* has the following distinguishing features: large and robust, body length 23.0–26.2 mm; antennae moderately long; eyes moderately large and convex; terminal segment of palpi obtuse; pronotum subquadrate; legs moderately long; elytra oblong, not sloping down toward apex, apices truncate-emarginate. *Prospodrus mangamuka* occurs in northern areas of the North Island (ND, AK, CL).

Prospodrus waltoni Britton, 1959

Fig. 43, 86, 164

Prospodrus waltoni Britton, 1959: 106. Holotype: male (NZAC) labeled “Type (circular red-bordered label; typed) / alive on wall 500 yds inside Waipuna Cave Te Kuiti [WO] 11.Jan.1958. B.M. May (hand-written) / HOLOTYPE [male symbol] *Prospodrus waltoni* gen. sp. n. (hand-written).” Paratype: one female (BMNH) from the same locality as the holotype, bearing a blue paratype label.

Description. Body length 17.0–20.1 mm. Head, pronotum, and elytra black; abdomen black or reddish brown; antennae and palpi reddish brown; legs dark brown. Microsculpture isodiametric on head, moderately transverse on pronotum and elytra. Very shiny, without metallic luster. **Head.** Mandibles much longer than in other species, strongly curved anteriorly. Labrum strongly transverse, slightly biconcave anteriorly. Antennae very long. Eyes small, strongly convex. Tempora strongly inflated and very long (about two times as long as eyes). Mentum with six setae. Submentum with eight setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum strongly convex, impunctate, feebly wrinkled medially and laterally, wide, strongly cordate, widest before middle; apex slightly emarginate; anterolateral angles moderately developed, rounded; anterior bead incomplete, obsolete medially; sides strongly rounded anteriorly, strongly sinuate posteriorly; lateral beads incomplete, obsolete in basal third; lateral depressions complete, widened anteriorly and posteriorly; posterolateral angles strongly rounded; laterobasal foveae very deep and wide, elongate (reaching pronotal apex), prolonged forward; posterior

bead absent; base emarginate. **Legs.** Very long. Protibiae with dorsal longitudinal groove. **Elytra.** Moderately convex, sloping down toward apex, subovate, widest about middle. Basal margin complete, reaching about scutellum. Shoulders strongly rounded. Sides moderately rounded. Scutellar striole very long, impunctate. Striae deep, finely punctate. Intervals slightly convex; interval 3 with three obsolete setiferous punctures. Umbilicate series with 19–20 setiferous punctures. Subapical sinuations moderately strong. Apices obtusely rounded. **Abdomen.** Sternum VII (last visible sternum): both sexes with two long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 86): strongly arcuate in basal half; base slightly convex dorsally, with basal lobe moderately wide; middle very wide, strongly convex, slightly concave toward apex dorsally, slightly convex ventrally, with dorsal membranous area strongly widened in apical half; apex subtriangular, moderately concave dorsally, almost straight, slightly convex ventrally, with extreme tip narrow and rather short. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left).

Material examined. 37 specimens (AMNZ, BMNH, CMNH, CMNZ, JNNZ, MONZ, NZAC).

Geographic distribution (Fig. 164). North Island: AK, CL, RI, TK, WO.

Ecology. Lowland, montane. Fossorial, amphibious. Margins of rills (about 1–2 m wide) and seepages crossing dense wet forests (broadleaf, podocarp); caves (occasionally). Associated with gullies and ravines. Shaded ground; wet, stony or gravelly soil. Nocturnal; hides during the day under embedded stones, logs, and clods of clay. Gregarious.

Biology. Seasonality: January–February, April, June–July. Teneral: March–April, June. Predacious (based on mouthpart morphology). Defense mechanism: when alarmed, the adult escapes by running and diving into the water.

Dispersal power. Subapterous (incapable of flight). Swift runner. Excellent swimmer.

Collecting techniques. Turning embedded stones and logs, also clods of clay; pitfall trapping.

References. Laroche and Larivière 2001: 139 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 114 (list), 2016: 38 (list).

***Prospodrus sirvidi* Laroche and Larivière, new species**

Fig. 44, 87, 162

Prospodrus sirvidi Laroche and Larivière, new species. Holotype: male (NZAC) labeled “[NEW ZEALAND WN] Wellington (typed) Akatarawa Range 1300’ 11.5.73 (hand-written) J.I. Townsend (typed) / J.I. Townsend Collection (typed) / HOLOTYPE [male symbol] *Prospodrus sirvidi* Laroche & Larivière, 2021 (red label; typed).” Paratypes: two females (CMNZ, NZAC) from the same locality as the holotype, bearing blue paratype labels.

Description. Body length 14.0–16.1 mm. Head, pronotum, and elytra dark brown; abdomen dark rufous; antennae, palpi, and legs reddish. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra. Moderately shiny, with metallic luster (bronze). **Head.** Mandibles strongly curved anteriorly. Labrum moderately transverse, slightly to moderately emarginate anteriorly. Antennae very long. Eyes small, strongly convex. Tempora moderately inflated and long (about half as long as eyes). Mentum with two setae. Submentum with six setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum feebly convex, impunctate, deeply wrinkled throughout, narrow (wide in other species), subcordate, widest before middle; apex subtruncate; anterolateral angles well developed, subangulate; anterior bead incomplete, present only around anterolateral angles; sides angulate anteriorly, moderately sinuate posteriorly; lateral beads complete, widened basally; lateral depressions absent anteriorly, wide posteriorly; posterolateral angles rectangular; laterobasal foveae moderately deep and wide, elongate (reaching anterolateral setiferous punctures), prolonged forward; posterior bead obsolete; base emarginate. **Legs.** Very long. Protibiae with dorsal longitudinal groove obsolete. **Elytra.** Subdepressed, sloping down toward apex, subovate, widest behind middle. Basal margin incomplete, reaching about stria 3. Shoulders angulate. Sides slightly rounded. Scutellar striole short or moderately long, impunctate. Striae deep, finely punctate. Intervals depressed; interval 3 with or without a single obsolete setiferous puncture. Umbilicate series with 17–18 setiferous punctures. Subapical sinuations feeble. Apices broadly rounded. **Abdomen.** Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory

setae. **Aedeagus.** Lateral view (Fig. 87): strongly arcuate, transversely wrinkled in apical third; base slightly convex dorsally, with basal lobe very wide; middle strongly convex, slightly concave toward apex dorsally, strongly concave ventrally, without visible dorsal membranous area; apex subtriangular, slightly concave dorsally and ventrally, with extreme tip narrow and very long. Dorsal view: narrow, symmetrical (ostium of membranous area dorsal).

Material examined. 42 specimens (CMNZ, JNNZ, MONZ, NZAC).

Geographic distribution (Fig. 162). North Island: HB, RI, WA, WI, WN.

Ecology. Lowland, montane. Fossorial, amphibious. Margins of rills (about 1 m wide) and seepages crossing dense wet forests (beech, broadleaf, podocarp); caves (occasionally). Associated with gullies and ravines. Shaded ground; wet clay soil. Nocturnal; hides during the day under embedded stones. Gregarious.

Biology. Seasonality: September, November, February–May, August. Predacious (based on mouthpart morphology). Defense mechanism: when alarmed, the adult escapes by running and diving into the water.

Dispersal power. Subapterous (incapable of flight). Swift runner. Excellent swimmer.

Collecting technique. Turning embedded stones.

Remarks. The species is named after our friend and colleague Phil Sirvid (Museum of New Zealand Te Papa Tongarewa, Wellington) for his special help and encouragement in our entomological studies. In addition to diagnostic characters of the male genitalia, *Prospodrus sirvidi* has the following distinguishing features: antennae, palpi, and legs reddish; pronotum subcordate and narrow, sides moderately sinuate posteriorly, anterolateral angles subangulate. *Prospodrus sirvidi* occurs in southern areas of the North Island (RI–HB to WN–WA), mostly in the Wellington and Wairarapa regions.

***Prospodrus waimana* Larochelle and Larivière, new species**

Fig. 45, 88, 163

Prospodrus waimana Larochelle and Larivière, new species. Holotype: male (NZAC) labeled “NEW ZEALAND BP Urewera NP, Waimana Vly, Onepu Hut tk [=track] 1.XII.1995 Larivière, Larochelle (typed) / Shaded edges, swift rill; stony-rocky; broadleaf for. [=forest] Under ½ emerged stones (typed) / HOLOTYPE [male symbol] *Prospodrus waimana* Larochelle & Larivière, 2021 (red label; typed).” Paratypes: one male (CMNZ) from the same locality as the holotype and one female (NZAC) from Urewera National Park, Waimana Valley, Te Waiti Stream (BP), bearing blue paratype labels.

Description. Body length 16.1–18.0 mm. Head, pronotum, and elytra black; abdomen dark brown; antennae and palpi reddish brown; legs dark brown. Microsculpture moderately transverse on head, pronotum, and elytra. Very shiny, without metallic luster. **Head.** Mandibles slightly curved anteriorly. Labrum moderately transverse, slightly to moderately emarginate anteriorly. Antennae very long. Eyes small, strongly convex. Tempora moderately inflated and long (about half as long as eyes). Mentum with two setae. Submentum with four setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum moderately convex, impunctate, feebly wrinkled medially and laterally, wide, trapezoid, widest before middle; apex subtruncate; anterolateral angles moderately developed, rounded; anterior bead incomplete, obsolete medially; sides moderately rounded anteriorly, not sinuate posteriorly; lateral beads complete, widened basally; lateral depressions narrow anteriorly, widened posteriorly; posterolateral angles subrectangular; laterobasal foveae very deep and wide, rounded, not prolonged forward; posterior bead complete; base emarginate. **Legs.** Very long. Protibiae with dorsal longitudinal groove obsolete. **Elytra.** Moderately convex, sloping down toward apex, subovate, widest behind middle. Basal margin incomplete, reaching about stria 4. Shoulders angulate. Sides slightly rounded. Scutellar striole very long, impunctate. Striae deep (shallower at base), finely punctate. Intervals depressed; interval 3 with or without one or two obsolete setiferous punctures. Umbilicate series with 19–20 setiferous punctures. Subapical sinuations absent. Apices obtuse. **Abdomen.** Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 88): strongly arcuate in basal half; base slightly convex dorsally, with basal lobe moderately wide; middle subparallel, strongly convex in basal half, almost straight in apical half dorsally, moderately concave ventrally, without visible dorsal membranous area;

apex subtriangular, strongly concave dorsally, slightly concave ventrally, with extreme tip narrow and moderately long. Dorsal view: moderately wide, symmetrical (ostium of membranous area dorsal).

Material examined. 147 specimens (CMNZ, JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 163). North Island: BP, GB, TO.

Ecology. Lowland, montane. Fossorial, amphibious. Margins of rills (about 1–2 m wide) and seepages crossing dense wet forests (broadleaf, podocarp). Associated with gullies and ravines. Shaded ground; wet, stony or gravelly soil. Nocturnal; hides during the day under embedded stones. Gregarious.

Biology. Seasonality: September–April, July. Teneral: November, January–February. Predacious (based on mouthpart morphology). Defense mechanism: when alarmed, the adult escapes by running and diving into the water.

Dispersal power. Subapterous (incapable of flight). Swift runner. Excellent swimmer.

Collecting techniques. Turning embedded stones; pitfall trapping.

Remarks. The species is named after the type locality Waimana Valley (BP), and is applied as a noun in apposition. *Prospodrus waimana* is morphologically close to *P. occultus*. In addition to diagnostic characters of the male genitalia, *P. waimana* has the following distinguishing features: pronotum feebly wrinkled medially and laterally, posterior bead complete. Both species occur in eastern areas of the North Island although they are allopatric: *P. waimana* is present in BP, TO, and GB (East Cape area), while *P. occultus* is found in RI, HB, and GB (excluding the East Cape area).

***Prospodrus occultus* Britton, 1960**

Fig. 46, 89, 161

Prospodrus occultus Britton, 1960: 123. Holotype: male (NZAC) labeled “Type (circular red-bordered label; typed) / in debris 400 yrds from the entrance in Simpsons Cave Wairoa [GB] Hawkes Bay Sept. 1959 A. Norgrove (hand-written) / HOLOTYPE [male symbol] *Prospodrus occultus mihi* E.B. Britton det. 1959 (hand-written).” Paratype: one female (BMNH) from the same locality as the holotype, bearing a blue paratype label.

Description. Body length 16.3–19.0 mm. Head, pronotum, elytra black; abdomen dark brown; antennae and palpi reddish brown; legs dark brown. Microsculpture moderately transverse on head, pronotum, and elytra. Very shiny, without metallic luster. **Head.** Mandibles slightly curved anteriorly. Labrum moderately transverse, slightly to moderately emarginate anteriorly. Antennae very long. Eyes small, strongly convex. Tempora moderately inflated and long (about half as long as eyes). Mentum with two setae. Submentum with four setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum moderately convex, impunctate, deeply wrinkled throughout, wide, trapezoid, widest before middle; apex subtruncate or slightly emarginate; anterolateral angles moderately developed, rounded; anterior bead incomplete, obsolete medially; sides moderately rounded anteriorly, not sinuate posteriorly; lateral beads complete, widened basally; lateral depressions narrow anteriorly, widened posteriorly; posterolateral angles subrectangular; laterobasal foveae very deep and wide, rounded, not prolonged forward; posterior bead obsolete medially; base emarginate. **Legs.** Very long. Protibiae with dorsal longitudinal groove obsolete. **Elytra.** Moderately convex, sloping down toward apex, subovate, widest behind middle. Basal margin incomplete, reaching about stria 4. Shoulders angulate. Sides slightly rounded. Scutellar striae moderately long or very long, impunctate. Striae deep (although shallower at base), finely punctate. Intervals depressed; interval 3 with or without one or two obsolete setiferous punctures. Umbilicate series with 19–21 setiferous punctures. Subapical sinuations absent. Apices obtuse or obtusely rounded. **Abdomen.** Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 89): strongly arcuate medially, transversely wrinkled in apical third; base slightly convex dorsally, with basal lobe very wide; middle strongly convex dorsally, moderately concave ventrally, with dorsal membranous area moderately wide and long; apex slender, sinuate dorsally, slightly concave ventrally, with extreme tip narrow and very long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left).

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

Geographic distribution (Fig. 161). North Island: GB, HB, RI.

Ecology. Lowland, montane. Fossorial, amphibious. Margins of rills (about 1–2 m wide) and seepages crossing dense wet forests (broadleaf, podocarp); caves (occasionally). Associated with gullies and ravines. Shaded ground; wet stony soil. Nocturnal; hides during the day under embedded stones. Gregarious.

Biology. Seasonality: October–May. Teneral: January–February. Predacious (based on mouthpart morphology). Defense mechanism: when alarmed, the adult escapes by running and diving into the water.

Dispersal power. Subapterous (incapable of flight). Swift runner. Excellent swimmer.

Collecting technique. Turning embedded stones.

References. Laroche and Larivière 2001: 139 (catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 114 (list), 2016: 38 (list).

Genus *Maoriplatynus* Laroche and Larivière, new genus

Fig. 47, 90, 154

Type species. *Maoriplatynus marrisi* new species, by present designation.

Description. Body length 12.5–12.7 mm. Color mostly dark. Metallic luster absent. Dorsal surface mostly glabrous. Forebody narrow in comparison to elytra. **Head.** Very wide. Mandibles very long. Labrum subtruncate anteriorly. Eyes moderately convex, separated from buccal fissures; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction deep dorsolaterally. Mentum tooth bifid apically (as in *Prospodrus*); two large circular foveae; two long setae. Submentum with twelve short setae in addition to two long setae. Palpi with terminal segment obtuse apically. Ligula with two setae. Paraglossae glabrous. **Thorax.** Pronotum cordate; a single setiferous puncture on each side (anteriorly). Prosternum glabrous apically, not compressed into a vertical ridge. **Legs.** Very long. Metacoxae with two posteroventral setae. Metafemora with two or three posteroventral setae. Protibiae with dorsal longitudinal groove; cleaning organ with two clip setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 strongly bilobed and asymmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Ovate. Fused along suture (hindwings vestigial). Basal margin complete, reaching about scutellum. Shoulders narrow, rounded. Sides widest about middle. Scutellar setiferous pore visible. Scutellar striole short. Striae complete, consisting of impressed lines. Interval 3 with three setiferous punctures. Umbilicate series with 17–20 setiferous punctures. Apices mucronate, turned upward (not turned upward in other genera). **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sterna V–VI: both sexes with numerous short setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae and numerous short setae; female with four long apical ambulatory setae and numerous short setae. **Aedeagus.** Lateral view: slightly arcuate; basal lobe of basal bulb absent; internal sac without scale-like sclerites. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Remarks. The generic name is derived from *Maori* (the Polynesian people who colonized New Zealand) and *Platynus* (the type genus of the tribe Platynini), genus masculine. This monotypic genus appears to be a genetically highly distinctive taxon characterized as follows: abdominal sterna V–VII of both sexes with numerous short setae in addition to two long apical ambulatory setae; submentum with twelve short setae in addition to two long setae; elytral apices turned upward; aedeagus (in lateral view) slightly arcuate. This genus is restricted to the Three Kings Islands (TH).

Maoriplatynus marrisi Laroche and Larivière, new species

Fig. 47, 90, 154

Maoriplatynus marrisi Laroche and Larivière, new species. Holotype: male (NZAC) labeled “[NEW ZEALAND TH] Three Kings Is Great I. Nov. 70 NZ. Ent. Div. Exp. (typed) / HOLOTYPE [male symbol] *Maoriplatynus marrisi* Laroche & Larivière, 2021 (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 12.5–12.7 mm. Head, pronotum, and elytra black; abdomen dark brown; antennae, palpi, and tarsi reddish; femora and tibiae rufopiceous. Microsculpture absent on head, very transverse (with

microlines) on pronotum and elytra. Iridescence present on pronotum and elytra. Very shiny. **Head.** Mandibles slightly curved anteriorly. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled on disc and across base, narrow, strongly cordate, widest before middle; apex strongly emarginate; anterolateral angles well developed, angulate; anterior bead incomplete, obsolete medially; sides strongly rounded, strongly sinuate posteriorly; lateral beads incomplete, obsolete anteriorly; lateral depressions narrow; posterolateral angles rectangular, acute at apex; laterobasal foveae shallow, moderately wide, prolonged forward; posterior bead obsolete; base emarginate. **Elytra.** Slightly convex, not sloping down toward apex. Shoulders broadly rounded. Sides strongly rounded. Scutellar striole impunctate. Striae deep, impunctate. Intervals moderately convex; interval 3 with three moderately deep, small setiferous punctures. Subapical sinuations feeble. **Aedeagus.** Lateral view (Fig. 90): slender, slightly arcuate; base slightly convex, almost straight dorsally; middle slightly convex dorsally, moderately concave ventrally, with dorsal membranous area moderately wide and very long; apex slender, moderately convex dorsally, slightly concave ventrally, with extreme tip moderately wide and long.

Material examined. 30 specimens (CMNZ, LUNZ, NZAC).

Geographic distribution (Fig. 154). Offshore Islands: TH–Great Island, Tasman Valley.

Ecology. Coastal lowland. Epigeal. Wet forests (broadleaf). Associated with streams. Shaded ground; wet soil. Nocturnal; active at night on mossy stream banks. Gregarious.

Biology. Seasonality: October–December. Teneral: December. Predacious (based on mouthpart morphology). Regularly infested with mites.

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

Collecting technique. Hand-collecting.

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. In addition to generic characters, *Maoriplatynus marris* has the following distinguishing features: iridescence present on pronotum and elytra; pronotum narrow, strongly cordate; elytral interval 3 with three setiferous punctures.

Genus *Kiwiplatynus* Laroche and Larivière, new genus

Fig. 48–49, 91–92, 149–150

Type species. *Colpodes bidens* Chaudoir, 1878, by present designation.

Description. Body length 16.0–19.3 mm. Color mostly dark. Metallic luster absent. Dorsal surface mostly glabrous. Forebody narrow in comparison to elytra. **Head.** Narrow. Mandibles moderately long. Labrum truncate or subtruncate anteriorly. Eyes strongly convex, separated from buccal fissures; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction deep dorsolaterally. Mentum tooth emarginate apically; two small circular foveae; two long setae. Submentum with six or eight long setae. Palpi with terminal segment truncate apically. Ligula with two setae. Paraglossae glabrous. **Thorax.** Pronotum cordate; a single setiferous puncture on each side (anteriorly). Prosternum glabrous apically, not compressed into a vertical ridge. **Legs.** Very long. Metacoxae with three or four posteroventral setae. Metafemora with three posteroventral setae. Pro-tibiae with dorsal longitudinal groove; cleaning organ with three clip setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed and symmetrical apically. Metatarsomeres 5 setose ventrally. **Elytra.** Subovate. Fused along suture (hindwings vestigial). Basal margin complete, reaching about scutellum. Shoulders narrow, rounded. Sides widest about middle. Scutellar setiferous pore visible. Scutellar striole short or moderately long. Striae complete, consisting of impressed lines. Interval 3 with a single subapical setiferous puncture or two setiferous punctures (anterior puncture absent). Umbilicate series with 22–25 setiferous punctures. Apices mucronate or obtusely triangular. **Abdomen.** Sternum IV: both sexes with two to four long ambulatory setae. Sterna V–VI: both sexes with three to five long apical ambulatory setae. Sternum VII (last visible sternum): male with two or four long apical ambulatory setae; female with six or eight long apical ambulatory setae. **Aedeagus.** Lateral view: moderately arcuate; basal lobe of basal bulb present; internal sac with scale-like sclerites. Dorsal view: moderately wide or very wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb close to membranous area.

Remarks. The generic name is derived from *Kiwi* (the vernacular name of an ancient group of New Zealand birds; also a major national symbol) and *Platynus* (the type genus of the tribe Platynini), genus masculine. The morphological characters unifying species of *Kiwiplatynus* are: forebody narrow in comparison to elytra; two setiferous punctures on inner side of each eye; mentum tooth emarginate apically; metatarsomeres 4 symmetrical apically; interval 3 of elytra with one or two setiferous punctures; abdominal sterna V–VI of both sexes with three to five long apical ambulatory setae; aedeagus (in lateral view) moderately arcuate; internal sac of aedeagus with scale-like sclerites. Furthermore, three morphological characters are shared between *Kiwiplatynus* and *Kupeplatynus* that set them apart from *Ctenognathus* and *Tuiplatynus*: cleaning organ of protibiae with three clip setae; neck constriction deep dorsolaterally; basal bulb of aedeagus close to membranous area. *Kiwiplatynus* species occur mostly in northern areas of the North Island.

Key to species of *Kiwiplatynus*

1. Elytra with striae impunctate, interval 3 with two setiferous punctures (medially and subapically); submentum with six setae; sternum VII (last visible abdominal sternum), male with two long apical ambulatory setae, female with six long apical ambulatory setae; Fig. 48. [Body length 16.0–19.3 mm; North Island (ND to TK–GB; WN)] *Kiwiplatynus bidens* (Chaudoir)
- Elytra with striae coarsely punctate, interval 3 with a single setiferous puncture (subapically); submentum with eight setae; sternum VII, male with four long apical ambulatory setae, female with eight long apical ambulatory setae; Fig. 49. [Body length 16.1–19.0 mm; central North Island (WO, TK, TO)] *Kiwiplatynus taranaki* Laroche and Larivière, new species

Kiwiplatynus bidens (Chaudoir, 1878), new combination

Fig. 48, 91, 149

Colpodes bidens Chaudoir, 1878: 303. Holotype: female (MNHN) labeled “ExMusaeo Chaudoir (typed) / *bidens* Chaud. Nouv. Zélande (hand-written).”

Anchomenus batesi Broun, 1880: 21. Synonymized by Watt (1961: 93).

Ctenognathus bidens: Broun 1893: 986.

Ctenognathus batesi: Broun 1893: 986.

Description. Body length 16.0–19.3 mm. Head, pronotum, elytra, and abdomen black; antennal segments 1–3 rufopiceous, segments 4–11 reddish; palpi rufopiceous; legs dark rufous. Microsculpture isodiametric on head, very transverse (with microlines) on pronotum, and isodiametric on elytra. Iridescence present on pronotum. Very shiny on head and pronotum, moderately shiny on elytra. **Head.** Mandibles moderately curved anteriorly. Labrum moderately transverse, truncate anteriorly. Mentum: medial tooth moderately emarginate apically. Submentum with six setae. **Thorax.** Pronotum slightly convex, obsolete punctate across base, obsolete wrinkled on disc and across base, narrow, slightly cordate, widest before middle; apex slightly emarginate; anterolateral angles well developed, angulately rounded; anterior bead complete; sides moderately rounded, not sinuate posteriorly; lateral beads complete; lateral depressions wide, more so posteriorly; posterolateral angles obtuse; laterobasal foveae very deep and wide, prolonged forward; posterior bead complete, less impressed near posterolateral angles; base subtruncate. **Legs.** Metatarsomeres 5 setose ventrally (with long setae). **Elytra.** Slightly convex, not sloping down toward apex. Shoulders moderately rounded. Sides moderately rounded. Scutellar striole moderately long, impunctate. Striae deep, impunctate. Intervals moderately convex; interval 3 with two shallow, minute setiferous punctures (medially and subapically). Umbilicate series with 24–25 setiferous punctures. Subapical sinuations moderately strong. Apices mucronate internally, rounded externally. **Abdomen.** Sternum IV: both sexes with two or three long apical ambulatory setae. Sternum V: both sexes with three or four long apical ambulatory setae. Sternum VI: both sexes with four long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with six long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 91): moderately arcuate; base moderately convex dorsally, with basal lobe rather narrow; middle subparallel, straight dorsally, moderately concave ventrally, with dorsal membranous area strongly widened from base to apex and very long; apex subtriangular, slightly convex dorsally, rather straight ventrally, with extreme tip narrow, short,

and moderately curved downward; internal sac with a few scale-like sclerites. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb close to membranous area.

Material examined. 2245 specimens (AMNZ, BMNH, CMNH, JNNZ, LUNZ, MNHN, MONZ, NZAC).

Geographic distribution (Fig. 149). North Island: AK, BP, CL, GB, ND, TK, TO, WN, WO.

Ecology. Lowland, montane, subalpine. Epigeal, arboreal. Mesic forests (podocarp, broadleaf), tree plantations (pine), and shrublands. Shaded ground; moderately moist soil. Nocturnal; hides during the day under logs, fallen trees and branches, or under stones. Gregarious.

Biology. Seasonality: Throughout the year. Mating observed in October (BP). Teneral: December–March. Predacious (based on mouthpart morphology). Predators: Kiwi birds. Regularly infested with fungi (Laboulbeniales). Occasionally infested with mites.

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

Collecting techniques. Pitfall trapping; turning logs, fallen trees and branches, as well as stones.

References. Laroche and Larivière 2001: 133–134 (as *Ctenognathus bidens*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 111 (as *C. bidens*; list), 2016: 36 (as *C. bidens*; list).

***Kiwiplatynus taranaki* Laroche and Larivière, new species**

Fig. 49, 92, 150

Kiwiplatynus taranaki Laroche and Larivière, new species. Holotype: male (NZAC) labeled “NEW ZEALAND TK Mt Messenger For [=Forest], Mokau Rd-Kiwi Rd tk [=track] 200m 385350S 1743600E 5–11.XII.1999 Larivière, Laroche (typed) / Wet broadleaf forest: pittraps. (typed) / HOLOTYPE [male symbol] *Kiwiplatynus taranaki* Laroche & Larivière, 2021 (red label; typed).” Paratypes: one female (NZAC) and one male (AMNZ) from Mount Messenger Forest, Mokau Road-White Cliffs track, bearing blue paratype labels.

Description. Body length 16.1–19.0 mm. Head, pronotum, and elytra black; abdomen blackish; antennae, palpi, and legs rufopiceous. Microsculpture very transverse (with microlines) on head and pronotum, moderately transverse on elytra. Iridescence present on head and pronotum. Very shiny on head and pronotum, moderately shiny on elytra. **Head.** Mandibles moderately curved anteriorly. Labrum moderately transverse, subtruncate anteriorly. Mentum: medial tooth strongly emarginate apically. Submentum with eight setae. **Thorax.** Pronotum slightly convex, obsoletely punctate, obsoletely wrinkled on disc, narrow, moderately cordate, widest before middle; apex slightly emarginate; anterolateral angles well developed, broadly rounded; anterior bead complete; sides moderately rounded and sinuate posteriorly; lateral beads complete; lateral depressions narrow; posterolateral angles rectangular, acute at tip; laterobasal foveae moderately deep, very wide, prolonged forward; posterior bead absent; base subtruncate. **Legs.** Metatarsomeres 5 setose ventrally (with long setae). **Elytra.** Slightly convex, not sloping down toward apex. Shoulders moderately rounded. Sides moderately rounded. Scutellar setiferous pore visible. Scutellar striole short or moderately long, punctate. Striae deep, coarsely punctate. Intervals strongly convex; interval 3 with a single shallow, minute subapical setiferous puncture. Umbilicate series with 22–23 setiferous punctures. Subapical sinuations feeble. Apices obtusely triangular. **Abdomen.** Sternum IV: both sexes with four long apical ambulatory setae. Sterna V–VI: both sexes with four or five long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 92): moderately arcuate; base strongly convex dorsally, with basal lobe rather narrow; middle subparallel, slightly biconcave dorsally, slightly concave ventrally, with dorsal membranous area moderately widened from base to apex and moderately long; apex subtriangular, moderately biconvex dorsally, slightly concave ventrally, with extreme tip narrow, moderately long, and moderately curved downward; internal sac with numerous scale-like sclerites. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb close to membranous area.

Material examined. 65 specimens (AMNZ, BMNH, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 150). North Island: TK, TO, WO.

Ecology. Lowland, montane, subalpine. Epigeal. Wet forests (broadleaf, beech, podocarp) and swamp forests. Associated with streams and slopes. Shaded ground; wet soil. Nocturnal; hides during the day under logs. Gregarious.

Biology. Seasonality: October–January, March–April. Teneral: November–December. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

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

Collecting techniques. Pitfall trapping; turning logs.

Remarks. This species is named after the Taranaki region which includes the type locality Mount Messenger (TK), and is applied as a noun in apposition. *Kiwiplatynus taranaki* is morphologically close to *K. bidens*. In addition to diagnostic characters of the male genitalia, *K. taranaki* has the following distinguishing features: submentum with eight setae; elytra with striae coarsely punctate, interval 3 with a single subapical setiferous puncture; sternum VII, male with four long apical ambulatory setae, female with eight long apical ambulatory setae. *Kiwiplatynus taranaki* is known from the central North Island (WO, TK, TO), while *K. bidens* occurs throughout the North Island (ND to TK–GB; WN).

Genus *Kupeplatynus* Laroche and Larivière, new genus

Fig. 50–52, 93–95, 151–153

Type species. *Colpodes crenatus* Chaudoir, 1878, by present designation.

Description. Body length 12.8–20.2 mm. Color mostly dark. Metallic luster absent. Dorsal surface mostly glabrous. Forebody very wide in comparison to elytra. **Head.** Moderately wide or very wide. Mandibles moderately long or very long. Labrum subtruncate or emarginate anteriorly. Eyes moderately convex, separated from buccal fissures; a single setiferous puncture on inner side of each eye (posteriorly). Tempora inflated or not. Neck constriction deep dorsolaterally. Mentum tooth entire, acute apically; two small circular foveae; two long setae. Submentum with two, four, or six long setae. Palpi with terminal segment truncate apically. Ligula with two setae. Paraglossae glabrous. **Thorax.** Pronotum cordate or suborbicular; a single setiferous puncture on each side (anteriorly). Prosternum glabrous or pubescent apically, not compressed into a vertical ridge. **Legs.** Moderately long or very long. Metacoxae with three or four posteroventral setae. Metafemora with two to four posteroventral setae. Protibiae with dorsal longitudinal groove; cleaning organ with three clip setae. Meso- and metatarsomeres 1–4 poorly or well developed, tricarinate or not carinate dorsally, shallowly or deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, moderately or strongly asymmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Oblong, ovate, or subovate. Fused along suture (hindwings vestigial). Basal margin complete (reaching about scutellum) or incomplete (reaching about stria 1). Shoulders narrow, rounded or obtuse. Sides widest about middle. Scutellar setiferous pore visible or not. Scutellar striole short. Striae complete, consisting of impressed lines. Interval 3 without setiferous punctures. Umbilicate series with 17–25 setiferous punctures. Apices rounded or mucronate. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four or six long apical ambulatory setae. **Aedeagus.** Lateral view: strongly arcuate, semicircular; basal lobe of basal bulb present; internal sac with or without scale-like sclerites. Dorsal view: moderately wide, symmetrical (ostium of membranous area dorsal) or asymmetrical (ostium of membranous area deflected to the left); basal bulb close to membranous area.

Remarks. The generic name is derived from *Kupe* (the legendary Polynesian navigator to whom is attributed the discovery of New Zealand) and *Platynus* (the type genus of the tribe Platynini), genus masculine. The morphological characters unifying species of *Kupeplatynus* are: forebody wide in comparison to elytra; a single setiferous puncture on inner side of each eye (posteriorly); mentum tooth entire, acute apically; metatarsomeres 4 asymmetrical apically; interval 3 of elytra without setiferous punctures; abdominal sterna IV–VI of both sexes with two long apical ambulatory setae; aedeagus (in lateral view) strongly arcuate, semicircular. *Kupeplatynus* species occur in northern areas of the North Island. See also Remarks under *Kiwiplatynus*.

Key to species of *Kupeplatynus*

1. Femora and tibiae dark rufous; antennae reddish; elytra oblong, scutellar setiferous pore invisible, striae impunctate, intervals depressed; Fig. 50. [Body length 12.8–14.0 mm; submentum with six setae; apex of prosternum pubescent; northern North Island (ND to WO)] *Kupeplatynus sulcitaris* (Broun)
- Femora and tibiae black piceous; antennal segments 1–3 rufopiceous, 4–11 pale reddish; elytra subovate or ovate, scutellar setiferous pore visible, striae coarsely punctate, intervals convex 2
- 2(1). Mandibles very long; submentum with two setae; pronotum slightly convex, moderately cordate, widest before middle, sides moderately sinuate posteriorly; apex of prosternum pubescent; elytra subovate; Fig. 51. [Body length 16.5–20.2 mm; northern North Island (ND to TK–BP)] *Kupeplatynus crenatus* (Chaudoir)
- Mandibles moderately long; submentum with four setae; pronotum strongly convex, suborbicular, widest about middle, sides not sinuate posteriorly; apex of prosternum glabrous; elytra ovate; Fig. 52. [Body length 15.3–18.4 mm; northern North Island (ND to TK–TO)] *Kupeplatynus lucifugus* (Broun)

***Kupeplatynus sulcitaris* (Broun, 1880), new combination**

Fig. 50, 93, 153

Anchomenus (*Platynus*) *sulcitaris* Broun, 1880: 27. Holotype: “one mutilated specimen at Parua, near Whangarei Harbour” [ND] (BMNH, could not be located).

Anchomenus sulcitaris: Hutton 1904: 144.

Agonum (*Platynus*) *sulcitaris*: Csiki 1931: 853.

Agonum sulcitaris: Watt 1971: 25.

Ctenognathus sulcitaris: Larochelle and Larivière 2007: 81, 111.

Description. Body length 12.8–14.0 mm. Head, pronotum, and elytra black; abdomen piceous black; antennae and palpi reddish; legs dark rufous. Microsculpture isodiametric on head, very transverse (with microlines) on pronotum, and isodiametric on elytra. Iridescence present on pronotum. Very shiny. **Head.** Moderately wide. Mandibles moderately long, moderately curved anteriorly. Labrum moderately transverse, subtruncate anteriorly. Tempora moderately inflated and short. Submentum with six setae. **Thorax.** Pronotum moderately convex, obsolete punctate across base, obsolete wrinkled on disc, narrow, cordate, widest about middle; apex subtruncate; anterolateral angles poorly developed, obtusely rounded; anterior bead complete; sides moderately rounded, not sinuate posteriorly; lateral beads incomplete, obsolete basally; lateral depressions wide, incomplete near apex; posterolateral angles obtuse; laterobasal foveae very deep, narrow, prolonged forward; posterior bead incomplete, absent medially; base subtruncate. Apex of prosternum pubescent. **Legs.** Moderately long. Metacoxae with three posteroventral setae. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, shallowly bisulcate laterally. Metatarsomeres 4 moderately asymmetrical apically. **Elytra.** Slightly convex, sloping down toward apex, oblong. Basal margin complete, reaching about scutellum. Shoulders obtuse. Sides slightly rounded. Scutellar setiferous pore invisible. Scutellar striae impunctate. Striae deep, impunctate. Intervals depressed. Umbilicate series with 17–18 setiferous punctures. Subapical sinuations feeble. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 93): base strongly convex dorsally, with basal lobe very wide; middle strongly convex dorsally, strongly concave ventrally, with dorsal membranous area narrow and moderately long; internal sac without scale-like sclerites; apex subtriangular, moderately convex dorsally, slightly concave ventrally, with extreme tip moderately wide and long. Dorsal view: moderately wide, symmetrical (ostium of membranous area dorsal); basal bulb close to membranous area.

Material examined. 224 specimens (AMNZ, BMNH, CMNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 153). North Island: AK, CL, ND, WO.

Ecology. Lowland, montane. Epigeal, arboreal. Wet forests (broadleaf, podocarp). Associated with streams and slopes. Shaded ground; wet soil. Nocturnal; hides during the day under logs and fallen trees. Gregarious.

Biology. Seasonality: September–May, August. Probably a summer breeder. Teneral: November–March (mostly November–December). Predacious (based on mouthpart morphology). Predators: Kiwi birds. Occasionally infested with mites.

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

Collecting techniques. Pitfall trapping; turning logs and fallen trees.

References. Laroche and Larivière 2001: 132 (as “*Anchomenus*” *sulcitaris*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus sulcitaris*; list), 2016: 38 (as *C. sulcitaris*; list).

Remarks. The holotype of *Anchomenus (Platynus) sulcitaris* could not be located in BMNH where Broun’s types can usually be found. However, there is no ambiguity regarding the identity of this taxon; the original description can only apply to the species as currently understood. In addition to diagnostic characters of the male genitalia, *Kupeplatynus sulcitaris* has the following distinguishing features: femora and tibiae dark rufous; antennae reddish; elytra oblong, scutellar setiferous pore invisible, striae impunctate, intervals depressed. This species occurs in northern areas of the North Island (ND to WO).

Kupeplatynus crenatus (Chaudoir, 1878), new combination

Fig. 51, 94, 151

Colpodes crenatus Chaudoir, 1878: 304. Lectotype (here designated): male (MNHN) labeled “*crenatus* Chaud. Nouv. Zélande (hand-written) / Ex Musaeo Chaudoir (typed) / LECTOTYPE [male symbol] *Colpodes crenatus* Chaudoir, 1878 designated by Laroche & Larivière, 2021 (red label; typed).”

Calathus deformipes Broun, 1880: 19. Holotype: male (BMNH) labeled “[male symbol] (hand-written) / 42. (typed) / type (circular red-bordered label; typed) / [ND] Parua (hand-written) / New Zealand. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Ctenognathus deformipes*. (hand-written).” **New synonym**

Anchomenus (Platynus) cheesemani Broun, 1880: 26. Holotype: male (BMNH) labeled “575 (typed) / type (circular red-bordered label; typed) / New Zealand. Broun. Coll. Brit. Mus. 1922–482 (white label with red horizontal line; typed) / [AK] Remuera. Auckland (hand-written) / *Ctenognathus cheesemani*. (hand-written).” **New synonym**

Anchomenus deformipes: Broun 1886: 820.

Ctenognathus deformipes: Broun 1893: 986.

Ctenognathus cheesemani: Broun 1893: 986.

Ctenognathus crenatus: Hutton 1904: 144.

Colpodes crenatus: Csiki 1931: 751.

Ctenognathus crenatus: Hudson 1934: 174.

Description. Body length 16.5–20.2 mm. Head, pronotum, elytra, and abdomen black; antennal segments 1–3 rufopiceous, segments 4–11 reddish; palpi reddish; legs dark rufous. Microsculpture moderately transverse on head, very transverse (with microlines) on pronotum, and moderately transverse on elytra. Iridescence present on pronotum. Very shiny on head and pronotum, moderately shiny on elytra. **Head.** Moderately wide. Mandibles very long (about three times as long as labrum), slightly curved anteriorly. Labrum moderately transverse, slightly or moderately emarginate anteriorly. Eyes somewhat smaller than in other species. Tempora moderately inflated and very long (much longer than length of eyes). Submentum with two setae. **Thorax.** Pronotum slightly convex, obsoletely punctate mediobasally, obsoletely wrinkled on disc, moderately wide and cordate, widest before middle; apex strongly emarginate; anterolateral angles well developed, obtusely rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, moderately sinuate posteriorly; lateral beads incomplete, obsolete basally; lateral depressions wide; posterolateral angles straight or slightly acute and extended laterally, obtuse at extreme apex; laterobasal foveae moderately deep, very wide, prolonged forward; posterior bead complete; base convex. Apex of prosternum pubescent. **Legs.** Very long. Metacoxae with three posteroventral setae. Metafemora with three posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 strongly bilobed and asymmetrical apically. Metatarsomeres 5 with several longitudinal wrinkles dorsally (without wrinkles in other species). **Elytra.** Strongly convex, sloping down

toward apex, subovate. Basal margin almost complete, reaching about stria 1 (complete, reaching about scutellum in other species). Shoulders strongly rounded. Sides moderately rounded. Scutellar setiferous pore visible. Scutellar striole punctate. Striae deep, coarsely punctate. Intervals slightly convex dorsally, moderately convex laterally. Umbilicate series with 17–19 setiferous punctures. Subapical sinuations moderately strong. Apices mucronate. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with six long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 94): base moderately convex dorsally, with basal lobe very wide; middle moderately concave dorsally, moderately concave with a slight convexity before apex ventrally, with dorsal membranous area strongly widened in apical half and moderately long; internal sac without scale-like sclerites; apex strongly convex dorsally, slightly concave ventrally, with extreme tip narrow and very long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb close to membranous area.

Material examined. 229 specimens (AMNZ, BMNH, JNNZ, LUNZ, MNHN, MONZ, NZAC).

Geographic distribution (Fig. 151). North Island: AK, BP, CL, ND, TK, WO.

Ecology. Lowland, montane. Epigean, arboreal. Wet forests (broadleaf, podocarp, tree ferns) and tree plantations (pine). Associated with streams and logs. Shaded ground; wet soil. Nocturnal; hides during the day under logs and in rotten logs, also under fallen trees.

Biology. Seasonality: Throughout the year. Teneral: October–January, April. Predacious (based on mouthpart morphology). Regularly infested with mites. Occasionally infested with fungi (Laboulbeniales).

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

Collecting techniques. Pitfall trapping; turning and breaking logs.

References. Laroche and Larivière 2001: 134 (as *Ctenognathus crenatus*, *C. cheesemani*, *C. deformipes*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 111 (as *C. crenatus*, *C. cheesemani*, *C. deformipes*; list), 2016: 36–37 (as *C. crenatus*, *C. cheesemani*, *C. deformipes*; list).

Remarks. Chaudoir described *Colpodes crenatus* from two specimens, one of which (a male) could be seen (MNHN) and is here designated as lectotype in order to preserve stability of nomenclature in the future. Examination of the types of *Calathus deformipes* and *Anchomenus (Platynus) cheesemani* revealed them to be conspecific with *Kupeplatynus crenatus*.

***Kupeplatynus lucifugus* (Broun, 1886), new combination**

Fig. 52, 95, 152

Anchomenus lucifugus Broun, 1886: 819. Holotype: male (BMNH) labeled “[AK] Waitakerei [= Waitakere Railway-station] (hand-written) / [male symbol] (hand-written) / 45. [male symbol] (hand-written) / Type (circular red-bordered label; typed) / New Zeal. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Ctenognathus lucifugus*. (hand-written).”

Anchomenus munroi Broun, 1893: 984. Lectotype (here designated): male (BMNH) labeled “Type (circular red-bordered label; typed) / 1771 (hand-written) / [AK] Hunua Clevedon. (hand-written) / New Zeal. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Ctenognathus munroi*. (hand-written). / LECTOTYPE [male symbol]

Anchomenus munroi Broun, 1893 designated by Laroche & Larivière, 2021 (red label; typed).” **New synonym**

Ctenognathus lucifugus: Broun 1893: 986.

Ctenognathus munroi: Laroche and Larivière 2007: 81, 111.

Description. Body length 15.3–18.4 mm. Head and pronotum black; elytra smoky black; abdomen black; antennal segments 1–3 rufopiceous, segments 4–11 reddish; palpi reddish; legs black piceous. Microsculpture isodiametric on head, very transverse (with microlines) on pronotum, and granulate on elytra. Iridescence present on pronotum. Moderately shiny on head, very shiny on pronotum, dull on elytra. **Head.** Very wide. Mandibles moderately long, slightly curved anteriorly. Labrum slightly transverse, subtruncate anteriorly. Tempora not inflated. Submentum with four setae. **Thorax.** Pronotum strongly convex, impunctate, obsolete wrinkled on disc, wide, suborbicular, widest about middle; apex slightly emarginate; anterolateral angles well developed, broadly rounded; anterior bead complete; sides strongly rounded, not sinuate posteriorly; lateral beads absent;

lateral depressions narrow anteriorly, wide posteriorly; posterolateral angles broadly rounded; laterobasal foveae very deep and wide, prolonged forward; posterior bead complete; base truncate. Apex of prosternum glabrous. **Legs.** Moderately long. Metacoxae with three or four posteroventral setae. Metafemora with four posteroventral setae. Meso- and metatarsomeres 1–4 poorly developed, not carinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 strongly asymmetrical apically. **Elytra.** Strongly convex, sloping down toward apex, ovate. Basal margin complete, reaching about scutellum. Shoulders strongly rounded. Sides strongly rounded. Scutellar setiferous pore visible. Scutellar striole punctate. Striae deep, coarsely punctate. Intervals strongly convex. Umbilicate series with 20–25 setiferous punctures. Subapical sinuations very strong. Apices mucronate. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 95): base slightly convex dorsally, with basal lobe very wide; middle strongly convex dorsally, strongly concave ventrally, with dorsal membranous area narrow and moderately long; internal sac with a few scale-like sclerites; apex moderately convex dorsally, slightly concave ventrally, with extreme tip narrow and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb close to membranous area.

Material examined. 303 specimens (AMNZ, BMNH, CMNH, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 152). North Island: AK, BP, CL, ND, TK, TO, WO.

Ecology. Lowland, montane. Epigeal, arboreal. Wet forests (broadleaf, podocarp, tree ferns) and tree plantations (pine). Associated with streams and slopes. Shaded ground; wet soil. Nocturnal; hides during the day in and under rotten logs.

Biology. Seasonality: Throughout the year. Teneral: December–January, March. Predacious (based on mouthpart morphology). Occasionally infested with mites.

Dispersal power. Subapterous (incapable of flight). Swift runner. Regular climber (on trees).

Collecting techniques. Pitfall trapping; breaking and turning logs; pan trapping (yellow pan traps); window trapping.

References. Larochelle and Larivière 2001: 135 (as *Ctenognathus lucifugus*, *C. munroi*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 111 (as *C. lucifugus*, *C. munroi*; list), 2016: 37 (as *C. lucifugus*, *C. munroi*; list).

Remarks. Broun described *Anchomenus munroi* from two specimens, one of which (a male) could be located (BMNH) and is here designated as lectotype. This type designation is made to preserve stability of nomenclature in the future. Examination of this specimen revealed it to be conspecific with *Kupeplatynus lucifugus*.

Genus *Tuiplatynus* Larochelle and Larivière, new genus

Fig. 53–54, 96–97, 165–166

Type species. *Anchomenus sophronitis* Broun, 1908, by present designation.

Description. Body length 10.0–12.3 mm. Color mostly dark. Metallic luster absent. Dorsal surface mostly glabrous. Forebody narrow in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long. Labrum emarginate anteriorly. Eyes strongly convex, separated from buccal fissures; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum tooth subtruncate or emarginate apically; two large circular foveae; ten to eighteen short setae in addition to two long setae. Submentum with eight long setae. Palpi with terminal segment truncate or obtuse apically. Ligula with two setae. Paraglossae glabrous. **Thorax.** Pronotum cordate; two setiferous punctures (anterior and posterior) on each side. Prosternum glabrous apically, not compressed into a vertical ridge. **Legs.** Moderately long. Metacoxae with two posteroventral setae. Metafemora with two posteroventral setae. Protibiae with dorsal longitudinal groove; cleaning organ with two clip setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed and symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Oblong-subovate. Fused along suture (hindwings vestigial). Basal margin complete, reaching about scutellum.

Shoulders narrow, rounded. Sides widest about middle. Scutellar setiferous pore visible. Scutellar striole moderately long. Striae complete, consisting of impressed lines. Interval 3 with three setiferous punctures. Umbilicate series with 16–19 setiferous punctures. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view: moderately or strongly arcuate; basal lobe of basal bulb present; internal sac without scale-like sclerites. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Remarks. The generic name is derived from *Tui* (a New Zealand honey-eating bird) and *Platynus* (the type genus of the tribe Platynini), genus masculine. This new genus is erected to accommodate two species previously placed in *Ctenognathus* (*C. sophronitis* and *C. libitus*). *Tuiplatynus* appears to be a genetically highly distinctive taxon with its mentum bearing numerous short setae (ten to eighteen) in addition to two long setae as well as two large circular foveae, and its geographic isolation in southernmost areas of the South Island and on Stewart Island.

Key to species of *Tuiplatynus*

1. Interval 3 of elytra with three deep, large (foveate) setiferous punctures, striae finely punctate; mentum tooth subtruncate apically, with ten or eleven short setae; terminal segment of palpi truncate apically; Fig. 53. [Body length 10.0–11.3 mm; southern South Island (OL–DN to eastern FD–SL)] . . .
 *Tuiplatynus sophronitis* (Broun)
- Interval 3 of elytra with three shallow, minute setiferous punctures, striae impunctate; mentum tooth strongly emarginate apically, with twelve to eighteen short setae; terminal segment of palpi obtuse apically; Fig. 54. [Body length 11.4–12.3 mm; southwestern South Island (OL, FD) and Stewart Island] *Tuiplatynus libitus* (Broun)

Tuiplatynus sophronitis (Broun, 1908), new combination

Fig. 53, 96, 166

Anchomenus sophronitis Broun, 1908: 349. Lectotype (here designated): male (BMNH) labeled “Type (circular red-bordered label; typed) / 2668. [male symbol] (hand-written) / New Zealand. Broun. Coll. Brit. Mus. 1922–482 (white label with red horizontal line; typed) / West Plains Southland (hand-written) / *Anchomenus sophronitis* (hand-written) / LECTOTYPE [male symbol] *Anchomenus sophronitis* Broun, 1908 designated by Laroche & Larivière, 2021 (red label; typed).” Paralectotype: one female (BMNH) from the same locality as the lectotype, bearing a blue paralectotype label.

Agonum (*Anchomenus*) *sophronitis*: Csiki 1931: 865.

Anchomenus sophronitis: Hudson 1934: 174.

Ctenognathus sophronitis: Laroche and Larivière 2007: 81, 111.

Description. Body length 10.0–11.3 mm. Head, pronotum, and elytra mostly piceous black; lateral margins of pronotum and elytra reddish; abdomen piceous black; antennae and palpi rufotestaceous; femora dark yellow; tibiae and tarsi reddish. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra. Iridescence absent. Very shiny. **Head.** Mandibles moderately curved anteriorly. Labrum strongly transverse, deeply emarginate anteriorly. Mentum: medial tooth subtruncate apically; ten or eleven setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled on disc, deeply wrinkled across apex and base, narrow, moderately cordate, widest before middle; apex slightly emarginate; anterolateral angles poorly developed, obtuse; anterior bead complete; sides moderately rounded, moderately sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, widened posteriorly, prolonged forward; posterolateral angles obtuse; laterobasal foveae very deep, moderately wide; posterior bead complete; base subtruncate. **Elytra.** Moderately convex, not sloping down toward apex. Shoulders moderately rounded. Sides moderately rounded. Scutellar striole impunctate. Striae shallow, finely punctate. Intervals depressed; interval 3 with three very deep, large (foveate) setiferous punctures. Umbilicate series with 16–19 setiferous punctures. Subapical sinuations moderate. **Aedeagus.** Lateral view (Fig. 96): moderately arcuate; base strongly convex dorsally, with basal lobe moderately wide; middle moderately convex dorsally, moderately

concave ventrally, with dorsal membranous area moderately wide and moderately long; apex moderately convex dorsally, moderately concave ventrally, with extreme tip narrow and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 127 specimens (AMNZ, BMNH, JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 166). South Island: CO, DN, FD, OL, SL.

Ecology. Lowland, montane, subalpine. Epigeal, arboreal. Wet forests (beech, broadleaf). Associated with streams and mud flats. Shaded ground; wet soil. Nocturnal; hides during the day under logs and stones, and in moss growing on tree trunks. Gregarious.

Biology. Seasonality: September–March, May, August. Teneral: March, May. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

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

Collecting techniques. Turning logs and stones; examining moss on tree trunks; pitfall trapping.

References. Laroche and Larivière, 2001: 132 (as “*Anchomenus*” *sophronitis*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus sophronitis*; list), 2016: 37 (as *C. sophronitis*; list).

Remark. Broun described *Anchomenus sophronitis* from two specimens, one of which (a male) could be located (BMNH) and is here designated as lectotype in order to preserve stability of nomenclature in the future.

***Tuipatynus libitus* (Broun, 1914), new combination**

Fig. 54, 97, 165

Anchomenus libitus Broun, 1914: 84. Holotype: male (BMNH) labeled “Type (circular red-bordered label; typed) / 3391. [male symbol] (hand-written) / New Zeal. Broun. Coll. Brit. Mus. 1922–482 (white label with red horizontal line; typed) / Hakapoua. Southland. March 1911. (hand-written) / *Anchomenus libitus*. [male symbol] (hand-written).”
Ctenognathus libitus: Laroche and Larivière 2007: 81, 111.

Description. Body length 11.4–12.3 mm. Head, pronotum, and elytra mostly piceous black; lateral margins of pronotum and elytra reddish; abdomen piceous black; antennae and palpi dark rufous; femora dark yellow; tibiae and tarsi reddish. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra. Iridescence absent. Very shiny. **Head.** Mandibles moderately curved anteriorly. Labrum strongly transverse, strongly emarginate anteriorly. Mentum: medial tooth strongly emarginate apically; twelve to eighteen setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum moderately convex, impunctate, obsoletely wrinkled on disc, narrow, moderately cordate; apex slightly emarginate; anterolateral angles poorly developed, rounded; anterior bead complete; sides strongly rounded, moderately sinuate; lateral beads complete; lateral depressions narrow anteriorly, widened posteriorly; posterolateral angles obtuse; laterobasal foveae very deep, moderately wide, prolonged forward; posterior bead complete; base emarginate. **Elytra.** Moderately convex, not sloping down toward apex. Shoulders moderately rounded. Sides moderately rounded. Scutellar striae impunctate. Striae shallow, impunctate. Intervals subdepressed; interval 3 with three shallow, minute setiferous punctures. Umbilicate series with 16–17 setiferous punctures. Subapical sinuations feeble. **Aedeagus.** Lateral view (Fig. 97): strongly arcuate, slender; base strongly convex dorsally, with basal lobe very wide; middle strongly convex dorsally then moderately concave before apex, strongly concave ventrally, with dorsal membranous area much wider in apical half and moderately long; apex moderately convex dorsally, slightly concave ventrally, with extreme tip subtriangular, moderately wide and short. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 143 specimens (AMNZ, BMNH, JNNZ, LUNZ, MNHN, MONZ, NZAC).

Geographic distribution (Fig. 165). South Island: FD, OL. Stewart Island.

Ecology. Lowland. Epigeal, arboreal. Wet forests (beech, podocarp, broadleaf). Shaded ground; wet soil. Nocturnal; hides during the day under logs and stones; active at night on tree trunks. Gregarious.

Biology. Seasonality: October–March, May. Teneral: February–March. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

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

Collecting techniques. Examining tree trunks at night; pitfall trapping; turning logs and stones.

References. Laroche and Larivière 2001: 131 (as “*Anchomenus*” *libitus*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus libitus*; list), 2016: 37 (as *C. libitus*; list).

Genus *Ctenognathus* Fairmaire, 1843

Fig. 55–79, 98–122, 124–148

Ctenognathus Fairmaire, 1843: 13.

Type species. *Anchomenus Novae-Zelandiae* Fairmaire, 1843, by monotypy.

Description. Body length 7.0–13.9 mm. Color mostly dark. Metallic luster absent. Dorsal surface mostly glabrous. Forebody usually narrow or moderately wide in comparison to elytra. **Head.** Usually narrow or moderately wide. Mandibles moderately long (very long in *C. garnerae*). Labrum emarginate or subtruncate anteriorly. Eyes moderately or strongly convex, separated from buccal fissures; two setiferous punctures on inner side of each eye. Tempora not inflated (inflated in *C. elevatus*). Neck constriction usually shallow, sometimes absent dorsolaterally. Mentum tooth entire (acute, rounded or subtruncate) or emarginate apically; two small circular foveae; two long setae. Submentum with four, six, or ten long setae. Palpi with terminal segment obtuse or truncate apically. Ligula with two setae. Paraglossae glabrous. **Thorax.** Pronotum usually cordate (rarely subquadrate); a single setiferous puncture on each side (anteriorly) or two setiferous punctures on each side (anteriorly and posteriorly). Prosternum glabrous apically (glabrous or pubescent in *C. helmsi*), not compressed into a vertical ridge. **Legs.** Usually moderately long, sometimes very long (short in *C. tawanui*). Metacoxae with two posteroventral setae. Metafemora with two posteroventral setae (three setae in *C. elevatus* and *C. tepaki*). Protibiae with dorsal longitudinal groove; cleaning organ with two clip setae. Meso- and metatarsomeres 1–4 usually well developed, tricarinate dorsally, deeply bisulcate laterally (sometimes poorly developed, not carinate dorsally, shallowly or deeply bisulcate laterally). Metatarsomeres 4 moderately bilobed, symmetrical or asymmetrical apically. Metatarsomeres 5 glabrous or setose ventrally. **Elytra.** Subovate or oblong. Fused along suture (hindwings vestigial). Basal margin complete, reaching about scutellum. Shoulders narrow, rounded (obtuse in *C. perumalae*). Sides widest about middle (widest behind middle in *C. arnaudensis*, *C. davidsoni*, *C. edwardsii*, *C. marieclaudiae*, *C. takahe*, and *C. tawanui*). Scutellar setiferous pore usually visible. Scutellar striole short or moderately long. Striae complete, consisting of impressed lines. Interval 3 usually with three setiferous punctures (sometimes without punctures or with a subapical puncture). Umbilicate series with 13–24 setiferous punctures. Apices obtuse or rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two or four long apical ambulatory setae; female with four, eight, or ten long apical ambulatory setae. **Aedeagus.** Lateral view: moderately or strongly arcuate; basal lobe of basal bulb usually present; internal sac without scale-like sclerites. Dorsal view: usually moderately wide (rarely narrow or very wide), asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

References. Laroche and Larivière 2001: 129–132 (as “*Anchomenus*”; catalogue), 133–136 (as *Ctenognathus*; catalogue); Liebherr 2005: 267 (key to genera and species, Vanuatu Platynini), 283 (new status, New Zealand “*Anchomenus*” species); Laroche and Larivière 2007: 80–81, 111 (description, ecology, geographic distribution, references; new status, New Zealand “*Anchomenus*” species), 2016: 36 (list).

Remarks. This genus occurs on the Three Kings Islands (TH), North Island, South Island, and Stewart Island. All New Zealand species previously recorded in the genus “*Anchomenus*” have been transferred to the genus *Ctenognathus* Fairmaire by Liebherr (2005: 283) and Laroche and Larivière (2007: 80). In the present revision, six species previously assigned to *Ctenognathus* are transferred to *Kiwiplatynus* new genus (*C. bidens*), *Kupeplatynus* new genus (*C. sulcitaris*, *C. crenatus*, *C. lucifugus*), and *Tuiplatynus* new genus (*C. sophronitis*, *C. libitus*).

Key to species of *Ctenognathus*

1. Pronotum with a single setiferous puncture on each side (anteriorly) 2
 — Pronotum with two setiferous punctures on each side (anteriorly and posteriorly) 9
- 2(1). Meso- and metatarsomeres 1–4 (Fig. 27) not carinate dorsally 3
 — Meso- and metatarsomeres 1–4 (Fig. 28) tricarinate dorsally 6
- 3(2). Antennae entirely rufopiceous; abdomen black 4
 — Antennae bicolored; abdomen rufopiceous 5
- 4(3). Tempora not inflated; pronotum not sinuate posteriorly, sides moderately rounded, posterolateral angles obtusely rounded, base truncate, posterior bead present, complete; apices of elytra obtuse; Fig. 55. [Body length 12.0–13.9 mm; North Island (ND to TK–HB)]
 *Ctenognathus novaezelandiae* (Fairmaire)
 — Tempora moderately inflated (about two-thirds as long as eyes); pronotum moderately sinuate posteriorly, sides strongly rounded, posterolateral angles slightly acute, base convex, posterior bead absent; apices of elytra rounded; Fig. 56. [Body length 12.0–13.2 mm; southern North Island (WN)]
 *Ctenognathus elevatus* (White)
- 5(3). Antennal segments 1–4 rufopiceous, 5–11 reddish; mandibles very long, slightly curved anteriorly; pronotum with lateral depressions narrow, slightly widened from apex to base, posterolateral angles obtuse; metatarsomeres 5 glabrous ventrally; Fig. 57. [Body length 11.4–12.8 mm; Three Kings Islands (TH)] *Ctenognathus garnerae* Laroche and Larivière, new species
 — Antennal segments 1 rufopiceous, 2–11 reddish; mandibles moderately long and curved anteriorly; pronotum with lateral depressions wide throughout, posterolateral angles rectangular; metatarsomeres 5 setose ventrally (with long setae); Fig. 58. [Body length 11.6–13.2 mm; northern North Island (ND, top of Aupouri Peninsula)] *Ctenognathus tepaki* Laroche and Larivière, new species
- 6(2). Head, pronotum, and elytra coal black; femora rufopiceous; elytra without visible scutellar setiferous pore, microsculpture very transverse (with microlines); terminal segment of palpi obtuse apically (Fig. 10) 7
 — Head and pronotum pure black, elytra piceous black; femora reddish; elytra with visible scutellar setiferous pore, microsculpture isodiametric; terminal segment of palpi truncate apically (Fig. 11) 8
- 7(6). Pronotum widest before middle, slightly wrinkled on disc, sides strongly sinuate posteriorly, posterolateral angles rectangular; interval 3 of elytra with a minute subapical setiferous puncture; Fig. 59. [Body length 12.7–13.8 mm; eastern central North Island (BP, GB, HB)]
 *Ctenognathus urewera* Laroche and Larivière, new species
 — Pronotum widest about middle, deeply wrinkled on disc, sides not sinuate posteriorly, posterolateral angles acute and projected laterally; interval 3 of elytra without setiferous punctures; Fig. 60. [Body length 11.3–13.8 mm; northern North Island (ND to WO)]
 *Ctenognathus cardiophorus* (Chaudoir)
- 8(6). Pronotum subquadrate, moderately convex, sides moderately sinuate posteriorly, posterolateral angles rectangular, moderately long; interval 3 of elytra without setiferous punctures; Fig. 61. [Body length 12.7–12.9 mm; North Island (AK–CL to WN)] *Ctenognathus adamsi* (Broun)
 — Pronotum elongate, slightly convex, sides strongly sinuate posteriorly, posterolateral angles acute (projected laterally), very long; interval 3 of elytra with a large (foveate) subapical setiferous puncture; Fig. 62. [Body length 11.0–13.6 mm; southern North Island (WI to WN–WA) and northern South Island (SD, NN, MB)] *Ctenognathus pictonensis* Sharp
- 9(1). Femora dark, pure black, piceous black or dark rufous 10
 — Femora paler, yellow or rufotestaceous 15
- 10(9). Scutellar setiferous pore of elytra invisible; legs short; Fig. 63. [Rather small, body length 7.0–9.8 mm; terminal segment of palpi truncate apically; southern South Island (SL)]
 *Ctenognathus tawanui* Laroche and Larivière, new species

- Scutellar setiferous pore of elytra visible; legs moderately long or very long 11
- 11(10). Pronotum strongly cordate; elytra subovate, strongly convex; Fig. 64. [Body length 11.9–12.4 mm; southwestern South Island (southern WD)]
 *Ctenognathus perumalae* Larochelle and Larivière, new species
- Pronotum moderately cordate, subquadrate, or subrectangular; elytra oblong, slightly convex or subdepressed 12
- 12(11). Antennal segments 1–3(4) black, (3)4–11 dark rufous 13
- Antennae entirely dark rufous 14
- 13(12). Femora and tibiae black; pronotum moderately cordate, base emarginate; elytra subdepressed, microsculpture isodiametric, striae finely punctate; Fig. 65. [Body length 8.5–11.4 mm; southwestern South Island (southern FD)] *Ctenognathus takahe* Larochelle and Larivière, new species
- Femora and tibiae dark rufous; pronotum subrectangular, base subtruncate; elytra slightly convex, microsculpture moderately transverse, striae impunctate; Fig. 66. [Body length 10.1–10.6 mm; northern South Island (NN, BR, MB, KA)] *Ctenognathus arnaudensis* (Broun)
- 14(12). Pronotum unwrinkled, moderately cordate, laterobasal foveae moderately wide (not meeting toward pronotal midline); elytra very shiny, slightly convex, interval 3 with three or four large (foveate) setiferous punctures; Fig. 67. [Body length 12.6–13.3 mm; western South Island (BR, WD, OL)] ..
 *Ctenognathus marieclaudiae* Larochelle, new species
- Pronotum wrinkled on disc and across base, subquadrate, laterobasal foveae very wide (meeting toward pronotal midline); elytra dull, subdepressed, interval 3 with three shallow, minute setiferous punctures; Fig. 68. [Smaller, body length 8.5–11.0 mm; southern South Island (MC to FD–SL) and Stewart Island] *Ctenognathus edwardsii* (Bates)
- 15(9). Meso- and metatarsomeres 1–4 (Fig. 27) not carinate dorsally; Fig. 69. [Body length 9.1–10.5 mm; northeastern South Island (MB, KA)]
 *Ctenognathus kaikoura* Larochelle and Larivière, new species
- Meso- and metatarsomeres 1–4 (Fig. 28) tricarinate dorsally 16
- 16(15). Sternum VII (last visible sternum of abdomen; Fig. 35): male with two long apical ambulatory setae, female with four long apical ambulatory setae 17
- Sternum VII (Fig. 36): male with four long apical ambulatory setae, female with eight to ten long apical ambulatory setae 20
- 17(16). Posterolateral angles of pronotum acute and projected laterally; terminal segment of palpi obtuse apically (Fig. 10) 18
- Posterolateral angles of pronotum rectangular; terminal segment of palpi truncate apically (Fig. 11) ... 19
- 18(17). Femora and tibiae pale yellow; pronotum with anterolateral angles poorly developed, posterior bead incomplete (obsolete medially), base emarginate; legs moderately long; elytra very convex; Fig. 70. [Body length 10.2–11.1 mm; southern North Island (WN, WA)]
 *Ctenognathus sandageri* (Broun)
- Femora dark yellow, tibiae reddish; pronotum with anterolateral angles well developed, posterior bead complete, base subtruncate; legs very long; elytra moderately convex; Fig. 71. [Body length 9.5–11.6 mm; western South Island (NN–SD to WD)] *Ctenognathus helmsi* (Sharp)
- 19(17). Elytra ovate; pronotum widest about middle, sides strongly rounded; Fig. 72. [Body length 10.0–11.4 mm; North Island (WO–BP to WN)] *Ctenognathus xanthomelus* (Broun)
- Elytra subovate; pronotum widest before middle, sides moderately rounded; Fig. 73. [Body length 10.5–12.0 mm; southern North Island (TO to WN)] *Ctenognathus intermedius* (Broun)
- 20(16). Femora and tibiae pale yellow 21
- Femora dark yellow or reddish; tibiae reddish 23
- 21(20). Elytra shiny; posterolateral angles of pronotum slightly obtuse; mentum tooth subtruncate apically; submentum with ten long setae; Fig. 75. [Body length 10.8–11.2 mm; pronotum slightly cordate; elytra

- slightly convex, striae finely punctate; South Island (NN–BR to NC–MK)]
 *Ctenognathus colenisonis* (White)
- Elytra dull; posterolateral angles of pronotum rectangular; mentum tooth emarginate apically; submentum with six long setae 22
- 22(21). Pronotum slightly cordate; elytra subdepressed, striae finely punctate; eyes strongly rounded; terminal segment of palpi obtuse apically; Fig. 74. [Body length 10.3–12.7 mm; southern South Island (OL–DN to FD–SL)] *Ctenognathus otagoensis* (Bates)
- Pronotum subquadrate; elytra moderately convex, striae impunctate; eyes moderately rounded; terminal segment of palpi truncate apically; Fig. 76. [Body length 10.2–11.5 mm; Stewart Island]
 *Ctenognathus earlyi* Laroche and Larivière, new species
- 23(20). Antennal segments 1–3 rufotestaceous, 4–11 dark piceous; femora rufotestaceous; sides of pronotum not sinuate posteriorly, lateral depressions wide throughout, laterobasal foveae very wide (almost meeting toward pronotal midline); elytra with sides slightly rounded, interval 3 with three very deep, large (foveate) setiferous punctures; Fig. 77. [Body length 11.2–12.9 mm; western South Island (BR–SL)] *Ctenognathus davidsoni* Laroche and Larivière, new species
- Antennae entirely dark rufous or rufotestaceous; femora dark yellow; sides of pronotum moderately sinuate posteriorly, lateral depressions narrow anteriorly and widened posteriorly, laterobasal foveae moderately wide (well separated from each other); elytra with sides moderately rounded, interval 3 with three shallow, minute setiferous punctures 24
- 24(23). Antennae dark rufous; terminal segment of palpi obtuse apically; eyes strongly convex; pronotum obsoletely wrinkled on disc, moderately cordate, posterolateral angles rectangular; elytra oblong, sides moderately rounded, striae deep and impunctate; Fig. 78. [Body length 10.5–13.00 mm; southeastern South Island (MK–SL)] *Ctenognathus oreobius* (Broun)
- Antennae rufotestaceous; terminal segment of palpi truncate apically; eyes moderately convex; pronotum deeply wrinkled on disc, slightly cordate, posterolateral angles acute and slightly projected laterally; elytra subovate, sides strongly rounded, striae shallow and finely punctate; Fig. 79. [Body length 11.1–12.3 mm; Banks Peninsula (MC)]
 *Ctenognathus hoarei* Laroche and Larivière, new species

Ctenognathus novaezelandiae (Fairmaire, 1843)

Fig. 55, 98, 138

Anchomenus Novae-Zelandiae Fairmaire, 1843: 12. Holotype: one specimen from “Nouvelle-Zélande” [= New Zealand] (MNHN, Fairmaire Collection, could not be located).

Anchomenus (Ctenognathus) novae zeelandiae [sic]: White 1846: 3.

Ctenognathus novae zelandiae: Chenu 1851: 139.

Dicrochile ovicollis Motschulsky, 1865: 316. Holotype: one specimen from “Nouvelle-Zélande” [= New Zealand]. Synonymized by Kuschel (1990: 76).

Anchomenus punctulatus Broun, 1877: 371. Holotype: “Habitat: Auckland” (BMNH, could not be located). **New synonym** *Colpodes neozelandicus* Chaudoir, 1878: 294. Lectotype (here designated): male (MNHN) labeled “baie des isles [= ND, Bay of Islands] (hand-written) / ExMusaeo Chaudoir (typed) / neozelandicus Chaud. Nouv. Zélande Baie des Isles Coll. Reiche (hand-written) / LECTOTYPE [male symbol] *Colpodes neozelandicus* Chaudoir, 1878 designated by Laroche & Larivière, 2021 (red label; typed).” **New synonym**

Anchomenus montivagus Broun, 1880: 22. Holotype: one specimen “near Whangarei Heads” [ND] (BMNH, could not be located). **New synonym**

Anchomenus politulus Broun, 1880: 22. Holotype: female (BMNH) labeled “Type (circular red-bordered label; typed) / 47. (hand-written) / [ND] [Mt] Manaia 1876 (hand-written) / New Zealand. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Ctenognathus politulus*. (hand-written).” **New synonym**

Anchomenus suborbithorax Broun, 1880: 24. Holotype: male (BMNH) labeled “Type (circular red-bordered label; typed) / 51. [male symbol] (hand-written) / [ND] [Mt] Manaia 1877 (hand-written) / New Zeal. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Ctenognathus suborbithorax* (hand-written).” **New synonym**

Anchomenus perrugithorax Broun, 1880: 24. Holotype: male (BMNH) labeled “Type (circular red-bordered label; typed) / 52. [male symbol] (hand-written) / New Zeal. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line;

typed) / [ND] Mt Manaia 1878 (hand-written) / *Ctenognathus perrugithorax*. (hand-written).” **New synonym** *Ctenognathus latipennis* Sharp, 1886: 363. Synonymized with *Anchomenus montivagus* Broun, 1882 by Csiki (1931: 744). *Ctenognathus politulus*: Broun 1893: 986. *Ctenognathus suborbithorax*: Broun 1893: 986. *Ctenognathus perrugithorax*: Broun 1893: 986. *Ctenognathus neozealandicus* [sic]: Hutton 1904: 144. *Anchomenus suborbithorax*: Walker 1904: 115. *Ctenognathus suborbithorax*: Hutton 1904: 144. *Colpodes neozealandicus*: Csiki 1931: 758. *Agonum* (*Anchomenus*) *punctatum* [sic]: Csiki 1931: 865. *Ctenognathus neozealandicus* [sic]: Hudson 1934: 174. *Agonum novaezealandicum* [sic]: Moeed and Meads 1985: 22. *Ctenognathus novaezealandiae*: Kuschel 1990: 24, 40. *Ctenognathus montivagus*: Laroche and Larivière 2001: 135. *Ctenognathus punctulatus*: Laroche and Larivière 2007: 81, 111.

Description. Body length 12.0–13.9 mm. Head, pronotum, elytra, and abdomen black; antennae, palpi, and legs rufopiceous. Microsculpture very transverse (with microlines) on head and pronotum, isodiametric on elytra. Iridescence present on head and pronotum. Very shiny on head and pronotum, moderately shiny on elytra. Fore-body moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, moderately emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth entire, rounded apically; two setae. Submentum with four setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled on disc and across base, wide, slightly cordate, widest before middle; apex strongly emarginate; anterolateral angles well developed, broadly rounded; anterior bead complete; sides moderately rounded, not sinuate posteriorly; lateral beads complete; lateral depressions wide, more so posteriorly; a single setiferous puncture on each side (anteriorly); posterolateral angles obtusely rounded; laterobasal foveae moderately deep and wide, prolonged forward; posterior bead complete; base truncate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 poorly developed, not carinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed and asymmetrical apically. Metatarsomeres 5 setose ventrally (with long setae). **Elytra.** Slightly convex, not sloping down toward apex, oblong, widest about middle. Shoulders slightly rounded. Sides moderately rounded. Scutellar setiferous pore invisible. Scutellar striole short, impunctate. Striae deep, impunctate. Intervals moderately convex; interval 3 with a single very deep, large (foveate) subapical setiferous puncture. Umbilicate series with 19–20 setiferous punctures. Subapical sinuations moderately strong. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with nine or ten long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 98): strongly arcuate, slender; base moderately convex dorsally, with basal lobe very wide; middle strongly convex dorsally, strongly concave ventrally, with dorsal membranous area strongly widened in apical half and moderately long; apex moderately convex dorsally, slightly concave ventrally, with extreme tip narrow and very long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 1421 specimens (AMNZ, BMNH, CMNH, JNNZ, LUNZ, MNHN, MONZ, NZAC).

Geographic distribution (Fig. 138). North Island: AK, BP, CL, HB, ND, TK, WO.

Ecology. Coastal lowland. Epigeal, fossorial, arboreal. Sand dunes and adjacent forests (broadleaf, podocarp), shrublands, and tree plantations (pine). Mostly open ground; dry soil. Nocturnal; hides during the day in burrows at the base of plants (*Muehlenbeckia*, grass), in leaf litter, under logs, fallen trees and branches, or stones. Gregarious. Larval habitat: leaf litter and rotten logs.

Biology. Seasonality: Throughout the year; numbers decreasing from mid-winter onward. Teneral: Spring. Young adults mostly inactive over summer. An autumn-winter breeder. Egg stage: 9 days. Larval development:

82.2 days (autumn and winter). Pupal stage: 11.8 days. Adult lifespan: one year. Predacious. Food: Small arthropods, e.g., insects. Predators: Rats. Occasionally infested with mites.

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

Collecting techniques. Examining burrows at the base of *Muehlenbeckia* plants, pitfall trapping; sifting leaf litter; turning logs, fallen branches, and stones; pan trapping (yellow pan traps).

References. Larochelle and Larivière 2001: 131, 135–136 (as “*Anchomenus*” *punctulatus*, *Ctenognathus montivagus*, *C. neozelandicus*, *C. novaezelandiae*, *C. perrugithorax*, *C. politulus*, *C. suborbithorax*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus punctulatus*; list); Philip and Burgess, 2008a: 35–39 (life history, rearing), 2008b: 41–46 (behavior, ecology), Larochelle and Larivière 2016: 37 (as *Ctenognathus montivagus*, *C. neozelandicus*, *C. novaezelandiae*, *C. perrugithorax*, *C. politulus*, *Ctenognathus punctulatus*, *C. suborbithorax*; list).

Remarks. The holotype of *Anchomenus Novae-Zelandiae* could not be located in MNHN where Fairmaire’s specimens can usually be found. However, there is no ambiguity regarding the identity of this taxon; the original description can only apply to the species as currently understood. In addition to diagnostic characters of the male genitalia, *Ctenognathus novaezelandiae* has the following distinguishing features: tempora not inflated; pronotum not sinuate posteriorly, sides moderately rounded, posterolateral angles obtusely rounded, base truncate, posterior bead present, complete; elytral apices obtuse. This species occurs in coastal dunes and forests on the North Island (ND to TK–HB). The holotypes of *Anchomenus punctulatus* Broun and *Anchomenus montivagus* Broun could not be located in BMNH where Broun’s specimens can usually be found. However, there is no ambiguity regarding the identity of these taxa; their original descriptions can only apply to *Ctenognathus novaezelandiae* as currently understood. Chaudoir described *Colpodes neozelandicus* from three specimens, one of which (a male) could be seen (MNHN) and is here designated as lectotype in order to preserve stability of nomenclature in the future. Examination of this specimen revealed it to be conspecific with *C. novaezelandiae*. Finally, examination of Broun’s types of *Anchomenus politulus*, *A. suborbithorax* and *A. perrugithorax* also revealed them to be conspecific with *Ctenognathus novaezelandiae*.

Ctenognathus elevatus (White, 1846), reinstated

Fig. 56, 99, 131

Anchomenus elevatus White, 1846: 3. Holotype: male (BMNH) labeled “Type H.T. (circular red-bordered label; typed) / New Zealand (hand-written) / *Anchomenus elevatus* Zool. Erebus & Terror (hand-written) / *Anchomenus elevatus*. White (hand-written).” Erroneously synonymized with *Anchomenus novaezelandiae* Fairmaire, 1843 by Sharp (1884: 297). **Reinstated as full species**

Ctenognathus actochares Broun, 1894: 307. Holotype: male (BMNH) labeled “Type (circular red-bordered label; typed) / 2660 (hand-written) / [WN] Wellington (hand-written) / New Zealand. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / *Ctenognathus actochares* (hand-written).” **New synonym**

Ctenognathus (*Anchomenus*) *actochares*: Walker 1904: 76.

Ctenognathus actochares: Hudson 1923: 356.

Description. Body length 12.0–13.2 mm. Head, pronotum, elytra, and abdomen black; antennae, palpi, and legs rufopiceous. Microsculpture very transverse (with microlines) on head and pronotum, isodiametric on elytra. Iridescence present on head and pronotum. Very shiny on head and pronotum, moderately shiny on elytra. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, slightly emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora moderately inflated (about two-thirds as long as eyes). Neck constriction shallow dorsolaterally. Mentum: medial tooth entire, rounded apically; two setae. Submentum with four setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, obsoletely punctate across base, obsoletely wrinkled on disc and across base, wide, moderately cordate, widest before middle; apex strongly emarginate; anterolateral angles well developed, broadly rounded; anterior bead complete; sides strongly rounded, moderately sinuate posteriorly; lateral beads complete; lateral depressions wide, slightly widened near posterolateral angles; a single setiferous puncture on each side (anteriorly); posterolateral angles rectangular or

slightly acute (projected laterally); laterobasal foveae moderately deep and wide, prolonged forward; posterior bead absent; base convex. **Legs.** Moderately long. Metafemora with three posteroventral setae. Meso- and metatarsomeres 1–4 poorly developed, not carinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed and asymmetrical apically. Metatarsomeres 5 setose ventrally (with long setae). **Elytra.** Slightly convex, not sloping down toward apex, oblong, widest about middle. Shoulders slightly rounded. Sides moderately rounded. Scutellar setiferous pore invisible. Scutellar striole short, impunctate. Striae deep, impunctate. Intervals moderately convex; interval 3 with a single very deep, large (foveate) subapical setiferous puncture. Umbilicate series with 19–20 setiferous punctures. Subapical sinuations moderately strong. Apices rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with nine or ten long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 99): strongly arcuate; base strongly convex and biconcave dorsally, with basal lobe narrow; middle strongly convex dorsally, strongly concave ventrally, with dorsal membranous area moderately wide and moderately long; apex strongly convex dorsally, slightly concave ventrally, with extreme tip narrow and very long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 95 specimens (AMNZ, BMNH, CMNH, JNNZ, MONZ, NZAC).

Geographic distribution (Fig. 131). North Island: WN.

Ecology. Coastal lowland. Epigeal, fossorial. Sand dunes and adjacent scrublands or pine forests. Mostly open ground; dry soil. Nocturnal; hides during the day in burrows at the base of plants (*Muehlenbeckia*), or under stones and logs. Gregarious.

Biology. Seasonality: Throughout the year. Teneral: October–November. Predacious (based on mouthpart morphology). Predators: Spiders. Occasionally infested with mites and fungi (Laboulbeniales).

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

Collecting techniques. Examining burrows at the base of *Muehlenbeckia* plants; turning stones and logs.

References. Larochelle and Larivière 2001: 133, 135 (as junior synonym of *Ctenognathus novaezealandiae*, as *C. actochares*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 111 (as *C. actochares*; list); 2016: 36 (as *C. actochares*; list).

Remarks. *Anchomenus elevatus* was erroneously synonymized with *Ctenognathus novaezealandiae* by Sharp (1884). However, the holotype was seen and there is no ambiguity regarding the identity of this taxon which is here resurrected from synonymy. In addition to diagnostic characters of the male genitalia, *C. elevatus* has the following distinguishing features: tempora moderately inflated (about two-thirds as long as eyes); pronotum moderately sinuate posteriorly, sides strongly rounded, posterolateral angles slightly acute, base convex, posterior bead absent; elytral apices rounded. The two species are allopatric: *C. elevatus* is restricted to southern areas of the North Island (WN), while *C. novaezealandiae* occurs in more northern areas of the North Island (ND to TK–HB). Examination of the type of *Ctenognathus actochares* Broun, revealed it to be conspecific with *Ctenognathus elevatus*. *Anchomenus elevatus* Bates, 1874 is a *nomen nudum* (Larochelle and Larivière 2001: 135, 178).

***Ctenognathus garnerae* Larochelle and Larivière, new species**

Fig. 57, 100, 132

Ctenognathus garnerae Larochelle and Larivière, new species. Holotype: male (NZAC) labeled “[NEW ZEALAND TH] Three Kings Is Great I. Nov. 70 NZ. Ent. Div. Exp. (typed) / Castaway Camp (typed) / G. Kuschel (typed) / ex. crevices in coastal cliffs. (hand-written) / HOLOTYPE [male symbol] *Ctenognathus garnerae* Larochelle & Larivière, 2021 (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 11.4–12.8 mm. Head, pronotum, and elytra black; abdomen rufopiceous; antennal segments 1–4 rufopiceous, 5–11 reddish; palpi reddish; femora and tibiae rufopiceous; tarsi reddish. Microsculpture very transverse (with microlines) on head and pronotum, isodiametric on elytra. Iridescence present on pronotum. Very shiny on head and pronotum, moderately shiny on elytra. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles very long, slightly curved anteriorly. Labrum strongly

transverse, moderately emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth entire, rounded apically; two setae. Submentum with four setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled on disc and across apex, wide, moderately cordate, widest before middle; apex strongly emarginate; anterolateral angles well developed, broadly rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, moderately sinuate posteriorly; lateral beads incomplete, obsolete anteriorly; lateral depressions narrow, slightly widened from apex to base; a single setiferous puncture on each side (anteriorly); posterolateral angles obtuse; laterobasal foveae moderately deep and wide, prolonged forward; posterior bead obsolete; base emarginate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 poorly developed, not carinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed and asymmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Slightly convex, not sloping down toward apex, oblong, widest about middle. Shoulders slightly rounded. Sides moderately rounded. Scutellar setiferous pore invisible. Scutellar striole short, impunctate. Striae deep, impunctate. Intervals moderately convex; interval 3 with a single very deep, large (foveate) subapical setiferous puncture. Umbilicate series with 21 setiferous punctures. Subapical sinuations moderately strong. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with ten long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 100): strongly arcuate, moderately wide; base strongly convex dorsally, with basal lobe moderately wide; middle moderately convex, slightly concave in apical half dorsally, strongly concave ventrally, with dorsal membranous area moderately wide and moderately long; apex strongly convex dorsally, slightly concave ventrally, with extreme tip moderately wide and long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 19 specimens (MONZ, NZAC).

Geographic distribution (Fig. 132). Offshore Islands: TH–Great Island, Castaway Camp.

Ecology. Coastal lowland. Epigeal, fossorial. Sea cliffs and adjacent forests. Open or shaded ground; dry soil. Nocturnal; hides during the day in rock crevices. Gregarious.

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

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

Collecting techniques. Examining rock crevices; pan trapping (yellow pan traps).

Remarks. This species is named after our friend and colleague Beulah Garner (The Natural History Museum, London (BMNH)) for facilitating our study of the type material of Carabidae, especially the Broun Collection. *Ctenognathus garnerae* is morphologically close to *C. tepaki*. In addition to diagnostic characters of the male genitalia, *C. garnerae* has the following distinguishing features: antennal segments 1–4 rufopiceous, 5–11 reddish; mandibles very long, slightly curved anteriorly; pronotum with lateral depressions narrow and slightly widened from apex to base, posterolateral angles obtuse; metatarsomeres 5 glabrous ventrally. The two species are allopatric: *C. garnerae* is restricted to the Three Kings Islands (TH), while *C. tepaki* occurs in northernmost areas of the North Island (ND, top of Aupouri Peninsula).

Ctenognathus tepaki Laroche and Larivière, new species

Fig. 58, 101, 146

Ctenognathus tepaki Laroche and Larivière, new species. Holotype: male (NZAC) labeled “[NEW ZEALAND ND] Spirits Bay, N.Z. (typed) under stone. (hand-written) 20–28:VIII:1957 J.C. Watt. (typed) / J.C. Watt Collection Ent. Div. DSIR, 1966. (typed) / HOLOTYPE [male symbol] *Ctenognathus tepaki* Laroche & Larivière, 2021 (red label; typed)” Paratypes: one female (NZAC) from the same locality as the holotype and one male (AMNZ) from Cape Maria van Diemen, Motuopao Island (ND), bearing blue paratype labels.

Description. Body length 11.6–13.2 mm. Head, pronotum, and elytra black; abdomen rufopiceous; antennae reddish (scape rufopiceous); palpi reddish; femora and tibiae rufopiceous; tarsi reddish. Microsculpture very transverse (with microlines) on head and pronotum, isodiametric on elytra. Iridescence present on head and

pronotum. Very shiny on head and pronotum, moderately shiny on elytra. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, moderately emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth entire, rounded apically; two setae. Submentum with four setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, obsolete wrinkled on disc and across base, wide, moderately cordate, widest before middle; apex strongly emarginate; anterolateral angles well developed, broadly rounded; anterior bead incomplete, obsolete medially; sides strongly rounded, moderately sinuate posteriorly; lateral beads incomplete, obsolete anteriorly; lateral depressions wide; a single setiferous puncture on each side (anteriorly); posterolateral angles rectangular; laterobasal foveae moderately deep and wide, prolonged forward; posterior bead incomplete, obsolete medially and near posterolateral angles; base emarginate. **Legs.** Moderately long. Metafemora with three posteroventral setae. Meso- and metatarsomeres 1–4 poorly developed, not carinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed and asymmetrical apically. Metatarsomeres 5 setose ventrally (with long setae). **Elytra.** Slightly convex, not sloping down toward apex, oblong, widest about middle. Shoulders slightly rounded. Sides moderately rounded. Scutellar setiferous pore invisible. Scutellar striole short, impunctate. Striae deep, impunctate. Intervals moderately convex; interval 3 with a single very deep, large (foveate) subapical setiferous puncture. Umbilicate series with 21–24 setiferous punctures. Subapical sinuations moderately strong. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with eight to ten long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 101): strongly arcuate, slender; base slightly convex, with basal lobe very wide; middle strongly biconvex dorsally, strongly concave ventrally, with dorsal membranous area moderately wide in apical half and moderately long; apex slender, moderately convex dorsally, slightly concave ventrally, with extreme tip narrow and very long. Dorsal view: narrow, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 74 specimens (AMNZ, CMNZ, MONZ, NZAC).

Geographic distribution (Fig. 146). North Island: ND (Te Paki area)– Huka Creek [=Stream]. Matapia Island. Maungapiko [Hill]. Motuopao Island. Murimotu Island. Ngaroku Stream. Spirits Bay. Unuwahao.

Ecology. Coastland lowland. Epigeal, fossorial. Sand dunes and adjacent forests. Shaded ground; dry soil. Nocturnal; hides during the day in burrows at the base of plants (*Muehlenbeckia*) or under stones.

Biology. Seasonality: October–January, August. Teneral: November. Predacious (based on mouthpart morphology). Occasionally infested with mites and fungi (Laboulbeniales).

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

Collecting techniques. Examining burrows at the base of *Muehlenbeckia* plants; turning stones.

Remarks. The species is named after the Te Paki area (ND, Aupouri Peninsula) which includes the type locality Spirits Bay, and is applied as a noun in apposition. *Ctenognathus tepaki* is morphologically close to *C. garnerae*. In addition to diagnostic characters of the male genitalia, *C. tepaki* has the following distinguishing features: antennal segments 1 rufopiceous, 2–11 reddish; mandibles moderately long and curved anteriorly; pronotum with lateral depressions wide, posterolateral angles rectangular; metatarsomeres 5 setose ventrally (with long setae). The two species are allopatric: *C. tepaki* is found in northern North Island (ND, top of Aupouri Peninsula), while *C. garnerae* is restricted to the Three Kings Islands (TH).

***Ctenognathus urewera* Larochelle and Larivière, new species**

Fig. 59, 102, 147

Ctenognathus urewera Larochelle and Larivière, new species. Holotype: male (NZAC) labeled “NEW ZEALAND GB Urewera NP, Huiarau Summit 923m 14–18.II.1994 Larivière, Larochelle (typed) / Nothofagus + Horopito + tree fern for. [= forest], wet slopes. Pittraps. (typed) / HOLOTYPE [male symbol] *Ctenognathus urewera* Larochelle & Larivière, 2021 (red label; typed).” Paratypes: two females (MONZ, NZAC) from the same locality as the holotype, bearing blue paratype labels.

Description. Body length 12.7–13.8 mm. Head, pronotum, and elytra coal black; abdomen blackish; antennae, palpi, and femora rufopiceous; tibiae and tarsi reddish. Microsculpture very transverse (with microlines) on head, pronotum, and elytra. Iridescence present on head and pronotum. Very shiny. Forebody narrow in comparison to elytra. **Head.** Narrow. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, moderately emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth truncate apically; two setae. Submentum with four setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, obsolete punctate across apex and base, slightly wrinkled on disc, narrow, strongly cordate, widest before middle; apex strongly emarginate; anterolateral angles well developed, angulate; anterior bead complete, less impressed medially; sides strongly rounded and sinuate posteriorly; lateral beads complete; lateral depressions narrow; a single setiferous puncture on each side (anteriorly); posterolateral angles rectangular; laterobasal foveae moderately deep, rather narrow, prolonged forward; posterior bead complete, less impressed medially; base emarginate. **Legs.** Very long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed and asymmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Slightly convex, not sloping down toward apex, subovate, widest about middle. Shoulders moderately rounded. Sides strongly rounded. Scutellar setiferous pore invisible. Scutellar striole short or moderately long, impunctate. Striae obsolete, impunctate. Intervals slightly convex; interval 3 with a single shallow, minute subapical setiferous puncture. Umbilicate series with 17–18 setiferous punctures. Subapical sinuations feeble. Apices rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with ten long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 102): strongly arcuate; base strongly convex dorsally, with basal lobe very wide; middle moderately convex in basal half and straight in apical half dorsally, slightly concave ventrally, with dorsal membranous area very wide and very long; apex subtriangular, straight dorsally and ventrally, with extreme tip narrow and short. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 811 specimens (JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 147). North Island: BP, GB, HB.

Ecology. Lowland, montane. Epigeal, fossorial, arboreal. Wet forests (beech, broadleaf) and tree plantations (pine). Associated with stream, seepages, and mud flats. Shaded ground; wet, soaked soil. Nocturnal; hides during the day under logs, fallen branches, and stones. Gregarious.

Biology. Seasonality: September–January, March–April. Teneral: December–February. Predacious (based on mouthpart morphology). Occasionally infested with mites and fungi (Laboulbeniales).

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

Collecting techniques. Pitfall trapping; turning logs, fallen branches, and stones.

Remarks. The species is named after the Urewera National Park (GB) which includes the type locality Huiarau Summit, and is applied as a noun in apposition. *Ctenognathus urewera* is morphologically close to *C. cardiophorus*. In addition to diagnostic characters of the male genitalia, *C. urewera* has the following distinguishing features: pronotum widest before middle, slightly wrinkled on disc, sides strongly sinuate posteriorly, posterolateral angles rectangular; interval 3 of elytra with a minute subapical setiferous puncture. The two species are allopatric: *C. urewera* occurs in eastern central areas of the North Island (BP, GB, HB), while *C. cardiophorus* is found in more northern areas (ND–WO).

Ctenognathus cardiophorus (Chaudoir, 1878)

Fig. 60, 103, 126

Colpodes cardiophorus Chaudoir, 1878: 305. Holotype: female (MNHN) labeled “ExMusaeo Chaudoir (typed) / *cardiophorus* Chaud. Nouv. Zélande C. Laferté (hand-written)”

Anchomenus parabilis Broun, 1880: 20. Holotype: “Whangarei Heads” [ND] (BMNH could not be located). **New synonym**

Ctenognathus parabilis: Broun 1893: 986.

Ctenognathus cardiophorus: Hutton 1904: 144.

Colpodes cardiophorus: Csiki 1931: 749.

Ctenognathus cardiophorus: Hudson 1934: 174.

Description. Body length 11.3–13.8 mm. Head, pronotum, and elytra coal black; abdomen blackish; antennae and palpi reddish; femora rufopiceous; tibiae and tarsi reddish. Microsculpture very transverse (with micro-lines) on head, pronotum, and elytra. Iridescence absent. Moderately shiny. Forebody narrow in comparison to elytra. **Head.** Narrow. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, slightly emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth truncate apically; two setae. Submentum with four setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, deeply wrinkled on disc, narrow, strongly cordate, widest about middle; apex slightly emarginate; anterolateral angles well developed, angulate; anterior bead complete; sides strongly rounded, not sinuate posteriorly; lateral beads complete; lateral depressions wide, more so posteriorly; a single setiferous puncture on each side (anteriorly); posterolateral angles acute, projected laterally; laterobasal foveae unusually depressed, shallow, moderately wide, prolonged forward; posterior bead complete, less impressed near posterolateral angles; base emarginate. **Legs.** Very long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed and asymmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Moderately convex, not sloping down toward apex, subovate, widest about middle. Shoulders moderately rounded. Sides strongly rounded. Scutellar setiferous pore invisible. Scutellar striole short, impunctate. Striae obsolete, impunctate. Intervals moderately convex; interval 3 without setiferous punctures. Umbilicate series with 18–21 setiferous punctures. Subapical sinuations moderately strong. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 103): strongly arcuate; base strongly convex, with basal lobe very wide; middle strongly convex dorsally, moderately concave ventrally, with dorsal membranous area biconvex, strongly widened in apical half and very long; apex moderately convex dorsally, rather straight ventrally, with extreme tip moderately wide and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 519 specimens (AMNZ, BMNH, CMNH, LUNZ, MNHN, MONZ, NZAC).

Geographic distribution (Fig. 126). North Island: AK, CL, ND, WO.

Ecology. Lowland. Epigeal, fossorial. Wet forests (broadleaf, podocarp) and tree plantations (pine). Associated with streams and slopes. Shaded ground; wet, soaked soil. Nocturnal; hides during the day under logs, fallen branches, and stones. Gregarious.

Biology. Seasonality: Throughout the year. Teneral: November–January. Predacious (based on mouthpart morphology). Predators: Spiders. Occasionally infested with mites.

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

Collecting techniques. Pitfall trapping; turning logs, fallen branches, and stones.

References. Laroche and Larivière 2001: 134, 136 (as *Ctenognathus cardiophorus*, *C. parabilis*, catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 111 (as *C. cardiophorus*, *C. parabilis*; list), 2016: 36–37 (as *C. cardiophorus*, *C. parabilis*; list).

Remarks. The holotype of *Anchomenus parabilis* could not be located in BMNH where Broun's specimens can usually be found. However, there is no ambiguity regarding the identity of this taxon. Furthermore, a non-type male specimen from the Broun Collection (BMNH) was examined. This specimen is from Hunua-Wairoa [= Wairoa, Hunua Ranges] (AK) and its morphology corresponds to Broun's original description of *Ctenognathus cardiophorus*.

***Ctenognathus adamsi* (Broun, 1886)**

Fig. 61, 104, 124

Anchomenus adamsi Broun, 1886: 937. Lectotype (here designated): male (BMNH) labeled “Type (circular red-bordered label; typed) / 686. (hand-written) / *Ctenognathus adamsi*. (hand-written). / [TK] Stratford (typed) / New Zeal. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed). / LECTOTYPE [male symbol] *Anchomenus adamsi* Broun, 1886 designated by Laroche & Larivière, 2021 (red label; typed).”

Ctenognathus adamsi: Broun 1893: 986.

Ctenognathus littorellus Broun, 1908: 349. Lectotype (here designated): male (BMNH) labeled “Type (circular red-bordered label; typed) / 2670. (hand-written) / New Zealand. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [SL] Invercargill. Sea beach. (hand-written) / *Ctenognathus littorellus*. [male symbol] (hand-written) / LECTOTYPE [male symbol] *Ctenognathus littorellus* Broun, 1908 designated by Laroche & Larivière, 2021 (red label; typed).” **New synonym**

Description. Body length 12.7–12.9 mm. Head and pronotum black; elytra and abdomen piceous black; antennae, palpi, and legs reddish. Microsculpture isodiametric on head, very transverse (with microlines) on pronotum, and isodiametric on elytra. Iridescence present on pronotum. Very shiny. Forebody narrow in comparison to elytra. **Head.** Narrow. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, moderately emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth moderately emarginate apically; two setae. Submentum with four setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum moderately convex, impunctate, obsoletely wrinkled subapically and across base, narrow, subquadrate, strongly cordate, widest before middle; apex moderately emarginate; anterolateral angles well developed, angulate; anterior bead complete; sides strongly rounded, moderately sinuate posteriorly; lateral beads complete; lateral depressions narrow, slightly widened from apex to base; a single setiferous puncture on each side (anteriorly); posterolateral angles rectangular, moderately long, obtuse at apex; laterobasal foveae moderately deep, rather narrow, prolonged forward; posterior bead complete; base subtruncate. **Legs.** Very long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed and asymmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Slightly convex, not sloping down toward apex, subovate, widest about middle. Shoulders moderately rounded. Sides strongly rounded. Scutellar setiferous pore visible. Scutellar striole short, impunctate. Striae deep, impunctate. Intervals moderately convex; interval 3 without setiferous punctures. Umbilicate series with 18–19 setiferous punctures. Subapical sinuations feeble. Apex obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 104): moderately arcuate, wider medially; base moderately convex dorsally, with basal lobe narrow; middle strongly convex dorsally, moderately concave ventrally, with dorsal membranous area moderately wide and moderately long; apex moderately convex dorsally, straight ventrally, with extreme tip narrow and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 1309 specimens (AMNZ, BMNH, CMNZ, JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 124). North Island: AK, BP, CL, HB, RI, TK, TO, WI, WN, WO.

Ecology. Lowland, montane, subalpine. Epigean, arboreal. Wet forests (broadleaf, podocarp, beech), tree plantations (pine), and shrublands. Associated with streams and mud flats. Shaded; wet soil. Nocturnal; hides during the day under logs, fallen branches and trees, or under stones. Gregarious.

Biology. Seasonality: September–June. Teneral: December. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous (incapable of flight). Swift runner. Regular climber (on trees).

Collecting techniques. Pitfall trapping; turning logs, fallen branches and trees, as well as stones.

References. Laroche and Larivière 2001: 133–134 (as *Ctenognathus adamsi*, *C. littorellus*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 111 (as *C. adamsi*, *C. littorellus*; list), 2016: 36–37 (as *C. adamsi*, *C. littorellus*; list).

Remarks. Broun described *Anchomenus adamsi* from two specimens, one of which (a male) could be located (BMNH) and is here designated as lectotype. Broun also described *Ctenognathus littorellus* from two specimens, one of which (a male) could be located (BMNH) and is here designated as lectotype. These two type designations are made to preserve stability of nomenclature in the future. Examination of the type of *Ctenognathus littorellus* revealed it to be conspecific with *Ctenognathus adamsi* which has a North Island distribution. Consequently, the South Island type locality of *Ctenognathus littorellus*, Invercargill (SL) appears to be a case of mislabeling.

Ctenognathus pictonensis Sharp, 1886

Fig. 62, 105, 142

Ctenognathus pictonensis Sharp, 1886: 364. Lectotype (here designated): male (BMNH) labeled “*Anchomenus pictonensis* type D.S. Picton, N.Z. Helms (hand-written) / Type H.T. (circular red-bordered label; typed) / Sharp Coll. 1905-313. / Picton New Zealand. Helms. (typed). / LECTOTYPE [male symbol] *Ctenognathus pictonensis* Sharp, 1886 designated by Larochelle & Larivière, 2021 (red label; typed).”

Anchomenus pictonensis: Sharp 1886: 454, Plate XII, Figure 5 (error for *Ctenognathus pictonensis*)

Ctenognathus simmondsi Broun, 1912: 386. Holotype: male (BMNH) labeled “Type (circular red-bordered label; typed) / 3169. (hand-written) / [WN] Mt. Quoin 1000 feet. / *Ctenognathus simmondsi* (hand-written) / New Zeal. Broun. Coll. Brit. Mus. 1922-482 (white label with red horizontal line; typed).” **New synonym**

Description. Body length 11.0–13.6 mm. Head and pronotum black; elytra and abdomen piceous black; antennae, palpi, and legs reddish. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra. Iridescence absent. Very shiny. Forebody narrow in comparison to elytra. **Head.** Narrow. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, moderately emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth moderately emarginate apically; two setae. Submentum with four setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled across base, narrow, elongate, strongly cordate, widest before middle; apex strongly emarginate; anterolateral angles well developed, angulate; anterior bead complete; sides strongly rounded (with a slight angulation) and sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, wide posteriorly; a single setiferous puncture on each side (anteriorly); posterolateral angles very long, acute, projected laterally, obtuse at apex; laterobasal foveae moderately deep, rather narrow, prolonged forward; posterior bead complete; base subtruncate. **Legs.** Very long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed and asymmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Slightly convex, not sloping down toward apex, subovate, widest about middle. Shoulders moderately rounded. Sides strongly rounded. Scutellar setiferous pore visible. Scutellar striole short, impunctate. Striae deep, impunctate. Intervals slightly convex; interval 3 with a single very deep, large (foveate) subapical setiferous puncture. Umbilicate series with 18–20 setiferous punctures. Subapical sinuations feeble. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with eight or nine long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 105): strongly arcuate; base moderately convex dorsally, with basal lobe very wide; middle subparallel, moderately convex dorsally, strongly concave ventrally, with dorsal membranous area very wide and moderately long; apex strongly convex dorsally, slightly concave ventrally, with extreme tip narrow and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 989 specimens (AMNZ, BMNH, CMNH, JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 142). North Island: WA, WI, WN. South Island: MB, NN, SD.

Ecology. Lowland. Epigeal. Wet forests (broadleaf, podocarp, beech) and tree plantations (pine). Associated with streams, rills, and seepages. Shaded ground; wet soil. Nocturnal; hides during the day under logs, fallen branches, or under stones. Gregarious.

Biology. Seasonality: September–March. Teneral: February–April. Predacious (based on mouthpart morphology). Regularly infested with fungi (Laboulbeniales).

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

Collecting techniques. Pitfall trapping; turning logs, fallen branches, and stones.

References. Larochelle and Larivière 2001: 136 (as *Ctenognathus pictonensis*, *C. simmondsi*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 111 (as *C. pictonensis*, *C. simmondsi*; list), 2016: 37 (as *C. pictonensis*, *C. simmondsi*; list).

Remarks. Sharp described *Ctenognathus pictonensis* from several specimens, one of which (a male; BMNH) is here designated as lectotype in order to preserve stability of nomenclature in the future. Examination of the type of *Ctenognathus simmondsi* revealed it to be conspecific with *C. pictonensis*.

***Ctenognathus tawanui* Larochelle and Larivière, new species**

Fig. 63, 106, 145

Ctenognathus tawanui Larochelle and Larivière, new species. Holotype: male (NZAC) labeled “NEW ZEALAND SL Catlins SFP, Catlins Riv Walk (Frank Stm-Tawanui Cpgd) 100m 12.I.1999 Larivière, Larochelle[,] Paquin, Dupérré (typed) / Wet beech forest along stream banks - under logs. (typed) / HOLOTYPE [male symbol] *Ctenognathus tawanui* Larochelle & Larivière, 2021 (red label; typed).” Paratypes: one male (LUNZ) from the same locality as the holotype and one female (NZAC) from Catlins State Forest Park, Catlins River Walk, Wallis Stream-Frank Stream (SL), bearing blue paratype labels.

Description. Body length 7.0–9.8 mm. Head, pronotum, and elytra black; abdomen piceous black; antennal segments 1–3 dark rufous, 4–11 rufotestaceous; palpi reddish; legs black. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra. Iridescence absent. Head and pronotum very shiny, elytra dull. Forebody narrow in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum moderately transverse, subtruncate anteriorly. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth moderately emarginate apically; two setae. Submentum with four setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum slightly convex, impunctate, obsolete wrinkled on disc, narrow, moderately cordate, widest before middle; apex strongly emarginate; anterolateral angles poorly developed, broadly rounded; anterior bead complete; sides strongly rounded, moderately sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, widened posteriorly; two setiferous punctures (anterior and posterior) on each side; posterolateral angles rectangular; laterobasal foveae very deep, moderately wide, prolonged forward; posterior bead incomplete, obsolete medially; base subtruncate. **Legs.** Short. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Moderately convex, sloping down toward apex, oblong, widest behind middle. Shoulders moderately rounded. Sides strongly rounded. Scutellar setiferous pore invisible. Scutellar striole moderately long, impunctate. Striae shallow, finely punctate. Intervals subdepressed; interval 3 with three very deep, large (foveate) setiferous punctures. Umbilicate series with 13–15 setiferous punctures. Subapical sinuations strong. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 106): moderately arcuate; base moderately convex dorsally, with basal lobe moderately wide; middle moderately biconvex dorsally, moderately concave ventrally, with dorsal membranous area moderately wide and long; apex strongly convex dorsally, straight ventrally, with extreme tip moderately wide and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 12 specimens (JNNZ, LUNZ, NZAC).

Geographic distribution (Fig. 145). South Island: SL–Catlins State Forest Park (Catlins River Track (Frank Stream to Tawanui Campground; Wallis Stream to Frank Stream); Lake Wilkie; Slopedown Range, North of Slopedown Hill).

Ecology. Lowland. Epigeal. Wet forests (podocarp, broadleaf, beech), swamp forests, and tree plantations (pine). Associated with streams and mud flats. Shaded ground; wet soil. Nocturnal; hides during the day under logs, fallen branches, and stones.

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

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

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

Remarks. The species is named after Tawanui (SL), the place in the Catlins closest to the type locality, and is applied as a noun in apposition. In addition to diagnostic characters of the male genitalia, *Ctenognathus tawanui* has the following distinguishing features: elytra without visible scutellar setiferous pore; head, pronotum, elytra, and abdomen black; antennal segments 1–3 dark rufous, 4–11 rufotestaceous; legs short, black; rather small in size, body length 7.0–9.8 mm. *Ctenognathus tawanui* is restricted to the southern South Island (SL).

Ctenognathus perumalae Laroche and Larivière, new species

Fig. 64, 107, 141

Ctenognathus perumalae Laroche and Larivière, new species. Holotype: male (NZAC) labeled “[NEW ZEALAND WD] Okarito 17.11.56 B.B. Given (hand-written) / HOLOTYPE [male symbol] *Ctenognathus perumalae* Laroche & Larivière, 2021 (red label; typed).” Paratypes: two females (AMNZ, NZAC) from the same locality as the holotype, bearing blue paratype labels.

Description. Body length 11.9–12.4 mm. Head, pronotum, elytra, and abdomen piceous black; antennae and palpi dark rufous; legs black. Microsculpture isodiametric on head, very transverse (with microlines) on pronotum, and isodiametric (almost granulate) on elytra. Iridescence absent. Head, pronotum, and elytra very shiny. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, moderately emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction absent dorsolaterally. Mentum: medial tooth subtruncate apically; two setae. Submentum with six setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum strongly convex, impunctate, unwrinkled, wide, strongly cordate, widest before middle; apex moderately emarginate; anterolateral angles moderately developed, obtuse; anterior bead complete; sides strongly rounded and sinuate posteriorly; lateral beads complete; lateral depressions wide; two setiferous punctures (anterior and posterior) on each side; posterolateral angles rectangular; laterobasal foveae very deep and wide, prolonged forward; posterior bead incomplete, obsolete medially; base emarginate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Strongly convex, sloping toward apex, subovate, widest about middle. Shoulders obtuse. Sides moderately rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae deep, impunctate. Intervals strongly convex; interval 3 with three or four moderately deep, small setiferous punctures. Umbilicate series with 17–18 setiferous punctures. Subapical sinuations strong. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 107): moderately arcuate, slender; base moderately convex dorsally, with basal lobe moderately wide; middle subparallel dorsally, moderately concave ventrally, with dorsal membranous area moderately widened in apical half and moderately long; apex slightly convex dorsally, slightly concave ventrally, with extreme tip wide, subtriangular, short. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 26 specimens (AMNZ, JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 141). South Island: WD–Fox Glacier. Franz Josef (Alex Knob; Callary Gorge; Lake Wombat track). Karangarua River. Macdonalds Creek (north of Franz Josef). Okarito. Taumaka Island (Taumaka Forest).

Ecology. Lowland, montane. Epigeal. Wet forests (broadleaf). Shaded ground; wet soil. Nocturnal; found during the day under a stone and in a fallen tree.

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

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

Collecting techniques. Turning stones and fallen trees.

Remarks. The species is named after Dr. Divya Perumal (Eye Institute, Auckland), a special acquaintance and a highly skilled health specialist, someone who handles challenges with grace. In addition to diagnostic characters of the male genitalia, *Ctenognathus perumalae* has the following distinguishing features: pronotum strongly cordate; elytra subovate, strongly convex, widest about middle. *Ctenognathus perumalae* is restricted to the southwestern South Island (southern WD).

Ctenognathus takahe Laroche and Larivière, new species

Fig. 65, 108, 144

Ctenognathus takahe Laroche and Larivière, new species. Holotype: male (NZAC) labeled “[NEW ZEALAND FD] Takahe Val. Hd. Basin. FD. Nat. Park 11 Dec 72. A.C. Eyles. (hand-written) / under stone on scree. (hand-written) / HOLOTYPE [male symbol] *Ctenognathus takahe* Laroche & Larivière, 2021 (red label; typed).” Paratypes: one female (NZAC) from the same locality as the holotype and one female (LUNZ) from Mount Grey [= Mount Gray], Turret Range (FD) (typed), bearing blue paratype labels.

Description. Body length 8.5–11.4 mm. Head, pronotum, elytra, and abdomen black; antennal segments 1–4 black, 5–11 dark rufous; palpi, femora, and tibiae black; tarsi rufotestaceous. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric (almost granulate) on elytra. Iridescence absent. Very shiny. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, deeply emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction absent dorsolaterally. Mentum: medial tooth subtruncate apically; two setae. Submentum with four setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, obsolete wrinkled on disc and across base, narrow, moderately cordate, widest before middle; apex slightly emarginate; anterolateral angles poorly developed, broadly rounded; anterior bead complete; sides strongly rounded, moderately sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, widened posteriorly; two setiferous punctures (anterior and posterior) on each side; posterolateral angles rectangular; laterobasal foveae very deep, moderately wide, prolonged forward; posterior bead obsolete; base emarginate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Subdepressed, sloping down toward apex, oblong, widest behind middle. Shoulders moderately rounded. Sides moderately rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae shallow, finely punctate. Intervals subdepressed; interval 3 with three very deep, large (foveate) setiferous punctures. Umbilicate series with 16–18 setiferous punctures. Subapical sinuations strong. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with six long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 108): moderately arcuate, stout; base slightly convex dorsally, with basal lobe moderately wide; middle angular basally, slightly convex dorsally, strongly concave ventrally, with dorsal membranous area strongly widened in apical half and moderately long; apex subtriangular, slightly convex dorsally, slightly concave ventrally, with extreme tip narrow and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 29 specimens (AMNZ, JNNZ, LUNZ, NZAC).

Geographic distribution (Fig. 144). South Island: FD.

Ecology. Lowland, montane. Epigeal. Wet forests (beech). Shaded ground; wet soil. Nocturnal; hides during the day under stones; active at night on *Sphagnum* moss.

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

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

Collecting techniques. Pitfall trapping; turning stones; examining *Sphagnum* moss at night.

Remarks. The species is named after the type locality Takahe Valley (FD), and is applied as a noun in apposition. *Ctenognathus takahe* is morphologically close to *C. arnaudensis*. In addition to diagnostic characters of the male genitalia, *C. takahe* has the following distinguishing features: femora and tibiae black; pronotum moderately cordate, base emarginate; elytra subdepressed, microsculpture isodiametric, striae finely punctate. Both species are allopatric: *C. takahe* is restricted to southern FD (southwestern South Island), while *C. arnaudensis* occurs in northern areas of the South Island (BR, NN, MB, KA).

Ctenognathus arnaudensis (Broun, 1921)

Fig. 66, 109, 125

Anchomenus arnaudensis Broun, 1921: 598. Holotype: “[male symbol] [BR] Mt St Arnaud, Nelson” (BMNH, could not be located).

Agonum (*Anchomenus*) *arnaudense*: Csiki 1931: 865.

Anchomenus arnaudensis: Hudson 1934: 174.

Ctenognathus arnaudensis: Laroche and Larivière 2007: 81, 111.

Description. Body length 10.1–10.6 mm. Head, pronotum, elytra, and abdomen piceous black; antennal segments 1–3 reddish black, 4–11 dark rufous; palpi reddish; femora and tibiae dark rufous; tarsi rufotestaceous. Microsculpture isodiametric on head, moderately transverse on pronotum and elytra. Iridescence absent. Head and pronotum very shiny, elytra dull. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, moderately emarginate anteriorly. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth slightly emarginate apically; two setae. Submentum with six setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled across base, wide, subrectangular, widest before middle; apex slightly emarginate; anterolateral angles moderately developed, moderately rounded; anterior bead complete; sides moderately rounded, not sinuate posteriorly; lateral beads complete; lateral depressions wide, much more so posteriorly; two setiferous punctures (anterior and posterior) on each side; posterolateral angles obtusely rectangular; laterobasal foveae very deep and wide, prolonged forward; posterior bead incomplete, obsolete medially; base subtruncate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Slightly convex, sloping down toward apex, oblong, widest behind middle. Shoulders moderately rounded. Sides slightly rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae shallow, impunctate. Intervals subdepressed; interval 3 with three or four very deep, large (foveate) setiferous punctures. Umbilicate series with 16–17 setiferous punctures. Subapical sinuations feeble. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 109): strongly arcuate, very wide medially, stout; base strongly convex dorsally, with marginal blade instead of basal lobe; middle strongly convex dorsally, strongly concave ventrally, with dorsal membranous area very wide in apical half and very long; apex subtriangular, slightly convex dorsally, slightly concave ventrally, with extreme tip triangular and moderately long. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 15 specimens (BMNH, CMNZ, MONZ, NZAC).

Geographic distribution (Fig. 125). South Island: BR–Lake Rotoiti. Mount St Arnaud. KA–Williams Stream. MB–Judges Creek. Shroders Creek (Upper Wairau Valley). NN–Beebys Knob. Kaituna River (near Aorere). Nelson.

Ecology. Lowlands, montane. Epigeal. Dry forests (beech). Shaded ground; dry soil. Nocturnal; found under a log and a matagouri bush.

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

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

Collecting technique. Hand-collecting.

References. Larochelle and Larivière 2001: 130 (as “*Anchomenus*” *arnaudensis*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus arnaudensis*; list), 2016: 36 (list).

Remarks. The holotype of *Anchomenus arnaudensis* could not be located in BMNH where Broun’s specimens can usually be found. However, there is no ambiguity regarding the identity of this taxon. Furthermore, a non-type female specimen from the Broun Collection (BMNH) was examined. This specimen is from Lake Rotoiti (BR) at St Arnaud next to the St Arnaud Range and its morphology corresponds to Broun’s original description of *Anchomenus arnaudensis*. In addition to diagnostic characters of the male genitalia, *Ctenognathus arnaudensis* has the following distinguishing features: femora and tibiae dark rufous; pronotum subrectangular, base subtruncate; elytra slightly convex, microsculpture moderately transverse, striae impunctate. *Ctenognathus arnaudensis* occurs in dry beech forests from northern areas of the South Island (NN, BR, MB, KA).

Ctenognathus marieclaudiae Larochelle, new species

Fig. 67, 110, 137

Ctenognathus marieclaudiae Larochelle, new species. Holotype: male (NZAC) labeled “NEW ZEALAND OL (typed) Makarora 3 Feb 1984 JC Watt (hand-written) / on mossy trunks at night (hand-written) / HOLOTYPE [male symbol] *Ctenognathus marieclaudiae* Larochelle, 2021 (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 12.6–13.3 mm. Head, pronotum, elytra, and abdomen black; antennae and palpi dark rufous; legs black. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric (almost granulate) on elytra. Iridescence absent. Head, pronotum, and elytra very shiny. Forebody very wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, moderately emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction absent dorsolaterally. Mentum: medial tooth slightly emarginate apically; two setae. Submentum with six setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, unwrinkled, wide, moderately cordate, widest before middle; apex subtruncate; anterolateral angles poorly developed, narrowly rounded; anterior bead complete; sides moderately rounded, slightly sinuate posteriorly; lateral beads complete; lateral depressions wide; two setiferous punctures (anterior and posterior) on each side; posterolateral angles rectangular; laterobasal foveae moderately deep and wide, prolonged forward; posterior bead incomplete, obsolete medially; base subtruncate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Slightly convex, sloping toward apex, oblong, widest behind middle. Shoulders moderately rounded. Sides slightly rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae deep, impunctate. Intervals depressed; interval 3 with three or four moderately deep, large (foveate) setiferous punctures. Umbilicate series with 17–20 setiferous punctures. Subapical sinuations moderate. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with ten long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 110): moderately arcuate, slender; base strongly convex dorsally, with basal lobe moderately wide; middle moderately convex, then rather straight toward apex dorsally, moderately concave ventrally, with dorsal membranous area moderately wide and long; apex slender, strongly convex dorsally, almost straight ventrally,

with extreme tip narrow and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 63 specimens (AMNZ, BMNH, MONZ, NZAC).

Geographic distribution (Fig. 137). South Island: BR, OL, WD.

Ecology. Lowland, montane. Epigeal, arboreal. Wet forests (beech, podocarp, broadleaf). Shaded ground; wet soil. Nocturnal; hides during the day under logs, fallen branches, and stones; active at night on mossy tree trunks and logs.

Biology. Seasonality: November–April. Predacious (based on mouthpart morphology).

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

Collecting techniques. Pitfall trapping; turning logs, fallen branches, and stones; examining mossy tree trunks and logs at night.

Remarks. The species is named after Marie-Claude Larivière, the love of my life. *Ctenognathus marieclaudiae* Larochelle is morphologically close to *C. edwardsii*. In addition to diagnostic characters of the male genitalia, *C. marieclaudiae* has the following distinguishing features: pronotum unwrinkled and moderately cordate, latero-basal foveae moderately wide, not meeting toward pronotal midline; elytra very shiny, slightly convex, interval 3 with three or four large (foveate) setiferous punctures. *C. marieclaudiae* is found in western areas of the South Island (BR, WD, OL), while *C. edwardsii* occurs in the southern South Island (MC to FD–SL) and Stewart Island.

Ctenognathus edwardsii (Bates, 1874)

Fig. 68, 111, 130

Platynus edwardsii Bates, 1874: 239 (redescribed in 1875: 302). Holotype: “New Zealand” (could not be located either in MNHN or in CMNZ).

Anchomenus (Platynus) edwardsii: Broun 1880: 26.

Anchomenus macrocoelis Broun, 1908: 346. Lectotype (here designated): male (BMNH) labeled “Type (circular red-bordered label; typed) / 2664. [male symbol] (hand-written) / [MK] Hermitage. Mt. Cook. (hand-written) / New Zealand. Broun. Coll. Brit. Mus. 1922–482 (white label with red horizontal line; typed) / *Anchomenus macrocoelis*. (hand-written) / LECTOTYPE [male symbol] *Anchomenus macrocoelis* Broun, 1908 designated by Larochelle & Larivière, 2021 (red label; typed).” **New synonym**

Anchomenus edwardsii: Hudson 1923: 356.

Agonum (Platynus) edwardsii: Csiki 1931: 853.

Agonum (Anchomenus) macrocoele: Csiki 1931: 865.

Anchomenus edwardsii: Hudson 1934: 174.

Anchomenus macrocaelis [sic]: Hudson 1934: 174.

Ctenognathus edwardsii: Larochelle and Larivière 2007: 81, 111.

Ctenognathus macrocoelis: Larochelle and Larivière 2007: 81, 111.

Description. Body length 10.4–12.6 mm. Head, pronotum, elytra, and abdomen black; antennae and palpi dark rufous; legs piceous black (tarsi with reddish tinge). Microsculpture isodiametric on head, pronotum, and elytra (elytra almost granulate). Iridescence absent. Head and pronotum very shiny, elytra dull. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, moderately emarginate anteriorly. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction absent dorsolaterally. Mentum: medial tooth slightly or moderately emarginate apically; two setae. Submentum with six setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled on disc, deeply wrinkled across base, wide, subquadrate, widest before middle; apex strongly emarginate; anterolateral angles well developed, broadly rounded; anterior bead incomplete, obsolete medially; sides moderately rounded, slightly sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, widened posteriorly; two setiferous punctures (anterior and posterior) on each side; posterolateral angles rectangular; laterobasal foveae moderately deep, very wide, meeting toward pronotal midline, prolonged forward; posterior bead obsolete; base subtruncate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed,

tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Subdepressed, not sloping down toward apex, oblong, widest behind middle. Shoulders moderately rounded. Sides moderately rounded. Scutellar setiferous pore visible. Scutellar striae moderately long, impunctate. Striae shallow, impunctate. Intervals subdepressed; interval 3 with three shallow, minute setiferous punctures. Umbilicate series with 17–19 setiferous punctures. Subapical sinuations strong. Apices rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with eight or ten long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 111): strongly arcuate; base slightly convex dorsally, with marginal blade instead of basal lobe; middle slightly convex, almost straight in basal half and strongly convex in apical half dorsally, strongly concave ventrally, with dorsal membranous area very wide in apical half and moderately long; apex slender, slightly convex dorsally, slightly concave ventrally, with extreme tip narrow and very long. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 192 specimens (AMNZ, BMNH, JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 130). South Island: CO, FD, MC, MK (mostly), OL, SC, SL. Stewart Island.

Ecology. Lowland, montane, subalpine. Epigeal. Dry forests (beech). Shaded ground; dry soil. Nocturnal; hides during the day under logs and stones. Gregarious.

Biology. Seasonality: October–February, April–May. Teneral: November, January–March, May. Predacious (based on mouthpart morphology). Occasionally infested with mites.

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

Collecting techniques. Turning logs and stones; pitfall trapping.

References. Laroche and Larivière 2001: 130–131 (as “*Anchomenus edwardsii*,” “*A. macrocoelis*”; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus edwardsii*, *C. macrocoelis*; list), 2016: 36 (as *Ctenognathus edwardsii*, *C. macrocoelis*; list).

Remarks. The holotype of *Platynus edwardsii* could not be located either in MNHN or in CMNZ where Bates’ specimens can usually be found. However, there is no ambiguity regarding the identity of this taxon; the original description can only apply to the species as currently understood. In addition to diagnostic characters of the male genitalia, *Ctenognathus edwardsii* has the following distinguishing features: pronotum wrinkled on disc and across base, subquadrate, laterobasal foveae of pronotum very wide, meeting toward pronotal midline; elytra dull, subdepressed, interval 3 with three shallow, minute setiferous punctures.

Broun described *Anchomenus macrocoelis* from two specimens, one of which (a male) was located (BMNH) and is here designated as a lectotype in order to preserve stability of nomenclature in the future. The morphology of this lectotype corresponds to Bates’ original description of *Platynus edwardsii*. The two taxa are therefore conspecific.

***Ctenognathus kaikoura* Laroche and Larivière, new species**

Fig. 69, 112, 136

Ctenognathus kaikoura Laroche and Larivière, new species. Holotype: male (NZAC) labeled “[NEW ZEALAND KA] Puhipuhi Val. [=Puhui Puhui Valley] Kaikoura Marlborough (typed) / 31 Aug 70. G.W. Ramsay Under stones. (hand-written) / HOLOTYPE [male symbol] *Ctenognathus kaikoura* Laroche & Larivière, 2021 (red label; typed).” Paratypes: one female (NZAC) from Hundalee (KA) and one female (LUNZ) from Oaro (KA), bearing blue paratype labels.

Description. Body length 9.8–10.5 mm. Head, pronotum, and elytra mostly piceous black; lateral margins of pronotum and elytra reddish; abdomen smoky brown, yellowish lateroapically; antennae and palpi rufotestaceous; legs reddish. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra. Iridescence absent. Very shiny. Forebody narrow in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, slightly emarginate anteriorly. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth subtruncate or subtriangular apically; two setae. Submentum with six setae.

Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled on disc and across base, narrow, moderately cordate, widest before middle; apex slightly emarginate; antero-lateral angles well developed, rounded; anterior bead complete; sides moderately rounded, moderately sinuate posteriorly; lateral beads complete; lateral depressions wide; two setiferous punctures (anterior and posterior) on each side; posterolateral angles acute, strongly projected laterally; laterobasal foveae very deep, moderately wide, prolonged forward; posterior bead complete; base subtruncate. **Legs.** Very long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 poorly developed, not carinate dorsally, shallowly bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Subdepressed, sloping down toward apex, subovate, widest about middle. Shoulders strongly rounded. Sides strongly rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae shallow, impunctate. Intervals subdepressed; interval 3 with three moderately deep, minute setiferous punctures. Umbilicate series with 16–19 setiferous punctures. Subapical sinuations feeble. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 112): strongly arcuate; base moderately convex dorsally, with basal lobe narrow; middle strongly convex with a slight concavity before apex dorsally, moderately concave ventrally, with dorsal membranous area strongly widened in apical half and moderately long; apex subtriangular, slightly convex dorsally, slightly concave ventrally, with extreme tip subtriangular and very long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 7 specimens (AMNZ, BMNH, LUNZ, NZAC).

Geographic distribution (Fig. 136). South Island: KA–Hundalee. Oaro. Puhi Puhi Valley. MB–Saxton Pass. Wairau River Bridge (above Judges Creek).

Ecology. Lowland, montane. Dry forests (beech). Shaded ground; dry soil. Nocturnal; hides during the day under stones and in leaf litter.

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

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

Collecting techniques. Lifting stones; sifting leaf litter.

Remarks. The species is named the Kaikoura region (KA) which includes the type locality Puhi Puhi Valley, and is applied as a noun in apposition. In addition to diagnostic characters of the male genitalia, *Ctenognathus kaikoura* has meso- and metatarsomeres 1–4 without dorsal carinae, characters that separate it from other South Island *Ctenognathus* species. *Ctenognathus kaikoura* is restricted to the dry beech forests of northeastern areas of the South Island (MB, KA).

***Ctenognathus sandageri* (Broun, 1882)**

Fig. 70, 113, 143

Anchomenus sandageri Broun, 1882: 218 (redescribed in 1883: 218 and 1886: 748). Holotype: male (BMNH) labeled “[male symbol] (hand-written) / Type (circular red-bordered label; typed) / 46. (hand-written) / New Zealand Broun. Coll. Brit. Mus. 1922–482 (white label with red horizontal line; typed) / [WN] Wellington (typed) / *Anchomenus sandageri*. (hand-written).”

Agonum (*Platynus*) *sandageri*: Csiki 1931: 853.

Anchomenus sandageri: Hudson 1934: 174.

Ctenognathus sandageri: Larochelle and Larivière 2007: 81, 111.

Description. Body length 10.2–11.1 mm. Head, pronotum, and elytra mostly piceous black; lateral margins of pronotum and elytra reddish; abdomen piceous black, yellowish lateroapically; antennae and palpi rufotestaceous; femora and tibiae pale yellow; tarsi rufotestaceous. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra. Iridescence absent. Very shiny. Forebody narrow in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, slightly emarginate anteriorly. Eyes strongly convex; two setiferous punctures on inner side of each

eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth subtruncate or subrounded apically; two setae. Submentum with four setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum moderately convex, impunctate, obsoletely wrinkled on disc, narrow, strongly cordate, widest about middle; apex strongly emarginate; anterolateral angles poorly developed, rounded; anterior bead complete; sides strongly rounded, strongly sinuate posteriorly; lateral beads complete; lateral depressions wide; two setiferous punctures (anterior and posterior) on each side; posterolateral angles acute, slightly projected laterally; latero-basal foveae moderately deep and wide, prolonged forward; posterior bead incomplete, obsolete medially; base emarginate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Very convex, sloping down toward apex, subovate, widest about middle. Shoulders strongly rounded. Sides strongly rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae deep, impunctate. Intervals subdepressed; interval 3 with three moderately deep, small setiferous punctures. Umbilicate series with 15–16 setiferous punctures. Subapical sinuations moderate. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 113): moderately arcuate, strongly widened in apical half; base moderately convex dorsally, with basal lobe narrow; middle moderately convex dorsally, strongly concave ventrally, with dorsal membranous area strongly widened in apical half and moderately long; apex subtriangular, moderately convex dorsally, slightly concave ventrally, with extreme tip narrow and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

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

Geographic distribution (Fig. 143). North Island: WA, WN.

Ecology. Lowland, montane. Epigeal. Wet forests (broadleaf, beech, podocarp). Associated with streams. Shaded ground; wet soil. Nocturnal; hides during the day under stones and logs. Gregarious.

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

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

Collecting techniques. Pitfall trapping; turning stones and logs.

References. Larochelle and Larivière 2001: 131 (as “*Anchomenus sandageri*”; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus sandageri*), 2016: 37 (list).

Ctenognathus helmsi (Sharp, 1881)

Fig. 71, 114, 133

Anchomenus helmsi Sharp, 1881: 47. Lectotype (here designated): female (BMNH) labeled “*Anchomenus helmsi* [WD] Greymouth N. Zd. (hand-written) / Greymouth New Zealand. Helms. (white label with red horizontal line; typed) Sharp Coll. 1905–313. / LECTOTYPE [female symbol] *Anchomenus helmsi* Sharp, 1881 designated by Larochelle & Larivière, 2021 (red label; typed).”

Agonum (Platynus) helmsi: Csiki 1931: 853.

Anchomenus helmsi: Hudson 1934: 174.

Agonum helmsi: Johns 1977: 316.

Anchomenus helmsi: Townsend 1997: 15.

Ctenognathus helmsi: Larochelle and Larivière 2007: 81, 111.

Description. Body length 9.5–11.6 mm. Head, pronotum, and elytra mostly piceous black; lateral margins of pronotum and elytra reddish; abdomen piceous black, yellowish lateroapically; antennae and palpi rufotestaceous; femora dark yellow; tibiae and tarsi reddish. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra. Iridescence absent. Very shiny. Forebody narrow in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, slightly emarginate anteriorly. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora

not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth subtruncate or slightly emarginate apically; two setae. Submentum with four setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum moderately convex, impunctate, obsoletely wrinkled throughout, narrow, strongly cordate, widest about middle; apex strongly emarginate; anterolateral angles well developed, rounded; anterior bead complete; sides strongly rounded, strongly sinuate posteriorly; lateral beads complete; lateral depressions wide; two setiferous punctures (anterior and posterior) on each side; posterolateral angles acute, slightly projected laterally; laterobasal foveae very deep, moderately wide, prolonged forward; posterior bead complete; base subtruncate. Apex of prosternum glabrous or pubescent (glabrous in all other species). **Legs.** Very long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 setose ventrally (with very short setae). **Elytra.** Moderately convex, sloping down toward apex, subovate, widest about middle. Shoulders strongly rounded. Sides strongly rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae deep, impunctate. Intervals subdepressed; interval 3 with three moderately deep, small setiferous punctures. Umbilicate series with 16–18 setiferous punctures. Subapical sinuations strong. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 114): moderately arcuate; base strongly convex dorsally, with basal lobe narrow; middle moderately convex dorsally, strongly concave ventrally, with dorsal membranous area strongly widened in apical half and very long; apex slender, slightly convex dorsally, slightly concave ventrally, with extreme tip subtriangular and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 322 specimens (AMNZ, BMNH, CMNH, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 133). South Island: BR, NN, SD, WD.

Ecology. Lowland, montane. Epigeal. Wet forests (beech, broadleaf, podocarp). Associated with streams and mud flats. Shaded ground; wet soil. Nocturnal; hides during the day under logs and stones. Gregarious.

Biology. Seasonality: September–March, May. Teneral: November, February–May. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

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

Collecting techniques. Turning logs and stones; pitfall trapping.

References. Larochelle and Larivière 2001: 130 (as “*Anchomenus*” *helmsi*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus helmsi*; list), 2016: 37 (list).

Remarks. Sharp described *Anchomenus helmsi* from two specimens, one of which (a female) was located (BMNH) and is here designated as lectotype. This type designation is made to preserve stability of nomenclature in the future.

Ctenognathus xanthomelus (Broun, 1908)

Fig. 72, 115, 148

Anchomenus xanthomelus Broun, 1908: 346. Holotype: male (BMNH) labeled “Type (circular red-bordered label; typed) / 2665. [male symbol] (hand-written) / New Zeal. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / [RI/WN] Manawatu Gorge. (hand-written) / *Anchomenus xanthomelus* (hand-written).”

Anchomenus xanthomelas [sic]: Hudson 1923: 356.

Agonum (*Anchomenus*) *xanthomelus*: Csiki 1931: 865.

Anchomenus xanthomelas [sic]: Hudson 1934: 174.

Ctenognathus xanthomelus: Larochelle and Larivière 2007: 81, 111.

Description. Body length 10.0–11.4 mm. Head, pronotum, and elytra mostly piceous black; lateral margins of pronotum and elytra reddish; abdomen piceous black, yellow lateroapically; antennae and palpi rufotestaceous; femora pale yellow; tibiae and tarsi reddish. Microsculpture isodiametric on head, very transverse (with micro-lines) on pronotum, and moderately transverse on elytra. Iridescence present on pronotum. Very shiny. Forebody narrow in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly.

Labrum strongly transverse, slightly emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth slightly emarginate apically; two setae. Submentum with six setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum moderately convex, impunctate, deeply wrinkled across base, narrow, strongly cordate, widest about middle; apex slightly emarginate; anterolateral angles poorly developed, rounded; anterior bead complete; sides strongly rounded, strongly sinuate posteriorly; lateral beads absent; lateral depressions wide; two setiferous punctures (anterior and posterior) on each side; posterolateral angles rectangular; laterobasal foveae very deep, moderately wide, prolonged forward; posterior bead complete; base subtruncate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Very convex, sloping down toward apex, ovate, widest about middle. Shoulders strongly rounded. Sides strongly rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae deep, finely punctate. Intervals slightly convex; interval 3 with three moderately deep, small setiferous punctures. Umbilicate series with 16–18 setiferous punctures. Subapical sinuations feeble. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 115): moderately arcuate, strongly widened in apical half; base moderately convex dorsally, with basal lobe narrow; middle moderately concave dorsally, strongly concave ventrally, with dorsal membranous area moderately wide and moderately long; apex subtriangular, strongly convex dorsally, slightly concave ventrally, with extreme tip narrow and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 127 specimens (AMNZ, BMNH, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 148). North Island: BP, RI, TK, TO, WN, WO.

Ecology. Lowland, montane. Epigeal. Wet forests (broadleaf, podocarp). Associated with streams, slopes, and mud flats. Shaded ground; wet soil. Nocturnal; hides during the day under logs and fallen branches, also in heaps of dead leaves and mud. Gregarious.

Biology. Seasonality: October–January, March–April, June. Teneral: November–December, February, June. Predacious (based on mouthpart morphology). Occasionally infested with mites.

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

Collecting techniques. Pitfall trapping; turning logs and fallen branches; examining heaps of dead leaves and mud; pan trapping (yellow pan traps).

References. Laroche and Larivière 2001: 132 (as “*Anchomenus*” *xanthomelas*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus xanthomelus*; list), 2016: 38 (list).

***Ctenognathus intermedius* (Broun, 1908)**

Fig. 73, 116, 135

Anchomenus intermedius Broun, 1908: 347. Lectotype (here designated): male (BMNH) labeled “Type (circular red-bordered label; typed) / 2666. [male symbol] (hand-written) / [WI/WN] Manawatu Flats (hand-written) / *Anchomenus intermedius*. (hand-written) / New Zealand. Broun. Coll. Brit. Mus. 1922–482. (white label with red horizontal line; typed) / LECTOTYPE [male symbol] *Anchomenus intermedius* Broun, 1908 designated by Laroche & Larivière, 2021 (red label; typed).”

Agonum (*Anchomenus*) *intermedium*: Csiki 1931: 865.

Anchomenus intermedius: Hudson 1934: 174.

Ctenognathus intermedius: Laroche and Larivière 2007: 81, 111.

Description. Body length 10.5–12.0 mm. Head, pronotum, and elytra mostly piceous black; lateral margins of pronotum and elytra reddish; abdomen piceous black, yellowish lateroapically; antennae and palpi rufotestaceous; femora and tibiae pale yellow; tarsi reddish. Microsculpture isodiametric on head, very transverse (with

microlines) on pronotum, and isodiametric on elytra. Iridescence present on pronotum. Very shiny. Forebody narrow in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, slightly emarginate anteriorly. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth subtruncate apically; two setae. Submentum with six setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum moderately convex, impunctate, obsolete wrinkled on disc and across base, narrow, moderately cordate, widest before middle; apex slightly emarginate; anterolateral angles poorly developed, obtuse; anterior bead complete; sides moderately rounded, moderately sinuate posteriorly; lateral beads absent; lateral depressions wide; two setiferous punctures (anterior and posterior) on each side; posterolateral angles rectangular; laterobasal foveae very deep, moderately wide, prolonged forward; posterior bead complete; base truncate. **Legs.** Very long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Slightly convex, not sloping down toward apex, subovate, widest about middle. Shoulders strongly rounded. Sides strongly rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae deep, finely punctate. Intervals subdepressed; interval 3 with three moderately deep, small setiferous punctures. Umbilicate series with 17–19 setiferous punctures. Subapical sinuations feeble. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with two long apical ambulatory setae; female with four long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 116): moderately arcuate, slender; base moderately convex dorsally, with basal lobe narrow; middle subparallel, moderately convex dorsally, moderately concave ventrally, with dorsal membranous area moderately wide and moderately long; apex moderately convex dorsally, slightly concave ventrally, with extreme tip narrow and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 54 specimens (BMNH, JNNZ, MONZ, NZAC).

Geographic distribution (Fig. 135). North Island: RI, TO, WI, WN.

Ecology. Lowland, montane. Epigeal. Wet forests (beech, broadleaf). Associated with streams. Shaded ground; wet soil. Nocturnal; hides during the day under logs, fallen branches, and stones. Gregarious.

Biology. Seasonality: September–October, December–February. Mating observed in January (WI). Teneral: February–April. Predacious (based on mouthpart morphology).

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

Collecting techniques. Turning logs, fallen branches, and stones.

References. Laroche and Larivière 2001: 130 (as “*Anchomenus intermedius*”; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus intermedius*), 2016: 37 (list).

Remarks. Broun described *Anchomenus intermedius* from two specimens, one of which (a male) could be located (BMNH) and is here designated as lectotype. This type designation is made to preserve stability of nomenclature in the future.

Ctenognathus colenisonis (White, 1846)

Fig. 75, 117, 127

Anchomenus colenisonis White, 1846: 3. Lectotype (here designated): female (BMNH) labeled “[female symbol] (hand-written) / [?]5 [first number unreadable] (hand-written) / [NC/MC/SC] Canterbury (typed) / New Zeal. Broun Coll. Brit. Mus. 1922–482 (white label with red horizontal line; typed) / *Platynus colenisonis* (hand-written).” LECTOTYPE [female symbol] *Anchomenus colenisonis* White, 1846 designated by Laroche & Larivière, 2021 (red label; typed).”

Platynus colenisonis: Bates 1874: 239.

Anchomenus (Platynus) colenisonis: Broun 1880: 26.

Anchomenus colenisonis: Sharp 1884: 298.

Anchomenus integratus Broun, 1908: 348. Holotype: female (BMNH) labeled “Type (circular red-bordered label; typed) / 2667 (hand-written) / New Zeal. Broun. Coll. Brit. Mus. 1922–482 (white label with red horizontal line; typed) / [MC] Broken River (hand-written) / *Anchomenus integratus*. (hand-written).” **New synonym**

Agonum (Platynus) colensoni [sic]: Csiki 1931: 865.

Agonum (Anchomenus) integratum: Csiki 1931: 865.

Anchomenus colensoni: Hudson 1934: 174.

Agonum integratus [sic]: Johns 1980: 62.

Ctenognathus colensoni: Larochelle and Larivière 2007: 81, 111.

Ctenognathus integratus: Larochelle and Larivière 2007: 81, 111.

Description. Body length 10.8–11.2 mm. Head, pronotum, and elytra piceous black; lateral margins of elytra reddish; abdomen piceous black; antennae and palpi rufotestaceous; femora and tibiae pale yellow; tarsi reddish. Microsculpture isodiametric on head, pronotum, and elytra. Iridescence absent. Very shiny. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, deeply emarginate anteriorly. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth subtruncate apically; two setae. Submentum with ten setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled on disc, wide, slightly cordate, widest before middle; apex slightly emarginate; anterolateral angles well developed, broadly rounded; anterior bead complete; sides moderately rounded, slightly or moderately sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, widened posteriorly; two setiferous punctures (anterior and posterior) on each side; posterolateral angles slightly obtuse, almost rectangular; laterobasal foveae shallow, moderately wide, prolonged forward; posterior bead obsolete; base subtruncate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Slightly convex, not sloping down toward apex, oblong, widest about middle. Shoulders moderately rounded. Sides moderately rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae shallow, finely punctate. Intervals depressed; interval 3 with three shallow, minute setiferous punctures. Umbilicate series with 15–22 setiferous punctures. Subapical sinuations feeble. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with eight or ten long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 117): strongly arcuate; base strongly convex dorsally, with basal lobe moderately wide; middle strongly convex dorsally, strongly concave ventrally, with dorsal membranous area very wide in apical half and moderately long; apex moderately convex dorsally, slightly concave ventrally, with extreme tip moderately wide and long. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 363 specimens (AMNZ, BMNH, CMNH, JNNZ, LUNZ, NZAC).

Geographic distribution (Fig. 127). South Island: BR, MC, MK, NC, NN, SC.

Ecology. Lowland, montane, subalpine. Epigeal, arboreal. Dry forests (beech). Shaded ground; dry soil. Nocturnal; hides during the day under logs and fallen branches. Gregarious.

Biology. Seasonality: September–May, July. Teneral: November–December, February–March, May. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous (incapable of flight). Moderate runner. Regular climber (on tree trunks).

Collecting techniques. Pitfall trapping; turning logs and fallen branches; examining tree trunks at night.

References. Larochelle and Larivière 2001: 130 (as “*Anchomenus*” *colensoni*, “*A.*” *integratus*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus colensoni*, *C. integratus*; list), 2016: 36–37 (as *C. colensoni*, *C. integratus*; list).

Remarks. White described *Anchomenus colensoni* from two specimens, one of which (a female) could be located (BMNH) and is here designated as lectotype in order to preserve stability of nomenclature in the future. Examination of the type of *Anchomenus integratus* revealed it to be conspecific with *Ctenognathus colensoni*.

Ctenognathus otagoensis (Bates, 1878)

Fig. 74, 118, 140

Anchomenus (Platynus) otagoensis Bates, 1878: 27. Syntypes: “[male symbol] [female symbol]” from [CO/DN/OL] “Otago” (could not be located either in MNHN or in CMNZ).

Anchomenus otagoensis: Broun 1880: 25.

Agonum (Platynus) otagoense: Csiki 1931: 853.

Platynus otagoensis: Liebherr and Zimmerman 1998: 147.

Ctenognathus otagoensis: Liebherr 2005: 283.

Description. Body length 10.3–12.7 mm. Head, pronotum, and elytra piceous black; abdomen rufopiceous; antenna and palpi rufotestaceous; femora and tibiae pale yellow; tarsi reddish. Microsculpture isodiametric on head, pronotum, and elytra (elytra almost granulate). Iridescence absent. Head and pronotum very shiny, elytra dull. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum moderately transverse, subtruncate anteriorly. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction absent dorsolaterally. Mentum: medial tooth slightly or moderately emarginate apically; two setae. Submentum with six setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, obsolete wrinkled on disc, wide, moderately cordate, widest before middle; apex slightly emarginate; anterolateral angles poorly developed, obtuse; anterior bead incomplete, obsolete medially; sides moderately rounded, slightly sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, widened posteriorly; two setiferous punctures (anterior and posterior) on each side; posterolateral angles rectangular; laterobasal foveae moderately deep and wide, prolonged forward; posterior bead complete; base truncate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Subdepressed, not sloping down toward apex, oblong, widest about middle. Shoulders moderately rounded. Sides moderately rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae shallow, finely punctate. Intervals depressed; interval 3 with three shallow, minute setiferous punctures. Umbilicate series with 17–20 setiferous punctures. Subapical sinuations strong. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 118): strongly arcuate, strongly widened medially; base strongly convex dorsally, with marginal blade instead of basal lobe; middle strongly convex dorsally, slightly convex ventrally, with dorsal membranous area strongly widened in apical half and moderately long; apex strongly convex dorsally, moderately concave ventrally, with extreme tip narrow and very long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 615 specimens (AMNZ, JNNZ, LUNZ, MONZ, NZAC).

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

Ecology. Lowland, montane, subalpine. Epigeal. Wet forests (beech, broadleaf), tree plantations (pine), shrublands, and scrublands. Associated with streams. Shaded ground; wet soil. Nocturnal; hides during the day under logs, fallen trees, and stones. Gregarious.

Biology. Seasonality: September–April, June, August. Teneral: March. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

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

Collecting techniques. Pitfall trapping; turning logs, fallen trees, and stones.

References. Laroche and Larivière 2001: 131 (as “*Anchomenus*” *otagoensis*; catalogue; biology, dispersal power, ecology, geographic distribution, references); Liebherr 2005: 283 (as *Ctenognathus otagoensis*); Laroche and Larivière 2007: 111 (list), 2016: 37 (list).

Remarks. The syntypes of *Anchomenus otagoensis* could not be located either in MNHN or in CMNZ where Bates’ specimens can usually be found. However, there is no ambiguity regarding the identity of this taxon; the original description can only apply to the species as currently understood. In addition to diagnostic characters of the male genitalia, *Ctenognathus otagoensis* has the following distinguishing features: pronotum slightly cordate;

elytra subdepressed, striae finely punctate; eyes strongly rounded; terminal segment of palpi obtuse apically. This species occurs in southern areas of the South Island (OL–DN to FD–SL).

***Ctenognathus earlyi* Larochelle and Larivière, new species**

Fig. 76, 119, 129

Ctenognathus earlyi Larochelle and Larivière, new species. Holotype: male (NZAC) labeled “[NEW ZEALAND Stewart Island] Big S. Cape I. SW Stewart I. (typed) / Nov 68 J. McBurney (typed) / Phormium (typed) / HOLOTYPE [male symbol] *Ctenognathus earlyi* Larochelle & Larivière, 2021 (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 10.2–11.5 mm. Head, pronotum, and elytra piceous black; abdomen rufopiceous; antennae and palpi rufotestaceous; femora and tibiae pale yellow; tarsi reddish. Microsculpture isodiametric on head, pronotum, and elytra (elytra almost granulate). Iridescence absent. Head and pronotum very shiny, elytra dull. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, slightly emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction absent dorsolaterally. Mentum: medial tooth slightly emarginate apically; two setae. Submentum with six setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled on disc, wide, subquadrate, widest before middle; apex slightly emarginate; anterolateral angles well developed, broadly rounded; anterior bead complete; sides moderately rounded, slightly sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, widened posteriorly; two setiferous punctures (anterior and posterior) on each side; posterolateral angles rectangular; laterobasal foveae shallow, moderately wide, prolonged forward; posterior bead incomplete, obsolete medially; base truncate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Moderately convex, sloping down toward apex, oblong, widest about middle. Shoulders moderately rounded. Sides moderately rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae shallow, impunctate. Intervals depressed; interval 3 with three shallow, minute setiferous punctures. Umbilicate series with 15–18 setiferous punctures. Subapical sinuations strong. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 119): strongly arcuate; base slightly convex dorsally, with basal lobe narrow; middle angulate dorsally, moderately concave ventrally, with dorsal membranous area strongly widened in apical half and moderately long; apex subtriangular, slightly convex dorsally, moderately concave ventrally, with extreme tip rather narrow and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 9 specimens (MONZ, NZAC).

Geographic distribution (Fig. 129). Stewart Island: Big South Cape Island.

Ecology. Lowland. Wet forest, in leaf litter.

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

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

Collecting technique. Sifting leaf litter.

Remarks. The species is named after our friend and colleague John W. Early (Auckland War Memorial Museum, Auckland) for his special help and encouragement in our entomological studies. *Ctenognathus earlyi* is morphologically close to *C. otagoensis*. In addition to diagnostic characters of the male genitalia, *C. earlyi* has the following distinguishing features: pronotum subquadrate; elytra moderately convex, striae impunctate; eyes moderately rounded; terminal segment of palpi truncate apically. The two species are allopatric: *C. earlyi* is restricted to Stewart Island, while *C. otagoensis* occurs in southern areas of the South Island (OL–DN to FD–SL).

***Ctenognathus davidsoni* Laroche and Larivière, new species**

Fig. 77, 120, 128

Ctenognathus davidsoni Laroche and Larivière, new species. Holotype: male (NZAC) labeled “[NEW ZEALAND FD] Homer Saddle 3000’ Milford 1.IX.66 J.I. Townsend (hand-written) / HOLOTYPE [male symbol] *Ctenognathus davidsoni* Laroche & Larivière, 2021 (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 11.2–12.9 mm. Head, pronotum, and elytra rufotestaceous (forebody darker except along lateral margins); abdomen rufotestaceous; antennal segments 1–3 rufotestaceous, 4–11 dark piceous; palpi and legs rufotestaceous. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra. Iridescence absent. Head, pronotum, and elytra very shiny. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, moderately emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction absent dorsolaterally. Mentum: medial tooth slightly emarginate apically; two setae. Submentum with six setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum moderately convex, impunctate, obsoletely wrinkled across base, wide, subcordate, widest before middle; apex slightly emarginate; anterolateral angles slightly developed, narrowly rounded; anterior bead complete; sides moderately rounded, not sinuate posteriorly; lateral beads complete; lateral depressions wide; two setiferous punctures (anterior and posterior) on each side; posterolateral angles acutely rectangular; laterobasal foveae very deep and wide, almost meeting toward pronotal midline, prolonged forward; posterior bead incomplete, obsolete medially; base emarginate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Moderately convex, sloping down toward apex, subovate, widest behind middle. Shoulders moderately rounded. Sides slightly rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae shallow, impunctate. Intervals subdepressed; interval 3 with three very deep, large (foveate) setiferous punctures. Umbilicate series with 17–20 setiferous punctures. Subapical sinuations feeble. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 120): moderately arcuate; base strongly convex dorsally, with basal lobe moderately wide; middle moderately convex dorsally and ventrally, with dorsal membranous area moderately wide, rather strongly biconvex; apex moderately convex dorsally, slightly concave ventrally, with extreme tip subtriangular, moderately wide and long. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 272 specimens (AMNZ, CMNZ, JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 128). South Island: BR, FD, OL, SL, WD.

Ecology. Lowland, montane, subalpine. Epigeal, arboreal. Wet forests (beech). Shaded ground; wet soil. Nocturnal; hides during the day under logs and stones; active at night on mossy tree trunks and logs. Gregarious.

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

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

Collecting techniques. Pitfall trapping; turning logs and stones; examining mossy tree trunks and logs at night.

Remarks. This species is named after Robert L. Davidson (Carnegie Museum, Pittsburgh, Pennsylvania), long-time friend and colleague, for his special help and encouragement in our carabid research and for his special taxonomic expertise and dedication as a manuscript reviewer. *Ctenognathus davidsoni* is morphologically close to *C. oreobius* and *C. hoarei*. In addition to morphological characters of the male genitalia, *C. davidsoni* has the following distinguishing features: antennal segments 1–3 rufotestaceous, 4–11 dark piceous; femora rufotestaceous; sides of pronotum not sinuate, lateral depressions wide throughout, laterobasal foveae very wide, almost meeting toward pronotal midline; elytra with sides slightly rounded, interval 3 with three very deep, large (foveate) setiferous punctures. *Ctenognathus davidsoni* is found mostly in western areas of the South Island (BR to

SL). *Ctenognathus oreobius* occurs mostly in southeastern areas of the South Island (MK to SL), while *C. hoarei* is endemic to the Banks Peninsula (MC).

***Ctenognathus oreobius* (Broun, 1886)**

Fig. 78, 121, 139

Anchomenus oreobius Broun, 1886: 876. Holotype: “one male” from “Mount Maungatua, Taieri” [DN] (BMNH, could not be located).

Agonum (Platynus) oreobium: Csiki 1931: 853.

Anchomenus oreobius: Hudson 1934: 174.

Ctenognathus oreobius: Laroche and Larivière 2007: 81, 111.

Description. Body length 10.5–13.0 mm. Head, pronotum, and elytra mostly piceous black; posterolateral angles of pronotum and lateral margins of elytra reddish; abdomen piceous black; antennae and palpi dark rufous; femora dark yellow; tibiae and tarsi reddish. Microsculpture isodiametric on head, pronotum, and elytra (elytra almost granulate). Iridescence absent. Head and pronotum very shiny, elytra dull. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, slightly emarginate anteriorly. Eyes strongly convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction absent dorsolaterally. Mentum: medial tooth slightly or moderately emarginate apically; two setae. Submentum with six setae. Palpi with terminal segment obtuse apically. **Thorax.** Pronotum slightly convex, impunctate, obsoletely wrinkled on disc, wide, moderately cordate, widest before middle; apex strongly emarginate; anterolateral angles well developed, broadly rounded; anterior bead complete; sides moderately rounded, moderately sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, widened posteriorly; two setiferous punctures (anterior and posterior) on each side; posterolateral angles rectangular; laterobasal foveae moderately deep and wide, prolonged forward; posterior bead obsolete; base emarginate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Slightly convex, not sloping down toward apex, oblong, widest about middle. Shoulders moderately rounded. Sides moderately rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae deep, impunctate. Intervals depressed; interval 3 with three shallow, minute setiferous punctures. Umbilicate series with 15–18 setiferous punctures. Subapical sinuations feeble. Apices obtuse. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with ten long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 121): strongly arcuate; base moderately convex dorsally, with basal lobe narrow; middle strongly convex dorsally, strongly concave ventrally, with dorsal membranous area strongly widened in apical half and moderately long; apex subtriangular, moderately convex dorsally, slightly concave ventrally, with extreme tip moderately narrow and moderately long. Dorsal view: very wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 107 specimens (AMNZ, CMNH, JNNZ, LUNZ, MONZ, NZAC).

Geographic distribution (Fig. 139). South Island: CO, DN, MK, SL.

Ecology. Lowland, montane, subalpine, alpine. Epigeal. Tussock grasslands, fellfields, adjacent scrublands and forests (podocarp, broadleaf). Mostly open ground; moist or wet soil. Nocturnal; hides during the day under stones, in leaf litter, and under logs. Gregarious.

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

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

Collecting techniques. Pitfall trapping; turning stones; sifting leaf litter; turning logs.

References. Laroche and Larivière 2001: 131 (as “*Anchomenus*” *oreobius*; catalogue; biology, dispersal power, ecology, geographic distribution, references), 2007: 81, 111 (as *Ctenognathus oreobius*; list), 2016: 37 (list).

Remarks. The holotype of *Anchomenus oreobius* could not be located in BMNH where Broun's specimens can usually be found. However, there is no ambiguity regarding the identity of this taxon; the original description can only apply to the species as currently understood. In addition to morphological characters of the male genitalia, *Ctenognathus oreobius* has the following distinguishing features: antennae dark rufous; terminal segment of palpi obtuse apically; eyes strongly convex; pronotum obsoletely wrinkled on disc, moderately cordate, posterolateral angles rectangular; elytra oblong, sides moderately rounded, striae deep and impunctate. *Ctenognathus oreobius* occurs mostly in southeastern areas of the South Island (MK to SL, mostly DN and CO).

Ctenognathus hoarei Laroche and Larivière, new species

Fig. 79, 122, 134

Ctenognathus hoarei Laroche and Larivière, new species. Holotype: male (NZAC) labeled "[NEW ZEALAND MC] NZ: 43°47'S 172°49'E Reynolds [near Reynolds Valley Road] (NP1) FIT: 13 days (#R043-006) Native: 27m from edge RE: Neumegen 21-Dec-05 (typed) / HOLOTYPE [male symbol] *Ctenognathus hoarei* Laroche & Larivière, 2021 (red label; typed)." Paratypes: one female (NZAC) from Middle Road [near Kaituna Valley, Banks Peninsula] (MC) and one female (LUNZ) from Kaituna Valley, Kaituna Stream (MC), bearing blue paratype labels.

Description. Body length 11.1–12.3 mm. Head, pronotum, and elytra mostly piceous black; lateral margins of pronotum and elytra reddish; abdomen rufopiceous; antennae and palpi rufotestaceous; femora dark yellow; tibiae and tarsi reddish. Microsculpture isodiametric on head, moderately transverse on pronotum, and isodiametric on elytra (elytra almost granulate). Iridescence absent. Head and pronotum very shiny, elytra dull. Forebody moderately wide in comparison to elytra. **Head.** Moderately wide. Mandibles moderately long and curved anteriorly. Labrum strongly transverse, deeply emarginate anteriorly. Eyes moderately convex; two setiferous punctures on inner side of each eye. Tempora not inflated. Neck constriction shallow dorsolaterally. Mentum: medial tooth slightly emarginate apically; two setae. Submentum with six setae. Palpi with terminal segment truncate apically. **Thorax.** Pronotum slightly convex, impunctate, deeply wrinkled on disc, feebly wrinkled across base, narrow, slightly cordate, widest before middle; apex slightly emarginate; anterolateral angles poorly developed, rounded; anterior bead obsolete; sides moderately rounded, moderately sinuate posteriorly; lateral beads complete; lateral depressions narrow anteriorly, widened posteriorly; two setiferous punctures (anterior and posterior) on each side; posterolateral angles acute, slightly projected laterally; laterobasal foveae very deep, moderately wide, prolonged forward; posterior bead obsolete; base emarginate. **Legs.** Moderately long. Metafemora with two posteroventral setae. Meso- and metatarsomeres 1–4 well developed, tricarinate dorsally, deeply bisulcate laterally. Metatarsomeres 4 moderately bilobed, symmetrical apically. Metatarsomeres 5 glabrous ventrally. **Elytra.** Moderately convex, not sloping down toward apex, subovate, widest about middle. Shoulders moderately rounded. Sides strongly rounded. Scutellar setiferous pore visible. Scutellar striole moderately long, impunctate. Striae shallow, finely punctate. Intervals subdepressed; interval 3 with three shallow, minute setiferous punctures. Umbilicate series with 17–18 setiferous punctures. Subapical sinuations feeble. Apices obtusely rounded. **Abdomen.** Sterna IV–VI: both sexes with two long apical ambulatory setae. Sternum VII (last visible sternum): male with four long apical ambulatory setae; female with eight long apical ambulatory setae. **Aedeagus.** Lateral view (Fig. 122): moderately arcuate; base strongly convex dorsally, with basal lobe narrow; middle slightly convex dorsally, moderately concave ventrally, with dorsal membranous area very wide and long; apex angulate, straight dorsally, slightly concave ventrally, with extreme tip subtriangular, moderately wide, and moderately long. Dorsal view: moderately wide, asymmetrical (ostium of membranous area deflected to the left); basal bulb moderately distant from membranous area.

Material examined. 38 specimens (CMNZ, LUNZ, NZAC).

Geographic distribution (Fig. 134). South Island: MC–Banks Peninsula.

Ecology. Lowland. Epigeal. Dry forests (broadleaf, podocarp, beech), scrublands, and tree plantations (pine). Shaded ground; dry soil. Nocturnal; hides during the day under logs and stones, or in leaf litter. Gregarious.

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

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

Collecting techniques. Turning logs and stones; sifting leaf litter.

Remarks. This species is named after Robert J.B. Hoare (Landcare Research, Auckland), longtime friend and colleague, for his special help and encouragement in our carabid research and for his special talent and dedication as a manuscript reviewer. *Ctenognathus hoarei* is morphologically close to *C. oreobius*. In addition to diagnostic characters of the male genitalia, *C. hoarei* has the following distinguishing features: antennae rufotestaceous; terminal segment of palpi truncate apically; eyes moderately convex; pronotum deeply wrinkled on disc, slightly cordate, posterolateral angles acute and slightly projected laterally; elytra subovate, sides strongly rounded, striae shallow and finely punctate. Both species are allopatric: *C. hoarei* is restricted to the Banks Peninsula (MC), while *C. oreobius* occurs mostly in southeastern areas of the South Island (MK to SL).

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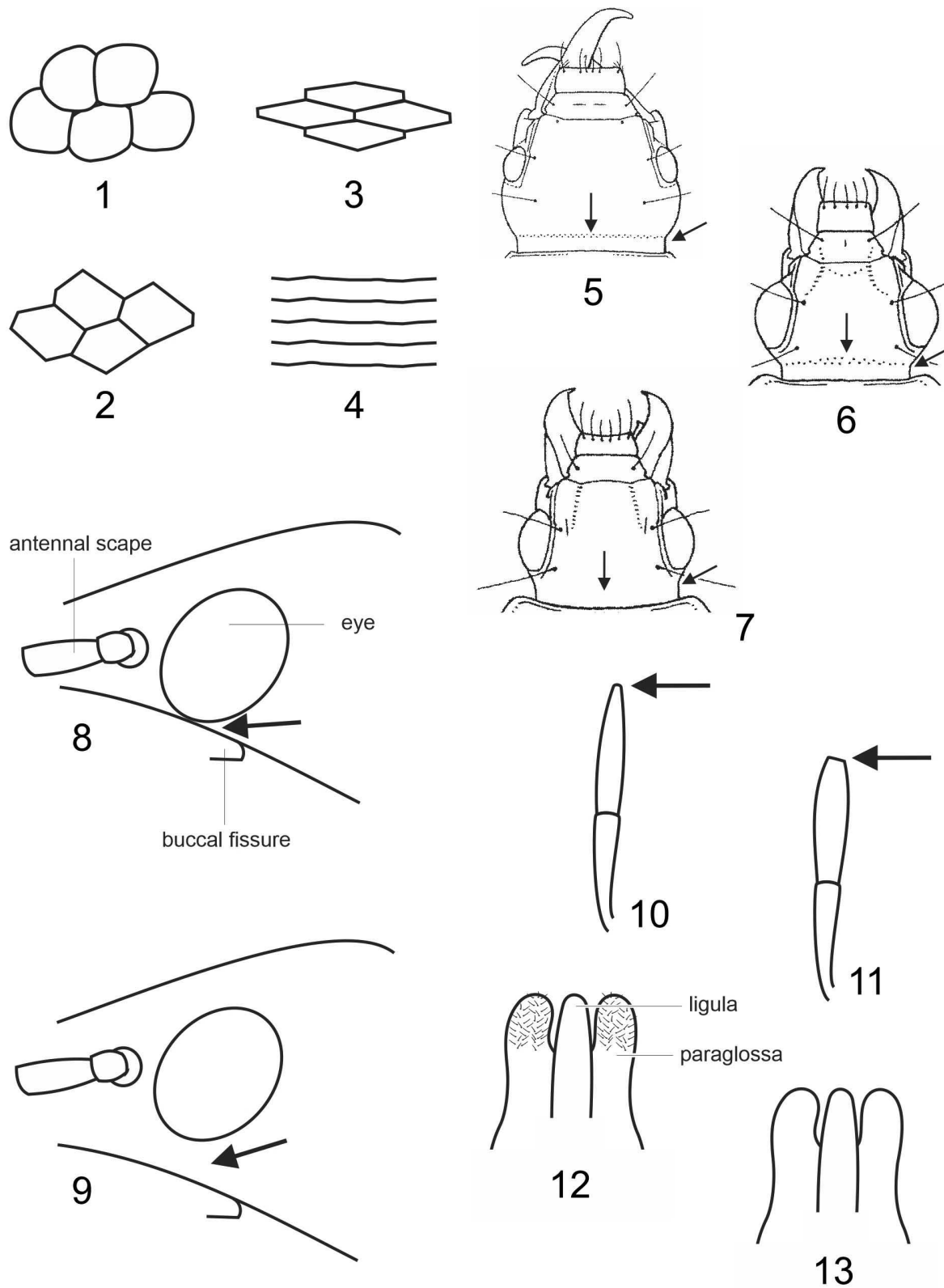
Appendix 1

Geographic coordinates of localities in decimal degrees.

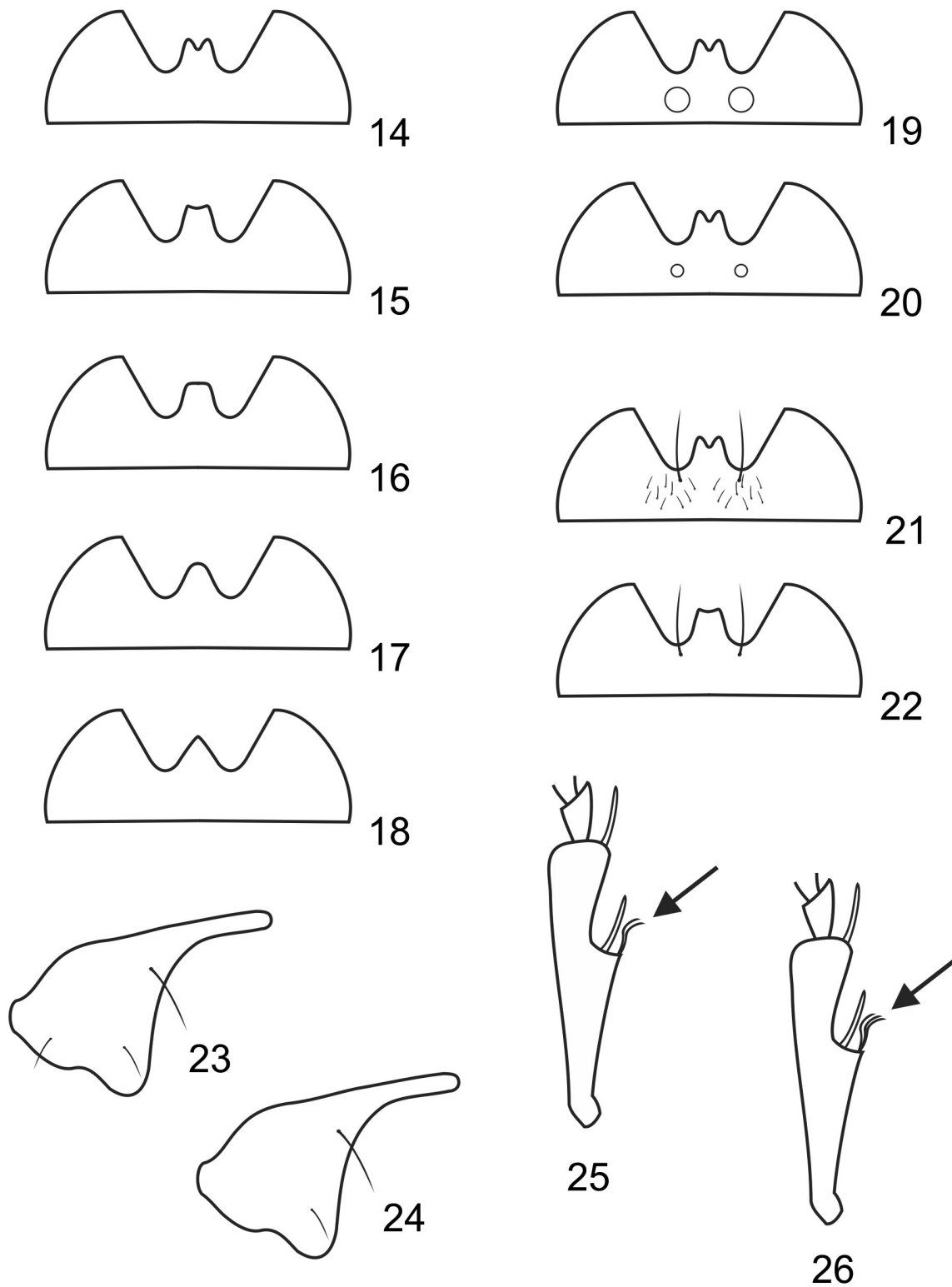
Akatarawa Range	WN	–40.9500	175.1000
Alex Knob	WD	–43.4277	170.1513
Aorere	NN	–40.7221	172.6007
Auckland	AK	–36.8525	174.7622
Aupouri Peninsula	ND	–34.7000	173.0000
Banks Peninsula	MC	–43.8825	173.0089
Bay of Islands	ND	–35.2166	174.2000
Beebys Knob	NN	–41.7329	172.9315
Big South Cape Island	SI	–47.2377	167.4075
Broken River	MC	–43.2006	171.7881
Callary Gorge	WD	–43.3931	170.1874
Canterbury	NC/MC/SC	–43.0000	172.0000
Cape Maria Van Dimmen	ND	–34.4758	172.6433
Castaway Camp, Great Island	TH	–34.1534	172.1413
Catlins River Track	SL	–46.4534	169.4685
Catlins State Forest Park	SL	–46.4800	169.3300
Chatham Islands	CH	–44.0000	176.5000
Christchurch	MC	–43.5160	172.5242
Clevedon	AK	–36.9923	175.0375
East Cape	GB	–37.7877	178.5492
Fiordland National Park	FD	–45.3800	167.2800
Fox Glacier	WD	–43.4660	170.0199
Frank Stream, Catlins State Forest Park	SL	–46.4426	169.4623
Franz Josef	WD	–43.3887	170.1824
Great Island	TH	–34.1666	172.1333
Greymouth	WD	–42.4610	171.2046
Hakapoua	FD	–46.1666	166.9500

Hermitage, Mount Cook	MK	-43.7333	170.0833
Homer Saddle	FD	-44.7593	167.9798
Huiarau Summit	GB	-38.6166	177.0166
Huka Stream	ND	-34.4286	172.9343
Hundalee	KA	-42.5988	173.4191
Hunua Ranges	AK	-37.0750	175.1800
Invercargill	SL	-46.4166	168.3666
Judges Creek	MB	-42.0557	172.9635
Kaituna River, near Aorere	NN	-40.7221	172.6007
Kaituna Stream/Valley, Banks Peninsula	MC	-43.7292	172.6985
Karangarua River	WD	-43.5765	169.8092
Lake Rotoiti	BR	-41.8333	172.8333
Lake Wilkie	SL	-46.5801	169.4391
Lake Wombat	WD	-43.4032	170.1676
Macdonalds Creek	WD	-43.2953	170.2283
Makarora	OL	-44.2332	169.2328
Manawatu Gorge	RI/WN	-40.3000	175.7666
Manawatu River Flats	WI/WN	-40.4700	175.2000
Mangamuka Gorge Walkway	ND	-35.1917	173.4550
Matapia Island	ND	-34.6060	172.7984
Mataraua Forest	ND	-35.5728	173.6506
Maungapiko Hill	ND	-34.4213	172.8622
Middle Road, Banks Peninsula	MC	-43.7166	172.6833
Mokau Road to Kiwi Road Track	TK	-38.9114	174.6069
Mokau Road to White Cliffs Track	TK	-38.8915	174.5874
Motuopao Island	ND	-34.4702	172.6377
Mount Gray, Turret Range	FD	-45.5526	167.2480
Mount Manaia	ND	-35.8181	174.5171
Mount Maungatua	DN	-45.8833	170.1166
Mount Messenger	TK	-38.9000	174.9333
Mount Quoin	WN	-41.0000	175.2333
Murimotu Island	ND	-34.4144	173.0500
Nelson	NN	-41.2734	173.2823
Ngaroku Stream	ND	-34.4133	173.0319
Oaro	KA	-42.5164	173.5044
Okarito	WD	-43.2232	170.1616
Onepu Hut Track, Waimana Valley	BP	-38.3264	177.1195
Otago	CO/DN/OL	-45.5000	170.0000
Parua	ND	-35.7669	174.4716
Picton	SD	-41.2922	174.0011
Puhi Puhi Valley	KA	-42.2826	173.7398
Remuera, Auckland	AK	-36.8763	174.7994
Reynolds, Banks Peninsula	MC	-43.7833	172.8167

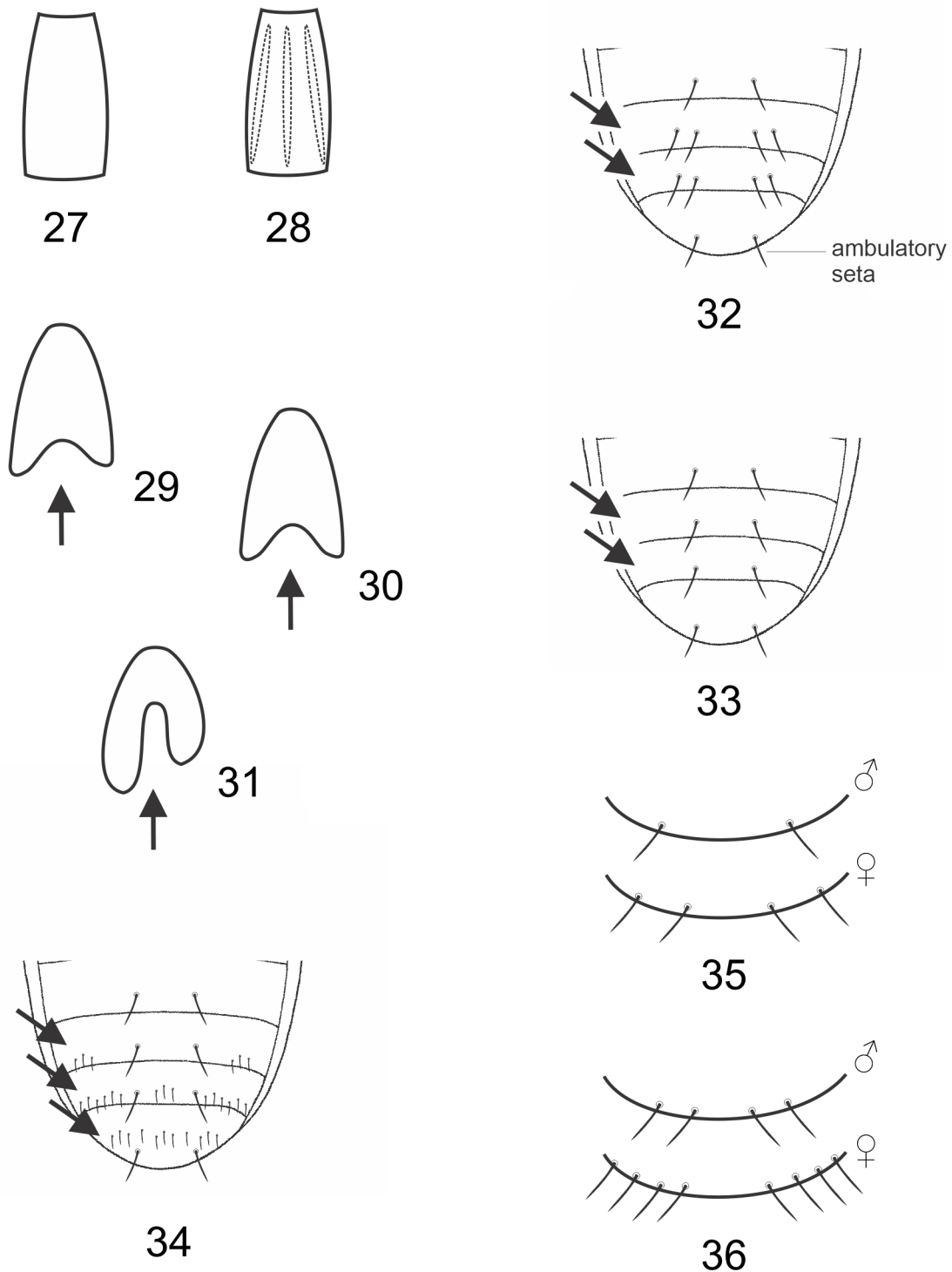
Saxton Pass	MB	-42.0696	173.2196
Shroders Creek	MB	-41.9879	172.8812
Slopedown Range	SL	-46.3500	169.0800
Spirits Bay	ND	-34.4588	172.8056
St Arnaud	BR	-41.8038	172.8470
Stewart Island	SI	-46.9962	167.8842
Stratford	TK	-39.3408	174.2844
Takahe Valley	FD	-45.2891	167.6574
Tasman Valley, Great Island	TH	-34.1608	172.1372
Taumaka Island/Forest	WD	-43.8601	168.8832
Tawanui	SL	-46.4622	169.5255
Te Kuiti	WO	-38.3333	175.1666
Te Paki	ND	-34.5039	172.7991
Te Waiiti Stream, Waimana Valley	BP	-38.3084	177.1355
Unuwhao	ND	-34.4321	172.8882
Urewera National Park	GB	-38.7500	177.1500
Waimana Valley	BP	-38.2424	177.1085
Waipoua River, Waipoua Forest	ND	-35.6524	173.5595
Waipuna Cave, Te Kuiti	WO	-38.2500	175.0833
Wairau River Bridge, Judges Creek	MB	-42.0665	172.9308
Wairoa	GB	-39.0417	177.4233
Wairoa, Hunua Ranges	AK	-37.0746	175.1361
Waitakere Railway-station	AK	-36.8507	174.5434
Wallis Stream, Catlins State Forest Park	SL	-46.4286	169.4507
Wekaweka Road end, Mataraua Forest	ND	-35.5607	173.6058
Wellington	WN	-41.2783	174.7771
West Plains	SL	-46.3680	168.3149
Whangarei Heads	ND	-35.8133	174.5055
Williams Stream	KA	-42.1132	173.7453



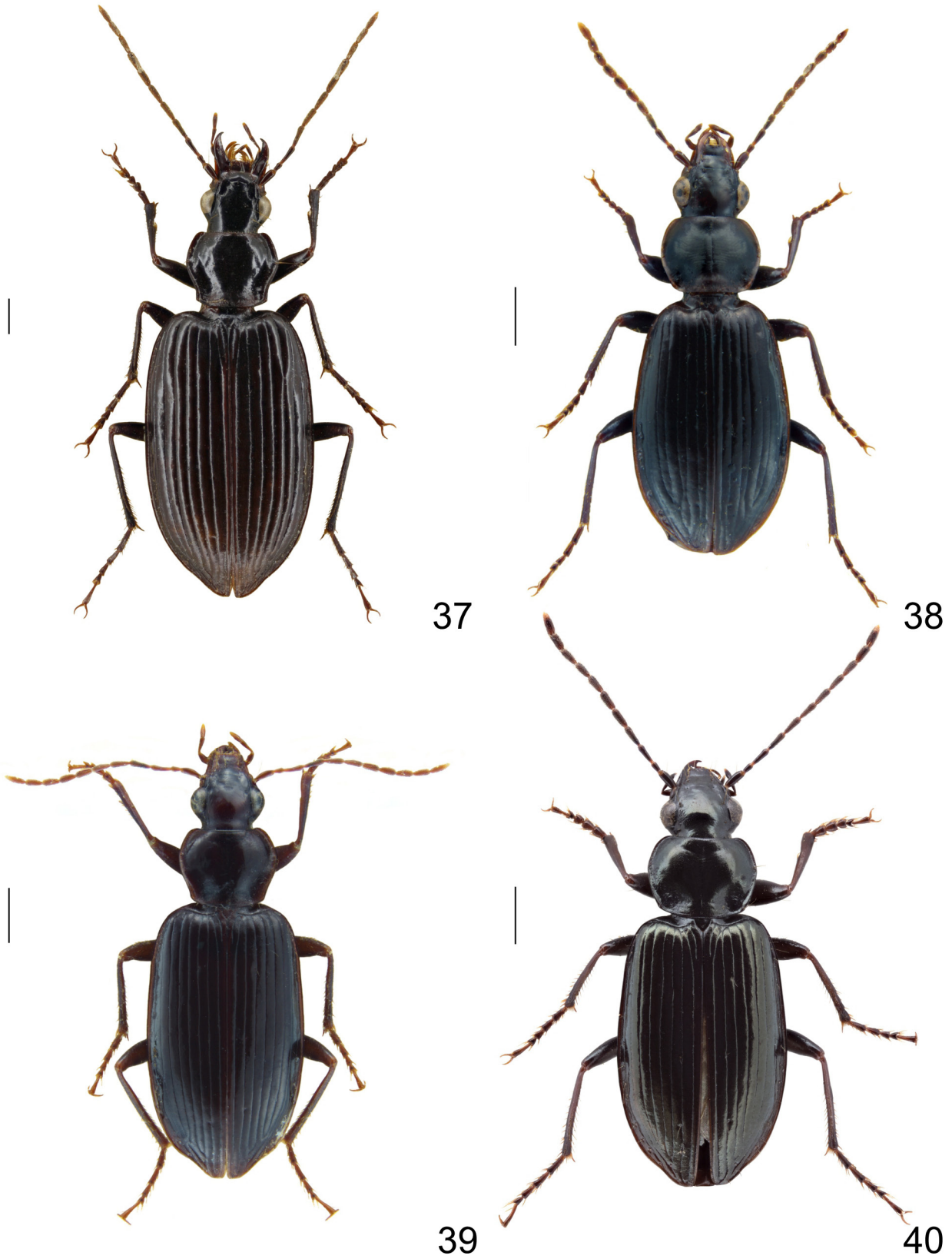
Figures 1–13. Microsculpture: 1) granulate; 2) isodiametric; 3) moderately transverse; 4) very transverse. Neck constriction, dorsolateral view: 5) deep; 6) shallow; 7) absent. Eye and buccal fissure, lateral view: 8) touching; 9) separated. Terminal segment of palpi: 10) obtuse apically; 11) truncate. Paraglossae: 12) pubescent; 13) glabrous.



Figures 14–26. Mentum: **14)** medial tooth bifid; **15)** emarginate; **16)** subtruncate; **17)** subtriangular; **18)** acute; **19)** circular foveae large; **20)** small; **21)** with numerous short setae; **22)** without short setae. Metacoxae: **23)** with 3–4 posteroventral setae; **24)** with 2 setae. Cleaning organ of protibia: **25)** with 2 clip setae; **26)** with 3 clip setae.



Figures 27–36. Meso- or metatarsomere, dorsal view: 27) not carinate; 28) tricarinate. Metatarsomere 4: 29) moderately bilobed and asymmetrical apically; 30) moderately bilobed and symmetrical; 31) strongly bilobed and asymmetrical. Abdominal sterna V–VI: 32) with 4 ambulatory setae; 33) with 2 ambulatory setae; 34) V–VII with numerous short setae; 35) VII, male with 2 ambulatory setae, female with 4 setae; 36) VII, male with 4 ambulatory setae, female with 8 setae.



Figures 37–40. Dorsal habitus. 37) *Platynus macropterus*. 38) *Notagonum chathamense*. 39) *N. lawsoni*. 40) *N. feredayi*. Scale line = 1 mm.



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Figures 41–44. Dorsal habitus. 41) *Notagonum submetallicum*. 42) *Prospodrus mangamuka* new species. 43) *P. waltoni*. 44) *P. sirvidi* new species. Scale line = 1 mm.



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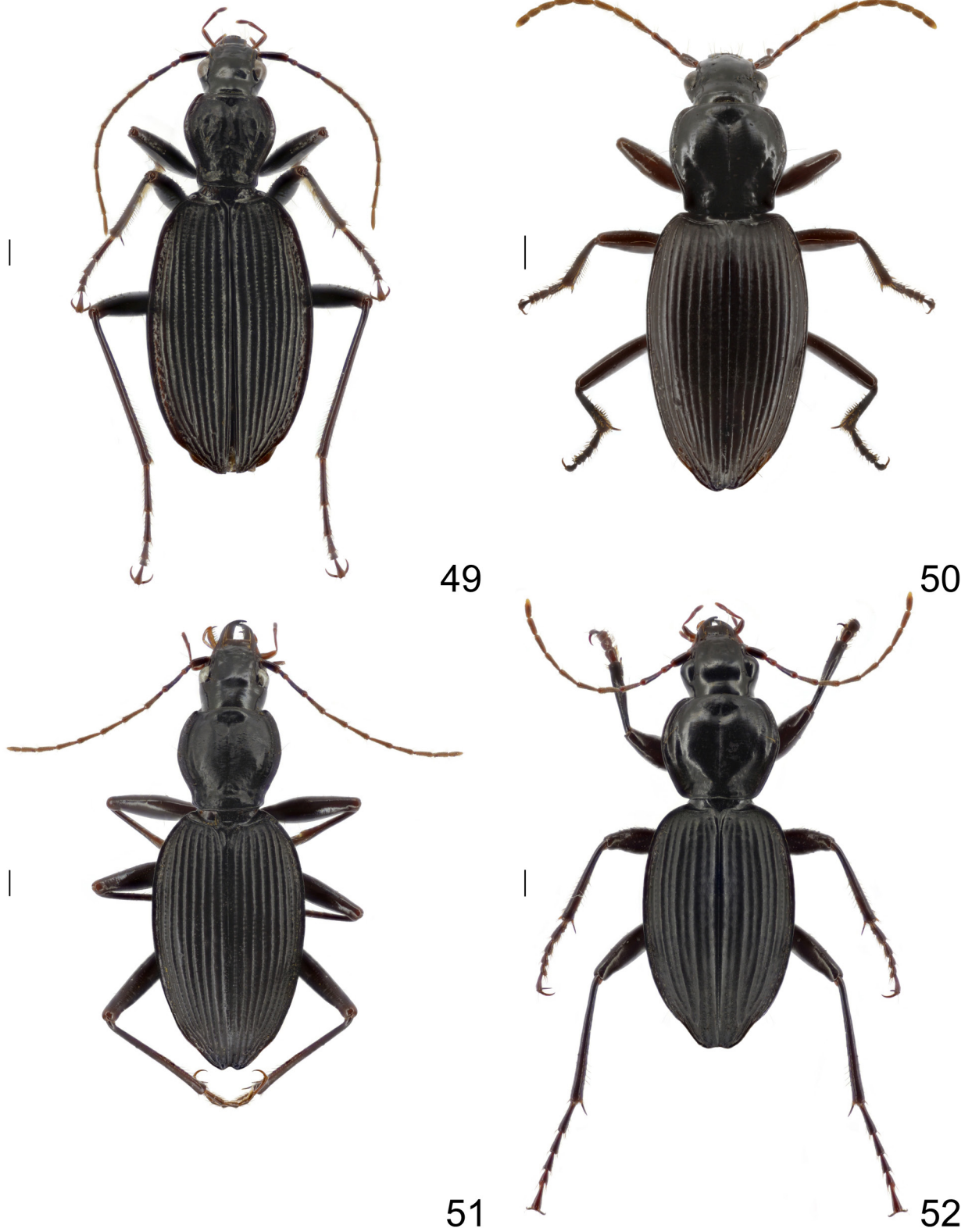


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Figures 45–48. Dorsal habitus. 45) *Prospodrus waimana* new species. 46) *P. occultus*. 47) *Maoriplatynus marrisi* new species. 48) *Kiwiplatynus bidens*. Scale line = 1 mm.



Figures 49–52. Dorsal habitus. 49) *Kiwiplatynus taranaki* new species. 50) *Kupeplatynus sulcitaris*. 51) *K. crenatus*. 52) *K. lucifugus*. Scale line = 1 mm.



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Figures 53–56. Dorsal habitus. 53) *Tuiplatynus sophronitis*, teneral. 54) *T. libitus*, teneral. 55) *Ctenognathus novaezelandiae*. 56) *C. elevatus*. Scale line = 1 mm.



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Figures 57–60. Dorsal habitus. 57) *Ctenognathus garnerae* new species. 58) *C. tepaki* new species. 59) *C. urewera* new species. 60) *C. cardiophorus*. Scale line = 1 mm.



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Figures 61–64. Dorsal habitus. 61) *Ctenognathus adamsi*. 62) *C. pictonensis*. 63) *C. tawanui* new species. 64) *C. perumalae* new species. Scale line = 1 mm.



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Figures 65–68. Dorsal habitus. 65) *Ctenognathus takahe* new species. 66) *C. arnaudensis*. 67) *C. marieclaudiae* new species. 68) *C. edwardsii*. Scale line = 1 mm.



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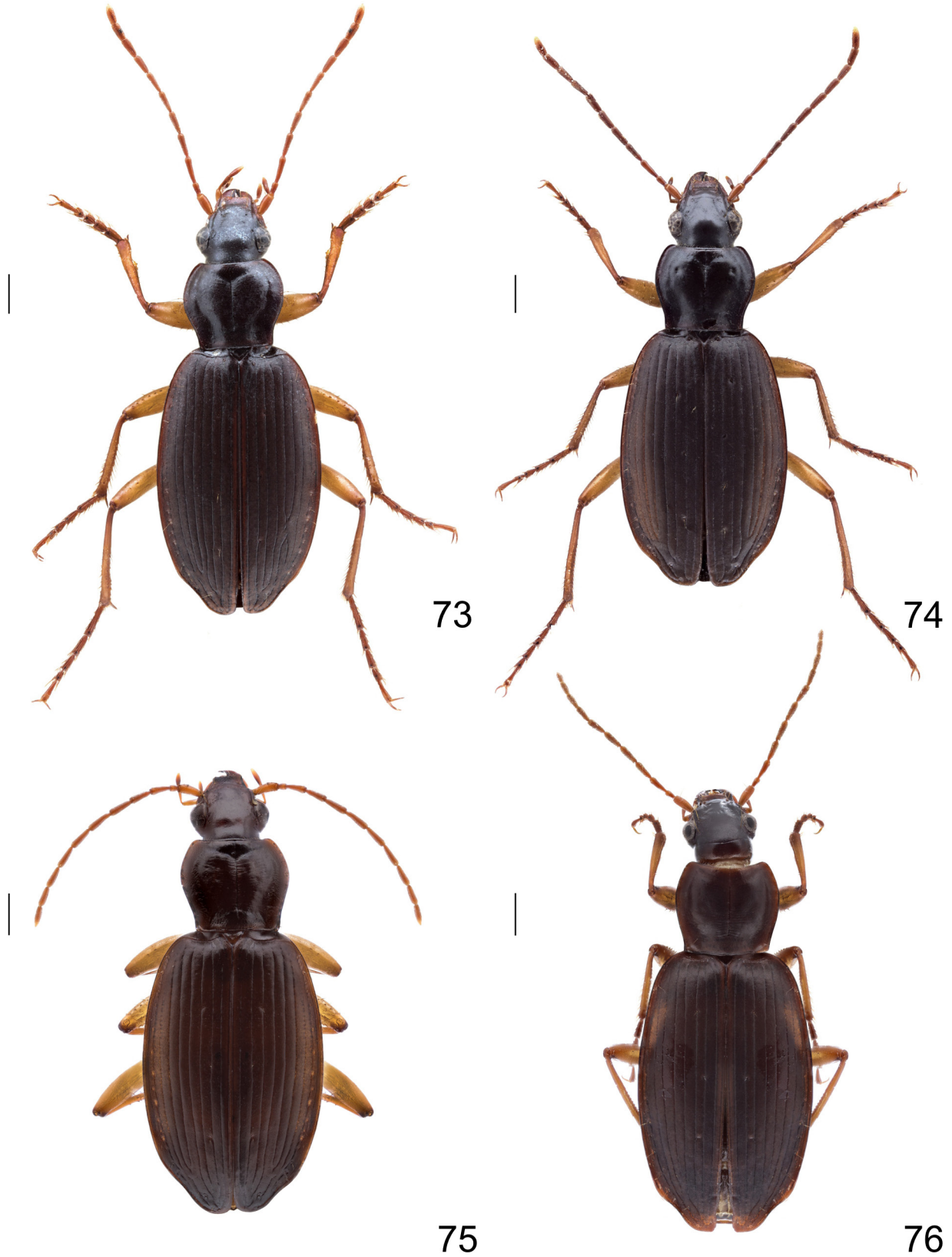


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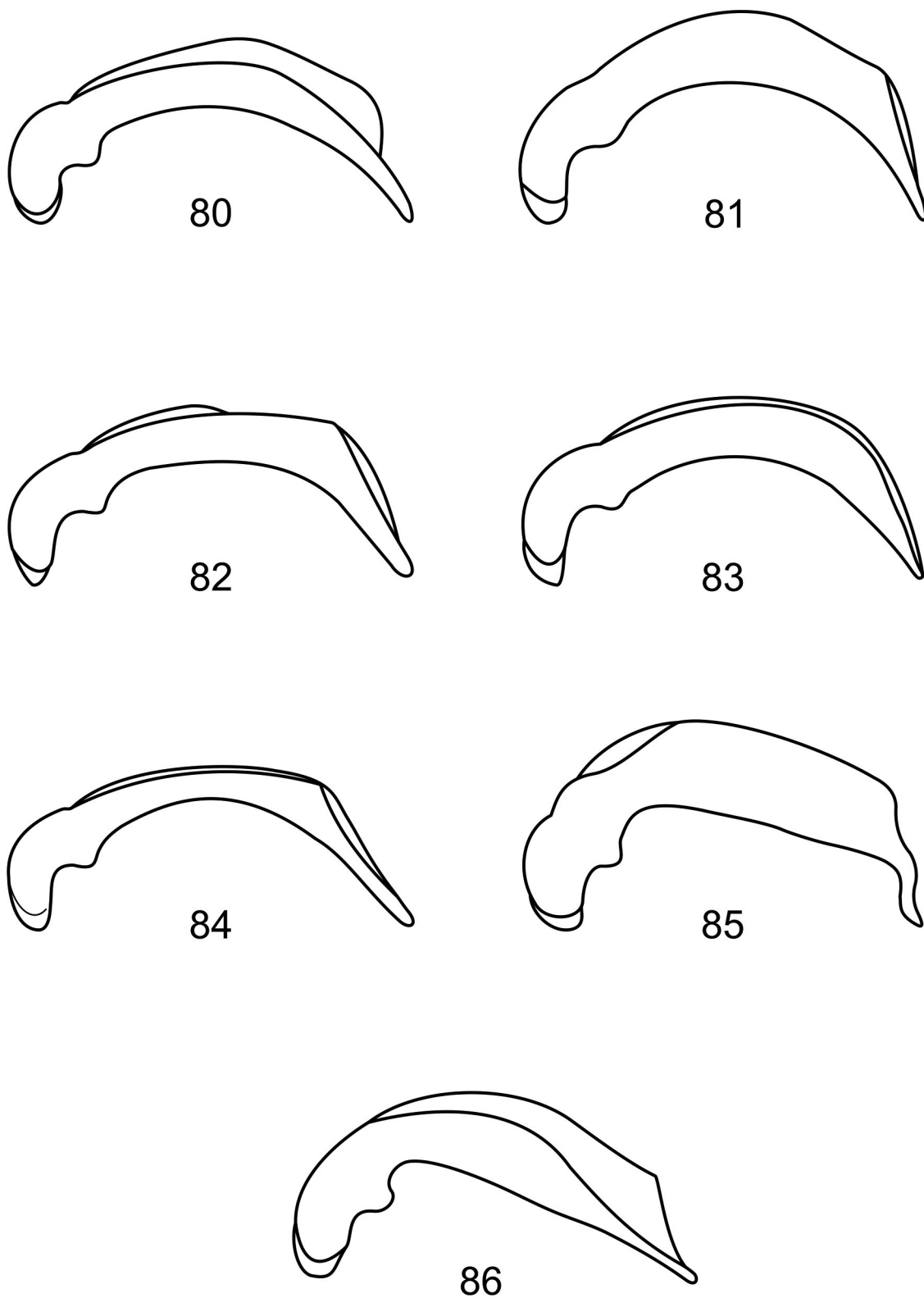
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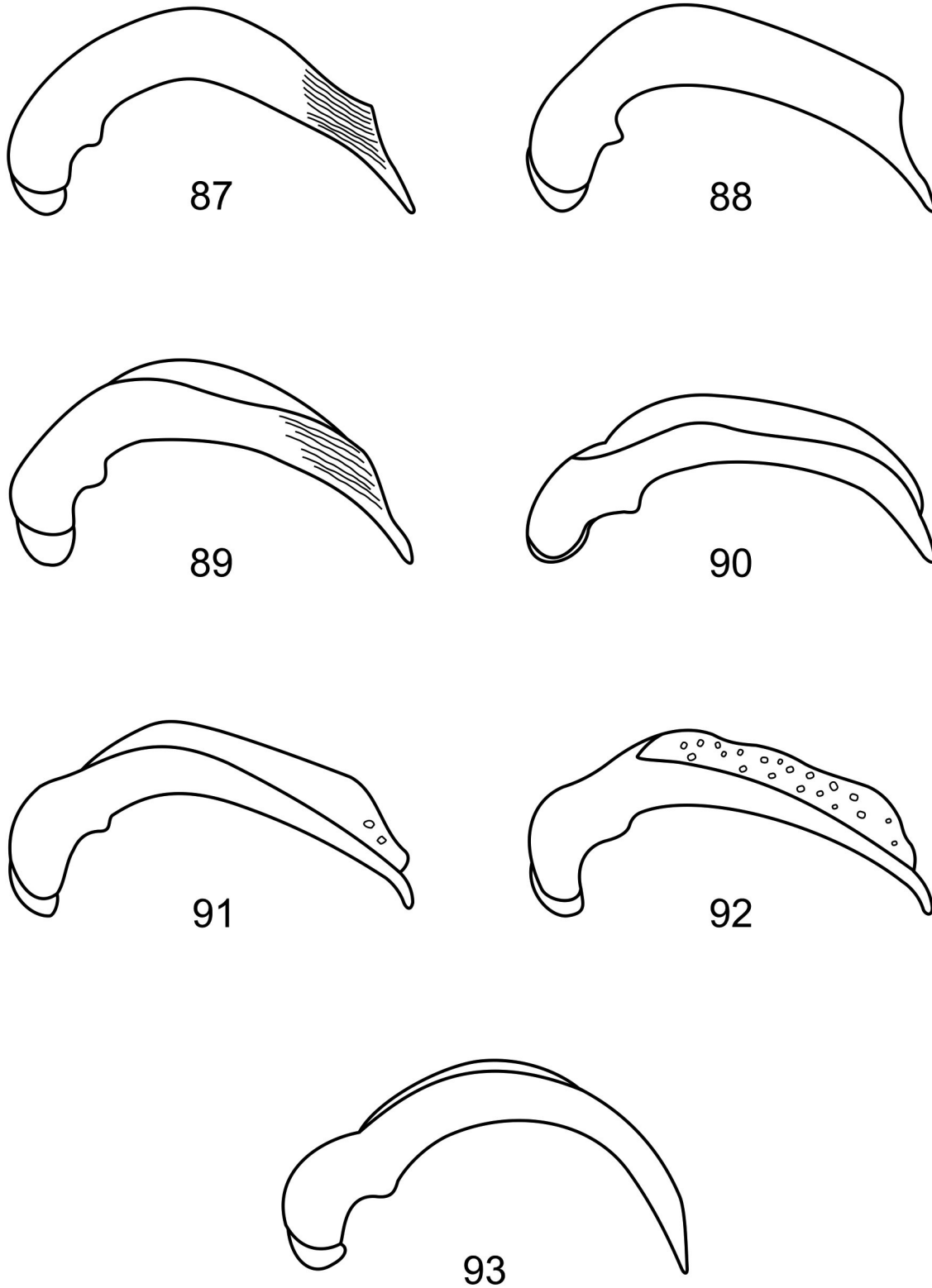
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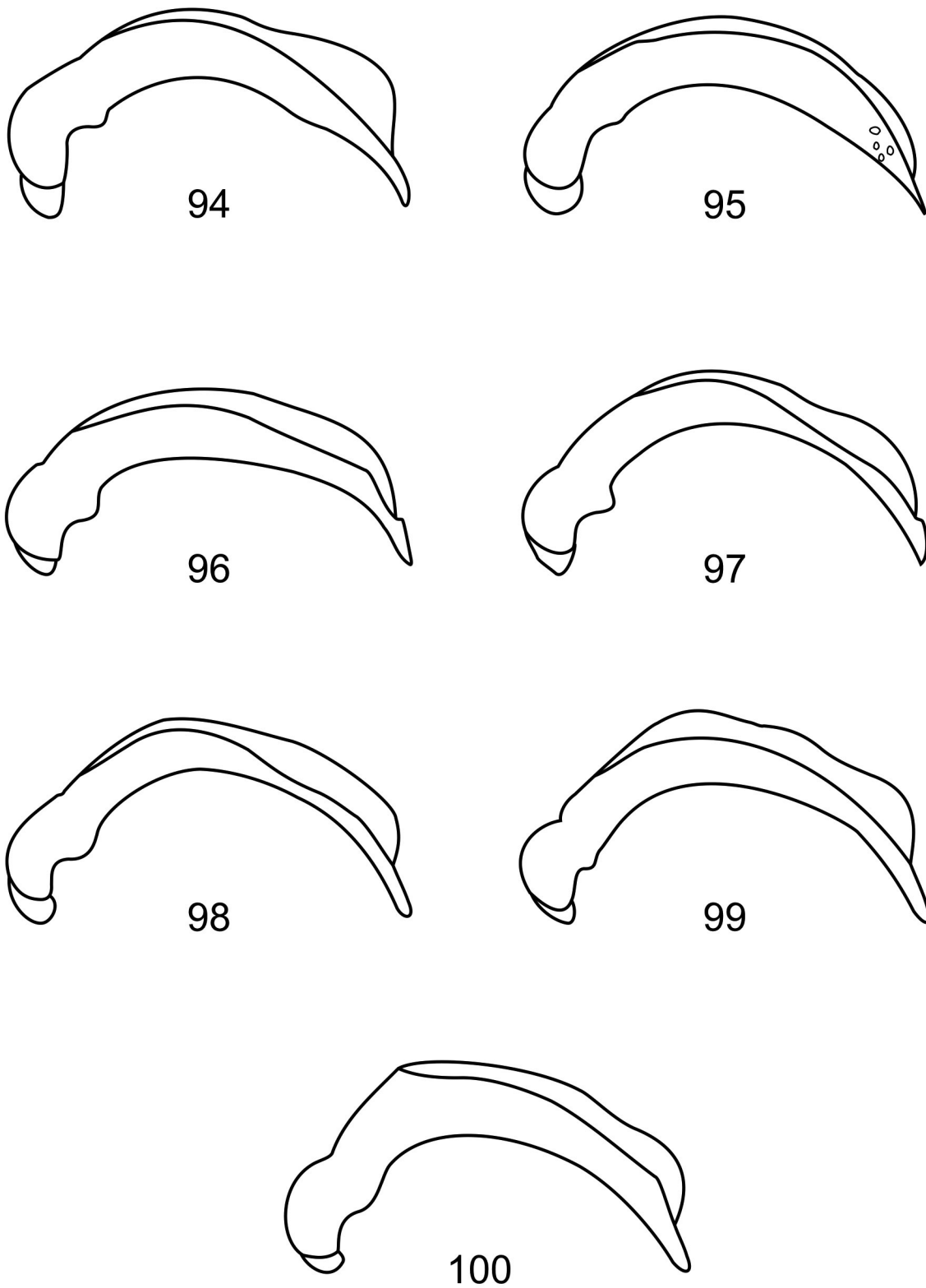
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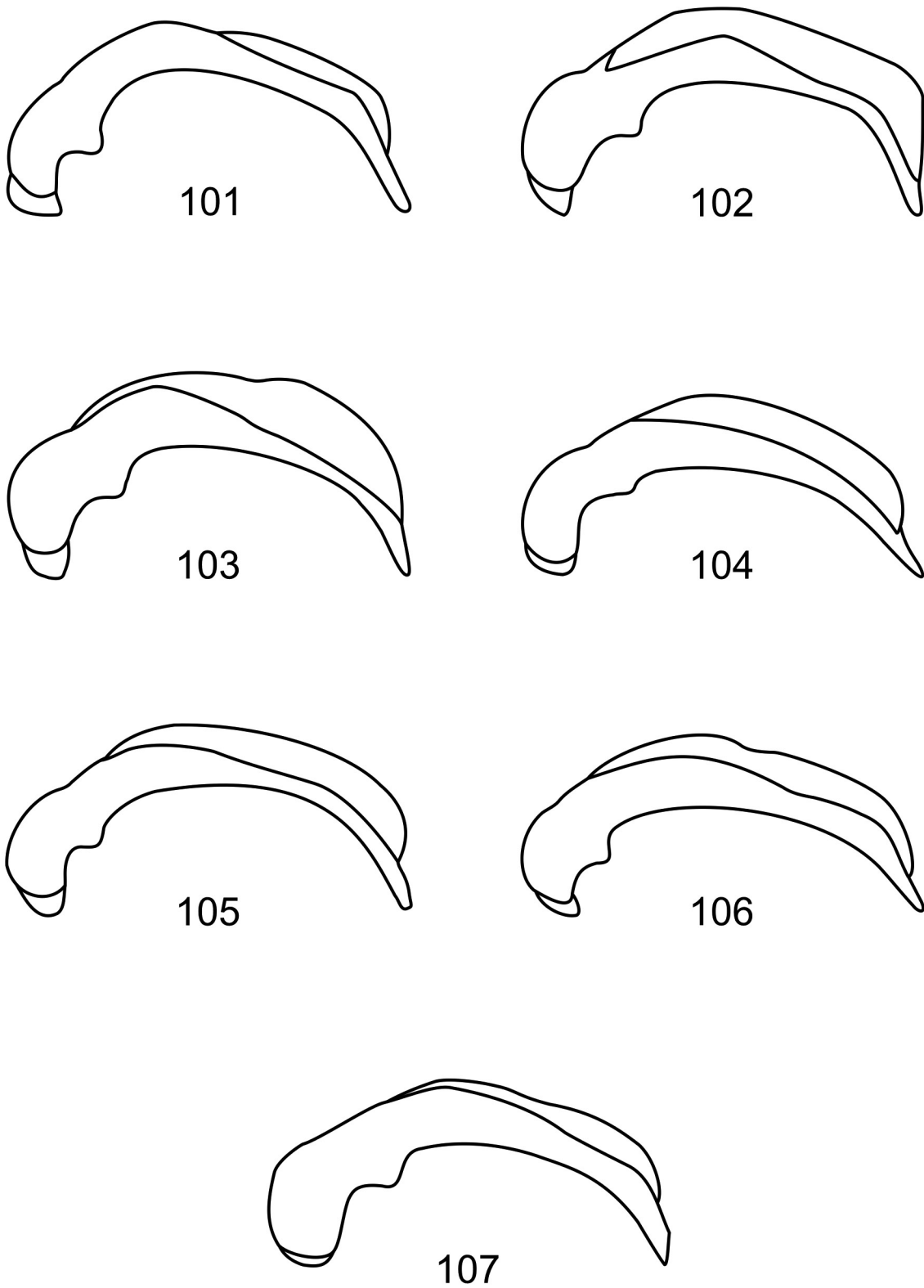
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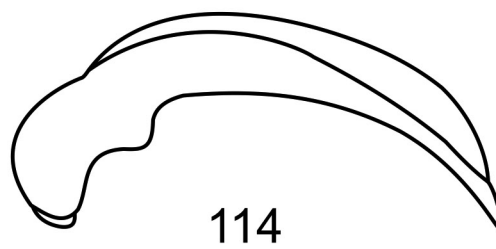
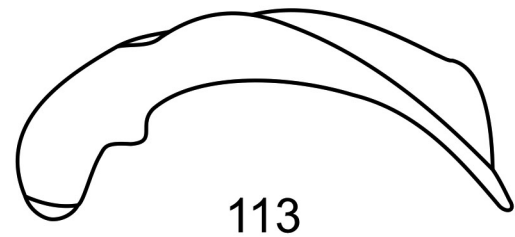
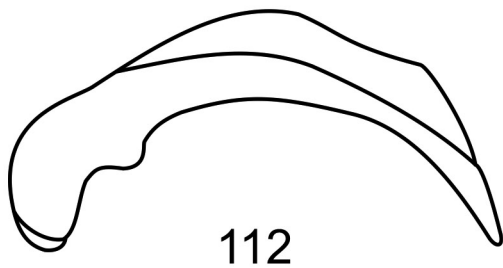
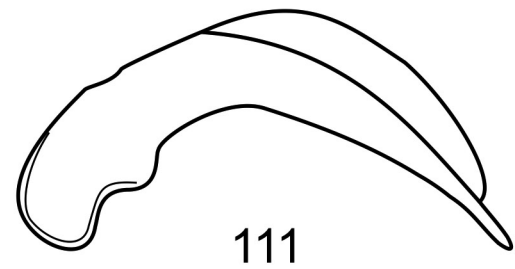
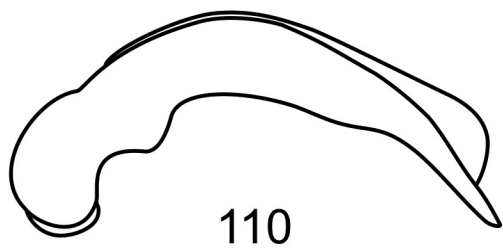
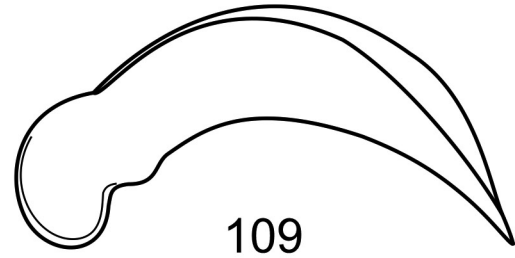
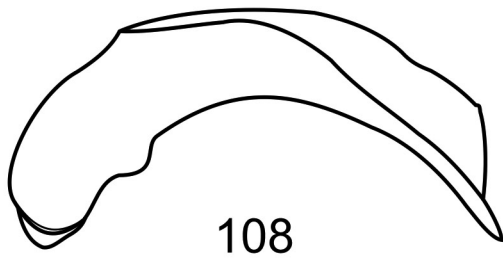
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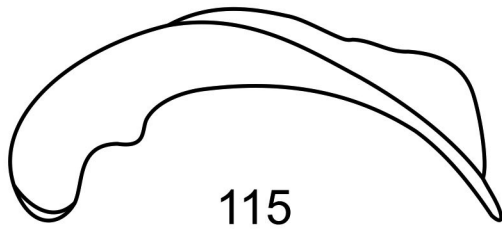
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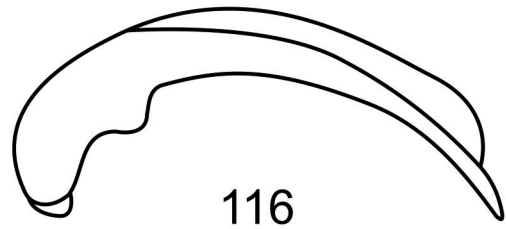
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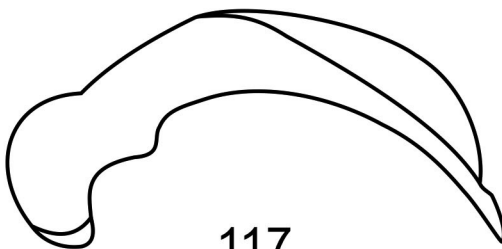
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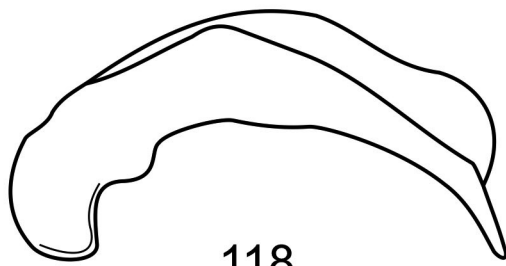
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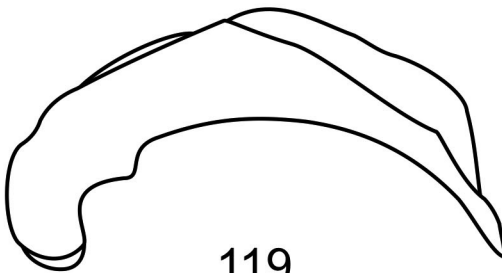
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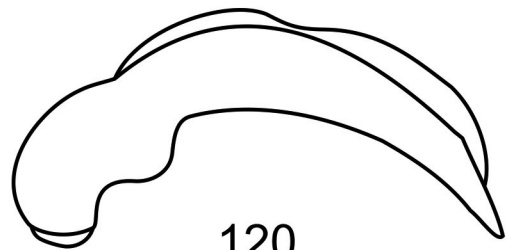
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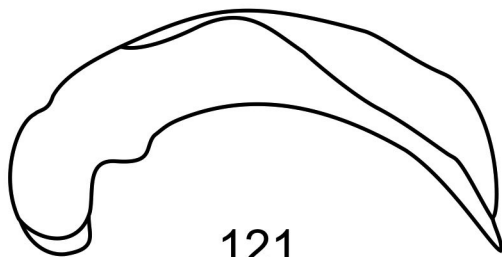
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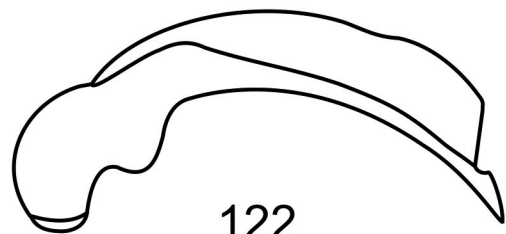
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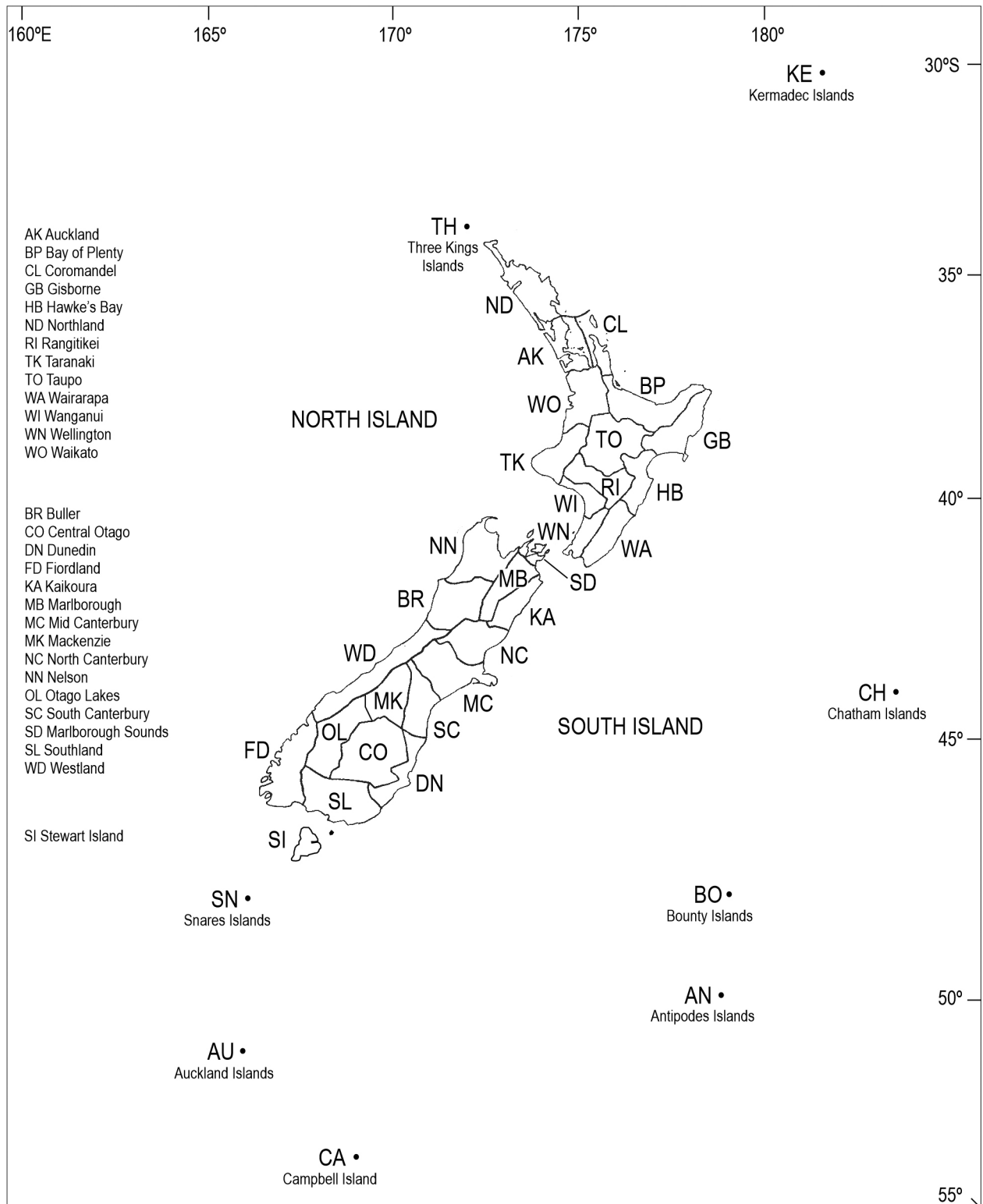
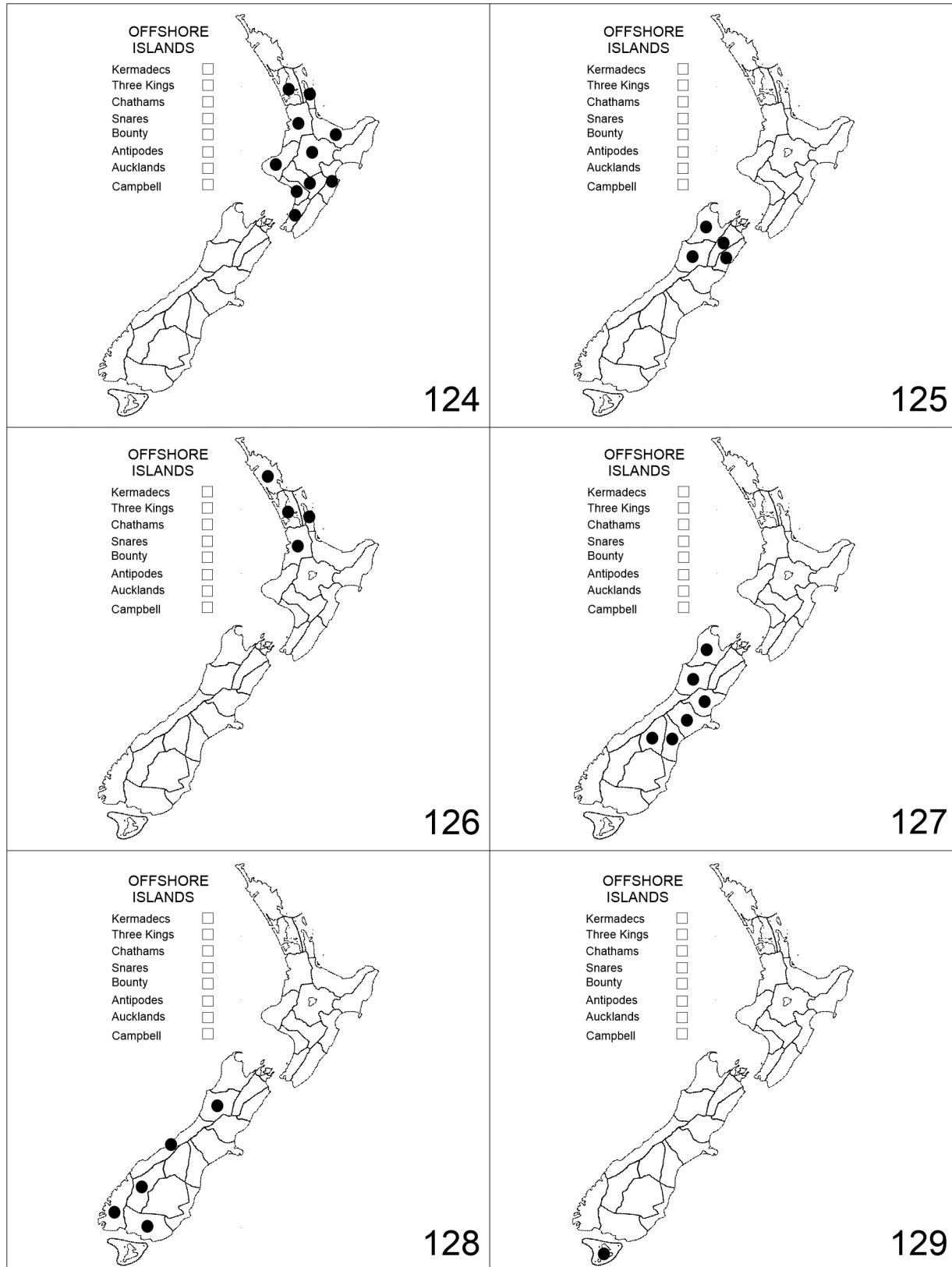
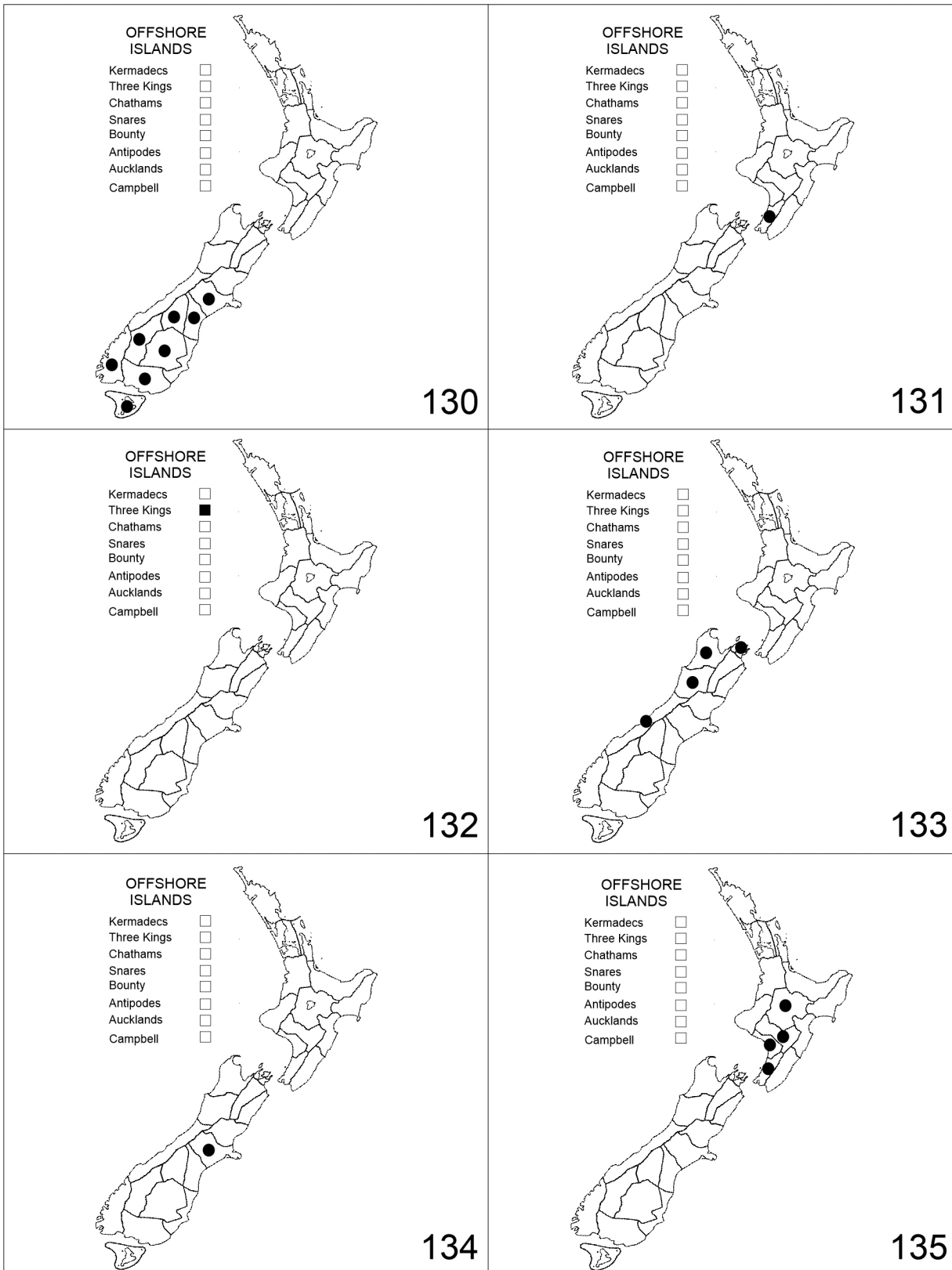


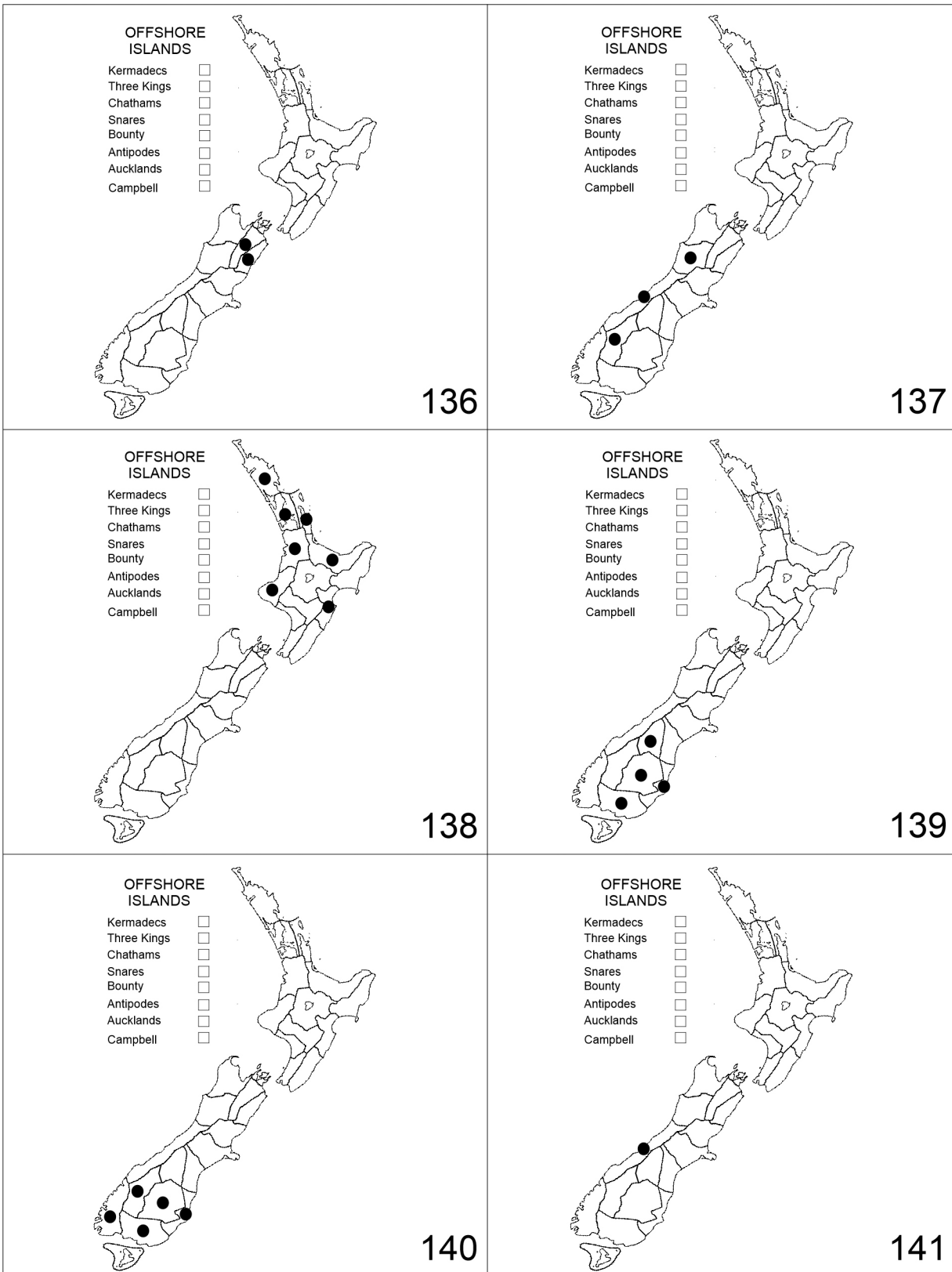
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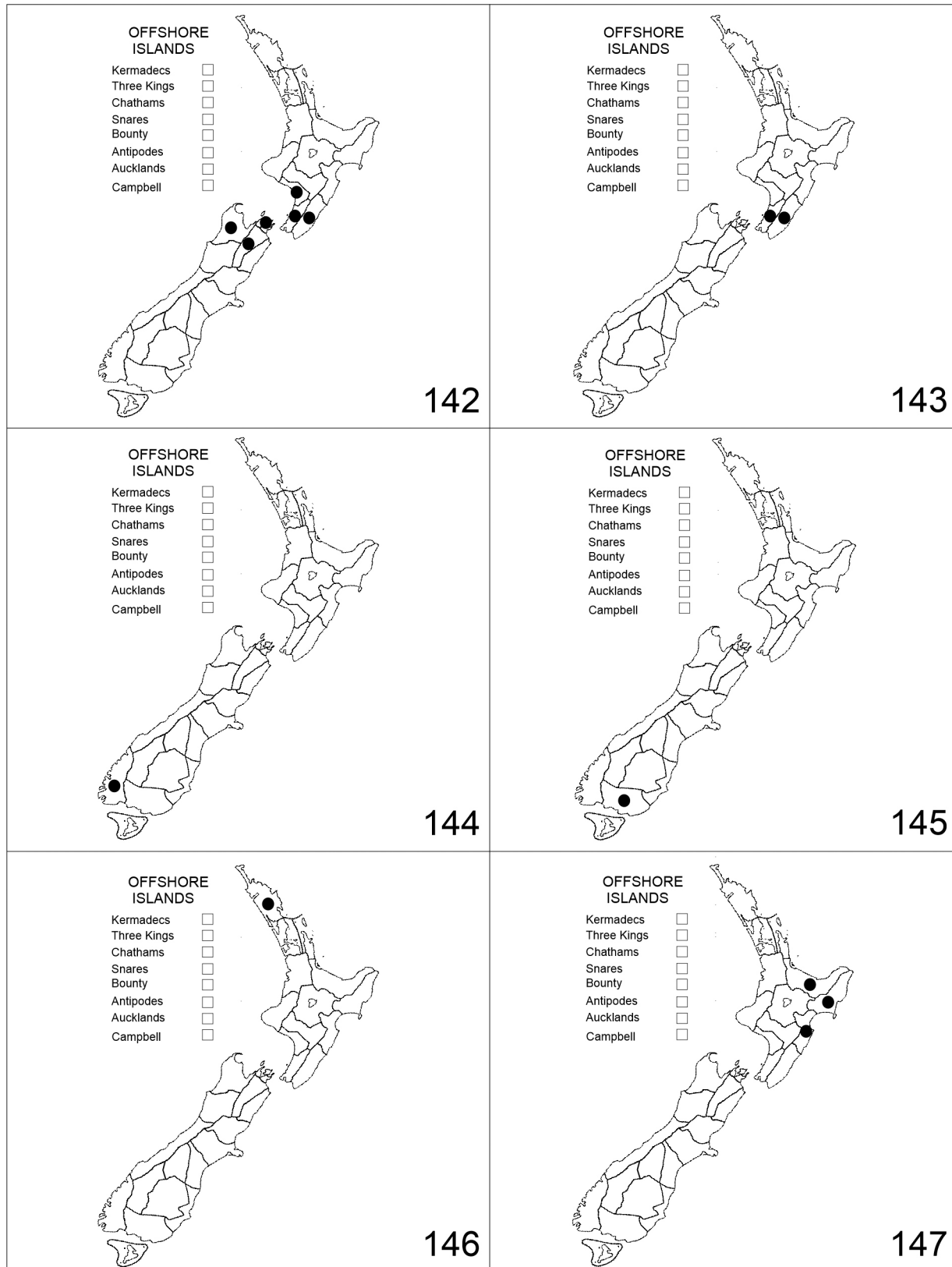
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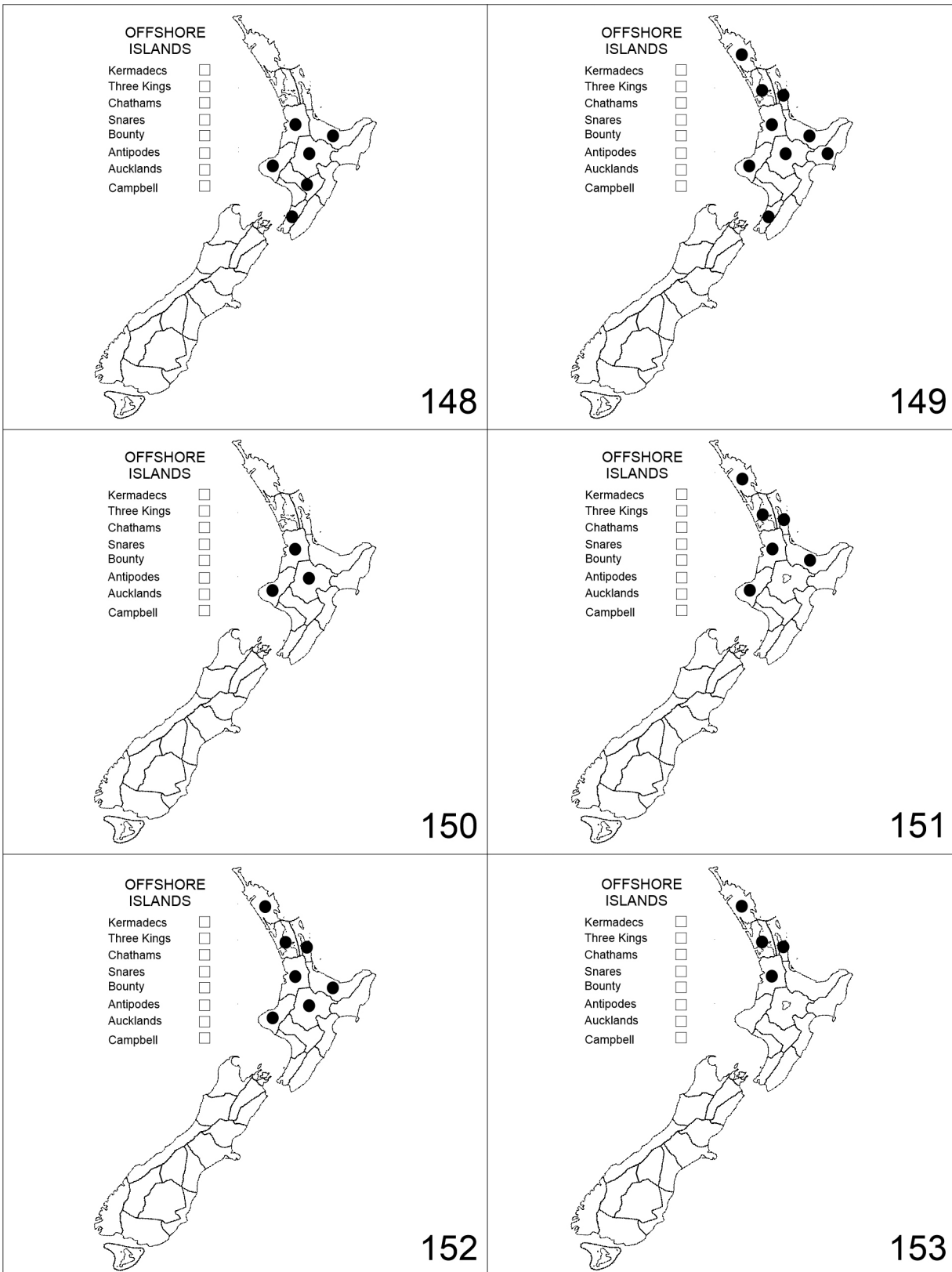
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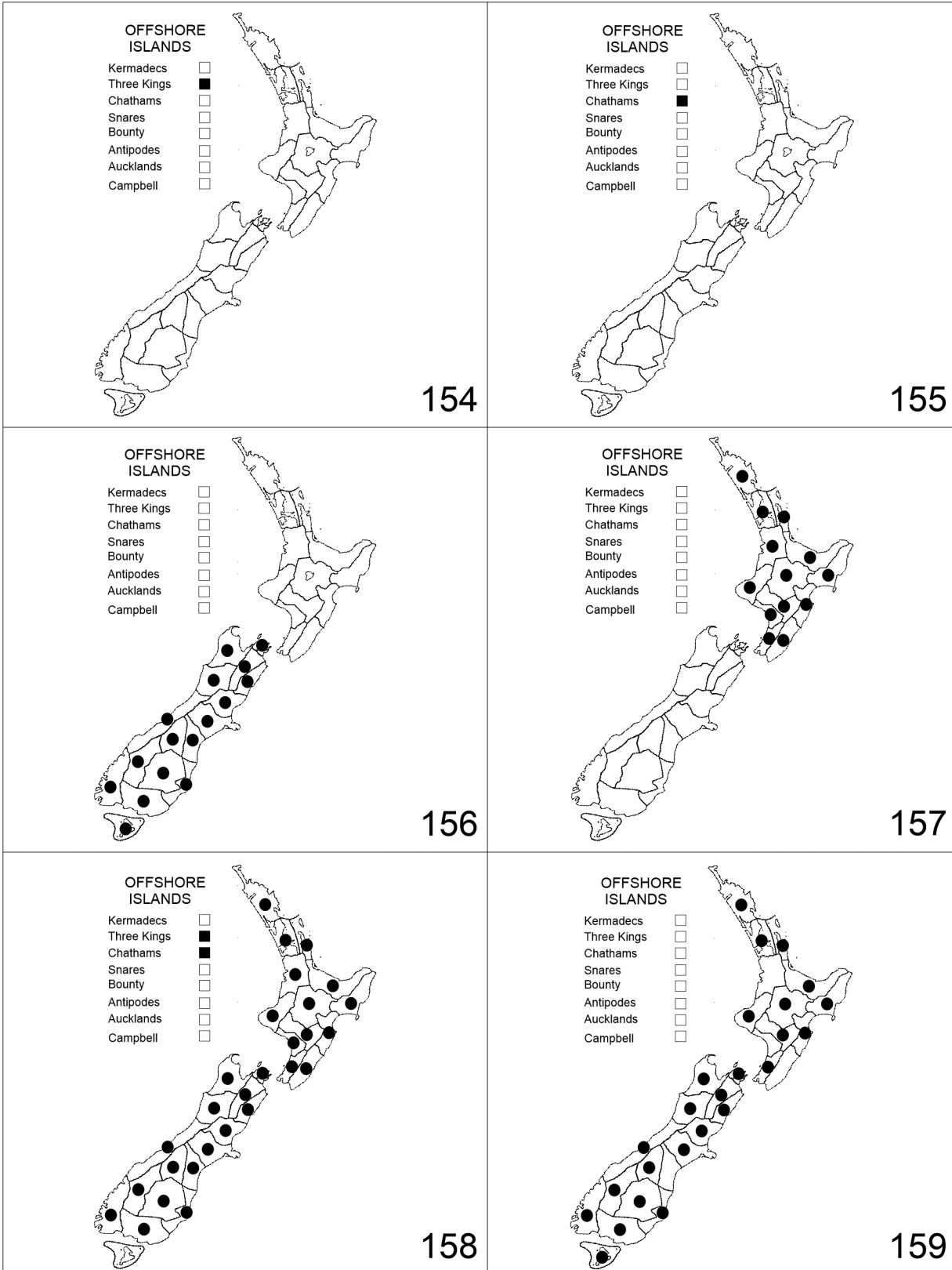
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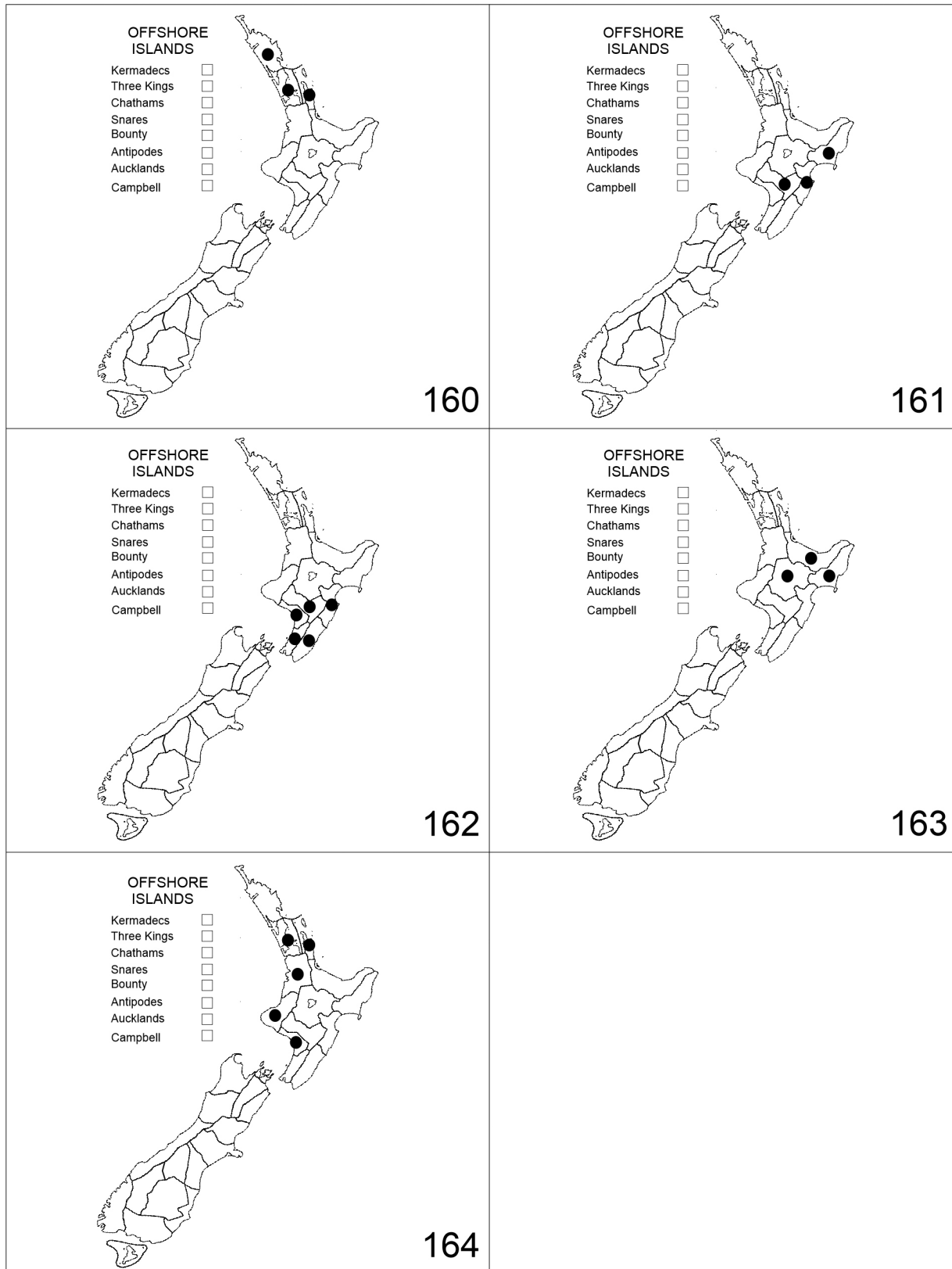
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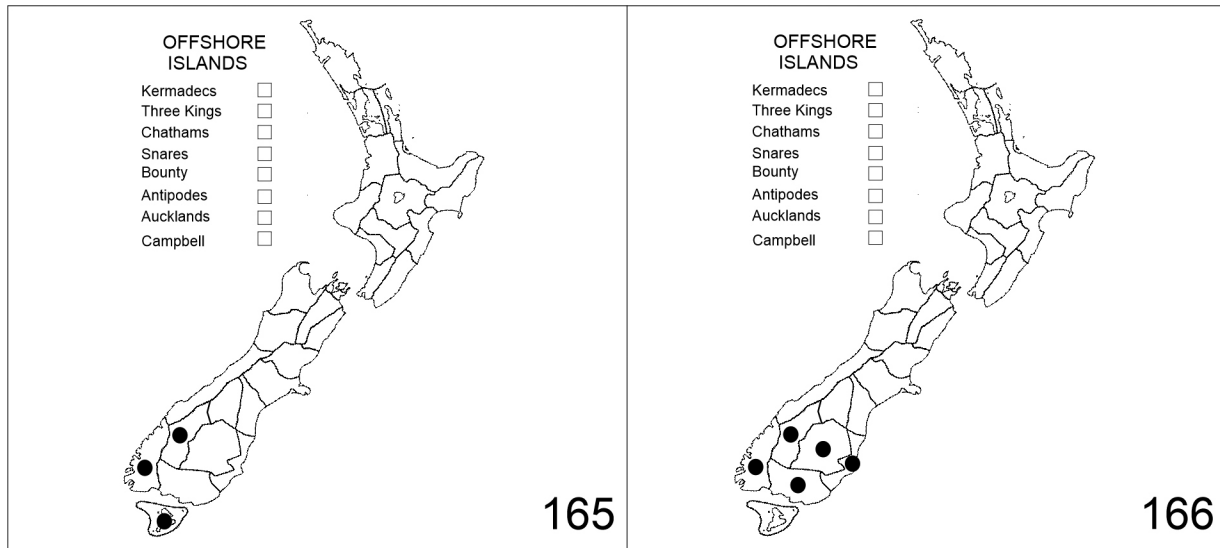
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