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Ko te Aitanga Pepeke o Aotearoa
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Carabidae
(Insecta: Coleoptera): catalogue

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2001
Class Insecta
Order Coleoptera
Family Carabidae

Ground beetles

The family Carabidae (ground beetles, including tiger beetles) is composed of 25 000 to 50 000 species worldwide, but probably at least twice as many taxa remain to be described. The world fauna is divided into 6 subfamilies and 85 tribes. Compared with larger or warmer regions of the world, the New Zealand fauna may appear relatively small (5 subfamilies, 20 tribes, 78 genera, 424 species), but New Zealand, with Australia, is a special place where the tribes Amarotypini, Broscini, Mecyclothoracini, Meonini, Migadopini, Pamborini, Tropopterini, and Zolini appear to have achieved their greatest taxonomic diversity. Once described, the New Zealand fauna may appear relatively small (5 subfamilies, 20 tribes, 78 genera, 424 species), but New Zealand, with Australia, is a special place where the tribes Amarotypini, Broscini, Mecyclothoracini, Meonini, Migadopini, Pamborini, Tropopterini, and Zolini appear to have achieved their greatest taxonomic diversity. Once described, the New Zealand fauna may appear relatively small (5 subfamilies, 20 tribes, 78 genera, 424 species), but New Zealand, with Australia, is a special place where the tribes Amarotypini, Broscini, Mecyclothoracini, Meonini, Migadopini, Pamborini, Tropopterini, and Zolini appear to have achieved their greatest taxonomic diversity. Once described, the New Zealand fauna may appear relatively small (5 subfamilies, 20 tribes, 78 genera, 424 species), but New Zealand, with Australia, is a special place where the tribes Amarotypini, Broscini, Mecyclothoracini, Meonini, Migadopini, Pamborini, Tropopterini, and Zolini appear to have achieved their greatest taxonomic diversity.

While it is easy to recognise a carabid as such, it is rather difficult to identify it at the species level. Ground beetles show a relatively high degree of morphological uniformity, a marked diversity of taxa, and striking ecological preferences, which make them especially suitable for studying the ecological and physical adaptations required to cope with environmental demands. Carabids are generally abundant and demonstrate a flexible set of responses to environmental factors. Because of these features, the relative ease with which their populations may be sampled by reliable quantitative methods (e.g., pittrapping), and their potential use as bioindicators and biocontrol agents, these beetles increasingly attract the attention of world scientists. Biologists investigating evolutionary and ecological hypotheses particularly favour this group. In New Zealand, conservation biologists have already listed many, often large-sized carabid species, as rare or threatened and worthy of protection.
As a result, ground beetles are among the best represented insect groups in New Zealand entomological museums and collections. But despite such high interest, no catalogue or checklist has been produced since 1934, although numerous name changes and new species have been published since then.

In general, carabids are hygrophilous (moisture-loving) species living at ground surface, but a number of species also live deep in the soil, in caves, or on plants and trees, and several species occur in association with the loose bark of trees or in rotten branches. The two New Zealand native habitats that harbour the greatest number of species are forests and tussock grasslands. While some species live almost exclusively along coastal lowlands, the majority of New Zealand species are found from the lowlands to higher elevations below the subalpine zone. Very few described carabids appear to be restricted to subalpine or alpine environments, but many new species remain to be described from such habitats. Most indigenous carabids occur naturally within the confines of native habitats, although a number of them can survive in modified environments. About 10 adventive species live around human dwellings. About 50 species (mostly native) dwell successfully in pine plantations, provided these are located near or adjacent to native forests. Introduced species seem to be able to invade natural habitats, but only to a slight degree.

Very little is known about the life history of native Carabidae. The reproductive season of most species is undocumented. Mouthpart morphology and food data are also very secretive, living in ground burrows or holes, and are rarely encountered at the surface of the ground, which makes them difficult to sample either by hand or by trapping.

New Zealand ground beetles have a number of enemies and parasites. Starlings, kiwis, spiders, and hedgehogs are frequent predators, while magpies, asilds, kingfishers, fernbirds, stoats, feral cats, thrushes, trout, and rats appear to be occasional predators. Based on the authors’ field experience, spiders could be significant predators, especially in tussock grasslands, herbfields, and fellfields. About 32% (137 species) of all carabid species studied are infested by mites (Acari), and at least 11% (48 species) of the total carabid fauna are subjected to me te taupuhi kai. I Aotearoa, arā ētahi momo carabid maha tonu (tāe atu ki ētahi mea rahi), ē kī ana ngā tohunga whakapūmāu koiora kua ongē, kua mōrearea rānei te noho, ā, me tika ki tika.

Nā konei anō i nohoia nuitia ai ngā whare rokiroki pepeke me ngā kohinga pepeke o Aotearo a ngā pītara noho papa, ina whakaritea ki ērā atu o ngā aitanga pepeke. Engari ahakoa e whāia nuitia ana tēnēi whiānau, nō te tāu 1934 te whakararangitanga whakamutanga o ōna huānga katoa (otirā, kua tāia he kōrero e whakautu ana i ngā ingoa hou, me ngā momo hou i roto i te wā).

Noho ai te nuinga o ngā carabid ki te mata tonu o Papatuanuku, ā, he pai ki a rātou te mākū. Hei anō, arā ētahi ka noho rawa ki tōna pōho, ki ngā ana, ki runga rānei i ngā tipu me ngā rākau. Arā anō ētahi ka noho tahi ki te hiakō tangatanga, ki ngā peka pirau rānei. Ko ngā kāinga noho māorī e rua o Aotearoa e kītea ai te tokomahā o ngā momo carabid, ko te ngahere me ngā whenua pātītū. Ko ētahi momo ka noho ki ngā whenua pātītū o te tahamoana anake, engari ko te nuinga, ka kītea mai i te atahitika, piki atu ki ngā whenua āhuia teitei tonu. He tino tokoiti ngā momo ka noho ki ngā maunga teitei anake, engari me te mōhio anō he momo kei aua takiwā kāore anō i āta tautuhia. Ko te nuinga o ngā carabid o konei taketake ake, ka kītea i ngā kāinga māorī, engari ko ora tonu ētahi i ngā kāinga noho i waihangatia e te ringa tangata. Tekau peā ngā momo ka noho tahi ki a ngāi tāua, ki te tangata. Kei te āhuia 50 ngā momo (ko te nuinga nō konei tūturu) kua pai tā rātou noho ki ngā ngahere paina, mehemea e pātata ana ki tētahi ngahere māorī. Kua hou atu anō ngā momo o āwāhi i ētahi kāinga māorī, engari kāore i panaia ngā momo tūturu ki waho.

He iti noa te mōhio ki te tupu haere o ngā Carabidae māorī mai i te whānautanga tae noa ki te hemonga. Kāore e mōhiota ana te kaupeka whakapūta uru o te nuinga. Waihoki, ko ngā āhuautanga taupori me te āhuia o tā rātou neke haere, me ki kei te huna tonu. Hei, ko te hanga o te waha me te āhuia o ā rātou kai, e tohu ana he maha ngā momo mea ka pataua e te pītara nei hei kai māna. He oreore tonu tā ngā pakeke mō te nuinga o te tau, otorā, ka āhuia ngōikore haere ka takurua ana. He haere pō anō ngā pakeke. Kua kītea ngā uwha o ētahi momo 11 e tīaki ana i ngā hua me ngā kūi. Me ki he huna tonu tā ngā kūi, noho ai rātou ki te poho o Papa, ā, me uua ka puta ake ki te whaiāo. Koinei anō i uua ai te ho i a rātou ki te ringa, ki te kōpīha rānei.

Me kōrero anō ngā hoariri o ngā pītara noho papa i Aotearoa. Ko ēna hoariri matua, ko te tāringi, te kiwi, te pūngāweroewere, me te tuatete, engari i ētahi wā he hoariri
infestations by fungi (Laboulbeniales). Species infested with Laboulbeniales or mites are usually rain-forest dwellers, often associated with rotten wood, branches, or logs. Nematodes have been found to parasitise 5 ground-beetle species.

Carabids with fully developed wings disperse easily and can form stable populations soon after colonising new environments. However, the majority of native ground beetles are flightless and use running as their main means of locomotion. When disturbed, Carabidae generally burrow into litter or soil, or run away. A number of other interesting defense mechanisms can be observed in New Zealand species. Two tiger beetles use a form of camouflage or colour pattern, blending perfectly with the background, to protect themselves against enemies. Death feigning can be observed in several species, mostly in the tribe Broscini. Other species emit a repellive smell or bite strongly when seized. Adults of *Amarotypus* standing on tree trunks at night drop to the ground if approached too closely, and *Prosphrodrus* species have the peculiar habit of diving into water when disturbed.

Too little information is currently available on the abundance and distribution of supposedly rare species to establish their conservation status with certainty, even though about 50 taxa have been declared as such. It is only through investigations including quantitative trapping and mark-recapture over several seasons that any meaningful conservation assessment can be formulated. Ground beetles are usually well hidden and scattered by day, hence usually escape the attention of the most specialised or attentive collector. Having to rely on casual observations or collection prevents any realistic approximation of population size and distribution.

Information about New Zealand carabids accumulated over the last 150 years is not easily accessible. It is most often scattered through the world literature or still associated with specimens in biological collections. With this catalogue, the authors wish to provide specialist as well as non-specialist readers with a compendium of all available knowledge on the taxonomy, distribution, ecology, biology, and dispersal of Carabidae. The format of the catalogue has been developed with the interests of systematists and other biologists in mind. It allows easy information retrieval, comparison between taxa, and synthesis of data. The authors believe that such a comprehensive database is necessary before testing hypotheses about environmental relationships in Carabidae.

anō nōna te makipai, te asilid, te kōtare, te mātā, te toriura, te ngeru mohoao, te piopio, te taraute, me te kioré. Ko tā ngā kaitahi nei, ko te pāngāwērewere peā tētahi tino hoarii i ngā whenua pātīiti, me ngā whenua teitei. Ko tētahi 33% pea (157 mōmo) o ngā mōmo carabid katoa kua rangahaua, e muia ana e te pāwēreriki (e te Acari), ā, ko tētahi 11% (e 48 ngā mōmo) o ngā carabid katoa, ka muia e te kōporawhētū (e te Laboulbeniale). Ko te tuenga o ngā mōmo e muia ana e te Laboulbeniale, e te pāwēreriki rānei, he noho ngahere ua, ā, ka kitea nuitia i ngā rākau pirau. Ko te nematode ka pirinoa ki te ngā carabid whai parirau tūturu te rere ki wīwī, ki wāwā, ā, kāore e roa kua tangata whenua ki o rātou kāinga hou. Engari ko te tuenga o ngā pītara noho pāpā no koei tētāuru, he rere-kore, ā, ka riro mā ngā waewae rātou e kawe haere ki hea, ki hea. Ki te whāwhāhia ātahi, kua mahei ki te huna i a ia i ngā otaota, i te oneone rānei, kua tahutu rānei. Engari tērā ētahi atu mahi pare hoarii rerekē a ngā mōmo tūturu o Aotearoa. E rua ngā mōmo pāpapa he kirihuna o rāua, e kore ai rāua e kītea e te hoarii. He māhia ngā mōmo ka whakaturanga kua mate rātou – ko te īwi Broscinī ngā tōhunga ki tērā mahei. Ko ētahi mōmo anō ka tuku haunga, ka ngau rānei āna hopukina. Tērā anō ngā pakeke o te īwi *Amarotypus* ka piri ki ngā kahiwi rākau ka pō ana, ā, ki te whakataata atu tētahi mea nui ki a ia, kua taka atu ki te papa. Ko tā ngā *Prosphrodrus*, he tirihoko ki te wai ki te pē he raruraru.

E 50 ngā mōmo kua kīia he onge, engari nā te iti o te mōhio ki ēnei pītara, kāore e tino mōhiotia pēhea rawa te mōrearea o tā rātou noho. Me hopu rawa ētahi, ka hoatu tohu, ka tuku anō kia rere, ka hopu anō, ā, kia maha ngā taurēpē nei ana - hei reira taea ai te whakataata mēna e tino mōrearea ana, pēhea kē rānei. He huna tonu tā ngā pītara noho papa i te awatea, he marara hoki te noho. Nā konei i kore ai e tere kītea āhakoa he tohunga, he kanohi hōmiōmio rānei te kaikohikohi. Kāore e taea e āta whakataata tata i tō rātou tokomaha, i runga i ngā kētenga me ngā kohinga māori noa iho.

Kua 150 tau ngā kōrero mō ngā carabid o Aotearoa e putu haere ana, engari kāore e tino wātea ana ki te tangata. Ko te tuenga o ngā kōrero, e noho parati ana ki ngā tāngā kōrero o te aoe, e pā noa ana rānei ki ngā pītara takiwhi o roto i ngā kohinga koiora. Ko te tūmanako o ngā kaituhī, mā te rārangi pītara nei, ka āhei mai ngā tohunga, me te marea anō hoki, ki ngā kōrero e pā ana ki te whakarōpūtanga, te tohanga, ngā āhutanga taupuhi kiaio, ngā āhutanga koiora, me te tītaringa o ngāi Carabidae. Ko te takoto o te rārangi, he mea whakarite i runga i te

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André Larochelle was born and educated in Quebec, graduating in 1974 with a Brevet d’Enseignement spécialisé from the Université du Québec à Montréal. Up to 1990 he taught ecology at the Collège Bourget, Rigaud, Quebec. Early in his career, with the encouragement of the late carabid specialist Carl H. Lindroth, André became interested in the study of ground-beetles. From 1975 to 1979 he was the co-editor of two entomological journals, Cordulia and Bulletin d’inventaire des insectes du Québec. Between 1986 and 1992 he was an honorary curator to the Lyman Entomological Museum and Research Laboratory, McGill University, Quebec. In 1992, André moved to New Zealand to work as a research scientist. Currently, he is also an honorary curator to the New Zealand Arthropod Collection, Auckland. André has authored over 400 papers on the distribution, ecology, biology, and dispersal power of North American insects, mostly carabids. In 1993 he co-authored a Catalogue of Carabidae of America north of Mexico. André, with the collaboration of his wife Marie-Claude, hopes to soon publish a natural history of North American carabids. Presently, his main research interest is the faunistics and taxonomy of New Zealand ground-beetles.

I whānau mai tētahi o ngā kaituhi, a André Larochelle, i Quebec. I reira ia e kura ana, a, nō te tau 1974 ka whakawhiwhia ki tana tohu Brevet d’Enseignement spécialise, mai i te Whare Wānanga o Quebec ki Montreal. Taka mai ki te tau 1990, e whakaako ana ia i te mātāuranga taupuhi kiaiao i te Kura Bourget, i Rigaud, Quebec. Kāore i roa e whakaako ana, ka tupu tana hiahia ki te rangahau pītara noho papa, me te akiaki anō a tērā tohunga carabid kua riro nei i te tirohanga kanohi, a Carl H. Lindroth, i tēnei whakararo āna. Mai i te 1975 ki te 1979 ko ia tētahi o ngā ētia o ētia hautaka mātai pepeke, arā, o Cordulia me te Bulletin d’inventaire des insectes du Québec. Mai i te 1986 ki te 1992, ko ia i te kaitiaki ātuku-kore o te Whare Rokiroki, Rangahau Pepeke o Lyman, i te Whare Wānanga o McGill, i Quebec. I te tau 1992, ka neke mai a Andre ki Aotearoa, ka mahi hei kaipūiaiai rangahau. I tēnei wā, ko ia i te kaitiaki ātuku-kore o te Kohinga Angawaho o Aotearoa, i Tāmaki-makau-rau. He nui ake i te 400 ngā kōrero kua tuhia e Andre mō te tohunga, te taupuhi kiaiao, te koiora, me te titaringa o ngā aitanga pepeke o Amerika ki te Raki, o tīrā, me te aro nui ki ngā carabid. I te tau 1993 ko ia tētahi o ngā kaituhi i te Rārangi o ngā Carabidae o Amerika ki te raki o Mēhiko. Ko te tūmanako o Andre rāua ko tana wahine, a Marie-Claude, kia whakaputaina ā tōna wā tūtū te hitori māori o ngā carabid o Amerika ki te Raki. Ko te aronga nui o ananga rangahau i tēnei wā, ko te āhua me te whakarōpūtanga o te whānau pītara noho papa o Aotearoa.

I whānau mai tērā atu kaituhi, a Marie-Claude Larivière i Quebec. I reira anō ia e rapu ana i te mātāuranga ā, riro noa i a ia tana Tōhu Takutatanga mai i te Whare Wānanga o McGill, i te tau 1990. Ko te kaupapa o tana tohu, ko te pūnaha whakarōpū i ngā aitanga a Punga. Kātahi ia ka neke ki Agriculture Canada, i Ottowa, mō te rua tau, ki reira whātōro ai i ētahi atu rangahauatanga. Nō te tau 1992, ka neke mai a Marie-Claude ki Aotearoa, ka mahi hei kaipūiaiai rangahau mā Manaaki Whenua. Nō muri, ka riro i a ia te tūranga Kaihautū Mahi Rangahau i raro i te kaupapa e kia nei ko te “Biostystemaics of New Zealand Land Invertebrates”. Nāna taua kaupapa i whakahaere i te tau 1994 ki te tau 1997. I ēnei rā, he tūranga kai rangahau ukiuki tōna i Manaaki Whenua, he whakarōpū koiora te
DEDICATION

We dedicate this work to J. Charles Watt, honorary research associate of the Systematics Group, Landcare Research, Auckland. Since our arrival in New Zealand Charles has repeatedly encouraged us to write a carabid catalogue for this country. Such a task would have been much more difficult to accomplish without his exceptional curation of carabids in the New Zealand Arthropod Collection (NZAC). Charles spent the major part of his professional career in the Entomology Division, DSIR (now Landcare Research), with responsibility in the Systematics Section for all Coleoptera except weevils. In this position he devoted almost as much attention to the study of carabids as to tenebrionids, his favourite group. Repeatedly he surveyed New Zealand to collect ground-beetles, mounted them with ecological annotations, organised them systematically, and sent them to foreign specialists for identification when necessary. Furthermore he indicated numerous undescribed carabid species in NZAC, which now makes the work of taxonomists much easier. As a result of Charles’ efforts, the authors were able to study a well organised insect collection containing authoritatively identified material such as homeotypes (specimens compared with types) by experts such as E.B. Britton and B.P. Moore. Charles’ open-mindedness, enthusiasm, generosity, and friendship have been inspirational to our research. Such is the influence of exceptional scientists.

Marie-Claude Larivière was born and educated in Québec, graduating with a Ph.D. in systematic entomology from McGill University in 1990. For the following two years she did postdoctoral research at Agriculture Canada, Ottawa. In 1992, Marie-Claude moved to New Zealand to work as a research scientist for Landcare Research. In 1994, she became Research Leader of the Biosystematics of New Zealand Land Invertebrates programme which she led until late 1997. Marie-Claude currently enjoys a full-time research position as a biosystematist with Landcare Research, which also includes curatorial responsibilities for Hemiptera (excluding Sternorrhyncha) at the New Zealand Arthropod Collection. Marie-Claude has authored over 65 papers and monographs, including two Fauna of New Zealand contributions, on the biosystematics of various families of bugs, including faunal and ecological aspects. She has also published on Orthoptera and contributed to publications on Carabidae (Coleoptera). Marie-Claude has a keen interest in bioinformatics, especially digital taxonomy, computer imaging, interactive identification, and web publishing.

Contributor Marie-Claude Larivière was born and educated in Québec, graduating with a Ph.D. in systematic entomology from McGill University in 1990. For the following two years she did postdoctoral research at Agriculture Canada, Ottawa. In 1992, Marie-Claude moved to New Zealand to work as a research scientist for Landcare Research. In 1994, she became Research Leader of the Biosystematics of New Zealand Land Invertebrates programme which she led until late 1997. Marie-Claude currently enjoys a full-time research position as a biosystematist with Landcare Research, which also includes curatorial responsibilities for Hemiptera (excluding Sternorrhyncha) at the New Zealand Arthropod Collection. Marie-Claude has authored over 65 papers and monographs, including two Fauna of New Zealand contributions, on the biosystematics of various families of bugs, including faunal and ecological aspects. She has also published on Orthoptera and contributed to publications on Carabidae (Coleoptera). Marie-Claude has a keen interest in bioinformatics, especially digital taxonomy, computer imaging, interactive identification, and web publishing.
Frontispiece: *Megadromus bullatus* (Broun, 1915) (photo prepared by B. E. Rhode, Landcare Research)
ABSTRACT

The species-group names of all New Zealand Carabidae (including Cicindelini) are catalogued with distribution records and information on ecology, biology, and dispersal power. Valid names are listed in their current and original combinations with the author(s), publication date, page citation, and type locality; synonyms are given in their original combinations; other existing combinations are also provided. Genus-group names are listed with the author(s), publication date, page citation, and type species (including method of fixation). The catalogue is arranged phylogenetically by subfamilies, divisions, tribes, and subtribes. Genus- and species-group names are listed alphabetically within these categories. The most important references dealing with taxonomy (including keys and revisions), distribution, ecology, biology, and dispersal power, are provided as appropriate.

The catalogue also includes a bibliography of all original descriptions and of most important references consulted, a habitus illustration of one representative of each tribe, maps showing species distribution, patterns of taxonomic diversity and of species endemism, and also a full taxonomic index. Finally, a number of appendices are provided: a glossary of technical terms, a list of nomina nuda, a list of unjustified emendations, a synopsis of species incorrectly or doubtfully recorded, a synopsis of species deliberately introduced, geographical coordinates of type localities, and alphabetical lists of species by areas.

The composition of the New Zealand carabid fauna (5 subfamilies, 20 tribes, 78 genera, 424 species, and 14 subspecies) and its affinities with Australia, New Caledonia, Lord Howe Island, and Norfolk Island are analysed and discussed. It is estimated that, once described, the fauna will attain approximately 600 species. Endemism is high with 92% (391) of species and 58% (46) of genera currently recognised as being endemic and the fauna shows greatest affinity to that of eastern Australia. Forty-three (43) species have been incorrectly or doubtfully recorded from New Zealand.

The following nomenclatural changes are proposed and discussed:

- Agonocheila antipodum (Bates, 1867) for Agonocheila binotata (Blanchard, 1842);
- Anchomenus integratus Bates, 1908 for Agonum integratum (Broun, 1908);
- Anchomenus punctatus Broun, 1877 for Agonum punctatum (Broun, 1877);
- Anchomenus sulcitaris Broun, 1880 for Agonum sulcitaris (Broun, 1880);
- Cicindela (Neocicindela) for Neocicindela Rivalier, 1963 (14 taxa);
- Ctenognathus montivagus (Broun, 1880) for Ctenognathus latipennis Sharp, 1886;
- Dicrochile whitei (Csiki, 1931) for Dicrochile atrata (Blanchard, 1842);
- Holcaspis sternalis (Broun, 1881) for Holcaspis punctigera (Broun, 1882);
- Maoritrechus rangitotoensis Brookes, 1932 for Temnostega rangitotoensis (Brookes, 1932);
- Mecyclothorax amplipennis amplipennis (Broun, 1912) for Molopsida amplipennis amplipennis (Broun, 1912);
- Mecyclothorax amplipennis labralis (Broun, 1912) for Molopsida amplipennis labralis (Broun, 1912);
- Mecyclothorax epicles (Broun, 1923) for Molopsida epicles (Broun, 1923);
- Megadromus (Megadromus) asperatus (Broun, 1886) for Trichosternus (Megadromus) asperatus Broun, 1886;
- Megadromus (Megadromus) curtulus (Broun, 1884) for Megadromus optabilis (Broun, 1893);
- Megadromus (Megadromus) guerini (Chaudoir, 1865) for Megadromus australasiae (Guérin-Méneville, 1841);
- Opipterus suavis Broun, 1917 for Pseudopterus suavis (Broun, 1917);
- Platynus macropterus (Chaudoir, 1879) for Colpodes macropterus Chaudoir, 1879;
- Taenarthrus capito (Jeannel, 1938) for Luxomerus (Pristancyclus) capito Jeannel,
1938; Taenarthrus philpotti Broun, 1914 for Loxomerus philpotti (Broun, 1914); Zolus ocularius Broun, 1917 for Oopterus ocularius (Broun, 1917); and Zolus subopacus Broun, 1915 for Oopterus subopacus (Broun, 1915).

Aulacopodus brouni (Csiki, 1930) is removed from synonymy with Aulacopodus puella (Chaudoir, 1865); Holcaspis thoracica Broun, 1881 is here considered a synonym of Holcaspis placida Broun, 1881.

One new synonym is established: Anchomenus haastii Broun, 1882 is synonymised with Platynus macropterus (Chaudoir, 1879).

The type species (listed in parentheses) of the following genus-group taxa are designated for the first time: Dicrochile Guérin-Méneville, 1846 (Dicrochile anchomenoides Guérin-Méneville, 1846); Pseudoopterus Csiki, 1928 (Oopterus plicaticollis Blanchard, 1843); Zabronothus Broun, 1893 (Zabronothus striatulus Broun, 1893).

A first record is given for New Zealand: Perigona nigriceps (Dejean, 1831) from Auckland.

In general, species are nocturnal and live in forested areas and tussock grasslands. They usually live within the confines of their natural habitats, but about 50 species also live in pine tree plantations neighbouring native forests. Larval biology is almost unknown and only 14 species have been described. Parental care by the female has been observed in 11 species of Pterostichini. Major predators of ground-beetles are starlings, kiwis, spiders, and hedgehogs. Major parasites are mites, Laboulbeniales fungi, and nematodes; these have been recorded for 137, 48, and 5 carabid species respectively.

Most species are flightless and moderate runners. A number of defense mechanisms have been observed: cryptic coloration, death feigning, biting strongly when seized, dropping to the ground, and diving into water when approached.

Keywords. Coleoptera, Carabidae, New Zealand, catalogue, classification, distribution, ecology, biology, dispersal power, species endemism, fauna.


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**INTRODUCTION**

The family Carabidae (including tiger beetles) is a highly speciose, worldwide beetle family, with an estimated total of 25,000 to 50,000 species. Carabids, or ground-beetles, are a highly adaptable group which has managed to occupy most terrestrial habitats on nearly all continents and most islands since its origin in the early Mesozoic. As a family they exhibit a relatively high degree of morphological uniformity which makes these insects especially suitable to study the ecophysiological adaptations required to cope with environmental demands. They are generally abundant in ecosystems and demonstrate a flexible set of responses to both abiotic and biotic environmental factors. Most carabids are nocturnal predators (Larochelle, 1990) living at the surface of the ground while some species live in the soil, in caves, or on the vegetation. Ground-beetles show good dispersal capability and, in many species, the ability to form stable populations following colonisation events. They are also fairly easy to sample by reliable and quantitative methods, e.g., pitfall trapping. These and other factors have made this group a favourite with biologists investigating evolutionary and ecological hypotheses throughout the world. More recently, this group has been used for applied investigations such as conservation evaluation.

The estimated number of species of better known continental faunas such as North America, Europe, and Australia, varies from about 2,500 to 3,000 species. Compared with these larger regions of the world the New Zealand fauna, currently known from five subfamilies, 20 tribes, 78 genera, and 424 species, appears relatively small, but what it lacks in size it makes up in uniqueness, e.g., 92% of known species are endemic.

The Carabidae are among the best represented groups of insects in New Zealand entomological museums and collections. Despite such high interest in this group, no modern effort has been made to catalogue the New Zealand species since Hudson’s (1934) list which enumerated 556 taxa. Numerous nomenclatural changes and new taxa have been published since then and although Hudson’s list is still useful, it is no longer reliable.

The present catalogue is an attempt to bring together the available literature and collection-based information on taxa recorded from New Zealand’s main islands and its offshore islands. It has been written with the needs of systematists, identifiers, ecologists, and other biologists in mind, hence the sections summarizing for all species the geographic distribution, ecology, biology, dispersal power, and the citation of main references to available identification tools, taxonomic revisions, and natural history treatments. A species checklist, a full bibliography, a taxonomic index, several appendices, and species distributions maps are also provided.

All attempts have been made to report information as accurately as possible, but none are more aware than the authors of the inevitability of errors or omissions in this type of work. Therefore, the authors ask the indulgence of readers and can only hope that the usefulness of this catalogue will outweigh its shortcomings.

**Brief history of carabid taxonomy in New Zealand.**

The first carabid beetle to have been described from New Zealand is Cicindela tuberculata Fabricius, 1775. Subsequently, between 1843 and 1923, the majority of species were described by Blanchard (1842–1843, 1853), White (1843, 1846), Laporte de Castelnau (1867–1868), Bates (1867–1878), Broun (1876–1923), and Sharp (1878–1903). This literature is quite complex to follow as about 90 species have been described twice or thrice in different papers or pre-publication reprints by the same author, e.g., Blanchard (1842–1843; 14 taxa republished in 1853), Laporte de Castelnau (1867; 23 taxa republished in 1867–1868), Bates (1874; 17 taxa republished in 1875), Broun (1882; 24 taxa republished in 1883 and 1886, and 1884; 11 taxa republished in 1886). Emberson (1993b) published an extremely useful paper establishing the publication dates of species described by Blanchard in Dumont D’Urville’s *Voyage au Pôle Sud*. 

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**Voyage au Pôle Sud**
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

Broun has been the most prolific carabid describer, with 382 taxa (202 still valid), but at the same time he contributed numerous nomenclatural problems still baffling workers today. His species concept was highly typological which often resulted in the description of the same species more than once under different names (e.g., 13 synonyms and 3 replacement names under Megadromus meritus (Broun)). Unfortunately, his type designations were often unclearly documented and he did not provide identification keys clarifying his view of diagnostic features. In addition, many of the Pterostichini and Platynini that he described were attributed to European genera. Examination of Broun’s original material, located in the Natural History Museum (London), is essential to taxonomists studying New Zealand Carabidae. For example, among the 137 taxa described by him in the Pterostichini, only 38 are still valid after two subsequent revisions (Britton, 1940; Butcher, 1984).

Taxonomic revisions started in 1937 and the tribes treated since then are: Broscini (Britton, 1949); Bembidini, except Tachyina (Jeanne!, 1937; Lindroth, 1976 and 1980; Moore 1980b); Pterostichini (Britton, 1940; Butcher, 1984); Lебини (Britton, 1941); Pentagoninи (Britton, 1941); and cave-dwelling carabids (Britton, 1958–1964). Based at the Natural History Museum (London), Britton contributed the greatest number of revisions. Unfortunately, even though he dealt with a good proportion of Broun’s material, he did not generally designate any lectotypes. Consequently, much of his material will need to be re-examined by workers wanting to describe new taxa in the groups he previously covered.

The revisions published so far cover approximately 230 taxa which is about 50% of the currently described fauna. However, except perhaps for the genus Holocaspis (Pterostichini) which has been recently revised, most of these groups are still in need of a more modern revisionary treatment that would include the examination of all types with appropriate type designations, and a thorough study of male genitalia and other morphological features throughout the distribution range of species and of the variation of these structures within and between populations. In addition, so much new material has been collected and deposited in New Zealand collections in the last 30–40 years that numerous new taxa remain to be described in the groups already covered by previous workers as well as in other groups. We estimate that the fauna will reach around 600 species when totally described.

Most taxonomic works published until now deal only with the adult stage; the larva of only 14 species having been described: Amarotypus edwardsii Bates (Amarotypini); Bountya insularis Townsend, Brullea antarctica Laporte de Castelnau, Diglymma castigatum

Broun, Mecodema alternans hudsoni Broun (Broscini); Cicindela parryi White, Cicindela tuberculata Fabricius (Cicindelini); Loxomerus brevius (Blanchard), Loxomerus nebroideus (Guérin-Méneville) (Migadopini); Megadromus vigil (White), Plocamostethus planiusculus (White), Zeopoecilus putus (Broun) (Pterostichini); Duvallitiomus mayae Britton, and Xenodactylus audoniini (Guérin-Méneville) (Trechini).

Two keys to suprageneric taxa have been published: a key to carabid tribes by Britton (1940) and, more recently, a key to subfamilies and tribes by Klimeszewska & Watt (1997). A key to described genera, although an essential tool for most taxonomists and field workers, is still unavailable. Table 1 compares the subfamilies and tribes used in the present catalogue with those given by Klimeszewska & Watt (1997).

As for checklists, Hutton (1874; 1904) and Hudson (1923; 1934) are still the only lists available, now unreliable due to the numerous nomenclatural changes and new taxa proposed since.

Higher classification. The history of carabid classifications has been superbly presented by Ball (1979) and Ball et al. (1998). The higher classification of carabids is very complex, with little consensus on the family’s divisions, except at the tribal level. According to Ball et al. (1998), Erwin’s classification (1991) is the most detailed ever presented. His classification is very comprehensive, taking into account morphological and chemical features, behaviour of both adults and larvae, and historical zoogeography. The higher classification used in this catalogue (Table 2) follows Erwin (1991), except in the case of the Psydritae (Baehr, 1998) and the Pentagoninii (Bousquet & Larochelle, 1993). The subtribal classification, being omitted by Erwin, takes after Bousquet & Larochelle (1993), except for the Cicindelina (Freitag, 1999), the Creobiina and Broscina (Ball, 1956), the Ooerterina (Liebel & Will, 1998), and the Acentenonyxina (Ball et al., 1995).

More work on the systematics of Australian Carabidae is needed before the taxonomic limits and the phylogenetic relationships of the tribes Pamborini, Amarotypini, Migadopini, Broscini, Mecyclothoracini, Meonini, Tropopertini, Trechini, Zolini, and Bembidini (Anillina), and their included subtribes, can be more satisfactorily established. Such advances will also provide the wider framework necessary to evaluate the taxonomic status of many genera originally described from New Zealand.

Geographic distribution. The New Zealand fauna is highly insular, with 46 genera (58%) and 391 species (92%) presently recorded as being endemic (Table 3).
Table 1. Comparison between subfamilies and tribes used in the present work and in Klimaszewski & Watt (1997).

<table>
<thead>
<tr>
<th>Present work</th>
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</tr>
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<td>Tribe BROSCINI</td>
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<td>Tribe PSYDRINI</td>
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<td>Tribe PLATYNNINI</td>
<td>Tribe AGONINI</td>
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<tr>
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</tbody>
</table>

The maps on pages 223–270 summarise the geographic distribution of Carabidae taxa occurring in New Zealand. Overall, species appear to be more widely distributed than originally thought for mostly flightless organisms; species belonging to well-revised groups have been shown to occur in several areas.

A greater number of taxa (299) occurs on the South Island, although 209 are restricted to it. Two hundred and one (201) taxa occur on the North Island, but only 111 species are restricted to it. Ninety (90) taxa are shared between the North and the South Islands.

Patterns of taxonomic diversity and the number of taxa restricted to areas of New Zealand are illustrated on Maps 4–6 (pp. 219–221). The areas so far known to contain the highest diversity (Map 4) are: NN (126 taxa), WN (117 taxa), MC (117 taxa), AK (95 taxa), BR (88 taxa), ND (85 taxa), and CO (83). Three areas of the South Island have a relatively low number of taxa: KA (44 taxa), SC (44 taxa), and MK (52 taxa). These areas have probably been undersurveyed; their number of taxa may eventually double. The areas with the greatest number of New Zealand endemics (Map 5) are found mostly on the South Island: NN (115), MC (106), WN (101), BR (85), CO (78), and DN (74).
Several carabids are restricted to a single area (Map 6). Currently, the areas with the greatest number of such taxa are: NN (19 taxa), MC (17 taxa), OL (11 taxa), ND (8 taxa), and AK (7 taxa). These numbers may change once the fauna is revised, but general trends should remain, i.e., these should be the areas of higher endemism.

Finally, the areas including the largest number of adventive taxa (Map 7, p. 222) are: AK (23 taxa), ND (18 taxa), WN (16 taxa), CL (14 taxa), and BP (14 taxa). Most introductions occur in the northern half of the North Island and in the Wellington region.

Faunal composition and affinities. Table 3 shows the total number of genera and species occurring in New Zealand. The number of adventive species is 27 or only 6% of the total fauna.

The New Zealand carabid fauna (424 species) is about 17% the size of the Australian fauna which is approximately 2,500 species according to Moore et al. (1987). It is characterised by a relatively high proportion of large-sized and darkly coloured taxa. Most species are flightless; even a few species of Cicindelini appear to have a substantially reduced ability to fly. The largest carabid

### Table 2. Higher classification.

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</table>
introduced species seem to be able to invade natural habitats. The following world tribes appear to have their greatest diversity in New Zealand and Australia: Amarotypini, Broscini, Mecyclothoracini, Meonini, Migadopini, Pamborini, Tropotoperini, and Zolini.

Ninety-seven (97) species have been reported from New Caledonia (Heller, 1916), 15 from Norfolk Island (Moore, 1985), and 28 from Lord Howe Island (Moore, 1992). Tables 4 and 5 show the genera and species shared between these areas. Too little is known of the South American fauna to infer any relationships with the New Zealand fauna.

The New Zealand fauna shows the greatest affinity with eastern Australia (including Tasmania) in sharing 16 native genera and 4 native species. In addition Ooiterus (Zolini) and Kenodactylus (Trechini) are shared with the Falkland Islands and Patagonia, but not with Australia. All Clivinini occurring in New Zealand have been introduced from Australia. Based on our preliminary examination of material in New Zealand collections and our own field work, we think that there will be additional introduced species recognised as investigations progress on the New Zealand fauna. This will probably include Australian species already introduced on Lord Howe and Norfolk Islands, e.g., 

**Ecology, biology, and dispersal.** Most New Zealand ground-beetles are hygrophilous species living at the surface of the ground, although a number of species also live deep in the soil (e.g., Aniliina), in caves (see below), and on plants and trees. Several species in the genera Ooiterus, Zolus (Zolini), Molopsida (Tropotoperini), “Anchomenus”, Ctenognathus (Platynini), Agonochile (Lebiini), and Amarotypus (Amarotypini) are tree-dwellers, often occurring in association with the loose bark of trees or in rotten branches.

The two native habitats harbouring the greatest number of species are forests and, to a lesser extent, tussock grasslands. In general, native carabids tend to live within the confines of native habitats, but since less than 25% of New Zealand’s original forest cover remains, most species appear also to survive in modified environments. Introduced species seem to be able to invade natural habitats, but only to a slight degree. About 50 species (mostly native) dwell successfully in pine plantations provided these are located near or adjacent to native forests.

A number of species live almost exclusively along coastal lowlands: Cicindela (3 spp.) (Cicindelini), Brullea (1 sp.), Mecodema (3 spp.) (Broscini), Kenodactylus (1 sp.), Mauiretrechus (1 sp.) (Trechini), Bembidion (2 spp.), all Zeilinellus (5 spp.) (Bembidini), Triptosarus (1 sp.) (Harapalin), and Zynognavna (2 spp.) (Platynini). The majority of New Zealand species, however, can be found from the lowlands to higher elevations below the subalpine zone. Very few described species appear to be restricted to the subalpine and alpine zones, but many species remain to be described from such habitats, e.g., in the Migadopini and Amarotypini.

Twelve (12) species from the following genera are obligatory cave-dwellers, i.e., living exclusively in caves: Duvaliimum, Erebotrechus, Neanops, Pholeodytes, Scototrechus (Trechini), and Sylectus (Harapalin). Eighteen (18) species are occasional cave-dwellers. They belong to the genera Taenarthis (Migadopini), Mecodema (Broscini), Duvaliimum (Trechini), Paratachys (Bembidini), Holcasip, Megadromus, Placostethus, Rhytisternus (Pterostichini), Dicrochile (Licinini), Lecanomerus, Sylectus (Harapalin), and Prophorus (Platynini). The latter two genera occur more frequently in caves than other genera, provided that rels or small brooks run through the caves.

Eleven (11) species are regarded as being synanthropic, i.e., living around human dwellings: Megadromus antarcticus (Chiaux), a native species, and 10 adventive species in the genera Carabus (Carabini), Paratachys (Bembidini), Laemostenus (Platynini), Perigona (Perigoniini), Rhystisternus (Pterostichini), Anisodactylus, Haplanister, Harpalus, and Lecanomerus (Harapalin).

Very little is known about the life history of native Carabidae. No life-cycle study has been published so far. The breeding type of most species, i.e., the time of the year at which they reproduce, is still unknown. Population biology and locomotory activity are virtually undocumented.

Mouthpart morphology and food data suggest that most species are opportunistic polyphagous predators. Adults are generally nocturnal and active most of the year, a little less so in winter (June–August). In general, they are active from November to March, that is, the end of spring (September–November), summer (December–February), and early autumn (March–May).

Parental care, or protection of eggs and larvae by the female, has been observed in 11 species of Pterostichini: Megadromus (8 spp.), Neoferonia (1 sp.), Placostethus (1 sp.), and Zeodocetus (1 sp.).
Table 3. Number of genera and species of Carabidae occurring in New Zealand. ( ) = number of endemic taxa; [ ] = number of adventive taxa.

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<tr>
<th>Subfamilies</th>
<th>Number of genera</th>
<th>Number of species</th>
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20 tribes 78 (46) [14] 424 (391) [29]
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Table 5. Species shared with Australia, New Caledonia, Norfolk Island, and Lord Howe Island. X = present; [ ] = adventive; — = absent; * = wing condition unknown.

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<td>Lecanomerus verticalis</td>
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<td>Perigona nigriceps</td>
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<td>Philophilaeus luculentus</td>
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<td>Anomotarus illawarrae</td>
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<td>Anomotarus variegatus</td>
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Total shared New Zealand taxa: 27 [23] 27 16 2 3 8
Larvae are usually fossorial and very secretive; they are rarely encountered at the surface of the ground and can be difficult to sample by hand or by pittrapping. Larvae of *Bembidion*, *Zeclilenus* (*Bembidiini*), and *Megalodromus* (*Pterostichini*), live closer to the ground surface and they are more easily found.

New Zealand carabids have number of enemies and parasites. Starlings, kiwis, spiders, and hedgehogs are major predators while maggpies, asilids, kingfishers, fernbirds, stoats, feral cats, thrushes, trouts, and rats appear to be minor predators. Based on our field experience, we think that spiders could be the most important predators, especially in tussock grasslands, herbfields, and fellfields. Hedgehogs are thought to be very active predators of carabids in tussock grasslands on the South Island. As elsewhere in the world, asilid flies, or robber flies (*Diptera: Asilidae*), could be regular enemies of tiger beetles (*Cicindelini*).

A survey of specimens in the New Zealand Arthropod Collection (NZAC) reported 48 species parasitised by Laboulbeniales (Fungi: Ascomycetes). This indicates that at least 11% of total carabid fauna is subjected to such infestations. Parasitised specimens were mostly from the tribes *Trechini*, *Harpalini*, *Mecyclothoracini*, *Tropopterini*, and *Zolini*. Fifteen (15) species were heavily infested in the genera *Duvaliomimus* (*Trechini*), *Lecanomerus* (*Harpalini*), *Mecyclothorax* (*Mecyclothoracini*), *Malopsis* (*Tropopterini*), *Oopterus*, and *Zolus* (*Zolini*).

A similar survey revealed 137 species as being infested with mites (Acari). Therefore, 32% of all species is subjected to this type of infestation. Eighteen (18) species were heavily infested in the genera *Holcaspis*, *Megalodromus*, *Placostethus* (*Pterostichini*), *Mecodema* (*Broschini*), and *Ctenognathus* (*Platynini*). On a world basis, and apparently also in New Zealand, mites are among the most important parasites of carabids.

In New Zealand, species infested with Laboulbeniales or mites are rain-forest dwellers, often associated with rotten wood, branches, and logs. Our survey of NZAC specimens did not reveal any teneral carabids with Laboulbeniales and mites associated with world carabids can be obtained from Lindroth (1948), Thiele (1977), Weir & Hammond (1997), and Vigna Taglianti & Rossi (1998). Nematodes have been found as parasites of 5 species belonging to the following genera: *Mecodema* (1 sp.), *Broschini*, *Holcaspis* (2 spp.), and *Megalodromus* (2 spp.) (*Pterostichini*).

The majority of New Zealand carabids are flightless, usually using running as their main mode of locomotion. In general, carabids either burrow in the litter or the soil or run away when disturbed, but a number of interesting defense mechanisms can be observed in New Zealand species. Two *Cicindela* species (*Cicindelini*) use cryptic coloration (colour pattern blending perfectly with the background) to protect themselves against enemies. Death feigning has been observed in species of *Diglymma* (2 spp.), *Mecodema* (2 spp.), *Metaglymma* (1 sp.) (*Broschini*), *Megalodromus* (1 sp.) (*Pterostichini*); and possibly also *Oopterus*, and *Zolus* (*Zolini*) (Hudson, 1934). When disturbed, adults may emit a strong smell, e.g., *Amarotypus* (1 sp.) (*Amarotyphini*), *Diglymma* (1 sp.), *Mecodema* (3 spp.), *Oregus* (1 sp.) (*Broschini*), *Holcaspis* (2 spp.), *Megalodromus* (5 spp.), *Placostethus* (1 sp.), *Rhytisternus* (1 sp.), and *Zeopoecilus* (1 sp.) (*Pterostichini*). Species of the following genera have been observed to bite strongly when seized: *Mecodema* (1 sp.) (*Broschini*), *Megalodromus* (4 spp.), *Placostethus* (1 sp.), and *Zeopoecilus* (1 sp.) (*Pterostichini*). When closely approached, adults of *Amarotypus* (Amarotyphini) standing on tree trunks at night let themselves drop to the ground. Finally, *Prosphodrus* (*Platynini*) species have the peculiar habit of diving into water when disturbed.

Fifty (50) carabid taxa were listed by Molloy et al. (1994) as threatened. So far, two species (*Mecodema chiltoni* Broun, *M. laeviceps* Broun) have been the subject of a basic conservation study (Barratt, 1994a & b). In our opinion, however, too little information is available on the relative abundance and distribution of supposedly rare species; more thorough investigations, e.g., quantitative pitfall trap population dynamic studies and mark-recapture studies over more than one year, will need to be carried out before any meaningful formal conservation assessment can be formulated for any species. Based on the world literature and our experience in the field, ground-beetles are usually well hidden and scattered by day through a given habitat so that they usually escape the attention of the most specialised or attentive collector, thus preventing any realistic approximation of population size and distribution from hand-collecting data.

**METHODS AND CONVENTIONS**

This catalogue is based on eight years of extensive field work carried out by the authors in over 400 localities, an exhaustive survey of the literature published between 1775 and December 1999 (approximately 500 publications), and the recording of information associated with several thousand specimens from the following entomological museums and collections:
AMNZ  Auckland Institute and War Memorial Museum, Auckland, New Zealand.
BBNZ  Barbara I.P. Barratt private collection, Dunedin, New Zealand.
BMNH  British Museum (Natural History), now The Natural History Museum, London, England.
BPNZ  Brian Patrick private collection, Dunedin [now in OMNZ].
CMNZ  Canterbury Museum, Christchurch, New Zealand.
ITNZ  J. Ian Townsend private collection, Levin, New Zealand [now partially deposited in NZAC].
JNNZ  John Nunn private collection, Dunedin, New Zealand.
LUNZ  Entomological Museum, Lincoln University, Lincoln, New Zealand.
MONZ  Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand.
NZAC  New Zealand Arthropod Collection, Mount Albert Research Centre, Auckland, New Zealand.
OMNZ  Otago Museum, Dunedin, New Zealand.
PHNZ  Philip Howe private collection, Timaru, New Zealand.
STNZ  Stephen Thorpe private collection, Herne Bay, Auckland, New Zealand.
UCNZ  Department of Zoology, University of Canterbury, Christchurch, New Zealand.

Field surveys and collecting techniques. Most areas of New Zealand have been visited by carabid collectors. This has provided a basic inventory of taxa and resulted in New Zealand collections having representatives of most species, either described or undescribed. Collecting in the back country and at high elevation throughout New Zealand, especially in the alpine habitats (edges of small glacial brooks and seepages) of the northern half of the South Island, may yet yield a number of undescribed species, e.g., in the Amorotypini and Migadopini. The South Island has generally received the closest attention while the North Island has been somewhat neglected by collectors, except for the Northland, Auckland, and Wellington areas. Coastal habitats (gravelly-stony sea beaches, estuaries, dunes, cliffs, salt marshes, mangroves, forests), flaxlands, edges of streams crossing forests, hill tops, soil fissures under well-embedded stones, the underside of loose tree bark, and cliff walls are among the habitats least surveyed.

The material collected so far is rich in geographic information but generally poor in biological data. Furthermore, a majority of species are represented only by a few specimens, impeding our ability to assess morphological variations within and between populations.

Because we are field biologists and believe that species should be first recognised in the field, we have carried out an extensive survey in order to complete a more detailed picture of geographic distribution and to increase our knowledge of the natural history of as many species as possible. Two to three months a year were spent in the field over the last eight years. Over 400 localities were surveyed mostly on the North Island, but also in the South and the West of the South Island. Visits lasting about one week were made to a relatively large area, e.g., the Catlins or the Ruahines. A mixture of collecting techniques was used: hand-collecting, litter-sifting, Berlese funnel extraction techniques, and pittrapping. For the latter, eight traps containing soapy water were set in a straight line with a distance of five metres between each trap and usually left for a period of 5–7 days. According to the world literature, setting and spacing traps in this manner allow minimum interference between traps and yields the greatest number of species. Pittrapping and litter collecting was also carried out for longer periods, especially in autumn and winter. For example, pittraps containing ethylene glycol would be set in the Mangamuka Hills, ND for 6 weeks at a time over a number of months.

Geographical and biological data associated with all samples and specimens collected were recorded in as much detail as possible in field notebooks. This information was subsequently transferred to mounted specimens on two labels (Fig. 1), one detailing the locality information, the other one, the biological observations. More recently, most locality information has also been georeferenced (attributed longitude and latitude data). Our material is deposited in the New Zealand Arthropod Collection (Auckland).

We plan to continue our surveys for years to come as there is still a lot of information to be gathered in order to complete our taxonomic revisions and to gain a better understanding of the biogeography and natural history of New Zealand species.

Taxonomic information. The appropriate taxonomic literature was checked to obtain original spellings, years of publication, page citation, type-species designations, type-locality information, and the nomenclatural acts and changes affecting the status of New Zealand taxa.

The catalogue is arranged phylogenetically by subfamilies, divisions, tribes, and subtribes. Genera, subgenera, species, and subspecies are listed alphabetically within their respective higher category.

Family-group names. Valid names of subfamilies, tribes, and subtribes (when available) are given as bold centred headings in small capitals. Treatment of nomenclature of family-group names is not included.

Genus-group names. Valid names are given with author and year as bold centred headings. Under this heading the valid name and its synonyms are given with author(s), year, and a page reference. Synonyms are given in chronological order and are followed by a citation of the original authority, year of publication, and page reference of each synonym. Information on original rank, availability, homonymy, and synonymy, or changes of rank are also included. Type species (in original combination) and method of fixation are given for valid genera as well as synonyms. Incorrect spellings are noted.

Species-group names. Valid names are given with author(s) and year as bold left-justified headings. Under this heading the valid name and its synonyms are given with author, year, and a page reference. Synonyms are given in chronological order in their original combination and are followed by a citation of the original authority, year of publication, and page reference of each synonym. Information on original rank, availability, homonymy, and synonymy, or changes of rank are also included. New combinations are listed in a manner similar to synonyms. Incorrect spellings are noted. Type localities are provided for valid taxa as well as synonyms. Appendices B and C provide lists of nomina nuda and unaccepted names.

Type data. Type locality information is quoted literally as possible from original descriptions and subsequent revisions. They are listed for valid species-group names and synonyms in the following format: “Type locality: name of type locality, appropriate area code (Crosby et al. 1976, 1998).” Additional information supported by reference citations is added in cases where information differs between two publications. The geographical coordinates of the main type localities are listed in Appendix F.

A number of years ago, R.M. Emberson (Lincoln University, Lincoln) initiated a project detailing the types of New Zealand Carabidae and their repositories; he is still working on this eagerly awaited catalogue.

Geographic distribution. The catalogue contains distributional information for tribes, subtribes, genera, subgenera, species, and subspecies, based on literature and specimen label data.

The distribution of supraspecific groups is given as major zoogeographical regions or in slightly more detail if the taxon is widely known within the Australian Region.

For species and subspecies, area codes of Crosby et al. (1976, 1998) are given in alphabetical order for the North Island, South Island, Stewart Island, and the Offshore Islands respectively. When appropriate, the extralimital distribution is also included as well as first mentions of adventive species. Species-based geographic information and type-locality data for valid species and synonyms, were maintained in a Microsoft Access database. This database was used to prepare the species distribution maps (pp. 223–270, presented alphabetically by taxa), the maps on taxonomic diversity (pp. 219–222), the appendices listing type localities (Appendix F), and the species by areas of New Zealand (Appendices G, H). All maps were prepared with the program Corel DRAW (version 8.0).

Two additional appendices provide synopses of species incorrectly or doubtfully recorded (Appendix D) and species deliberately introduced (Appendix E).

Two-letter abbreviations for the area codes of Crosby et al. (1976, 1998) used in this catalogue are as follows:

**New Zealand. North Island:** AK, Auckland; BP, Bay of Plenty; CL, Coromandel; GB, Gisborne; HB, Hawke’s Bay; ND, Northland; RI, Rangitikei; TK, Taranaki; TO, Taupo; WA, Waikato; WF, Wanganui; WN, Wellington; WO, Waikato. **South Island:** BR, Buller; CO, Central Otago; DN, Dunedin; FD, Fiordland; KA, Kaikoura; MC, Mid Canterbury; MK, Mackenzie; NC, North Canterbury; NN, Nelson; OL, Otago Lakes; SC, South Canterbury; SD, Marlborough Sounds; SL, Southland; WD, Westland. **SI, Stewart Island. Offshore Islands:** AN, Antipodes Islands; AU, Auckland Islands; BO, Bounty Islands; CA, Campbell Island; CH, Chatham Islands; KE, Kermandec Islands; SN, Snares Islands; TH, Three Kings Islands.

**Ecological, biological, and dispersal information.** The information provided is based on the literature and specimen label data. In order to eliminate spurious records, an effort was made to summarise available information by using the smallest common denominator representing the essentials of each species’ requirements.

Data sheets were prepared to compile information on ecology, biology, and dispersal power (Fig. 2). On these sheets, the first line indicates the data source, e.g., collection acronym or literature. The second line gives the complete scientific name of the taxon for which information is being compiled. This is followed by four sections recording information on geographic distribution, ecology, biology, and dispersal power, using predefined categories and standard terms. The data sheets were kept in alphabetical order in a series of binders and then used to compose the species’ treatments for the catalogue.

In this catalogue, ecological tendencies are summarised for each species using a series of standard terms.
following the approach taken by previous workers dealing with other faunas (Lindroth, 1945 and 1949; Sharova, 1981; Koch, 1989). The ecological terms used in this catalogue are defined in the glossary (Appendix A).

Altitudinal distribution, or distribution related to altitude or elevation, is expressed as lowland, mountain or upland, subalpine, alpine following the categories used by Poole & Adams (1990).

Vertical distribution, or distribution related to the horizon, is expressed as arboreal, planticolous, epigean, endogean, and cavernicolous. These terms are defined in the glossary (Appendix A).

Seasonality, or the period of year when an animal is active, is expressed as months from September to August.

Dispersal power, or the capability of dispersal, has been assessed when possible, using three main criteria: wing condition, flight data (including light-trapping observations), and other locomotory habits.

Wing condition was evaluated for each species based on the literature, and personal observations in the field and in the laboratory. The terms used for wing condition are also included in the glossary.

The locomotory habits of species has been recorded under three categories: fast runner, moderate runner, and slow runner. Each species has been assigned to one of these categories using field observations and examination of leg characteristics (Evans, 1977 and 1986; Forsythe, 1981 and 1983). In general, fast runners have longer, thinner legs and occur in open, bare habitats, e.g., Cicindela species. Moderate runners have moderately long, moderately large legs, and live generally in leaf litter or the low vegetation. Slow runners have shorter, more inflated legs armed with tooth-like excrescences, and dig burrows, e.g., Broschini and Clivinini.

For flight and climbing data, three categories were used: occasional (only a few specimens and instances observed), regular (a moderate number of specimens and instances), and frequent (numerous specimens and instances). Indirect evidence of flight was also provided in the case of specimens found in shore-drift material.

References. Under Reference(s), only the most important references are given for each valid taxon, with an indication of their contents between parentheses.

Notes. Additional information is given as Notes under each valid taxon.
**Carabus (Archicarabus) nemoralis** O.F. Müller, 1764

*Figure 3*

**Carabus nemoralis** O.F. Müller, 1764: 21. Type locality: Frederiksdal, Sjaelland, Denmark.


**Ecology.** Epigean, mesophilous, synanthropic. Lowland. A cultivated field (potato). Nocturnal; shelters during the day.


**Dispersal power.** Subapterous. Moderate runner.


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**Tribe PAMBORINI**

*Figure 4*

**Geographic distribution.** Australia, New Zealand.


**Genus Maoripamborus** Brookes, 1944

*Figure 4*

**Maoripamborus** Brookes, 1944: 262. Type species: *Maoripamborus fairburni* Brookes, 1944, by monotypy.

**Geographic distribution.** New Zealand (endemic; North Island).

**References.** Brookes, 1944: 262–263 (taxonomy); Molloy *et al*., 1994: 60 (distribution, conservation).

**Note.** A new species from northeast of Waitara, TK awaits description (Molloy *et al*., 1994: 60).

**Maoripamborus fairburni** Brookes, 1944

*Figure 4*

**Maoripamborus fairburni** Brookes, 1944: 262. Type locality: Waimatenui, ND.

**Geographic distribution** (Map p. 244). North Island: AK, ND.

**Ecology.** Epigean, silvicolous, very hygrophilous. Lowland, mountains. Wet forests (broadleaf, podocarp) and tree plantations (pine). Nocturnal; hides during the day under logs (mostly), fallen branches, and in rotten fallen trees.


**Dispersal power.** Subapterous. Moderate runner. Occasional climber (on tree trunks and logs).


**Note.** Almost restricted to ND, but not rare there.

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**Supertribe CICINDELITAE**

**Tribe CICINDELINI**

*Figure 5*

**Geographic distribution.** Worldwide.


**Subtribe CICINDELINA**

**Geographic distribution.** Worldwide.


**Genus Cicindela** Linnaeus, 1758

*Figure 5*

**Cicindela** Linnaeus, 1758: 407. Type species: *Cicindela campestris* Linnaeus, 1758, designated by Latreille, 1810: 425.

**Geographic distribution.** Worldwide.


**Subgenus Neocicindela** Rivalier, 1963, new status


**Geographic distribution.** New Zealand (endemic).

Notes. Rivalier’s splitting of the genus Cicindela into fifty-five genera, from 1950 to 1963, was based on the structure of the internal sac of the male genitalia, but his study was not detailed enough to justify the splitting of the genus Cicindela here or elsewhere in the world. His “genera” could be regarded as subgenera or species groups to balance them with the rest of carabids (Erwin & Sims, 1984: 367). New Zealand tiger beetles will have to be related to the Australian fauna revised by Freitag (1979) who maintained the genus Cicindela with several subgenera. The genus could comprise a few subgenera and subspecies. A wide variation exists within some species in regard to body size, labrum shape, and elytral colour pattern; examination of the genitalia in both sexes will be needed when revising the New Zealand taxa.

Cicindela (Neocicindela) austromontana Bates, 1878
Cicindela austromontana Bates, 1878c: 22. Type locality: Castle Hill, MC.
Cicindela incognita Horn, 1892b: 82. Type locality: “New Zealand?”. Synonymised by Horn, 1896b: 171.

Geographic distribution (Map p. 229). South Island: KA, MB, MC, ND.

Ecology. Epigean, mostly riparian, heliophilous. Lowland, montane, subalpine. Bare sand pockets or stony areas from open river beds, close to water; clay pockets of subalpine scree, road edges, lawns, and banks. Larval burrows usually dug in clay banks. Diurnal; active in the sunshine. Gregarious.


Dispersal power. Macropterous. Strong flier.


Cicindela (Neocicindela) brevilunata Horn, 1926
Cicindela brevilunata Horn, 1926a: 168. Type locality: New Zealand and Hokiaanga, ND.

Geographic distribution (Map p. 229). North Island: AK, CL, ND.


Cicindela (Neocicindela) dunedensis Laporte de Castelnau, 1867
Cicindela dunedensis Laporte de Castelnau, 1867: 35. Type locality: Dunedin, DN.
Cicindela dunedensis: Hutton, 1874: 158 (incorrect subsequent spelling).
Cicindela dunedensis brevilunata: Horn, 1896a: 354.


Ecology. Eurytopic, epigean, xerophilous, halotolerant, heliophilous. Lowland, montane, subalpine, alpine. Dry bare or sparsely vegetated areas (clay, chalk, sand, stone) of tussock grasslands, cultivated fields (mustard), field banks, eroded cliffs, eroded clay pockets, gardens, parks, river banks, salt pans, scree. Diurnal; active in the sunshine. Gregarious.


Note. This name could comprise two taxonomic forms.
Cicindela (Neocicindela) feredayi Bates, 1867
Geographic distribution (Map p. 230). North Island: BP, RI, TO, WI, WN. South Island: CO, DN, FD, KA, MB, MC, MK, NC, OL, SC.
Biology. Seasonality: November–April. Predacious (based on mouthpart morphology).

Cicindela (Neocicindela) hamiltoni Broun, 1921
Cicindela hamiltoni Broun, 1921: 594. Type locality: Mouat's Lookout, Awatere River Basin, KA.

Cicindela (Neocicindela) helmsi Sharp, 1886
Cicindela helmsi Sharp, 1886: 358. Type locality: Greymouth, BR.
Geographic distribution (Map p. 230). North Island: TO. South Island: BR, FD, KA, MB, NC, NN, OL, SC, WD.
Biology. Seasonality: November–April. Predacious (based on mouthpart morphology).

Note. The Central Volcanic Plateau (TO) populations being ecologically and geographically distinct from other populations, we could be facing two sibling species or subspecies.
**Cicindela (Neocicindela) parryi** White, 1846

*Cicindela parryi* White, 1846: 1. Type locality: Port Nicholson, WN.


**Ecology.** Epigean, mostly silvicoleous, hygrophilous. Lowland, montane, subalpine, alpine. Openings, paths and roads situated in forests (beech, broadleaf, podocarp), shrublands, and scrublands; roadsides and clay banks in tussock grasslands, cultivated fields; sandy beaches near tussock grasslands and cultivated fields; screes, stream beds, gardens. Larval burrows dug in bare areas of tussock grasslands. Mostly diurnal; active both in the sunshine and in cloudy weather. Solitary.


**Dispersal power.** Macropterous. Short-distance flier (about 0.5 m). Occasional flier to artificial lights at night. Reluctant both to fly and run. Occasional climber (on shrubs).

**References.** Laporte de Castelnau, 1867: 36 (larval description); Hudson, 1934: 30 (distribution, ecology); Brouerius van Nidek, 1965: 357 (distribution); McColl, 1975: 25–26 (ecology, biology); Johns, 1977: 325 (distribution, ecology); Watt, 1980b: 187 (distribution, ecology); Patrick et al., 1986: 13 (distribution); Johns, 1986: 31 (distribution, ecology); Wiesner, 1988: 175 (distribution, ecology, dispersal power); Townsend, 1997: 7 (distribution); Savill, 1999: 133–140 (distribution, ecology).

**Note.** This name could represent a species complex.

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**Cicindela (Neocicindela) perhispida campbelli** Broun, 1886

*Cicindela campbelli* Broun, 1886: 817. Type locality: Waikato Heads, AK/ND.

*Cicindela perhispida campbelli*: Horn, 1926a: 168.


**Geographic distribution** (Map p. 230). North Island: AK, ND.

**Ecology.** Stenotopic, epigean, arenicolous, xerophilous, heliophilous. Coastal lowland. Dry beaches and foredunes with white quartz sand. Diurnal; active in the sunshine. Gregarious.


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**Cicindela (Neocicindela) perhispida giveni** (Brouerius van Nidek, 1965), new combination

*Neocicindela perhispida giveni* Brouerius van Nidek, 1965: 353. Type locality: Spirits Bay, ND.


**Geographic distribution** (Map p. 230). North Island: AK, ND.

**Ecology.** Stenotopic, epigean, arenicolous, xerophilous, heliophilous. Coastal lowland. Dry beaches and foredunes with white quartz sand. Diurnal; active in the sunshine. Gregarious.


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**Cicindela (Neocicindela) perhispida perhispida** Broun, 1880

*Cicindela perhispida* Broun, 1880: 4. Type locality: Near Hokianga & Marsden Point, ND.


**Geographic distribution** (Map p. 230). North Island: AK, ND.


References. 

Note. A genitalic study is required to assess the taxonomic status of perthioida varieties.

Cicindela (Neocicindela) spilleri (Brouerius van Nidek, 1965), new combination
Neocicindela spilleri Brouerius van Nidek, 1965: 355. Type locality: Swanson, AK.

Geographic distribution (Map p. 231). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO. South Island: NN, SD.


Dispersal power. Macropterus. Occasional strong flier, usually reluctant to move. Attracted to artificial lights at night. Slow runner.


Cicindela (Neocicindela) tuberculata Fabricius, 1775

Figure 5

Cicindela tuberculata Fabricius, 1775: 225. Type locality: New Zealand.


Neocicindela tuberculata: Rivalier, 1963: 37.

Geographic distribution (Map p. 231). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO. South Island: NN, SD.

Ecology. Eurytopic, epigean, xerophilous, heliophilous. Lowland, montane. Dry clay banks, pastures, tussock grasslands, cultivated fields (millet, turnip, mustard), gardens, roadsides; streets, tracks in forests (broadleaf, podocarp), shrublands, and scrublands; orchards (apple), sand dunes, sandy or clay stream banks; sea beaches, flaxlands. Larval burrows (10–15 cm deep) dug in dry clay banks. Diurnal; active in the sunshine. Gregarious.


Note. Common names: Common tiger beetle, moeone, and papapa (adult); penny doctor, butcher boy, kapuku, kui, kurikuri, moeone, and muremure (larva).

Cicindela (Neocicindela) waiouraensis Broun, 1914

Cicindela waiouraensis Broun, 1914b: 146. Type locality: Waiouru, TO.


Geographic distribution (Map p. 231). North Island: TO. South Island: MB.

Ecology. Epigean, xerophilous, heliophilous, thermophilous. Upland. Open sparsely vegetated clay banks or compacted ash, often very hot to the touch; clay pockets in grasslands. Diurnal; active in the sunshine. Gregarious.


References. Hudson, 1934: 29 (distribution); Brouerius van Nidek, 1965: 358 (distribution); Wiesner, 1988: 175 (distribution); Savill, 1999: 134, 146 (distribution, ecology).

Division LOXOMERIFORMES
Subfamily SCARITINAE
Supertribe MIGADOPITAE
Tribe AMAROTYPINI

Figure 6

Geographic distribution. New Zealand (endemic).


Notes. Peter M. Johns (Christchurch, New Zealand) is currently revising this tribe. A few genera and numerous species from the South Island await description.

Genus Amarotypus Bates, 1872

Figure 6


Geographic distribution. New Zealand (endemic).


Note. A few species await description.

Amarotypus edwardsii Bates, 1872

Figure 6


Ecology. Stenotopic, arboreal, silvicolous. Lowland, montane, subalpine. Wet forests (beech, broadleaf) and shrublands. Nocturnal; active at night on trees; hides during the day in moss, liverworts and lichens growing on trees and shrubs.


Dispersal power. Brachypterous, incapable of flight. Moderate runner. Frequent climber (on trees and shrubs)


Tribe MIGADOPINI

Figure 7

Geographic distribution. Australia, New Zealand, Falkland Islands, southern South America.


Notes. Peter M. Johns (Christchurch, New Zealand) is revising this tribe. Several species await description.

Genus Calathosoma Jeannel, 1938

Calathosoma Jeannel, 1938b: 18. Type species: Calathus rubromarginatus Blanchard, 1843, by monotypy.

Geographic distribution. Subantarctic New Zealand (endemic).


Calathosoma rubromarginatum (Blanchard, 1843)

Calathus rubromarginatus Blanchard, 1843: Plate 2, Figure 3 (redescribed in 1853: 24). Type locality: Auckland Islands.

Calathosoma rubromarginatum: Jeannel, 1938b: 19.

Geographic distribution (Map p. 229). Subantarctic Islands: AU.

Ecology. Epigean, very hygrophilous. Lowland. Open scrublands (Metrosideros-Dracophyllum), grass-ferns coves. Nocturnal; hides during the day under fallen branches and stones lying on moss or peat.

Dispersal power. Subapterous. Moderate runner.

References. Putzeys, 1873b: 91 (taxonomy); Jeannel, 1938b: 19 (distribution); Gourlay, 1950: 180 (distribution); Brookes, 1951: 22 (distribution); Johns, 1974: 288, 301 (distribution, ecology); Emberson, 1993b: 20 (taxonomy).

Genus Loxomerus Chaudoir, 1842


Loxomerus Chaudoir, 1842: 851. Type species: Loxomerus nebrioides Chaudoir, 1842, by monotypy.

Geographic distribution. Subantarctic New Zealand (endemic).


Notes. This genus is restricted to the New Zealand Subantarctic Islands. A species awaits description. Although closely allied, both subgenera (Loxomerus and Pristancylus) are valid (P.M. Johns, personal communication).

Subgenus Loxomerus Chaudoir, 1842

Geographic distribution. Auckland Islands.

Loxomerus (Loxomerus) nebrioides (Guérin-Méneville, 1841)

Figure 7

Heterodactylus Guérin-Méneville, 1841b: 214. Type locality: Auckland Islands.


Pristonychus castaneus Blanchard, 1843: Plate 2, Figure 1 (revised as Pristancylus castaneus in 1853: 23). Type locality: Auckland Islands. Synonymised by Chaudoir, 1861: 515. Loxomerus nebrioides (Guérin-Méneville): Lacordaire, 1854: 276.


Loxomerus (Loxomerus) nebrioides: Jeannel, 1938b: 17.


Geographic distribution (Map p. 244). Subantarctic Islands: AU.

Ecology. Stenotopic, epigean, very hygrophilous. Lowland. Wet peaty forests (Metrosideros). Nocturnal; hides during the day under pieces of wood and stones.


Dispersal power. Subapterous. Moderate runner.


Subgenus Pristancylus Blanchard, 1853


Geographic distribution. Auckland Islands.

Loxomerus (Pristancylus) brevis (Blanchard, 1843)

Pristancylus brevis Blanchard, 1843: Plate 2, Figure 2 (revised as Pristancylus brevis, 1853: 23). Type locality: Auckland Islands.


Loxomerus cilicollis; Broun, 1909b: 94. Euthenaris cilicollis: Csiki, 1932a: 1268 (incorrect subsequent spelling).

Loxomerus (Pristancylus) brevis: Jeannel, 1938b: 17.

Geographic distribution (Map p. 243). Subantarctic Islands: AU.

Ecology. Eurytopic, epigean, very hygrophilous. Lowland, montane. Supralittoral zone, wet peaty herbfields (Stilbocarpa), tussock swards, fellfields. Nocturnal; hides during the day under pieces of wood, stones, and among Stilbocarpa-roots.


Dispersal power. Subapterous. Moderate runner.

References. Jeannel, 1938b: 17 (distribution, ecology); Gourlay, 1950: 179 (distribution); Brookes, 1951: 21 (distribution, ecology); Johns, 1974: 291, 294, 301 (larval
description, distribution, ecology); Emberson, 1993b: 20 (taxonomy); Nicholls et al., 1998: 3 (taxonomy).

**Loxomerus (Pristancylus) huttoni** (Broun, 1902)

_Eusthenarus huttoni_ Broun, in Hutton & Broun, 1902: 177. Type locality: Auckland Islands.

**Loxomerus huttoni**: Broun, 1909b: 94.

_Euthenarus huttoni_: Csiki, 1932a: 1268 (incorrect subsequent spelling).

**Loxomerus (Pristancylus) huttoni**: Jeannel, 1938b: 17.

**Geographic distribution** (Map p. 244). Subantarctic Islands: AU.

**Ecology**. Stenotopic, epigean, very hygrophilous. Lowland. Wet peaty scrublands (Dracophyllum). Nocturnal; hides during the day under stones.

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

**Dispersal power**. Subapterous. Moderate runner.

**References**. Jeannel, 1938b: 17 (distribution, ecology); Gourlay, 1950: 176 and 1960: 7 (taxonomy); Johns, 1974: 292, 301 (distribution, ecology); Nicholls et al., 1998: 3 (taxonomy).

**Genus Taenarthrus** Broun, 1914

_Taenarthrus_ Broun, 1914a: 85. Type species: _Taenarthrus philpotti_ Broun, 1914a, by monotypy.

**Geographic distribution**. New Zealand (endemic; South Island).

**References**. Hudson, 1934: 177 (list); Jeannel, 1938b: 17 (distribution, ecology); Gourlay, 1960: 7 (taxonomy).

**Notes**. The genus _Taenarthrus_ Broun, 1914 was incorrectly synonymised with _Loxomerus_ Chaudoir, 1842 by Gourlay (1960: 7). Several species await description. They occur in the South Island, particularly in the south, from lower to higher elevations, either in forests or open alpine areas, along seepages and rills, in colonies under deep embedded stones.

**Taenarthrus capito** (Jeannel, 1938), new combination

_Loxomerus (Pristancylus) capito_ Jeannel, 1938b: 17. Type locality: Lake Nakatipu [=Wakatipu], OL.

**Geographic distribution** (Map p. 268). South Island: OL.

**Ecology**. Eurytopic, riparian, very hygrophilous. Montane, subalpine, alpine. Wet edges of seepages and small brooks crossing tussock grasslands; caves (occasionally). Nocturnal; hides during the day under stones.

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

**Dispersal power**. Subapterous. Moderate runner.

**References**. Gourlay, 1960: 7 (taxonomy); Townsend, 1963: 95 (distribution, ecology).

**Notes**. Original combination reinstated on the basis of morphology. This taxon was incorrectly synonymised with _Loxomerus_ (Pristancylus) capito Jeannel, 1938b, but was reinstated as a valid species by Elliott & Ogle, 1985: 40.

**Supertribe SCARITITAE**

**Tribe CLIVININI**

_Figure 8_

**Geographic distribution**. Worldwide.


**Subtribe CLIVININA**

**Geographic distribution**. Worldwide.

**Genus Clivina** Latreille, 1802

_Figure 8_

_Clivina_ Latreille, 1802: 96. Type species: _Scarites arenarius_ Fabricius, 1775 (= _Tenebrio fossor_ Linnaeus, 1758), by monotypy.


**Geographic distribution.** Worldwide; New Zealand (adventive).


**australiae group**

**Clivina australasiae** Boheman, 1858

*Clivina australasiae* Boheman, 1858: 8. Type locality: Sydney, New South Wales, Australia.


**Ecology.** Fossorial. Lowland. Cultivated fields. Nocturnal; hides during the day in burrows.


**Dispersal power**. Macropterous, capable of flight. Slow runner.

**References.** Broun, 1880: 7 (distribution); Sloane, 1920b: 320 (distribution); Hudson, 1934: 31–32 (distribution, ecology); Anonymous, 1938a: 29 (biology); Muggeridge, 1939: 184–186 (biology); Spiller et al., 1982: 133 (biology); Martin, 1983: 30 (ecology, biology); Moore et al., 1987: 67 (distribution, ecology, biology, dispersal power); Moore, 1992: 162, 164 (distribution); Sunderland et al., 1995: 39–49 (distribution, ecology, biology).

**Notes.** Since Broun’s literature record (1880; as *rugithorax*), no specimens belonging to this species have been authenticated in New Zealand entomological collections. Almost all the New Zealand literature dealing with *Clivina rugithorax* probably refers to *Clivina vagans*.

**Clivina basalis** Chaudoir, 1843

Figure 8

*Clivina basalis* Chaudoir, 1843b: 734. Type locality: Australia.


**Geographic distribution** (Map p. 231). North Island: AK, BP, CL, GB, ND, TO. South Island: NN, SD, SL. Extralimital range: Australia (mainland), New Guinea, Sulawesi, Java, Celebes, Norfolk Island. Adventive. First New Zealand records: Lake Ohia, ND 1917 (NZAC); Woodhill, AK, Ruakaka, ND, Rangiputa, ND (Cameron & Butcher, 1980: 115). Well established.

**Ecology.** Eurytopic, fossorial, hygrophilous. Lowland. Moist or wet muddy areas such as pastures, cultivated fields, roadside ditches; edges of rivers, brooks, and marshes; swamp forests, saltmarshes. Nocturnal; hides during the day in burrows, under logs, plant debris, and stones.


**Dispersal power.** Macropterous. Frequent flyer to artificial lights at night; frequent in drift material, which indicates previous flight. Slow runner.

**References.** Cameron & Butcher, 1980: 115–116 (distribution, ecology, biology); Moore, 1985: 244 (distribution); Moore et al., 1987: 67 (distribution, ecology, biology, dispersal power); Kuschel, 1990: 24, 39 (distribution, ecology, biology, dispersal power); Cameron et al., 1995: 40 (distribution); Townsend, 1997: 7 (distribution).

**Clivina vagans** Putzeys, 1866

*Clivina vagans* Putzeys, 1866a: 38. Type locality: Eastern Australia.


**Ecology.** Eurytopic, fossorial, hygrophilous. Lowland. Moist or wet muddy areas such as pastures, cultivated fields (onion, carrot, potato, strawberry, maize, wheat, tobacco, swede, lucerne, turnip), gardens, chicken yards; edges of rivers, ponds, and lakes; roadside ditches, flaxlands. Nocturnal; hides during the day in burrows, under logs, and stones. Gregarious.

**Dispersal power.** Macropterous. Frequent flier. Frequent in drift material (sea beaches, lagoons, sand dunes), which indicates previous flight. Slow runner.

**References.** Moore et al., 1987: 77 (distribution, ecology, biology, dispersal power); Kuschel, 1990: 24, 39 (distribution, ecology, biology, dispersal power); Moore, 1992: 164 (distribution); Townsend, 1994: 9, 10, 12 (distribution, ecology).

**heterogena group**

*Clivina heterogena* Putzeys, 1866


**Ecology.** Fossorial, very hygrophilous. Lowland. Wet muddy areas such as edges of brooks and seepages crossing swamp forests. Nocturnal; hides during the day in burrows and under plant debris.

**Biology.** Seasonality: April, September, November. Predacious (Moore et al., 1987: 71).

**Dispersal power.** Macropterous, capable of flight. Slow runner.

**References.** Moore et al., 1987: 71 (distribution, ecology, biology, dispersal power); Baehr, 1989: 12 (distribution, ecology).

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**Division MELAENIFORMES**

**Subfamily BROSCINAE**

**Supertribe BROSCITAE**

**Tribe BROSCINI**

Figure 9

**Geographic distribution.** Worldwide; mostly the Australian Region and South America.


**Notes.** A new revision is needed. Numerous species await description, particularly in the genera *Mecodema* (for example, the *curvidens* and *spiniferum* groups) and *Diglymma*. Larvae are highly fossorial; they are rarely found at the surface of the ground. The Brosconini and the Pterostichini are the largest tribes of Carabidae in New Zealand.

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**Subtribe CREOBIINA**

**Geographic distribution.** New Zealand and South America.

**Genus Bountya** Townsend, 1971


**Geographic distribution.** Subantarctic New Zealand (endemic).


**Bountya insularis** Townsend, 1971

*Bountya insularis* Townsend, 1971b: 183. Type locality: Bounty Island.

**Geographic distribution** (Map p. 228). Subantarctic Islands: BO.

**Ecology.** Stenotopic, fossorial, nidicolous, very hygrophilous. Lowland. Penguin and albatross colonies; bare granitic areas. Nocturnal; hides during the day in bird nests and under stones.

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

**Dispersal power.** Subapterous. Slow runner.

**References.** Townsend, 1971b: 183 (taxonomy, distribution, ecology) and 1988: 10–11 (larval description); Johns, 1974: 284, 301 (distribution, ecology).

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**Subtribe BROSCINA**

**Geographic distribution.** Worldwide; mostly the Australian Region and South America.

**Genus Brullea** Laporte de Castelnau, 1867


**Geographic distribution.** New Zealand (endemic).

**Brullea antarctica** Laporte de Castelnau, 1867

_Brullea antarctica_ Laporte de Castelnau, 1867: 80 (redescribed in 1868: 166). Type locality: Auckland, AK.

**Geographic distribution** (Map p. 229). North Island: AK, GB, ND, TK, WA, WI, WN, WO. South Island: BR, FD, MC, NN, SD, WD.

**Ecology.** Stenotopic, fossorial, arenicolous, halophilous. Coastal lowland. Sandy sea beaches at the spring high water level; sandy foredunes. Nocturnal; hides during the day in deep burrows (down to 11 cm), under logs, and under dry dung-cakes. Larval habitat: Deep burrows dug in sand. Occasionally seen wandering on beaches in daytime after heavy rain and high tide.


**Dispersal power.** Subapterous. Slow runner.


**Genus Diglymma** Sharp, 1886


**Geographic distribution.** New Zealand (endemic).


**Notes.** A new revision is needed. Britton’s revision is of limited usefulness as it did not include any illustration of male genitalia. In addition, a few species await description.

**Diglymma castigatum** Broun, 1909

_Diglymma castigatum_ Broun, 1909b: 84. Type locality: The Snares.

**Geographic distribution** (Map p. 236). Subantarctic Islands: BO, SN.

**Ecology.** Stenotopic, fossorial, silvicolous, very hygrophilous. Lowland. Wet shrublands (_Olearia_) with peaty ground. Nocturnal; hides during the day under fallen branches, among dead leaves, in rotten wood, and at the base of tussock clumps.


**Dispersal power.** Subapterous. Slow runner.

**References.** Hudson, 1934: 34 (ecology, biology); Britton, 1949: 540 (distribution); Townsend, 1971b: 176, 178 (taxonomy, including larval description, distribution, ecology); Johns, 1974: 284, 301 (distribution, ecology).
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue


**Dispersal power.** Subapterous. Slow runner.

**References.** Britton, 1949: 541 (distribution); Townsend, 1997: 8 (distribution).

**Diglymma obtusum (Broun, 1886)**

*Metaglymma obtusum* Broun, 1886: 819. Type locality: Mt Maungatua, DN.


*Diglymma nigripes* Broun, 1904: 143.


*Snofru aemulator* Broun, 1908: 341. Type locality: Otara, SL. Synonymised by Britton, 1949: 540.


**Geographic distribution.** South Island: CO, DN, FD, OL, SL. Stewart Island. Offshore Islands: CH.

**Ecology.** Fossorial, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, podocarp), shrublands, and scrublands; flaxlands, tussock grasslands, herbfields. Nocturnal; active at night on forest floor and standing trees (R.M. Emberson, personal communication); hides during the day in leaf litter, under and in logs, in moss, and burrows.


**Dispersal power.** Subapterous. Slow runner.


**Genus Mecodema Blanchard, 1843**

Figure 9

*Mecodema* Blanchard 1843: Plate 2, Figure 14 (revised in 1853: 34). Type species: *Mecodema sculpturnatum* Blanchard, 1843, by monotypy.

**Geographic distribution.** New Zealand (endemic).


**Notes.** A new revision is needed. Numerous species await description, particularly from the North Island. Some species groups of Britton could represent genera of their own.

**alternans group**


**Mecodema alternans alternans** Laporte de Castelnaud, 1867


*Mecodema philpotti* Broun, 1923: 672. Type locality: Bluff, SL. Synonymised with *M. trailli* by Britton, 1949: 568.


**Geographic distribution.** (Map p. 244). South Island: DN, SL. Stewart Island. Offshore Islands: CH.

**Ecology.** Eurytopic, fossorial, silvicolous, very hygrophilous. Lowland, alpine. Wet forests (broadleaf, podocarp) and scrublands, coastal swaards, sand dunes, petrel nest burrows. Nocturnal; active at night on forest floor and standing trees (R.M. Emberson, personal communication); hides during the day under logs, stones, and in tree stumps.


**Dispersal power.** Subapterous. Slow runner. Good climber.


**Note.** *Mecodema alternans* could represent a species complex.

**Mecodema alternans hudsoni** Broun, 1909

*Mecodema hudsoni* Broun, 1909b: 83. Type locality: The Snares.

**Geographic distribution.** (Map p. 244). Subantarctic Islands: SN.

**Ecology.** Stenotopic, fossorial, mostly silvicolous, very hygrophilous. Lowland. Wet peaty forests (*Olearia*); hepatic swaards. Nocturnal; hides during the day under logs and among tussock roots. Gregarious.
**Mecodema angustulum** Broun, 1914

Mecodema angustulum Broun, 1914a: 82. Type locality: Mt Arthur, NN.

**Geographic distribution** (Map p. 244). South Island: NN.

**Ecology.** Eurytopic, fossorial, very hygrophilous. Montane, subalpine. Wet forests (beech), scrublands, tussock grasslands. Nocturnal; hides during the day under logs.


**Dispersal power.** Subapterous. Slow runner.

**References.** Britton, 1949: 569 (distribution); Molloy et al., 1994: 59 (distribution, conservation); Townsend, 1997: 8 (distribution).

**Note.** This species could be a true forest inhabitant.
Ecology. Fossorial, mostly silvicolous, hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf), shrublands, and scrublands; tussock grasslands-fellfields; caves (occasionally). Nocturnal; hides under and in rotten logs as well as under stones.


Dispersal power. Subapterous. Slow runner.


Mecodema metallicum Sharp, 1886
Mecodema metallicum Sharp, 1886: 359. Type locality: Greymouth, BR.

Geographic distribution (Map p. 248). South Island: BR, NN, WD.

Ecology. Fossorial, silvicolous, very hygrophilous. Lowland, montane. Wet forests (podocarp, broadleaf, beech). Nocturnal; shelters during the day.

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

Dispersal power. Subapterous. Slow runner.


Mecodema nitidum Broun, 1903
Mecodema nitidum Broun, 1903: 452. Type locality: Westport, NN.

Geographic distribution (Map p. 248). South Island: NN.

Ecology. Fossorial, silvicolous, very hygrophilous. Lowland. Wet forests (broadleaf, beech). Nocturnal; hides during the day under logs.

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

Dispersal power. Subapterous. Slow runner.

References. Britton, 1949: 569 (distribution); Molloy et al., 1994: 59 (as M. nitiden [sic], distribution, conservation); Townsend, 1997: 9 (distribution).

Note. Mecodema is a neuter noun, therefore requiring an adjective with neuter ending.

Mecodema proximum Britton, 1949
Mecodema proximus [sic] Britton, 1949: 569. Type locality: Saddle Hill, NN.

Geographic distribution (Map p. 249). South Island: NN, SD.

Ecology. Fossorial, mostly silvicolous, very hygrophilous. Montane, subalpine, alpine. Wet forests (beech), alpine grasslands, and rocky tussock grasslands. Nocturnal; hides during the day under stones.


Dispersal power. Subapterous. Slow runner.

References. Britton, 1949: 569 (distribution); Molloy et al., 1994: 59 (as M. proximinis [sic], distribution, conservation); Townsend, 1997: 9 (distribution).

Mecodema punctatum (Laporte de Castelnau, 1867)
Mecodema punctatum Laporte de Castelnau, 1867: 78 (redescribed in 1868: 164). Type locality: Dunedin, DN.

Metaglymma punctatum: Putzeys, 1873a: 312.


Geographic distribution (Map p. 249). South Island: BR, CO, DN, NN, OL, SL.

Ecology. Stenotopic, fossorial, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech). Nocturnal; shelters during the day.

Dispersal power. Subapterous. Slow runner.


Note. *Metaglymma aeneoniger* could be a valid species.

*Mecodema rugiceps anomalum* Townsend, 1965

*Mecodema rugiceps anomalum* Townsend, 1965: 311. Type locality: Upper Maitai, NN.

Geographic distribution (Map p. 250). South Island: MB, NN, SD.

Ecology. Stenotopic, fossorial, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech). Nocturnal; shelters during the day.


Dispersal power. Subapterous. Slow runner.

References. Townsend, 1965: 311–312 (taxonomy, distribution); Molloy et al., 1994: 59 (as *M. rawgiceps* [sic] subsp., distribution, conservation); Townsend, 1997: 9 (distribution).

Note. This subspecies could be a valid species.

*Mecodema rugiceps rugiceps* Sharp, 1886

*Mecodema rugiceps* Sharp, 1886: 359. Type locality: Near Bealey, NC.


Geographic distribution (Map p. 250). South Island: BR, FD, MB, MC, NC, NN, OL, WD.

Ecology. Fossorial, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf, podocarp) and shrublands; tussock grasslands, herbfields, fellfields, moraines. Nocturnal; hides during the day under logs and stones.

Biology. Seasonality: October–April, August. Predacious (based on mouthpart morphology). Occasionally infested with mites.

Dispersal power. Subapterous. Slow runner.


*Mecodema striatum* Broun, 1904

*Mecodema striatum* Broun, 1904: 42. Type locality: Puysegur Point, FD.

Geographic distribution (Map p. 251). South Island: FD.

Ecology. Fossorial, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech) and scrublands; tussock grasslands. Nocturnal; hides during the day under stones.


Dispersal power. Subapterous. Slow runner.


*Mecodema strictum* Britton, 1949

*Mecodema strictum* Britton, 1949: 569. Type locality: Takaka Hill, NN.

Geographic distribution (Map p. 251). South Island: NN.

Ecology. Fossorial, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech) and scrublands; tussock grasslands. Nocturnal; hides during the day under stones.


Dispersal power. Subapterous. Slow runner.


Note. *Mecodema costellum* spelles from Paturau Cave, NN awaits description (Molloy et al., 1994: 58).

*Mecodema bullatum* Lewis, 1902

*Mecodema bullatum* Lewis, 1902: 202. Type locality: Puysegur Point, FD.

Geographic distribution (Map p. 245). South Island: FD, OL, SL, WD.

Ecology. Fossorial, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech) and shrublands; tussock grasslands. Nocturnal; hides dur-
ing the day under logs and stones.


**Dispersal power.** Subapterous. Slow runner.

**References.** Britton, 1949: 551 (distribution); Patrick et al., 1987: 35 (distribution); Palma et al., 1989: 20 (taxonomy).

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*Mecodema chiltoni* Broun, 1917

*Mecodema chiltoni* Broun, 1917: 351. Type locality: Mt Dick, Lake Wakatipu, OL.

**Geographic distribution** (Map p. 245). South Island: CO, OL.

**Ecology.** Eurytopic, fossorial. Lowland, upland, alpine. Tussock grasslands, pastures, forests (beech). Nocturnal; hides during the day under stones (often situated near large weta holes) and logs.

**Biology.** Seasonality: September–April. Predacious. Adult and larval food: Invertebrates; a montane weta (J. Nunn, personal communication). Occasionally infested with mites.

**Dispersal power.** Subapterous. Slow runner.


**Note.** This species could mainly be a forest inhabitant.

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*Mecodema costellum costellum* Broun, 1903

*Mecodema costellum* Broun, 1903: 451. Type locality: Stephens Island, SD.

**Geographic distribution** (Map p. 245). South Island: SD.

**Ecology.** Stenotopic, fossorial, silvicolous, very xerophilous. Lowland, montane, subalpine. Dry forests (beech) and shrublands. Nocturnal; hides during the day in burrows dug under logs.

**Biology.** Seasonality: October, December–February, April, July. Predacious (based on mouthpart morphology). Occasionally infested with mites.

**Dispersal power.** Subapterous. Slow runner.


**Notes.** Configuration of the male genitalia suggests that this may be a valid species as originally proposed by Broun. An examination of the internal sac of the male genitalia, and perhaps of the female reproductive system, is needed to assess the taxonomic status of the *Mecodema costellum* subspecies. Common name: Stephens Island carabid.

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*Mecodema costellum gordonense* Broun, 1917

*Mecodema gordonense* Broun, 1917: 357. Type locality: Gordon’s Knob, near Belgrove, NN.

**Geographic distribution** (Map p. 245). South Island: BR, NN, SD.

**Ecology.** Fossorial, mostly silvicolous, very xerophilous. Montane, alpine. Cloud forests (beech), alpine grasslands. Nocturnal; shelters during the day.

**Biology.** Seasonality: November–May. Predacious (based on mouthpart morphology). Occasionally infested with mites.

**Dispersal power.** Subapterous. Slow runner.


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*Mecodema costellum lewisi* Broun, 1908

*Mecodema lewisi* Broun, 1908: 337. Type locality: Broken River, MC.

**Geographic distribution** (Map p. 245). South Island: KA, MC.

**Ecology.** Stenotopic, fossorial, silvicolous, xerophilous. Lowland, montane, subalpine. Dry forests (beech) and shrublands. Nocturnal; hides during the day in burrows dug under logs.

**Biology.** Seasonality: October, December–February, April, July. Predacious (based on mouthpart morphology). Occasionally infested with mites.

**Dispersal power.** Subapterous. Slow runner.

**Mecodema costellum obesum** Townsend, 1965
*Mecodema costellum obesum* Townsend, 1965: 302. Type locality: Canaan, Takaka Hill, NN.

**Geographic distribution** (Map p. 245). South Island: BR, KA, MB, NN.

**Ecology.** Stenotopic, fossorial, silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech) and shrublands. Nocturnal; hides during the day under large logs.


**Dispersal power.** Subapterous. Slow runner.


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**Mecodema costipenne** Broun, 1914
*Mecodema costipenne* Broun, 1914: 82. Type locality: Routeburn, Lake Wakatipu, OL.

**Geographic distribution** (Map p. 245). South Island: FD, OL, SL.

**Ecology.** Fossorial, silvicolous, very hygrophilous. Lowland, montane, subalpine. Forests (beech), shrublands-grasslands. Nocturnal, hides during the day under logs.

**Biology.** Seasonality: December–February, April, August. Predacious (based on mouthpart morphology). Occasionally infested with mites.

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

**References.** Hudson, 1934: 32 (distribution, ecology); Britton, 1949: 548 (distribution); Barratt, 1993: 5 (distribution).

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**Mecodema howittii** Laporte de Castelnau, 1867
*Mecodema howittii* Laporte de Castelnau, 1867: 73 (redescribed in 1868: 159). Type locality: Near Christchurch, MC.

**Geographic distribution** (Map p. 247). South Island: MC.

**Ecology.** Stenotopic, fossorial, campicolous, xerophilous. Lowland. Dry pastures. Nocturnal; hides during the day under logs and stones.

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

**Dispersal power.** Subapterous. Slow runner.


**Note.** Enigmatic species which has not been collected for many years.

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**Mecodema punctellum** Broun, 1921
*Mecodema punctellum* Broun, 1921: 596. Type locality: Stephens Island, SD.

**Geographic distribution** (Map p. 249). South Island: SD.

**Ecology.** Fossorial. Lowland. Habitat unknown; probably wet forests.


**Dispersal power.** Subapterous. Slow runner.


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**Mecodema rectolineatum** Laporte de Castelnau, 1867
*Mecodema rectolineatum* Laporte de Castelnau, 1867: 74 (redescribed in 1868: 160). Type locality: Near Dunedin, DN.

**Geographic distribution** (Map p. 250). South Island: CO,
DN, MK, SC.

Ecology. Stenotopic, fossorial, silvicolous. Montane. Forests (beech, podocarp, broadleaf) and scrublands. Mostly nocturnal; sometimes active on cloudy days (R.M. Emberson, personal communication); usually hides during the day under logs (mostly) and under stones.


Dispersal power. Subapterous. Slow runner.


Mecodema sculpturatum puncticolle Broun, 1914
Mecodema puncticolle Broun, 1914b: 146. Type locality: Totara, DN.
Mecodema sculpturatum puncticolle: Britton, 1949: 552.

Geographic distribution (Map p. 250). South Island: CO, DN, SL, WD.

Ecology. Eurytopic, fossorial. Lowland, montane. Forests (beech), open areas, suburban gardens. Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Slow runner.


Note. The male genitalia are identical to those of the nominotypical subspecies.

Mecodema sculpturatum sculpturatum Blanchard, 1843
Mecodema sculpturatum Blanchard, 1843: Plate 2, Figure 14 (redescribed in 1853: 35). Type locality: Otago, South Island.
Mecodema sculpturatum sculpturatum: Britton, 1949: 552.

Geographic distribution (Map p. 250). South Island: DN, SL, WD.

Ecology. Eurytopic, fossorial. Lowland, montane. Forests (beech), open areas, suburban gardens. Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Slow runner.


Note. The male genitalia are identical to those of the nominotypical subspecies.

Mecodema atrox Britton, 1949
Mecodema atrox Britton, 1949: 576. Type locality: Tauranga, BP.

Geographic distribution (Map p. 244). North Island: BP.

Ecology. Fossorial, silvicolous, very hygrophilous. Lowland. Wet native forests; an exotic plantation (pine-eucalypt). Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Slow runner.

References. Britton, 1949: 576 (distribution); Watt, 1979: 7 (distribution, ecology); Molloy et al., 1994: 59 (as M. aptrox [sic], distribution, conservation).

Mecodema curvidens (Broun, 1915)
Metaglymma curvidens Broun, 1915: 273. Type locality: Opotiki, BP.

Geographic distribution (Map p. 246). North Island: BP.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Coastal lowland. Wet forests (broadleaf, podocarp). Nocturnal; shelters during the day.


Dispersal power. Subapterous. Slow runner.

References. Britton, 1949: 576 (distribution); Molloy et al., 1994: 59 (as M. kermadens [sic], distribution, conservation).

Mecodema occiputale Broun, 1923
Mecodema occiputale Broun, 1923: 670. Type locality: Tokaanu, TO (Broun, 1923: 671); Kai Iwi Beach, WI (Britton, 1949: 575).


curvidens group

Geographic distribution. This group of species occurs mostly along the eastern coast of the North Island from the Three Kings Islands to East Cape.


Notes. A new revision is needed. A few species await description. Species belonging to this group could require a genus of their own.
Geographic distribution (Map p. 248). North Island: BP, HB, TO, WI, WO.

Ecology. Fossorial, silvicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp) and tree plantations (pine). Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Slow runner.


Mecodema pluto Britton, 1949

Mecodema pluto Britton, 1949: 576. Type locality: Te Aroha Trig Station, BP.

Geographic distribution (Map p. 249). North Island: BP, CL.

Ecology. Stenotopic, fossorial, silvicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp). Nocturnal; shelters during the day.


Dispersal power. Subapterous. Slow runner.

References. Hudson, 1934: 32 (distribution); Britton, 1949: 554 (distribution); Reid et al., 1982: 84 (biology); Worthy, 1983: 42 (subfossils); Townsend, 1997: 8 (distribution).

Mecodema regulus Britton, 1964

Mecodema regulus Britton, 1964b: 526. Type locality: Great Island, TH.

Geographic distribution (Map p. 250). Offshore Islands: TH.

Ecology. Stenotopic, fossorial, silvicolous, very hygrophilous. Lowland. Wet forests (broadleaf). Nocturnal; hides during the day under stones and logs.


Dispersal power. Subapterous. Slow runner.

**Mecodema ducale** Sharp, 1886
*Mecodema ducale* Sharp, 1886: 358. Type locality: Ahoura (=Ahaura), near Greymouth, BR.

**Geographic distribution** (Map p. 246). South Island: BR, NN.

**Ecology.** Stenotopic, fossorial, silviculous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech, broadleaf, podocarp), shrublands, and scrublands. Nocturnal; hides during the day under logs, stones, and fallen nikau palm fronds.

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

**Dispersal power.** Subapterous. Slow runner.

**References.** Britton, 1949: 553 (distribution); Watt, 1974: 762 (distribution); Townsend, 1997: 8 (distribution).

**inimate group**

**Mecodema elongatum** Laporte de Castelnau, 1867

**Mecodema gratum** Broun, 1917: 354. Type locality: Mt Alfred, near Paradise, OL. Synonymised by Britton, 1949: 574.

**Geographic distribution** (Map p. 246). South Island: CO, OL, SL.

**Ecology.** Fossorial, mostly silviculous. Lowland, montane. Forests (beech), scrublands, shrublands, tussock grasslands, pastures. Nocturnal; hides during the day under logs and stones.


**Dispersal power.** Subapterous. Slow runner.

**References.** Hudson, 1934: 33 (distribution, ecology); Britton, 1949: 575 (distribution).

**Mecodema infimate** Lewis, 1902
*Mecodema infimate* Lewis, 1902: 202. Type locality: West Plains, Invercargill, SL.


**Geographic distribution** (Map p. 247). South Island: SL. Stewart Island.

**Ecology.** Fossorial, mostly silviculous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, podocarp, broadleaf), cushion herbfields, tussock grasslands, flaxlands, moorlands. Nocturnal; hides during the day under stones, in the soil, leaf litter, and tussock clumps.


**Dispersal power.** Subapterous. Slow runner. Occasional climber (on ferns).

**References.** Britton, 1949: 574 (distribution); Patrick et al., 1992b: 18 (distribution); Palma et al., 1989: 21 (taxonomy).

**Mecodema minax** Britton, 1949
*Mecodema minax* Britton, 1949: 574. Type locality: Mt Table Top, near Milton, DN.

**Geographic distribution** (Map p. 248). South Island: CO, DN, SL.

**Ecology.** Eurytopic, fossorial. Lowland, upland, subalpine, alpine. Tussock grasslands, tussock herbfields, tussock shrublands, forests (beech). Nocturnal; hides during the day in rotten fallen trees.

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

**Dispersal power.** Subapterous. Slow runner.

**References.** Britton, 1949: 574 (distribution); Patrick et al., 1985: 8 (distribution, ecology); Palma et al., 1989: 22 (taxonomy); Molloy et al., 1994: 59 (as *M. ninax* [sic], distribution, conservation).

**Mecodema morio** (Laporte de Castelnau, 1867)
*Maoria morio* Laporte de Castelnau, 1867: 78 (redescribed in 1868: 164). Type locality: Otago, South Island.

**Metaglymma morio** Putzeys, 1873a: 313.


**Mecodema punctifer** [sic]: Broun, 1893a: 977.

**Mecodema morio** [sic]: Britton, 1949: 574.

**Geographic distribution** (Map p. 248). South Island: CO, DN, SL.

**Ecology.** Eurytopic, fossorial. Lowland, upland, subalpine. Tussock grasslands, tussock shrublands, forests. Nocturnal; shelters during the day.

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

**Dispersal power.** Subapterous. Slow runner.

**References.** Britton, 1949: 574 (distribution); Patrick et al., 1986: 14 (distribution); Barratt & Patrick, 1987: 82 (distribution, ecology, biology); Patrick et al., 1987: 35 (distribution); Molloy et al., 1994: 59 (as *M. moria* [sic], distribution, conservation).
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**laterale group**

*Mecodema allani* Fairburn, 1945

*Mecodema allani* Fairburn, 1945: 408. Type locality. Valley between Mt Misery and Mt Horrible, near Cass, MC.

**Geographic distribution** (Map p. 244). North Island: WN. South Island: BR, MC, WD.

**Ecology.** Stenotopic, fossorial, silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech) and shrublands: often along streams. Nocturnal; hides during the day under logs.

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

**Dispersal power.** Subapterous. Slow runner.


*Mecodema laterale* Broun, 1917

*Mecodema laterale* Broun, 1917: 350. Type locality: Hollyford, OL.

**Geographic distribution** (Map p. 247). South Island: FD, OL, WD.

**Ecology.** Stenotopic, fossorial, silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, podocarp, broadleaf), shrublands, and scrublands. Nocturnal; hides during the day under logs and stones.


**Dispersal power.** Subapterous. Slow runner.


**spiniferum group**

Notes. *Mecodema* is a neuter noun requiring the neuter epithet *spiniferum*, not *spinifer* (Brown, 1985: 323). A new revision is needed, particularly for the North Island forms.

*Mecodema brittoni* Townsend, 1965

*Mecodema brittoni* Townsend, 1965: 308. Type locality: Hanmer, MB.

**Geographic distribution** (Map p. 245). South Island: MB, NC, SC.

**Ecology.** Eurytopic, fossorial. Lowland, montane, subalpine, alpine. Scrubby open areas; a dry scrub with limestone rocks; city gardens and streets; a scree stream bed. Nocturnal; hides during the day under stones and logs.

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

**Dispersal power.** Subapterous. Slow runner.


*Mecodema dacx* Britton, 1949

*Mecodema dacx* Britton, 1949: 563. Type locality: Oio, Taumarunui, TO.

**Geographic distribution** (Map p. 246). North Island: HB, RI, TO.

**Ecology.** Fossorial, mostly silviculous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech) and shrublands; tussock grasslands. Nocturnal; shelters during the day.

**Biology.** Seasonality: January–February, June. Predacious (based on mouthpart morphology). Occasionally infested with mites.

**Dispersal power.** Subapterous. Slow runner.

**References.** Britton, 1949: 563 (distribution); Davies, 1986: 63 (distribution, ecology biology); Molloy et al., 1994: 59 (distribution, conservation).

*Mecodema fulgidum* Broun, 1881

Figure 9

*Mecodema fulgida* [sic] Broun, 1881: 653. Type locality: Near Nelson, NN.

*Mecodema constricta* [sic] Broun, 1881: 653. Type locality: Castle Hill Station, West Coast Road, MC. Synonymised by Townsend, 1965: 309.


*Mecodema antennale* Broun, 1923: 672. Type locality: Gordon’s Pyramid, Mt Arthur, NN. Synonymised by Britton, 1949: 564.

Geographic distribution (Map p. 246). South Island: BR, KA, MB, MC, NC, NN, SC.

Ecology. Eurytopic, fossorial. Lowland, montane, subalpine, alpine. Dry forests (beech), shrublands, and scrublands; tussock grasslands, pastures, fellfields, scree. Mostly nocturnal; sometimes active on cloudy days (R.M. Emberson, personal communication); usually hides during the day under logs, stones, in stumps, and tussock clumps.


Dispersal power. Subapterous. Slow runner.


Mecodema gourlayi Britton, 1949

Geographic distribution (Map p. 247). South Island: FD.

Ecology. Fossorial. Lowland. A wet beech forest. Nocturnal; shelters during the day.


Dispersal power. Subapterous. Slow runner.


Mecodema hector Britton, 1949
Mecodema hector Britton, 1949: 560. Type locality: Mt Hector, WN (type mislabelled as Mt Hector, Otago).

Geographic distribution (Map p. 247). North Island: WN.


Dispersal power. Subapterous. Slow runner.


Mecodema huttense Broun, 1915
Mecodema huttense Broun, 1915: 270. Type locality: Mt Hutt, MC.

Geographic distribution (Map p. 247). South Island: CO, FD, MC, OL, SL.


Dispersal power. Subapterous. Slow runner.


Mecodema laeviceps Broun, 1904
Mecodema laeviceps Broun, 1904: 41. Type locality: Ida Valley, CO.

Geographic distribution (Map p. 247). South Island: CO.

Ecology. Fossorial. Subalpine. A tussock grassland; a scree-like area surrounded by tussock and briar. Probably steppicolous. Nocturnal; hides during the day under stones and in tussock litter.


Dispersal power. Subapterous. Slow runner.


Note. Common name: Ida Valley carabid.
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Mecodema lucidum Laporte de Castelnau, 1867


Mecodema indiscretum Broun, 1917: 356. Type locality: Mt Earnslaw, OL. Synonymised by Britton, 1949: 561.


Ecology. Eurytopic, fossorial. Lowland, montane, subalpine, alpine. Herbfields, tussock grasslands, forests (beech). Mostly nocturnal; sometimes active on cloudy days (R.M. Emberson, personal communication); usually hides during the day under stones and logs.


Dispersal power. Subapterous. Slow runner.

References. Britton, 1949: 562 (distribution); Barratt, 1994a: 5 (distribution); Molloy et al., 1994: 59 (as M. pullatanum [sic], distribution, conservation).

Note. This taxon could be conspecific with Mecodema lucidum.

Mecodema politanum Broun, 1917

Mecodema politanum Broun, 1917: 352. Type locality: Staircase (= Devil’s Staircase), CO.

Geographic distribution (Map p. 249). South Island: CO, MK, OL.

Ecology. Eurytopic, fossorial. Montane, subalpine, alpine. Herbfields, tussock grasslands, forests (beech). Mostly nocturnal; hides during the day under stones and logs.


Dispersal power. Subapterous. Slow runner.


Mecodema oconnori Broun, 1912

Mecodema o’connori Broun, 1912: 382. Type locality: Levin, WN.

Geographic distribution (Map p. 249). North Island: TO, WA, WN.

Ecology. Stenotopic, fossorial, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech). Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Slow runner.


Note. According to the International Code of Zoological Nomenclature (1999: Article 32.5.2.3), in a compound species-group name published as words united by an apostrophe or a hyphen, the words are to be united by removing the mark concerned.

Mecodema quoinense Broun, 1912

Mecodema quoinense Broun, 1912: 384. Type locality: Mt Quoin, Tararua Range, WN.

Geographic distribution (Map p. 250). North Island: WN.

Ecology. Stenotopic, fossorial, silvicolous, very hygrophilous. Montane. Wet forests (beech). Nocturnal; hides during the day under logs.

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

Dispersal power. Subapterous. Slow runner.

**Mecodema rex** Britton, 1949
*Mecodema rex* Britton, 1949: 565. Type locality: Tuatapere, SL.

**Geographic distribution** (Map p. 250). South Island: FD, SL.

**Ecology.** Eurytopic, fossorial, very hygrophilous. Subalpine, alpine. Alpine meadows, tussock grasslands, tussock shrublands, wet forests (beech). Nocturnal; hides during the day under big stones and logs.

**Biology.** Seasonality: October–April. Predacious (based on mouthpart morphology). Occasionally infested with mites.

**Dispersal power.** Subapterous. Slow runner.

**References.** Britton, 1949: 565 (distribution); Patrick et al., 1987: 35 (distribution); Palma et al., 1989: 22 (taxonomy); Molloy et al., 1994: 59 (distribution, conservation); Peat & Patrick, 1996: 116 (distribution, ecology).

**Mecodema simplex** Laporte de Castelnau, 1867

**Geographic distribution** (Map p. 250). North Island: AK, HB, RI, WN, WA.

**Ecology.** Fossorial, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf) and tree plantations (pine); alpine meadows. Nocturnal; hides during the day under logs and in moss.


**Dispersal power.** Subapterous. Slow runner.

**References.** Hudson, 1905: 342 (distribution, ecology); Britton, 1949: 561 (distribution); Simmonds, 1953: 90 (biology); Dumbleton, 1957: 28 (biology); Green, 1982: 36 (distribution, ecology); Watt, 1983b: 34 (distribution); Davies, 1986: 63 (distribution, ecology, biology).

**Note.** The geographic distribution of *M. simplex* suggests that the type specimen may have been mislabelled.

**Mecodema spiniferum** Broun, 1880
*Mecodema spinifer* [sic] Broun, 1880: 10. Type locality: Waitakerei (=Waitakere), near Auckland, AK.


**Geographic distribution** (Map p. 251). North Island: AK, BP, CL, GB, HB, ND, RI, WA, WN, WO.

**Ecology.** Stenotopic, fossorial, silvicilous, very hygrophilous. Lowland, montane. Wet forests (podocarp, broadleaf). Mostly nocturnal; sometimes active on cloudy days; usually hides during the day under logs and stones.


**Dispersal power.** Subapterous. Slow runner.

**References.** Hudson, 1905: 342 (distribution, ecology); Britton, 1949: 561 (distribution); Simmonds, 1953: 90 (biology); Dumbleton, 1957: 28 (biology); Green, 1982: 36 (distribution, ecology); Watt, 1983b: 34 (distribution); Davies, 1986: 63 (distribution, ecology, biology).

**Note.** This taxon could represent a species complex.
Ecology. Eurytopic, fossorial, xerophilous. Lowland. Dry forests (beech, podocarp, broadleaf), tree plantations (pine), orchards, pastures, river banks. Nocturnal; hides during the day under logs, stones, and in burrows dug in sandy soil.


Dispersal power. Subapterous. Slow runner.


Note. The junior synonym *M. insulare* could be a valid species.

**Mecodema oregoides** (Broun, 1894)

*M. oregoides* [sic] Broun, 1894: 305. Type locality: Christchurch, MC.


Geographic distribution (Map p. 249). South Island: MC.

Ecology. Fossorial, mostly silvicolous, xerophilous. Lowland. Dry forests (broadleaf, podocarp, beech) and scrublands; forest pastures, farmlands, tussock grasslands, gardens. Nocturnal; hides during the day under fallen trees, logs, stones, and in leaf litter.

Biology. Seasonality: Throughout the year. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Slow runner.


Note. Adjectives ending in -oides are invariable (Stearn, 1983: 97).

**Mecodema sulcatum** (Sharp, 1886)

*M. sulcatum* Sharp, 1886: 361. Type locality: Picton, SD.


*M. oricolle* Broun, 1914b: 147. Type locality: Otaraia, near Martinborough, WA. Synonymised by Britton, 1949: 578.

Mecodema sulcatum: Britton, 1949: 578.

Geographic distribution (Map p. 251). North Island: HB, WA, WN. South Island: KA, MB, NC, NN, SD.

Ecology. Eurytopic, fossorial. Lowland, upland. Both dry and moist areas such as tussock grasslands, pastures, farmlands, gardens, scrublands, shrublands, forests (broadleaf) and tree plantations (pine), seashore supralittoral zone. Nocturnal; hides during the day in burrows dug in sandy substrate under stones and logs.


Dispersal power. Subapterous. Slow runner.

**Metaglymma moniliferum** Bates, 1867


**Geographic distribution** (Map p. 255). South Island: KA, MC, NC, SC.

**Ecology.** Eurytopic, fossorial, xerophilous. Lowland, montane. Dry areas such as tussock grasslands, cultivated fields (carrot), pastures, gardens, urban parks, scrublands, open forests (beech, podocarp) and tree plantations (pine, eucalypt), lagoon shores, river beds. Nocturnal; hides during the day in burrows, under cakes of dry manure, logs, stones, and fallen bark.


**Dispersal power.** Subapterous. Slow runner.

**References.** Britton, 1949: 580 (distribution); Johns, 1980: 60 (distribution, ecology) and 1986: 28 (distribution, ecology, biology).

**Note.** *Metaglymma* is a neuter noun requiring the neuter epithet *moniliferum*, not *monilifer*.

**Metaglymma tibiale** (Laporte de Castelnau, 1867)

_Maoria tibialis_ Laporte de Castelnau, 1867: 77 (redescribed in 1868: 163). Type locality: Near Molyneux River (=Puerua River), SL.


**Geographic distribution** (Map p. 255). South Island: CO, DN, SL.

**Ecology.** Eurytopic, fossorial. Lowland, montane, subalpine, alpine. Tussock grasslands, pastures, cultivated fields (lucerne, mustard), tree plantations (pine), shrublands, and scrublands; tussock grasslands, pastures, herbfields, urban gardens. Nocturnal; hides during the day under logs, large stones, and in tussock clumps.


**Dispersal power.** Subapterous. Slow runner.


**Oregus aereus** (White, 1846)

_Broscus* (Promecoderus?) *aereus* White, 1846: 5. Type locality: Port Nicholson, WN.

_Promecoderus aereus_: Chenu, 1851: 117.

*Mcodema oenomum* [sic]: Laporte de Castelnau, 1867: 76.


*Oregus aereus* [sic]: Putzeys, 1868b: 327.

*Oregus aereus*: Putzeys, 1873a: 317.


**Ecology.** Eurytopic, fossorial, xerophilous. Lowland, montane, subalpine, alpine. Dry forests (beech, broadleaf, podocarp), tree plantations (pine), shrublands, and scrublands; tussock grasslands, pastures, herbfields, urban gardens. Nocturnal; hides during the day under logs, large stones, and in tussock clumps.


**Dispersal power.** Subapterous. Slow runner.


**Genus Oregus** Putzeys, 1868

*Oregus* Putzeys 1868b: 326. Type species: _Broscus (Promecoderus?) aereus_ White, 1846: 5. by monotypy.

**Geographic distribution.** New Zealand (endemic).


**Note.** A new species from KA awaits description (Townsend, 1997: 19).

**Oregus aereus** (White, 1846)

_Broscus* (Promecoderus?) *aereus* White, 1846: 5. Type locality: Port Nicholson, WN.

_Promecoderus aereus_: Chenu, 1851: 117.

*Mcodema oenomum* [sic]: Laporte de Castelnau, 1867: 76.


*Oregus aereus* [sic]: Putzeys, 1868b: 327.

*Oregus aereus*: Putzeys, 1873a: 317.


**Ecology.** Eurytopic, fossorial, xerophilous. Lowland, montane, subalpine, alpine. Dry forests (beech, broadleaf, podocarp), tree plantations (pine), shrublands, and scrublands; tussock grasslands, pastures, herbfields, urban gardens. Nocturnal; hides during the day under logs, large stones, and in tussock clumps.


**Dispersal power.** Subapterous. Slow runner.


**Oregus inaequalis** (Laporte de Castelnau, 1867)

_Mecodema inaequale_ Laporte de Castelnau, 1867: 76 (redescribed in 1868: 162). Type locality: Dunedin, DN.

*Oregus inaequalis*: Putzeys, 1873a: 317.
**Geographic distribution** (Map p. 263). South Island: DN, SL.

**Ecology.** Eurytopic, fossorial. Lowland, montane, subalpine, alpine. Tussock grasslands, shrublands. Nocturnal; hides during the day under stones.

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

**Dispersal power.** Subapterous. Slow runner.


**Division PSYDRIFORMES**

**Subfamily PSYDRINAE**

**Supertribe PSYDRITAE**

**Geographic distribution.** Worldwide.


**Tribe MECYCLOTHORACINI**

**Figure 10**

**Geographic distribution.** Australian Region, Pacific Islands.


**Genus Mecyclothorax** Sharp, 1903

**Figure 10**


**Geographic distribution.** Australia, New Zealand, Pacific Islands.


**Notes.** A new species awaits description. Three *Molopsida* taxa (*amplipennis amplipennis, amplipennis labralis,* and *eplicatus*) are transferred to *Mecyclothorax* on morphological bases; they are not congeneric with *Molopsida* and they clearly belong to the tribe Mecyclothoracini, not Tropopterini. The only described New Zealand genus that these taxa can be associated with is *Mecyclothorax* even though its taxonomic limits may be poorly defined. A fourth taxon (*placens*) was recombined with *Mecyclothorax* by Sherley *et al.* (1999).

*Mecyclothorax amplipennis amplipennis* (Broun, 1912), new combination

*Tarastethus amplipennis amplipennis* Broun, 1912: 386. Type locality: Raurimu, TO.

*Molopsida amplipennis amplipennis* Britton, 1940: 477.

**Geographic distribution** (Map p. 251). North Island: GB, HB, RI, TK, TO, WA, WI, WN, WO.

**Ecology.** Stenotopic, arboreal-epigean, silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech, broadleaf, podocarp) and scrublands. Nocturnal; active at night on mossy logs and trees; hides during the day under logs, fallen branches, stones, and in leaf litter.


Mecyclothorax amplipennis labralis (Broun, 1912), new combination
Tarastethus amplipennis labralis Broun, 1912: 387. Type locality: Raurimu, TO.
Molopsida amplipennis labralis: Britton, 1940: 477.

Geographic distribution (Map p. 251). North Island: TO.

Ecology. Upland. A forest. Nocturnal; hides during the day under logs or in leaf litter.


Mecyclothorax eplicatus (Broun, 1923), new combination
Tarastethus eplicatus Broun, 1923: 675. Type locality: Pakarau [=Pekerau], ND.
Molopsida eplicatus: Britton, 1940: 477.

Geographic distribution (Map p. 251). North Island: HB, ND.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech, broadleaf, podocarp). Nocturnal; hides during the day under fallen branches (mostly), stones, and in leaf litter.


Dispersal power. Subapterous. Moderate runner.

Mecyclothorax placens (Broun, 1880)
Tropopterus placens Broun, 1880: 28. Type locality: Near Whangarei Heads, ND.

Geographic distribution (Map p. 252). North Island: BP, CL, ND, TO, WO.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp, beech). Nocturnal; hides during the day in leaf litter, under logs and stones.


Dispersal power. Subapterous. Moderate runner.

Mecyclothorax rotundicollis (White, 1846)
Figure 10
Oopterus rotundicollis White, 1846: 6. Type locality: Bay of Islands, ND.


Ecology. Eurytopic, epigean. Lowland, montane, subalpine, alpine. Tussock grasslands, pastures, cultivated fields (turnip, strawberry, carrot, rye, lucerne), farmlands, herfields, gardens, lawns, sand dunes, forest edges, forests (broadleaf, beech), tree plantations (pine), shrublands, scrublands, stream banks, pond edges, lakeshores, coastal turfs. Mostly nocturnal; hides during the day in leaf litter, moss, at the base of plants (Lupinus), under logs, boards, dried algal mats, and stones. Sometimes active in the sunshine. Gregarious.


(ecology, biology); Moore, 1984: 164 (taxonomy, distribution); Barratt & Patrick, 1987: 82 (distribution, ecology); Kuschel, 1990: 24, 39 (distribution, ecology, biology, dispersal power); Patrick et al., 1993: 11 (ecology); Townsend, 1994: 9–10 (distribution, ecology); Emberson, 1998: 29 (distribution, ecology, biology).

Note. This taxon could represent a species complex.

**Tribe MEONINI (MEONIDINI)**

Figure 11

**Geographic distribution.** Australian Region.


**Note.** The tribal stem is *Meon*-, not *Meonid*- (Madge, 1989: 465).

**Genus Selenochilus** Chaudoir, 1878

Figure 11

*Selenochilus* Chaudoir, 1878b: 21. Type species: *Argutor erythropus* Blanchard, 1843, by monotypy.


**Geographic distribution.** New Zealand (endemic).

**References.** Hudson, 1934: 178 (as *Sympiestus*, list); Britton, 1940: 477 (taxonomy); Moore, 1963: 288 (taxonomy); Baehr, 1998: 360 (taxonomy).

**Notes.** A revision is needed. Two species await description. Members of this genus live in forests.

*Selenochilus fallax* (Broun, 1893)

*Sympiestus fallax* Broun, 1893a: 1007. Type locality: Castle Hill Station, MC.

**Geographic distribution** (Map p. 266). South Island: MC.

**Ecology.** Stenotopic, epigean, silvicolous, xerophilous. Lowland. Dry forests (broadleaf) and shrublands. Nocturnal; shelters during the day.

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

**Dispersal power.** Subapterous. Moderate runner.


Note. This taxon could be conspecific with *S. synthetics*.

*Selenochilus frontalis* (Broun, 1917)

*Sympiestus frontalis* Broun, 1917: 370. Type locality: Scarcliff[e], near Mt Algidus, MC.

**Geographic distribution** (Map p. 267). South Island: MC.

**Ecology.** Montane. Habitat unknown; probably silvicolous.

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

**Dispersal power.** Subapterous. Moderate runner.

*Selenochilus oculator* (Broun, 1893)

*Sympiestus oculator* Broun, 1893a: 1398. Type locality: Hunua Ranges, AK.

**Geographic distribution** (Map p. 267). North Island: AK.

**Ecology.** Lowland. Habitat unknown; probably silvicolous.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.

*Selenochilus piceus* (Blanchard, 1843)

*Argutor erythropus* Blanchard, 1843: Plate 2, Figure 7 (redescribed in 1853: 27). Type locality: Akaroa, MC. Secondary homonym of *Pterostichus erythropus* (Marsham, 1802). Synonymised by Chaudoir, 1878b: 21.

*Argutor piceus* Blanchard, 1843: Plate 2, Figure 8 (redescribed in 1853: 28). Type locality: Akaroa, MC.

*Feronia (Argutor) erythropus* Lacordaire, 1854: 326.

*Feronia (Argutor) piceus* Lacordaire, 1854: 326.


**Geographic distribution** (Map p. 267). South Island: MC.

**Ecology.** Stenotopic, epigean, silvicolous, xerophilous. Lowland. Dry forests (broadleaf) and shrublands. Nocturnal; shelters during the day.

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

**Dispersal power.** Subapterous. Moderate runner.


*Selenochilus ruficornis* (Broun, 1882)

*Cerabilia ruficorne* [sic] Broun, 1882: 223 (redescribed in 1883: 223 and 1886: 754). Type locality: Wellington, WN.

**Geographic distribution** (Map p. 267). North Island: TO, WN.
Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Wet forests (broadleaf, podocarp). Nocturnal; shelters during the day.


Dispersal power. Subapterous. Moderate runner.


*Selenochilus syntheticus* (Sharp, 1886)

Figure 11

*Sympiestus syntheticus* Sharp, 1886: 373. Type locality: Bealey, NC.

*Selenochilus syntheticus*: Britton, 1940: 477 (as a junior synonym of *Selenochilus piceus*); resurrected from synonymy by Johns, 1980: 61.


Geographic distribution (Map p. 267). South Island: MB, MC, NC.

Ecology. Stenotopic, epigean, silvicolous, xerophilous. Lowland. Dry forests (beech). Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Moderate runner.


Tribe TROPOPTERINI (TROPIDOPTERINI)

Figure 12

Geographic distribution. Australia, New Zealand, Neotropical Region.


Note. The tribal stem is *Tropo*- not *Tropido*- (Madge, 1989: 468).

Genus *Molopsida* White, 1846

Figure 12


Geographic distribution. New Zealand (endemic).

References. Hudson, 1934: 177–178 (as *Tarastethus*, list); Sharp, 1886: 373 (taxonomy); Britton, 1940: 477 (taxonomy); Jeannel, 1940b: 97 (taxonomy).

Notes. A revision is needed. Several species await description. J. Nunn (Dunedin, New Zealand) is preparing a key to species, with some new synonyms. Members of this genus are occasional tree climbers at night.

*Molopsida alpinalis* (Broun, 1893)

*Tarastethus alpinalis* Broun, 1893a: 1005. Type locality: New Zealand.

Geographic distribution (Map p. 255). South Island: BR, MB, NN, SD, WD.

Ecology. Epigean, mostly silvicolous, very hygrophilous. Montane, subalpine, alpine. Wet forests (beech, podocarp, broadleaf), alpine meadows. Nocturnal; active at night on mossy logs and the forest floor; hides during the day in logs.


Dispersal power. Subapterous. Moderate runner.


Notes. Broun (1887: 604) cited *Tarastethus alpinalis*, n. sp. from Mt Arthur (NN), but without providing any description. This comment and Broun’s annotation of his personal copy of his *Manual* suggest Mt Arthur, NN, as type locality.

*Molopsida antarctica* (Laporte de Castelnau, 1867)

*Drimostomaantarctica* Laporte de Castelnau, 1867: 113 (redescribed in 1868: 199). Type locality: Wellington, WN.


*Tropidopterusantarcticus* Csiki, 1929: 486.


Geographic distribution (Map p. 255). North Island: WN. South Island: KA, MB, NN, SC, SD.

Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland. Wet native forests and tree plantations (pine), river bed plantings, shelter belts, city gardens. Nocturnal; hides during the day under logs (mostly), in rotten logs, and under the loose bark of fallen trees.


*Molopsida carbonaria* (Broun, 1908)
Tarastethus carbonarius Broun, 1908: 351. Type locality: Manawatu Flats, nine miles below the Gorge, WI/WN.


**Geographic distribution** (Map p. 255). North Island: WI/WN.

**Ecology.** Lowland. Habitat unknown; probably silvicolous.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.

**Note.** This taxon could be conspecific with *Molopsida polita*.

*Molopsida cincta* (Broun, 1893)
Tarastethus cinctus Broun, 1893a: 1005. Type locality: Near the Hermitage, Mt Cook, MK.


**Geographic distribution** (Map p. 255). South Island: CO, MK, SL.

**Ecology.** Epigean. Montane, subalpine, alpine. Forests (beech); a tussock herbfield. Nocturnal; hides during the day in leaf litter.

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

**Dispersal power.** Subapterous. Moderate runner.

*Molopsida convexa* (Broun, 1917)
Tarastethus convexus Broun, 1917: 366. Type locality: Routeburn, OL.


**Geographic distribution** (Map p. 255). South Island: OL.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Montane. Wet forests (beech, podocarp, broadleaf). Nocturnal; active at night on mossy logs and the forest floor.

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

**Dispersal power.** Subapterous. Moderate runner. Good climber.

**Note.** This taxon could be conspecific with *Molopsida oxygona*.

*Molopsida cordipennis* (Broun, 1912)
Tarastethus cordipennis Broun, 1912: 388. Type locality: Mt Quoin, Tararua Range, WN.


**Geographic distribution** (Map p. 255). North Island: WA, WN.

**Ecology.** Epigean, silvicolous. Lowland, montane. Both dry and wet forests (broadleaf). Nocturnal; hides during the day under logs, branches, and in leaf litter.

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

**Dispersal power.** Subapterous. Moderate runner.

*Molopsida debilis* (Sharp, 1886)
Tarastethus debilis Sharp, 1886: 373. Type locality: Bealey, NC.


**Geographic distribution** (Map p. 255). South Island: MC, NC.

**Ecology.** Montane. Habitat unknown; probably silvicolous.

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

**Dispersal power.** Subapterous. Moderate runner.


*Molopsida diversa* (Broun, 1917)
Tarastethus diversus Broun, 1917: 366. Type locality: Moa Basin, West of Mt Algidus, MC.


**Geographic distribution** (Map p. 256). South Island: MC, NC, WD.

**Ecology.** Stenotopic, epigean, silvicolous. Montane, subalpine. Forests (beech, podocarp), scrublands. Nocturnal; hides during the day in leaf litter and moss.


**Dispersal power.** Subapterous. Moderate runner.


*Molopsida dubia* (Broun, 1894)
Tarastethus dubius Broun, 1894: 309. Type locality: Wellington, WN.


**Geographic distribution** (Map p. 256). North Island: TO, WN.
Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech). Nocturnal; hides during the day in fissures of fallen pieces of wood.


Dispersal power. Subapterous. Moderate runner.

Note. This taxon could be conspecific with \textit{Molopsida strenua}.

\textit{Molopsida fovealis} (Broun, 1917)
\textit{Tarastethus fovealis} Broun, 1917: 367. Type locality: Ben Lomond, OL.
\textit{Molopsida fovealis}: Britton, 1940: 477.
Geographic distribution (Map p. 256). South Island: OL.
Dispersal power. Subapterous. Moderate runner.
Note. This taxon could be conspecific with \textit{Molopsida southlandica}.

\textit{Molopsida fuscipes} (Broun, 1923)
\textit{Tarastethus fuscipes} Broun, 1923: 675. Type locality: Belgrove, NN.
\textit{Molopsida fuscipes}: Britton, 1940: 477.
Geographic distribution (Map p. 256). South Island: NN.
Ecology. Lowland. Macrohabitat unknown; probably silvicolous. Nocturnal; hides during the day in rotten pieces of wood.
Biology. Seasonality: October. Predacious (based on mouthpart morphology).
Dispersal power. Subapterous. Moderate runner.
Note. This taxon could be conspecific with \textit{Molopsida seriaporus}.

\textit{Molopsida halli} (Broun, 1917)
\textit{Tarastethus halli} Broun, 1917: 367. Type locality: Mt Kiwi and Moa Basin, near Mt Algidus, MC.
\textit{Molopsida halli}: Britton, 1940: 477.
Geographic distribution (Map p. 256). South Island: MC.
Biology. Seasonality: October. Predacious (based on mouthpart morphology).

\textit{Molopsida longula} (Broun, 1917)
\textit{Tarastethus longulus} Broun, 1917: 368. Type locality: Clipping's Bush, near Kingston, OL.
\textit{Molopsida longula}: Britton, 1940: 477.
Geographic distribution (Map p. 256). South Island: OL.
Dispersal power. Subapterous. Moderate runner.
References: Johns, 1980: 61 (distribution); Watt, 1977: 89 (distribution).
Note. This taxon could be conspecific with \textit{Molopsida debilis}.

\textit{Molopsida marginalis} (Broun, 1882)
\textit{Tropineopterus marginalis} Broun, 1882: 219 (redescribed in 1883: 219 and 1886: 749). Type locality: Wellington, WN.
\textit{Tarastethus marginalis}: Sharp, 1886: 373.
\textit{Tropidopterus marginalis}: Csiki, 1929: 487.
\textit{Molopsida marginalis}: Britton, 1940: 477.
Geographic distribution (Map p. 256). North Island: WN.
Biology. Seasonality unknown. Predacious (based on mouthpart morphology).
Dispersal power. Subapterous. Moderate runner.
Note. This taxon could be conspecific with \textit{Molopsida antarctica}.

\textit{Molopsida optata} (Broun, 1917)
\textit{Tarastethus optatus} Broun, 1917: 369. Type locality: Mt Dick, OL.
\textit{Molopsida optata}: Britton, 1940: 477.
Geographic distribution (Map p. 256). South Island: OL.
Dispersal power. Subapterous. Moderate runner.
Note. This taxon could be conspecific with \textit{Molopsida oxygona}.
**Molopsida oxygona** (Broun, 1886)
*Tropopterus oxygonus* Broun, 1886: 820. Type locality: Mt Maungatua, DN.
*Tarastethus oxygonus* Sharp, 1886: 373.

**Geographic distribution** (Map p. 256). South Island: DN, SL.

**Ecology.** Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (broadleaf, podocarp, beech); a tussock-Celmisia area. Nocturnal; hides during the day under stones.


**Dispersal power.** Subapterous. Moderate runner.

**Molopsida phyllocharis** (Broun, 1912)
*Tarastethus phyllocharis* Broun, 1912: 387. Type locality: Erua, TO.

**Geographic distribution** (Map p. 257). North Island: TO.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech). Nocturnal; hides during the day in rotten pieces of wood and in leaf litter.

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

**Dispersal power.** Subapterous. Moderate runner.

**Note.** This taxon could be conspecific with *Molopsida seriatoporus*.

**Molopsida polita** White, 1846
*Molopsida polita* White, 1846: 6. Type locality: Waikouaiti, DN [probably mislabelled].
*Tarastethus laevicollis* Broun, 1903: 458. Type locality: Te Aroha, BP/WO. Synonymised by Britton, 1940: 477.

**Geographic distribution** (Map p. 257). North Island: BP, CL, GB, HB, RI, TK, TO, WN, WO.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf, podocarp) and shrublands; fellfields. Nocturnal; hides during the day in leaf litter (mostly), moss, under fallen branches and epiphyte crowns. Gregarious.


**Dispersal power.** Subapterous. Moderate runner.

**Note.** The North Island distribution of *M. polita* indicates that the type specimen collected by Mr Earl has been mislabelled. The likely type locality is Port Nicholson [= Wellington] as White records Earl as collector of a number of other beetles from there.

**Molopsida pretiosa** (Broun, 1910)
*Tarastethus pretiosus* Broun, 1910b: 6. Type locality: Raurimu, TO.

**Geographic distribution** (Map p. 257). North Island: BP, TK, TO. South Island: NN.

**Ecology.** Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf, podocarp) and shrublands. Nocturnal; hides during the day under stones.

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

**Dispersal power.** Subapterous. Moderate runner.


**Note.** This taxon could represent a species complex.

**Molopsida propinqua** (Broun, 1917)
*Tarastethus propinquus* Broun, 1917: 369. Type locality: Ben Lomond, OL.

**Geographic distribution** (Map p. 257). South Island: OL.

**Ecology.** Epigean. Montane. A forest (beech). Nocturnal; hides during the day under stones.


**Dispersal power.** Subapterous. Moderate runner.

**Molopsida puncticollis** (Sharp, 1883)
*Tarastethus puncticollis* Sharp, 1883: 24. Type locality: Greymouth, BR.

**Geographic distribution** (Map p. 257). South Island: BR, MC, NC, NN, WD.

**Ecology.** Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf, podocarp) and shrublands. Nocturnal; hides during the day in the cracked undersurface of logs and in moss.
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

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

**Dispersal power.** Subapterous. Moderate runner.

**References.** Hudson, 1934: 38 (distribution, ecology); Emden, 1936: 45 (morphology of male genitalia); Johns, 1977: 317 and 1980: 61, 65 (distribution, ecology); Deuve, 1993: 149 (morphology of female reproductive system); Townsend, 1997: 13 (distribution).

**Molopsida robusta** (Broun, 1921)

*Tarastethus robustus* Broun, 1921: 600. Type locality: Mt Robert, BR.

**Geographic distribution** (Map p. 257). South Island: BR, NN, SD.

**Ecology.** Epigean, stenotopic, very hygrophilous, silvicolous. Lowland, montane. Wet forests (broadleaf). Nocturnal; hides during the day under stones.


**Dispersal power.** Subapterous. Moderate runner.


**Molopsida seriatoporus** (Bates, 1874)

Figure 12


*Tarastethus seriatoporus*: Sharp, 1886: 373.

*Tropidopterus seriatoporus*: Csiki, 1929: 487.

*Molopsida seriatopora* [sic]: Britton, 1940: 477.

**Geographic distribution** (Map p. 257). North Island: BP, CL, GB, HB, RI, TK, TO, WI, WA, WO. South Island: BR, MB, NN, SD, WD.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Montane. Wet forests (beech, broadleaf, podocarp). Nocturnal; hides during the day in leaf litter, under fallen branches, logs, and in rotten pieces of wood.

**Biology.** Seasonality: September–May, August. Tenerals: September, January–April, July. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales) and mites.

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

**References.** Townsend, 1997: 13 (distribution).

**Note.** The suffix *-porus* is a Latin masculine noun, meaning pore (Brown, 1985: 415), not an adjective, thus invariable.

**Molopsida simplex** (Broun, 1903)

*Tarastethus simplex* Broun, 1903: 457. Type locality: Port Chalmers, DN.

**Geographic distribution** (Map p. 257). South Island: DN.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Wet forests (broadleaved, podocarp, beech). Nocturnal; hides during the day under stones and in leaf litter.


**Dispersal power.** Subapterous. Moderate runner.

**References.** Townsend, 1997: 13 (distribution).
HB, RI, TK, TO, WA, WI, WN, WO.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech, broadleaf, podocarp) and shrublands. Nocturnal; hides during the day under fallen branches and in fissures of fallen pieces of wood.


Dispersal power. Subapterous. Moderate runner.

*Molopsida sulcicollis* (Bates, 1874)
*Troposterus sulcicollis* Bates, 1874: 241 (redescribed in 1875: 304). Type locality: Christchurch, MC.
*Tarastethus sulcicollis* Csiki, 1929: 487.
*Molopsida sulcicollis* Britton, 1940: 477.

Geographic distribution (Map p. 258). North Island: WA, WN. South Island: KA, MB, MC, NC, SD.

Ecology. Stenotopic, arboreal-epigean, silvicolous. Lowland, montane, subalpine. Usually coastal. Forests (beech), tree plantations (pine). Nocturnal; active on trees at night; shelters during the day.

Biology. Seasonality unknown. Predacious (based on mouthpart morphology).


Supertribe TRECHITAE

Tribe TRECHINI

Figure 13

Geographic distribution. Worldwide.


Notes. A revision is needed. Several genera and many species await description. J.I. Townsend (Levin, New Zealand) is currently revising this tribe.

Subtribe AEPINA

Geographic distribution. Europe, subantarctic New Zealand, Falkland Islands, Crozet Islands, Patagonia, Chile.

Genus *Kenodactylus* Broun, 1909


Geographic distribution. Subantarctic New Zealand, Falkland Islands, Patagonia.


*Kenodactylus audouini* (Guérin-Méneville, 1830)
*Treichus testaceus* Blanchard, 1843: Plate 3, Figure 15 (redescribed in 1853: 45). Type locality: Port Famine, Falkland Islands. Synonymised by Putzeys, 1870: 22.
*Kenodactylus audouini*: Jeannel, 1940b: 93.


Dispersal power. Subapterous. Moderate runner.


Note. This flightless species has a wide subantarctic distribution which could be explained by its high tolerance to salinity and its exceptional ability to swim or survive for long periods at sea.
Genus Maoritrechus Brookes, 1932

Maoritrechus Brookes, 1932: 27. Type species: Maoritrechus rangitotoensis Brookes, 1932, by monotypy.

Geographic distribution. New Zealand (endemic).


Notes. Maoritrechus was incorrectly synonymised with Temnostega Enderlein, 1905, by Jeannel (1938a: 255), but was used again as a valid genus by Watt (1983b: 35). Two undescribed species have been found along the seashore over the tide line in deep beach gravel or under stones.

Maoritrechus rangitotoensis Brookes, 1932

Maoritrechus rangitotoensis Brookes, 1932: 27. Type locality: Rangitoto Island, AK.

Temnostega rangitotoensis: Jeannel, 1938a: 255.

Geographic distribution (Map p. 244). North Island: AK.

Ecology. Coastal lowland. A sea beach: above the high tide level, under decaying zosteras.

Biology. Seasonality: July. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.


Notes. This species was incorrectly synonymised with Temnostega antarctica Enderlein, 1905: 719 by Jeannel (1964: 411), but was used again as a valid species by Casale & Laneyrie (1982: 51). As in the two undescribed species, the true habitat of M. rangitotoensis could be above the high tide, among deep coarse gravel or under stones.

Subtribe TRECHINA

Geographic distribution. Worldwide.

Genus Duvaliomimus Jeannel, 1928

Duvaliomimus Jeannel, 1928: 82. Type species: Trechus maori Jeannel, 1920, by monotypy.

Geographic distribution. New Zealand (endemic).

References. Jeannel, 1928: 82–83 and 1942b: 226–228 (biogeography); Uéno, 1956: 64 (biogeography); Britton, 1958: 183 (taxonomy) and 1964a: 629 (taxonomy, including key to species); Casale & Laneyrie, 1982: 117 (list).

Notes. A few species currently included in Duvaliomimus may belong to undescribed genera of Trechina. In addition, several species await description in Duvaliomimus itself. Members of this genus live either in caves, sinkholes, or dark shaded mountain ravines and gullies, along rills and brooks, under stones, or in leaf debris (tree ferns). Long-legged, blind cave species and short-legged, eyed epigean species could belong to different genera.

Duvaliomimus brittoni Jeannel, 1938

Duvaliomimus brittoni Jeannel, 1938a: 256. Type locality: [Mt] Earnslaw, OL.

Geographic distribution (Map p. 236). South Island: MK, OL.

Ecology. Stenotopic, epigean, riparian, very hygrophilous. Montane. Cool dark wet edges of streams. Nocturnal; hides during the day under stones (usually) and pieces of wood.


Dispersal power. Subapterous. Moderate runner.


"Duvaliomimus" lamberti Britton, 1960

Duvaliomimus lamberti Britton, 1960b: 34. Type locality: Dogleg Hole, Takaka Hill, NN.

Geographic distribution (Map p. 236). South Island: NN.


Note. This species requires the description of a new genus (Townsend, 1997: 11).
Duvaliomimus mayae Britton, 1958

*Duvaliomimus mayae* Britton, 1958: 184. Type locality: Waipuna Caves, Te Kuiti, WO.

**Geographic distribution** (Map p. 236). North Island: WO.

**Ecology.** Stenotopic, cavernicolous (troglobitic), very hygrophilous. Lowland. Cool caves. Occurs on cave walls and on muddy or silty banks, among scorias.

**Biology.** Seasonality: Throughout the year, except October. Tenerals: March. Predacious (based on mouthpart morphology). Attracted to pittraps baited with a mixture of minced beef and cheese. Occasionally infested with fungi (Laboulbeniales).

**Dispersal power.** Subapterous. Fast runner. Excellent climber.


Duvaliomimus orpheus Britton, 1962

*Duvaliomimus orpheus* Britton, 1962: 668. Type locality: Twin Forks Cave, “Paturau District”, NN.

**Geographic distribution** (Map p. 237). South Island: NN.


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

**Dispersal power.** Subapterous. Fast runner.


Duvaliomimus pluto Britton, 1964

*Duvaliomimus pluto* Britton, 1964a: 627. Type locality: Fenian Creek Cave, Oparara, NN.

**Geographic distribution** (Map p. 237). South Island: NN.


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

**Dispersal power.** Subapterous. Fast runner.


Duvaliomimus styx Britton, 1959

![Figure 13](image)

*Duvaliomimus styx* Britton, 1959: 104. Type locality: Puriri Cave, Port Waikato, WO.

**Geographic distribution** (Map p. 237). North Island: BP, GB, TK, WA, W1, WO.


**Dispersal power.** Subapterous. Moderate runner.


“Duvaliomimus” walkeri (Broun, 1903)

*Anchomenus walkeri* Broun, 1903: 456. Type locality: Westport, NN.


*Duvaliomimus maori* Jeannel, 1928: 83.

*Agonum (Anchomenus) walkeri* Csiki, 1931: 865.

*Duvaliomimus walkeri* Jeannel, 1938a: 256.

**Geographic distribution** (Map p. 237). South Island: BR, NC, NN, WD.

**Ecology.** Mostly epigean, very hygrophilous, riparian. Lowland, montane. Edges of streams crossing wet forests (podocarp); caves (occasionally). Nocturnal; hides during the day under stones.

**Biology.** Seasonality: October–November, January, April, July. Predacious (morphology).

**Dispersal power.** Subapterous. Moderate runner. Occasional climber (on cave walls).


**Notes.** This species requires the description of a new genus. Adults show enormous morphological variation.
Duvaliomimus watti Britton, 1958
Duvaliomimus watti Britton, 1958: 188. Type locality: Moumoukai Valley, AK.

Geographic distribution (Map p. 237). North Island: AK, BP, CL, RI, WA, WI, WN.

Ecology. Stenotopic, epigean, riparian, very hygrophilous. Lowland. Shaded edges of rills crossing wet forests (broadleaf, podocarp). Nocturnal; hides during the day under stones and vegetal debris (dead fern leaves, branches).


Dispersal power. Subapterous. Moderate runner.


Genus Erebotrechus Britton, 1964


Stygiotrechus [sic]: Britton, 1964a: 626, Figure 1 (incorrect original spelling).

Geographic distribution. New Zealand (endemic).


Erebotrechus infernus Britton, 1964

Erebotrechus infernus Britton, 1964a: 625. Type locality: Fox River Cave, near Charleston, BR.

Geographic distribution (Map p. 237). South Island: BR.


Genus Neanops Britton, 1962


Geographic distribution. New Zealand (endemic; North Island).


Neanops caecus (Britton, 1960)

Duvaliomimus caecus Britton, 1960a: 121. Type locality: Fred Cave, Te Kuiti, WO.

Neanops caecus Britton, 1962: 672.

Geographic distribution (Map p. 258). North Island: WO.


Neanops pritchardi Valentine, 1987

Neanops pritchardi Valentine, 1987: 79. Type locality: Wairere Falls Cave, near Te Kuiti, WO.

Geographic distribution (Map p. 258). North Island: WO.


Genus Scototrechus Britton, 1962


Geographic distribution. New Zealand (endemic; South Island).


Scototrechus orcinus Britton, 1962

Scototrechus orcinus Britton, 1962: 670. Type locality: Ed’s Cellar, Canaan, Takaka Hill, NN.

Geographic distribution (Map p. 266). South Island: NN.


Tribe ZOLINI

Figure 14

Geographic distribution. Circumantarctic and South Temperate Regions, including New Zealand.


Notes. A revision is needed. P.M. Johns (Christchurch, New Zealand) is preparing a synonymic checklist to the Zolini of the world.

Subtribe OOPTERINA

Geographic distribution. Same as tribe.

Genus Oopterus Guérin-Méneville, 1841

Oopterus Guérin-Méneville, 1841a: 123. Type species: Oopterus clivinoides Guérin-Méneville, 1841a, by monotypy.


Geographic distribution. New Zealand, Falkland Islands; South Georgia (adventive).


Notes. A revision is needed. About twenty species await description. This taxon could represent three or four genera. Oopterus species climb regularly on trees at night. Death feigning has been observed by Hudson (1934: 38).

Oopterus clivinoides Guérin-Méneville, 1841

Oopterus clivinoides Guérin-Méneville, 1841a: 123. Type locality: Auckland Islands.


Pseudoopterus guerini: Csiki, 1928: 225.

Pseudoopterus tripunctatus: Csiki, 1928: 226.

Pseudoopterus tarsalis: Csiki, 1928: 226.

Geographic distribution (Map p. 260). Subantarctic Islands: AN, AU, CA, SN.

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


Dispersal power. Subapterous. Moderate runner.


Note. This taxon could represent a species complex.

Oopterus collaris Broun, 1893

Oopterus collaris Broun, 1893a: 1002. Type locality: New Zealand.


Geographic distribution (Map p. 260). South Island: NN.


Biology. Seasonality unknown. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.

Notes. Broun (1887: 604) cited Oopterus collaris, n. sp. from Mt Arthur, NN, without providing any description. This comment and Broun’s annotation of his personal copy of his Manual suggest Mt Arthur, NN as type locality.
**Oopterus frontalis** Broun, 1908


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**Oopterus fulvipes** Broun, 1886


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**Oopterus laevicollis** Bates, 1871


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**Oopterus laevigatus** Broun, 1917


**Note.** This taxon could be conspecific with *Oopterus latipennis*.

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**Oopterus laeviventris** Sharp, 1883


**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech, podocarp) and scrublands. Nocturnal; hides during the day under logs and stones. **Biology.** Seasonality: November, April. Predacious (based on mouthpart morphology). **Dispersal power.** Subapterous. Moderate runner.


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**Oopterus latifossus** Broun, 1917


**Note.** This taxon could be conspecific with *Oopterus latipennis*.

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**Oopterus latipennis** Broun, 1903


**Ecology.** Stenotopic, epigean, silvicolous, very
hygrophilous. Lowland, montane. Wet forests (podocarp, beech) and scrublands. Nocturnal; hides during the day under logs and stones.

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

**Dispersal power.** Subapterous. Moderate runner.


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**Oopterus lewisi** (Broun, 1912)

*Tarastethus lewisi* Broun, 1912: 388. Type locality: Greymouth, BR.


**Oopterus lewisi:** Johns, 1980: 57.

**Geographic distribution** (Map p. 261). South Island: BR, WD.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (podocarp, beech) and scrublands. Nocturnal; hides during the day under logs and stones.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.


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**Oopterus marrineri** Broun, 1909

*Oopterus marrineri* Broun, 1909b: 88. Type locality: Campbell Island.


*Pseudoopterus marrineri:* Csiki, 1928: 225.

*Zolus nigritulus:* Hudson, 1934: 38.

**Oopterus marrineri:** Johns, 1974: 297.

**Geographic distribution** (Map p. 261). Subantarctic Islands: CA.

**Ecology.** Eurytopic, epigean, very hygrophilous. Lowland, montane, subalpine, alpine. Supralittoral zone, peaty scrublands, tussock swarms, fellfields, mollymawk and penguin colonies. Nocturnal; hides during the day under stones, in leaf litter, under pieces of wood and wick sacks, in/under tussock clumps and moss, and under mat plants. Gregarious.


**Dispersal power.** Subapterous. Moderate runner.


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**Oopterus minor** Broun, 1917

*Oopterus minor* Broun, 1917: 364. Type locality: Mt Dick, near Kingston, Ol.


**Oopterus minor:** Hudson, 1934: 177.

**Geographic distribution** (Map p. 261). South Island: OL.

**Ecology.** Monteane. Habitat unknown; probably silvicolous.

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

**Dispersal power.** Subapterous. Moderate runner.

---

**Oopterus nigritulus** Broun, 1908

*Oopterus nigritulus* Broun, 1908: 341. Type locality: Palmerston North, WI; Karori, WN.

*Zolus nigritulus:* Hudson, 1934: 38.

**Oopterus nigritulus:** Johns, 1974: 297.

**Geographic distribution** (Map p. 261). North Island: WI, WN.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Wet forests. Nocturnal; hides during the day in moss and under logs.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.


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**Oopterus pallidipes** Broun, 1893

*Oöpterus pallidipes* Broun, 1893a: 1003. Type locality: New Zealand.

*Pseudoopterus pallidipes:* Csiki, 1928: 225.

**Oopterus pallidipes:** Hudson, 1934: 177.

**Geographic distribution** (Map p. 261). North Island: NN.

**Ecology.** Epigean, mostly silvicolous, very hygrophilous. Montane, subalpine, alpine. Wet forests (beech), fellfields. Nocturnal; active at night on mossy logs; hides during the day in moss and leaf litter. Gregarious.


**Dispersal power.** Subapterous. Moderate runner. Regular climber (on logs).
Notes. Broun (1887: 604) cited *Oopterus pallidipes*, n. sp. from Mt Arthur, NN, without providing any description. This comment and Broun’s annotation of his personal copy of his *Manual* suggest Mt Arthur, NN as type locality.

**Oopterus parvulus** Broun, 1903


**Geographic distribution** (Map p. 261). South Island: NC, NN.

**Ecology.** Stenotopic, epigean, silvicolous. Lowland, montane. Forest (podocarp) and scrublands. Nocturnal; hides during the day under logs and stones.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.


**Oopterus patulus** (Broun, 1881)

*Tropopterus patulus* Broun, 1881: 655. Type locality: Otago, South Island.

*Oopterus patulus*: Broun, 1886: 755.

*Tarastethus patulus* Sharp, 1886: 373.

*Pseudoopterus patulus*: Csiki, 1933a: 1651.

*Oopterus patulus*: Johns, 1974: 301.

**Geographic distribution** (Map p. 262). South Island: DN.

**Ecology.** Lowland. Habitat unknown; probably silvicolous. Nocturnal; hides during the day in decayed wood or in cavity in trunks and branches of live or dead trees; patrols woody surfaces at night (J. Nunn, personal communication).

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.


**Oopterus plicaticollis** Blanchard, 1843

*Oopterus plicaticollis* Blanchard, 1843: Plate 2, Figure 15 (redescribed in 1853: 44). Type locality: Auckland Islands.

*Oopterus laticollis* Kirsch, in Kiesenwetter & Kirsch, 1877: 159.


**Geographic distribution** (Map p. 262). Subantarctic Islands: AU.

**Ecology.** Eurytopic, epigean, very hygrophilous. Lowland, montane, subalpine, alpine. Supralittoral zone, tussock swards, fellfields. Nocturnal; hides during the day under leaf litter, under logs and stones, and in peat. Gregarious.


**Dispersal power.** Subapterous. Moderate runner.


**Oopterus probus** Broun, 1903


**Geographic distribution** (Map p. 262). South Island: NN.

**Ecology.** Lowland. Habitat unknown; probably silvicolous.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.

**Note.** This taxon could be conspecific with *Oopterus latipennis*.

**Oopterus puncticeps** Broun, 1893

*Oopterus puncticeps* Broun, 1893a: 1398. Type locality: Port Hills, MC.


**Geographic distribution** (Map p. 262). South Island: MC.

**Ecology.** Lowland. Habitat unknown; probably silvicolous.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.

**Note.** This taxon could be conspecific with *Oopterus laevicollis*.

**Oopterus pygmeatus** Broun, 1907

*Oopterus pygmeatus* Broun, 1907: 56. Type locality: Near Obelisk Peak, Carrick Range [= Old Man Range], CO. *Pseudoopterus pygmeatus*: Csiki, 1928: 225.

**Geographic distribution** (Map p. 262). Subantarctic Islands: AU.

**Ecology.** Eurytopic, epigean, very hygrophilous. Lowland, montane, subalpine, alpine. Supralittoral zone, tussock swards, fellfields. Nocturnal; hides during the day under leaf litter, under logs and stones, and in peat. Gregarious.


**Dispersal power.** Subapterous. Moderate runner.

Geographic distribution (Map p. 262). South Island: CO, FD, OL, SL.


Dispersal power. Subapterous. Moderate runner.

References. Broun, 1907: 56–57 (distribution, ecology); Hudson, 1934: 38 (distribution, ecology); Patrick et al., 1992b: 18 (distribution).

**Oopterus sculpturatus ovinotatus** Broun, 1908

Oopterus ovinotatus Broun, 1908: 344 (as a variety of *O. sculpturatus*, also listed by May, 1967: 177). Type locality: Near Mt Egmont [=Taranaki], TK.

Geographic distribution. “New Zealand”.

Ecology. Habitat unknown; probably silvicolous.

Biology. Seasonality unknown. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.

References. Broun, 1908: 56–57 (distribution, ecology); Hudson, 1934: 38 (distribution, ecology); Patrick et al., 1992b: 18 (distribution).

**Oopterus sculpturatus sculpturatus** Broun, 1908

Oopterus sculpturatus Broun, 1908: 343 (as containing two varieties, *O. sculpturatus* and *O. ovinotatus*). Type locality: New Zealand.

Oopterus sculpturalis [sic]: Hudson, 1923: 358.

Pseudoopterus sculpturatus: Csiki, 1928: 226.


Geographic distribution. “New Zealand”.

Ecology. Habitat unknown; probably silvicolous.

Biology. Seasonality unknown. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.

References. Broun, 1908: 343 (as containing two varieties, *O. sculpturatus* and *O. ovinotatus*). Type locality: Near Mt Egmont [=Taranaki], TK.


Geographic distribution. North Island: TK, WN.


Biology. Seasonality unknown. Predacious (based on mouthpart morphology).


Reference. Emden, 1936: 45 (morphology of male genitalia).

Genus Synteratus Broun, 1909

Synteratus Broun, 1909b: 84. Type species: Synteratus ovalis Broun, 1909b, by monotypy.

Geographic distribution. Subantarctic New Zealand (endemic).


**Synteratus ovalis** Broun, 1909

Synteratus ovalis Broun, 1909b: 85. Type locality: The Snares.

Geographic distribution. (Map p. 267). Subantarctic Islands: SN.
**Ecology.** Stenotopic, epigean, silvicoleous, very hygrophilous. Lowland. Wet peaty forests (*Olearia*). Nocturnal; hides during the day in leaf litter, under fallen branches and logs, and in rotten pieces of wood. Gregarious.

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

**Dispersal power.** Subapterous. Moderate runner.


Genus **Zolus** Sharp, 1886

**Zolus atratus** Broun, 1893

*Zolus atratus* Broun, 1893a: 1002. Type locality: Mt Egmont [=Taranaki], TK.

*Oöpterus atratus*: Jeannel, 1940b: 92.


**Geographic distribution.** Map p. 270. North Island: TK, TO. South Island: BR, NN, WD.

**Ecology.** Arboreal-epigean, mostly silvicoleous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (broadleaf, podocarp, beech), alpine meadows. Nocturnal; active at night on mossy trees and logs; hides during the day under logs (mostly), dead leaves, the loose bark of fallen trees and stones. Gregarious.

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

**Dispersal power.** Subapterous. Moderate runner.

**Note.** This taxon could be conspecific with *Zolus carinatus*.

**Zolus carinatus** (Broun, 1882)

*Oöpterus carinatus* Broun, 1882: 224 (redescribed in 1883: 224 and 1886: 754). Type locality: Near Wellington, WN.


*Pseudoopterus carinatus*: Coki, 1928: 225.


**Geographic distribution.** Map p. 270. North Island: TO, WN.

**Ecology.** Stenotopic, epigean, silvicoleous, very hygrophilous. Lowland, montane. Wet forests (beech, broadleaf). Nocturnal; hides during the day in logs. Gregarious.

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

**Dispersal power.** Subapterous. Moderate runner.


**Zolus femoralis** Broun, 1894

**Figure 14**

*Zolus femoralis* Broun, 1894: 311. Type locality: Wellington, WN.

*Oöpterus femoralis*: Jeannel, 1940b: 92.


**Geographic distribution.** Map p. 270. North Island: TO, WN. South Island: BR, MK, NN, WD.

**Ecology.** Stenotopic, epigean, silvicoleous, very hygrophilous. Montane, subalpine. Wet forests (beech, broadleaf). Nocturnal; hides during the day under logs and loose bark. Gregarious.

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

**Dispersal power.** Subapterous. Moderate runner.


**Note.** This taxon could be conspecific with *Zolus carinatus*.

**Zolus helmsi** Sharp, 1886

*Zolus helmsi* Sharp, 1886: 372. Type locality: Greymouth, BR.

*Oöpterus helmsi*: Jeannel, 1940b: 92.


**Geographic distribution.** Map p. 270. North Island: BR. South Island: BR, MC, NC, NN, SD, WD.

**Ecology.** Arboreal-epigean, mostly silvicoleous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, podocarp), alpine meadows. Nocturnal;
active at night on logs, trees, and the forest floor; hides during the day under logs, stones, and in moss. Gregarious.

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

**Dispersal power.** Subapterous. Moderate runner. Excellent climber (on trees).


**Zolus labralis** Broun, 1921

*Zolus labralis* Broun, 1921: 599. Type locality: Mt Robert, BR.

*Oopterus labralis* Jeannel, 1940b: 92.


**Geographic distribution.** (Map p. 270). South Island: BR, NN.

**Ecology.** Lowland, subalpine. Habitat unknown; probably silvicolicous.


**Dispersal power.** Subapterous. Moderate runner.


**Zolus ocularius** Broun, 1917

*Zolus ocularius* Broun, 1917: 365. Type locality: Routeburn, Hollyford and Mt Earnslaw, OL.

*Oopterus ocularius* Jeannel, 1940b: 92.

**Geographic distribution.** (Map p. 270). South Island: OL.

**Ecology.** Habitat unknown; probably silvicolicous.

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

**Dispersal power.** Subapterous. Moderate runner.

**Note.** Original combination reinstated on the basis of morphology.

**Zolus subopacus** Broun, 1915

*Zolus subopacus* Broun, 1915: 277. Type locality: Ben Lomond, OL.

*Oopterus subopacus* Jeannel, 1940b: 92.

**Geographic distribution.** (Map p. 270). South Island: OL, SL.

**Ecology.** Lowland, montane. Habitat unknown; probably silvicolicous.

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

**Dispersal power.** Subapterous. Moderate runner.

**Note.** Original combination reinstated on the basis of morphology.

**Tribe BEMBIDIINI**

Figures 15–18

**Geographic distribution.** Worldwide.


**Note.** A new revision is needed for New Zealand.

**Subtribe BEMBIDIINA**

Figures 15–16

**Geographic distribution.** Worldwide.

**References.** Lindroth, 1980: 180 and Emberson, 1993a: 16 (key to genera).

**Genus Bembidion** Latreille, 1802

Figure 15


*Bembecidium* Agassiz, 1847: 43 (unjustified emendation).

*Bembidium* Gemminger & Harold, 1868: 405 (unjustified emendation).

*Bembidion* Gyllenhal, 1810: 12 (unjustified emendation).

**Geographic distribution.** Holarctic and Neotropical Regions, New Caledonia, Australia (including Tasmania), Lord Howe Island, New Zealand.


**Note.** A new revision is needed; several species await description.

**Subgenus Ananotaphus** Netolitzky, 1931

*Ananotaphus* Netolitzky, 1931: 181. Type species: *Bembidium errans* Blackburn, 1888a, by monotypy.

**Geographic distribution.** Australia, New Zealand.
**Bembidion (Ananotaphus) rotundicolle eustictum**

*Bates, 1878*

*Bembidion eustictum* Bates, 1878b: 195. Type locality: Tairua, near Auckland, NZ.


*Bembidion (Peryphus) eustictum* Csiki, 1928: 95.

*Bembidion (Zeactedium) eustictum* Netolitzky, 1931: 182.


*Bembidion (Peryphus) clevedonense* Csiki, 1928: 90.

*Bembidion (Zeactedium) clevedonense* Netolitzky, 1931: 182.

*Bembidium waikatoense* Csiki, 1928: 163.

**Geographic distribution** (Map p. 227). North Island: AK, BP, CL, GB, HB, ND, WA, WI, WN, WO. South Island: BR, SD.

**Ecology.** Epigean, mostly riparian, very hygrophilous, halotolerant. Lowland, montane, subalpine. Bare sandy river banks, lakeshores, sea beaches, and salt marshes. Nocturnal; hides during the day at the base of plants and under plant debris and logs. Gregarious.


**Dispersal power.** Either macropterous, or brachypterous (incapable of flight). Moderate runner.


**Bembidion (Ananotaphus) rotundicolle rotundicolle**

*Bates, 1874*


*Bembidion (Peryphus) rotundicolle* Csiki, 1928: 110.

*Bembidion (Zeactedium) rotundicolle* Netolitzky, 1931: 182.


**Geographic distribution** (Map p. 228). North Island: WN, South Island: CO, DN, KA, MC, MK, NC, OL, SC, SL, Offshore Islands: CH.

**Ecology.** Epigean, mostly riparian, hygrophilous, halotolerant. Lowland, montane, subalpine. Moist or wet, bare banks of streams, lakes, ponds, sea beaches, and lagoons; cultivated fields (lucerne), pastures. Nocturnal; hides during the day under moss and algal mats. Gregarious.

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

**Dispersal power.** Macropterous. Moderate runner.


**Subgenus Notaphus Stephens, 1827**

*Notaphus Stephens, 1827: 51. Type species: *Carabus varius* Olivier, 1795, designated by Westwood, 1838: 7.*

**Geographic distribution.** Holarctic and Neotropical Regions; Australia and New Zealand (adventive).

**Bembidion (Notaphus) brullei** Gemminger & Harold, 1868

*Bembidion variegatum Brulle, 1838: 44. Type locality: Montevideo, Uruguay. Primary homonym of *Bembidium variegatum* Say, 1823.*

*Bembicidium brullei* Gemminger & Harold, 1868: 409. Replacement name for *Bembidion variegatum* Brulle, 1838.

*Bembidion brullei* Csiki, 1928: 159.


*Bembidion (Notaphus) brullei* Darlington, 1962a: 3.


**Ecology.** Epigean, very hygrophilous, mostly halophilous. Coastal lowland. Bare muddy areas along salt flats, lagoons, and estuary streams (mostly); edges of freshwater pools and streams; pastures, cultivated fields (carrot). Nocturnal; hides during the day at the base of plants and in soil crevices. Gregarious.


**Dispersal power.** Macropterous. Occasional flier to artificial lights at night. Moderate runner.

Subgenus Zeactedium Netolitzky, 1931
Zeactedium Netolitzky, 1931: 182. Type species: Bembidium orbiferum Bates, 1878c, by original designation.

Geographic distribution. New Zealand (endemic).

Bembidion (Zeactedium) musae Broun, 1882
Bembidium musae Broun, 1882: 225 (revised in 1883: 225 and 1886: 755). Type locality: Mt Arthur, NN.
Bembidion (Peryphus) musae: Csiki, 1928: 104.
Bembidion (Peryphus) diaphanum: Csiki, 1928: 93.
Bembidion (Zemetallina) musae: Netolitzky, 1931: 182.
Bembidion (Zemetallina) diaphanum: Netolitzky, 1931: 182.


Ecology. Stenotopic, epigean, riparian, halophilous, heliophilous. Lowland, montane. Bare banks of rivers and big brooks, with fine sand. At a good distance from water (up to 10 m). Both diurnal and nocturnal; active in the sunshine; shelters in cloudy weather.


Dispersal power. Macropterous, capable of flight. Moderate runner.


Bembidion (Zeactedium) orbiferum Bates, 1878
Bembidium orbiferum Bates, 1878c: 24. Type locality: West Coast, South Island.
Bembidion (Zeactedium) orbiferum: Netolitzky, 1931: 182.

Geographic distribution (Map p. 227). South Island: BR, FD, MK, NN, OL, WD.

Ecology. Stenotopic, epigean, riparian. Lowland, montane. River banks with bare fine sand. At a good distance from water. Nocturnal; hides during the day under stones, logs, and fallen loose bark. Gregarious.


Dispersal power. Macropterous. Moderate runner.


Subgenus Zemetallina Lindroth, 1976

Geographic distribution. New Zealand (endemic).

Bembidion (Zemetallina) anchonoderus Bates, 1878
Figure 15
Bembidion (Peryphus) anchonoderum [sic]: Csiki, 1928: 86.
Bembidion (Peryphus) antipodum: Csiki, 1928: 87.
Bembidion (Zeactedium) anchonoderum [sic]: Netolitzky, 1931: 182.
Bembidion (Zeactedium) antipodum: Netolitzky, 1931: 182.


Ecology. Stenotopic, epigean, riparian, very hygrophilous. Lowland, montane. Wet, bare banks of rivers and brooks, with gravel and pebbles lying on fine sand. Nocturnal; hides during the day among gravel and under pebbles. Gregarious.


Dispersal power. Macropterous. Moderate runner.


Note. The suffix -derus (meaning neck) is a masculine noun (Brown, 1985: 552), not an adjective, hence invariable.

Bembidion (Zemetallina) chalceipes Bates, 1878
Bembidium chalceipes Bates, 1878c: 24. Type locality: West Coast, South Island.
Bembidion (Peryphus) chalceipes Csiki, 1928: 89.  
Bembidion (Zeactedium) tinctillum Csiki, 1928: 163.  
Bembidion (Zeactedium) chalceipes: Netolitzky, 1931: 182.  


Dispersal power. Macropterous. Moderate runner.  


**Bembidion (Zemetallina) hokitikense** Bates, 1878  
Bembidion hokitikense Bates, 1878c: 25. Type locality: West Coast, South Island.  

*Bembidium attenuatum* Broun, 1886: 881. Type locality: Near Lake Tekapo, MK (Broun, 1886: 881); Tekapo, MK (Lindroth, 1976: 191, holotype examined). Thought to be perhaps a synonym (Lindroth, 1976: 191)  

*Bembidion (Peryphus) hokitikense* Csiki, 1928: 99.  
*Bembidion (Peryphus) attenuatum* Csiki, 1928: 114.  
*Bembidion (Zeactedium) hokitikense* Netolitzky, 1931: 182.  


Ecology. Epigean, riparian, very hygrophilous. Lowland, montane, subalpine, alpine. Banks of small brooks (mostly); moraines situated near glaciers. Nocturnal; hides during the day among gravel, under stones, in moss, and under dead leaves.  


Dispersal power. Macropterous. Moderate runner.  


Note. The species name implies Hokitika, WD as type locality.  

**Bembidion (Zemetallina) parviceps** Bates, 1878  
Bembidium parviceps Bates, 1878b: 194. Type locality: Tairua, near Auckland, CL. (Bates, 1878b: 194); Auckland, AK (Lindroth, 1976: 193, lectotype designated).  

Geographic distribution (Map p. 227). North Island: AK, BP, CL, GB, HB, ND, TO, WA, WN, WO. South Island: BR, CO, DN, FD, MB, MC, NC, NN, SD, WD.  

Ecology. Stenotopic, epigean, riparian, very hygrophilous. Lowland, montane, subalpine. Wet, bare banks of rivers and brooks. Nocturnal; hides during the day mostly among gravel and under pebbles, occasionally in the soil at the base of plants. Gregarious.  


Dispersal power. Macropterous. Moderate runner.  


**Bembidion (Zemetallina) solitarium** Lindroth, 1976  
Bembidion (Zemetallina) solitarium Lindroth, 1976: 185. Type locality: Rangitikei River Flats, RI.  

Geographic distribution (Map p. 228). North Island: RI, WA, WI, WN. South Island: BR.  


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


**Bembidion (Zemetallina) stewartense** Lindroth, 1976  


Geographic distribution (Map p. 228). Stewart Island.  


**Dispersal power.** Macropterous. Moderate runner.


*Bembidion (Zemetallina) tekapoense* Broun, 1886

*Bembidium tekapoense* Broun, 1886: 880. Type locality: Near Lake Tekapo, MK (Broun, 1886: 881); Tekapo, MK (Lindroth, 1976: 189, “holotype”).

*Bembidion (Peryphus) tekapoense* Csiki, 1928: 114.

*Bembidion (Zeactidium) tekapoense* Netolitzky, 1931: 182.


**Ecology.** Stenotopic, epigean, riparian, very hygrophilous. Lowland, montane. Wet, bare river banks with gravel and pebbles lying on fine sand. Nocturnal; shelters during the day. Gregarious.

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

**Dispersal power.** Macropterous. Moderate runner.

**References.** Lindroth, 1976: 189 (distribution, ecology); Emberson, 1993a: 16 (distribution, ecology).

*Bembidion (Zemetallina) urewerense* Lindroth, 1976

*Bembidium (Zemetallina) urewerense* Lindroth, 1976: 191. Type locality: Lake Waikaremoana, Urewera National Park, GB.

**Geographic distribution.** (Map p. 228). North Island: BP, GB, TK, WA, WI.

**Ecology.** Epigean, very hygrophilous. Lowland, montane. Sparsely vegetated wet muddy edges of trickles, seepages, puddles, and flats along roadsides. Nocturnal; hides during the day under soil clods, in moss, under spurrey (*Spergula*), and plant debris.


**Dispersal power.** Macropterous. Moderate runner.


*Bembidion (Zemetallina) wanakense* Lindroth, 1976

*Bembidium (Zemetallina) wanakense* Lindroth, 1976: 189. Type locality: Matukituki River, West Branch, Northwest of Wanaka, OL.

**Geographic distribution.** (Map p. 228). South Island: BR, FD, MC, MK, NC, NN, OL, WD.

**Ecology.** Stenotopic, epigean, riparian, very hygrophilous. Lowland, montane. Wet, bare or sparsely vegetated sandy river banks. Nocturnal; hides during the day under stones.

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

**Dispersal power.** Macropterous. Moderate runner.


**Subgenus Zeberapaides Lindroth, 1976**


**Geographic distribution.** New Zealand (endemic).

*Bembidion (Zeberapaides) callipeplum* Bates, 1878

*Bembidium callipeplum* Bates, 1878b: 195. Type locality: Wellington, WN.


*Bembidion (Peryphus) callipeplum* Csiki, 1928: 89.

*Bembidion (Peryphus) nesophilum* Csiki, 1928: 104.

*Bembidion (Zeactidium) callipeplum* Netolitzky, 1931: 182.

*Bembidion (Zeactidium) nesophilum* Netolitzky, 1931: 182.


**Geographic distribution.** (Map p. 226). North Island: AK, BP, CL, GB, ND, WA, WI, WN, WO.

**Ecology.** Epigean-fossorial, riparian, arenicolous, very hygrophilous, halophilous. Coastal lowland. Wet, bare sandy edges of estuaries, lagoons, and neighboring streams. Nocturnal; hides during the day in burrows (mostly), under plant debris and stones. Gregarious.

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

**Dispersal power.** Macropterous. Moderate runner.


**Subgenus Zeberapaus Lindroth, 1976**


**Geographic distribution.** New Zealand (endemic).
Bembidion (Zeperyphus) actuarium Broun, 1903
Bembidium actuarium Broun, 1903: 611. Type locality: Pipiriki, Wanganui River; W (Broun, 1903: 611); Pipiriki, Wanganui, W (Lindroth, 1976: 183, lectotype designated).
Bembidion (Peryphus) actuarium: Csiki, 1928: 85.
Bembidion (Zeactedium) actuarium: Netolitzky, 1931: 182.
Geographic distribution (Map p. 226). North Island: AK, BP, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO.
Dispersal power. Brachypterous, incapable of flight. Moderate runner.

Subgenus Zeplataphus Lindroth, 1976
Geographic distribution. New Zealand (endemic).

Bembidion (Zeplataphus) charile Bates, 1867
Bembidium charile Bates, 1867: 79. Type locality: Province of Canterbury, South Island (Bates, 1867: 79); Christchurch, MC (Bates, 1874: 274); Canterbury (Lindroth, 1976: 175, lectotype designated).
Bembidion (Peryphus) charile: Hutton, 1874: 158.
Bembidion (Zeactedium) charile: Csiki, 1928: 89.
Bembidion (Zeactedium) charile: Netolitzky, 1931: 182.
Geographic distribution (Map p. 226). North Island: BP, GB, HB, RI, TK, TO, WA, WI, WN. South Island: BR, KA, MK, NC, NN, SC, WD.
Dispersal power. Macropterous. Moderate runner.

Bembidion (Zeplataphus) dehiscens Broun, 1893
Bembidium dehiscens Broun, 1893a: 1009. Type locality: Pakuratahi Stream, Rimutaka Range, WN (Broun, 1893a: 1009); Rimutaka Range, WN (Lindroth, 1976: 175, lectotype designated).
Bembidion (Peryphus) dehiscens: Csiki, 1928: 93.
Bembidion (Zeactedium) dehiscens: Netolitzky, 1931: 182.
Geographic distribution (Map p. 227). North Island: BP, GB, HB, RI, TO, WA, WN. South Island: BR, MB, MC, NC, NN, WD.
Ecology. Stenotopic, epigean, riparian, arenicolous, very hygrophilous. Lowland, montane, subalpine. Wet, bare gravelly banks of big rivers (often near their mouths) with brackish or saline water. Nocturnal; hides during the day under stones and among gravel. Gregarious.
Biology. Seasonality: September–April, June. Tenerals: November. Predacious (based on mouthpart morphology).
Dispersal power. Macropterous. Moderate runner.

Bembidion (Zeplataphus) granuliferum Lindroth, 1976
Bembidion (Zeplataphus) granuliferum Lindroth, 1976: 175. Type locality: Motueka River, NN.
Geographic distribution (Map p. 227). North Island: BP, GB, HB, WA, WI, WN. South Island: BR, KA, MK, NC, NN, SC, WD.
Ecology. Stenotopic, epigean, riparian, very hygrophilous, halophilous. Lowland. Wet, bare gravelly banks of big rivers (often near their mouths) with brackish or saline water. Nocturnal; hides during the day under stones and among gravel.
Dispersal power. Macropterous. Moderate runner.

Bembidion (Zeplataphus) maorinum levatum Lindroth, 1976
Bembidion (Zeplataphus) maorinum levatum Lindroth, 1976: 171. Type locality: Mangakirikiri Stream, Urewera National Park, GB.
Geographic distribution (Map p. 227). North Island: AK, BP, GB, HB, RI, TO, WA, WN, WO.

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

Dispersal power. Macropterous. Moderate runner.


**Bembidion (Zeplataphus) maorinum maorinum** Bates, 1867

*Bembidium (Peryphus) maorinum* Bates, 1867: 56. Type locality: Province of Canterbury, South Island (Bates, 1867: 56); New Zealand (Lindroth, 1976: 171, lectotype designated).


Dispersal power. Macropterous. Moderate runner.


**Bembidion (Zeplataphus) tairuense** Bates, 1878


*Bembidium (Peryphus) tairuense*: Csiki, 1928: 114.

*Bembidium (Zeactedium) tairuense*: Netolitzky, 1931: 182.


Geographic distribution (Map p. 228). North Island: AK, BP, CL, GB, HB, ND, TO, WA, WI, WN, WO. South Island: BR, CO, DN, FD, MC, MK, NC, NN, OL, SC, SD, WD.


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

Dispersal power. Macropterous. Moderate runner.


Note. The type locality was not given by Bates but the name of this species implies it is probably Taiura, the type locality of previous and following species in his text (*Cillenum albescens*, p. 193, *Bembidium parviceps*, p. 194) and the collection locality of the majority of specimens sent to him by Broun.

**Bembidium (Zeplataphus) townsendi** Lindroth, 1976

*Bembidium (Zeplataphus) townsendi* Lindroth, 1976: 176. Type locality: Limestone Creek, Teal Valley, near Nelson, NN.

Geographic distribution (Map p. 228). South Island: NN.


Dispersal power. Macropterous. Moderate runner.


Genus *Zecillenus* Lindroth, 1980

Figure 16


Geographic distribution. New Zealand (endemic).


Notes. *Zecillenus* might be congeneric with *Bembidion*, or perhaps treated as a subgenus of it. In addition, *Zecillenus* itself is in need of a new revision. Several species await description. These coastal beetles have been considered very rare until the authors discovered their ecological requirements. The majority of species live in colonies on wet, bare sandy banks of estuary streams, well above the highest tidal line; one must flood their habitat...
for a period to flush adults and larvae out of their burrows. They are found in association with staphylinids (Coleoptera). *Zecillenus* species could be excellent bioindicators of the water quality of estuary streams.

**Zecillenus alacris** (Broun, 1921)

Figure 16

*Cillenum* [sic] *alacris* Broun, 1921: 601. Type locality: Karekare, West of Auckland, AK.


**Geographic distribution** (Map p. 269). North Island: AK.

**Ecology**. Stenotopic, fossorial, riparian, arenicolous, very hygrophilous, halophilous. Coastal lowland. Wet banks of estuary streams with bare or sparsely vegetated black ironsand. Just above the highest tidal line. Nocturnal; hides during the day in burrows. Gregarious. Associated with staphylinids (Coleoptera).


**Dispersal power**. Subapterous. Moderate runner.


**Zecillenus albescens** (Bates, 1878)

*Cillenum* [sic] *albescens* Bates, 1878b: 193. Type locality: Tainua, near Auckland, CL.

*Bembidion* (*Cillenum*) *albescens*: Csiki, 1928: 130.


**Geographic distribution** (Map p. 269). North Island: AK, CL, ND. Offshore Islands: CH.

**Ecology**. Stenotopic, fossorial, riparian, arenicolous, very hygrophilous, halophilous. Coastal lowland. Wet banks of estuary streams with bare yellow sand. Just above the highest tidal line. Nocturnal; hides during the day in burrows. Gregarious. Associated with staphylinids (Coleoptera).


**Dispersal power**. Subapterous. Moderate runner.

**References**. Broun, 1880: 59–60 (as *Cillenum*, distribution, ecology); Alfken, 1903: 603 (as *Cillenum*, distribution); Lindroth, 1980: 183 (distribution, ecology); Emberson, 1998: 29 (distribution).

**Zecillenus chalmeri** (Broun, 1886)

*Cillenum* [sic] *chalmeri* Broun, 1886: 881. Type locality: Port Chalmers, DN.

*Cillenum* [sic] *batesi* Sharp, 1886: 374. Type locality: Otago, South Island. Secondary homonym of *Notaphus batesi* Putzeys, 1875 (=*Bembidion nitidicum* Dejean, 1831).


*Bembidion* (*Cillenum*) *chalmeri*: Csiki, 1928: 130.


**Geographic distribution** (Map p. 269). South Island: DN.

**Ecology**. Arenicolous. Coastal lowland. A sand spit. The true habitat is probably estuary streams.


**Dispersal power**. Subapterous. Moderate runner.


**Zecillenus embersoni** Lindroth, 1980


**Geographic distribution** (Map p. 269). Stewart Island.

**Ecology**. Arenicolous. Coastal lowland. An area of extensive sand dunes. The true habitat is probably estuary streams.

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

**Dispersal power**. Subapterous. Moderate runner.

**References**. Lindroth, 1980: 185 (distribution, ecology); Emberson, 1993a: 16 (distribution, ecology).

**Zecillenus tillyardi** (Brookes, 1927)

*Cillenum* [sic] *tillyardi* Brookes, 1927: 563. Type locality: Tahuna (=Tahunanui), NN (Brookes, 1927: 564); Tahunanui, NN (Lindroth, 1976: 184).


**Geographic distribution** (Map p. 269). South Island: NN.

**Ecology**. Arenicolous, halophilous. Coastal lowland. Sea beach with yellow sand; near the highest tidal line; sand hills. The true habitat is probably estuary streams. Nocturnal; hides during the day in burrows. Gregarious. Associated with amphipods (Amphipoda).

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

**Dispersal power**. Subapterous. Moderate runner.
References. Brookes, 1927: 564 (as Cillenum, distribution, ecology); Lindroth, 1980: 185 (distribution, ecology); Molloy et al., 1994: 32 (distribution, conservation); Townsend, 1997: 10 (distribution, conservation).

Note. Common name: Back beach beetle.

Subtribe TACHYINA

Figure 17

Geographic distribution. Worldwide.


Note. A revision is needed.

Genus Paratachys Casey, 1918

Paratachys Casey, 1918: 174. Type species: Paratachys austinicus Casey, 1918, by original designation.


Geographic distribution. Worldwide.


Paratachys crypticola (Britton, 1960)

Eotachys crypticus [sic] Britton, 1960a: 125. Type locality: Puriri Cave, Port Waikato, WO.


Dispersal power. Macropterous. Frequent flier. Occasional in seashore drift material, which indicates previous flight. Moderate runner. Occasional climber (on shrubs).


Notes. The Latin suffix -cola (meaning dweller) is a masculine noun (Brown, 1985: 478), not an adjective, hence invariable. This species has probably been introduced into New Zealand: the hind-wings are full and functional; the beetle is synanthropic; the first record for New Zealand is relatively recent. The geographic origin is unknown.

Genus Pericompsus LeConte, 1852

Pericompsus LeConte, 1852: 191. Type species: Bembidium ephippiatum Say, 1830, designated by LeConte, 1859: 553.


Geographic distribution. Western Hemisphere, Australia (including Tasmania); New Zealand (adventive).

References. Erwin, 1974b: 1–96 (revision); Moore, 1992: 165 (distribution).

Subgenus Upocompsus Erwin, 1974

Upocompsus Erwin, 1974b: 11 (originally proposed with subgeneric rank in Pericompsus LeConte, 1852). Type species: Tachys australis Schaum, 1863, by original designation.

Geographic distribution. Australia (including Tasmania); New Zealand (adventive).

Pericompsus (Upocompsus) australis (Schaum, 1863)

Tachys australis Schaum, 1863: 90. Type locality: Victoria, Australia.


Geographic distribution (Map p. 263). North Island: AK, BP, GB, HB, ND, RI, TK, TO, WI, WN, WO. South Island: NN. Extralimital range: Australia (including Tasmania), Lord Howe Island. Adventive. First New Zea-
land record: Mokohinau Islands, ND (Broun, 1893a: 1010, as Bembidium tersatum). Well established.

**Ecology.** Eurytopic, fossorial, hygrophilous. Lowland. Wet or moist places: muddy edges of pools, lakes, eutrophic marshes, lagoons, streams, seepages, and roadside ditches; gardens, chicken yards, vacant lots, and parks. Nocturnal; hides during the day in soil fissures and under soil clods. Gregarious.

**Biology.** Seasonality: Throughout the year, except April. Predacious (Moore et al., 1987: 143).

**Dispersal power.** Macropterous. Frequent flier. Abundant in seashore drift material, which indicates previous flight. Moderate runner.


**Note.** This species could belong to an undescribed genus.

**Tachys** captus Blackburn, 1888

*Tachys* captus Blackburn, 1888a: 42. Type locality: Near Port Lincoln, South Australia.


**Biology.** Seasonality: September, November, April, June, August. Predacious (Moore et al., 1987: 138).

**Dispersal power.** Macropterous. Moderate runner.

**References.** Sloane, 1896b: 372 (distribution, ecology); Moore et al., 1987: 138 (distribution, ecology, biology, dispersal power); Kuschel, 1990: 24, 39 (distribution, ecology, biology, dispersal power).

**Note.** This species could belong to an undescribed genus of Zolini.

**Tachys** cavelli Broun, 1893

*Tachys (?)* cavelli Broun, 1893a: 1400. Type locality: Capleston, BR.

**Geographic distribution.** (Map p. 268). South Island: BR.

**Ecology.** Lowland. Habitat unknown; probably silviculous.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.

**Note.** This species could belong to an undescribed genus of Zolini.

**Tachys** latipennis Sharp, 1886

*Tachys latipennis* Sharp, 1886: 374. Type locality: Greymouth, BR and Kumara, WD.

**Geographic distribution.** (Map p. 268). South Island: BR, NN, SD, WD.

**Ecology.** Stenotopic, epigean, silviculous, very hygrophilous. Lowland. Montane. Wet dark forests (broadleaf, podocarp, beech) and tree plantations (pine). Nocturnal; hides during the day in rotten wood on top of fallen trees (mostly), in leaf litter, branches and logs, under the loose bark of fallen logs and trees, and in moss growing on tree trunks. Gregarious.

**Dispersal power.** Subapterous. Moderate runner.


**Note.** This taxon could be conspecific with *Tachys antarcticus*.

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**Subtribe ANILLINA**

**Figure 18**

**Geographic distribution.** Worldwide.


**Notes.** Anillines are known to occur in deep litter, soil crevices, and under well-embedded stones, particularly in moist situations. Sifting detached slopes bordering seepages, rills, brooks, and streams from temporary waters could add numerous species to the New Zealand fauna; this collecting technique has been successfully applied in Spain (Zaballos & Ruiz-Tapiador, 1996: 95).

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**Genus *Hygranillus* Moore, 1980**


**Geographic distribution.** New Zealand (endemic; South Island).


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*Hygranillus kuscheli* Moore, 1980

*Hygranillus kuscheli* Moore, 1980b: 404. Type locality: Livingstons Well, Brightwater, NN.

**Geographic distribution (Map p. 241).** South Island: NN.

**Ecology.** Stenotopic, endogean, very hygrophilous. Lowland. Obtained "from a driven pipe descending vertically through a concrete floor to a depth of 4.5 m" (Moore, 1980b: 406).

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

**Dispersal power.** Subapterous. Slow runner.


**Note.** The true habitat of this species could be deep soil crevices along streams.

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**Genus *Nesamblyops* Jeannel, 1937**

**Figure 18**

*Nesamblyops* Jeannel, 1937: 279. Type species: *Cillenum (?) subcaecum* Sharp, 1886, by original designation.

**Geographic distribution.** New Zealand (endemic).


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*Nesamblyops oreobius* (Broun, 1893)

**Figure 18**

*Tachys (?) oreobius* Broun, 1893a: 1399. Type locality: Mt Pirongia, WO.

*Tachys oreobius*: Hutton, 1904: 150.


**Geographic distribution (Map p. 259).** North Island: RI, TK, WN, WO. South Island: BR, MB, NC, NN, SD, WD.

**Ecology.** Stenotopic, endogean, silvicolarious, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech, broadleaf, podocarp) and shrublands. Nocturnal; hides during the day in deep leaf litter, moss, and mat plants, at the base of ferns, and along logs and fallen trees. Gregarious.

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

**Dispersal power.** Subapterous. Slow runner.


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*Nesamblyops subcaecus* (Sharp, 1886)

*Cillenum [sic] (?) subcaecum* Sharp, 1886: 375. Type locality: Greymouth, BR.

*Cillenum [sic] subcaecum*: Hutton, 1904: 150.


**Geographic distribution (Map p. 259).** North Island: AK, ND, South Island: BR, DN, FF, MB, NC, NN, SD, SL.

**Ecology.** Stenotopic, endogean, mostly silvicolarious, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf, podocarp) and shrublands; alpine herbfields. Nocturnal; hides during the day in deep leaf litter, moss, mat plants, and under deeply embedded stones. Gregarious.
Biology. Seasonality: September–November, January–April, August. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Slow runner.


Genus *Pelodiaetodes* Moore, 1980


Geographic distribution. New Zealand (endemic; North Island).


Note. Another species awaits description.

*Pelodiaetodes prominens* Moore, 1980

*Pelodiaetodes prominens* Moore, 1980b: 404. Type locality: Waipoua State Forest, ND.

Geographic distribution (Map p. 263). North Island: CL, ND.

Ecology. Stenotopic, endogean, silvicolaous, very hygrophilous. Lowland. Wet forests (broadleaf, podocarp). Nocturnal; hides during the day in deep leaf litter.


Dispersal power. Subapterous. Slow runner.


Genus *Pelodiaetus* Jeannel, 1937


Geographic distribution. New Zealand (endemic; South Island).


Genus *Zeanillus* Jeannel, 1937

*Zeanillus* Jeannel, 1937: 277. Type species: *Zeanillus phyllobius* Broun, 1893b, by original designation.

Geographic distribution. New Zealand (endemic; South Island).


*Zeanillus pallidus* (Broun, 1884)

*Anillus pallidus* Broun, 1884: 228 (redescribed in 1886: 918). Type locality: Taieri, DN.


Geographic distribution (Map p. 269). South Island: BR, CO, DN, ?NN.

Ecology. Eurytopic, endogean. Lowland, upland, subalpine, alpine. Tussock grasslands, pastures, fellfields, shrublands, forests (beech). Nocturnal; hides during the day in deep leaf litter, moss, and *Raoulia*-mats.

Dispersal power. Subapterous. Moderate runner.


**Zeanillus phyllobius** (Broun, 1893)

*Anillus phyllobius* Broun, 1893b: 164. Type locality: Riccarton Bush, MC.

**Zeanillus phyllobius**: Jeannel, 1937: 279.

**Geographic distribution** (Map p. 269). South Island: CO/DN, MC.

**Ecology**. Stenotopic, endogean, silvicolous, xerophilous. Lowland. Dry forests (broadleaf, podocarp). Nocturnal; hides during the day in deep leaf litter.

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

**Dispersal power**. Subapterous. Moderate runner.


**Zeanillus punctiger** (Broun, 1914)

*Anillus punctigerus* [sic] Broun, 1914b: 153. Type locality: Mt Hutt, near Methven, MC.

**Zeanillus punctigerus** [sic]: Moore, 1980b: 402.

**Geographic distribution** (Map p. 269). South Island: MC.

**Ecology**. Endogean. Lowland or montane. A tussock grassland area. Nocturnal; hides during the day under stones.

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

**Dispersal power**. Subapterous. Moderate runner.


**Note**. The Latin suffix -*ger*, not -*gerus*, is required for the masculine gender (Brown, 1985: 366).

**Subfamily HARPALINAE**

**Supertribe PTEROSTICHITAE**

**Tribe PTEROSTICHINI**

Figures 19–20

**Geographic distribution**. Worldwide.


**Notes**. This species requires the description of a new genus. It is retained here in its original combination in the genus *Argutor* Dejean. This species is distinct from all other described New Zealand Pterostichini, and, as noted by Butcher & Emberson (1981), it is "not at all closely related to the northern hemisphere members of the genus *Omaeseus* [sic] [=*Omaeseus* Dejean]", nor is it, in the authors’ opinion, closely related to the genus *Argutor*. 

**Genus “Argutor” Dejean, 1821**

*Argutor* Dejean, 1821: 11. Type species: *Carabus vernalis* Panzer, 1797, designated by Curtis, 1837: 666.

**Geographic distribution**. Europe (true *Argutor*). New Zealand (endemic; South Island – taxon currently placed in “*Argutor*”).

**Reference**. Britton, 1940: 478 (taxonomy).

**“Argutor” pantomelas** Blanchard, 1843

*Argutor pantomelas* Blanchard, 1843: Plate 2, Figure 6 (redescribed in 1853: 27, from Auckland Islands). Type locality: Akaroa, MC.

**Omaseus sylvaticus** Blanchard, 1843: Plate 2, Figure 5 (redescribed in 1853: 29). Type locality: Akaroa, MC. Synonymised by Tschitschérine, 1901: 47.

**Feronia (Holcaspis) sylvatica**: Bates, 1874: 243.

**Platysma (Holcaspis) pantomelas**: Tschitschérine, 1901: 47.

**Notes**. The Pterostichini and the Broscini are the largest tribes of Carabidae in New Zealand. A new revision is needed. Numerous species await description.
Genus Aulacopodus Britton, 1940

Aulacopodus Britton, 1940: 491. Type species: Pterostichus sharpianus Broun, 1893b, by original designation.

Geographic distribution. New Zealand.

Reference. Britton, 1940: 491–492 (revision).

Notes. A new revision is needed. Two species await description.

Aulacopodus brouni (Csiki, 1930), new status

Pterostichus adoxus Broun, 1908: 414. Type locality: Manawatu Gorge, RI/WN. Secondary homonym of Pterostichus adoxus (Say, 1823).

Trichosternus (Megadromus) broani Csiki, 1930: 545 (replacement name for Pterostichus adoxus Broun, 1908).

Aulacopodus brouni: Britton, 1940: 492.

Geographic distribution (Map p. 225). North Island: RI, WA, WI, WN.

Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland. Mostly wet forests (broadleaf); also poplar hedges, flaxlands, sandy beaches. Nocturnal; hides during the day under stones, leaf litter, and the loose bark of fallen trees.


Dispersal power. Brachypterous, incapable of flight. Moderate runner.


Note. Aulacopodus brouni was incorrectly synonymised with Rhytisternus puellus (Chaudoir, 1865b: 105) from Australia by Pilgrim, 1963: 840 (R.M. Emberson, personal communication).

Aulacopodus calathoides (Broun, 1886)

Haptoderus calathoides Broun, 1886: 879. Type locality: Whangarata, near Taikau, AK and near Ngahauwaha, WO.

Trichosternus (Megadromus) calathoides: Csiki, 1930: 545.


Aulacopodus calathoides: Britton, 1940: 491.

Geographic distribution (Map p. 226). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WO.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp, beech) and tree plantations (pine). Nocturnal; hides during the day under logs, stones, and fallen branches.


Dispersal power. Subapterous. Moderate runner.

References. Britton, 1940: 491 (distribution); Kuschel, 1990: 24, 39 (distribution, ecology, biology, dispersal power).

Note. This taxon could represent a species complex.

Aulacopodus maorinus (Bates, 1874)

Haptoderus maorinus Bates, 1874: 244 (revised in 1875: 307).

Type locality: Christchurch, MC.

Holcaspis (Haptoderus) maorinus: Broun, 1880: 41.

Pterostichus maorinus: Broun, 1893a: 991.

Holcaspis maorinus: Hutton, 1904: 146.

Aulacopodus maorinus: Britton, 1940: 492.

Geographic distribution (Map p. 226). South Island: MC.

Ecology. Stenotopic, epigean, silvicolous, xerophilous. Lowland. Dry forests (podocarp, broadleaf, beech). Nocturnal; hides during the day under logs and in fern leaf litter.


Dispersal power. Subapterous. Moderate runner.

References. Britton, 1940: 492 (distribution); Johns, 1986: 30 (distribution, ecology).

Aulacopodus sharpianus (Broun, 1893)

Pterostichus sharpianus Broun, 1893b: 163. Type locality: Ohaupo, WO and Hunua Ranges, AK.

Holcaspis sharpianus: Hutton, 1904: 146.

Trichosternus (Megadromus) sharpianus: Csiki, 1930: 546.

Aulacopodus sharpianus: Britton, 1940: 491.

Geographic distribution (Map p. 226). North Island: AK, ND, WO.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Wet forests (podocarp, broadleaf), swamp forests (broadleaf). Nocturnal; hides during the day in leaf litter and at the base of plants.


Dispersal power. Brachypterous, incapable of flight. Moderate runner.

References. Britton, 1940: 491 (distribution); Kuschel, 1990: 39, 74 (distribution, ecology, biology, dispersal power).
Genus *Gourlayia* Britton, 1964


**Geographic distribution.** New Zealand (endemic; Three Kings Islands).


*Gourlayia regia* Britton, 1964

*Gourlayia regia* Britton, 1964b: 522. Type locality: Great Island, TH.

**Geographic distribution** (Map p. 238). Offshore Islands: TH.

**Ecology.** Epigean, silvicolous, very hygrophilous. Lowland. Wet forests (broadleaf). Nocturnal; hides during the day under large stones.


**Dispersal power.** Subapterous. Moderate runner.


Genus *Holcaspis* Chaudoir, 1865

*Holcaspis* Chaudoir, 1865b: 101 (originally proposed with subgeneric rank in *Feronia* Latreille, 1817; first used with generic rank by Bates, 1874: 243). Type species: *Feronia (Holcaspis) angustula* Chaudoir, 1865b, designated by Britton, 1940: 492.

*Omaseus* (*Holcaspis*): Gemminger & Harold, 1868: 310.

**Geographic distribution.** New Zealand (endemic).

**References.** Britton, 1940: 492–502 (revision); Butcher, 1984: 47–99 (revision).

**Notes.** A new revision is needed that would describe in detail and illustrate the range of variation of male genitalia and pronotal configuration between and within populations. The North Island and Canterbury Plains species are particularly poorly understood. A few species await description. *Holcaspis* could comprise several genera.

*angustula group, angustula complex*

*Holcaspis angustula* (Chaudoir, 1865)

*Holcaspis angustula* Britton, 1964: 522. Type locality: Mt Algidsus, MC.

**Geographic distribution** (Map p. 238). South Island: MC.

**Ecology.** Epigean, mostly silvicolous, xerophilous. Lowland, montane, subalpine, alpine. Dry forests (beech) and scrublands, tussock grasslands, modified grasslands, fens, wetlands, sphagnum bogs, tufa beds, subalpine and alpine wetland. Nocturnal; hides during the day under logs, stones, in leaf litter, and under loose bark.


**Dispersal power.** Subapterous. Moderate runner.

**References.** Britton, 1940: 496 (distribution); Butcher, 1984: 61 (distribution).

*Holcaspis brevicula* Butcher, 1984

*Holcaspis brevicula* Butcher, 1984: 61. Type locality: Eyrewell, NC.

**Geographic distribution** (Map p. 238). South Island: NC.

**Ecology.** Lowland. A tree plantation (pine) through tussock grassland; probably silvicolous. Nocturnal; shelters during the day.

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

**Dispersal power.** Subapterous. Moderate runner.


*Holcaspis ohauensis* Butcher, 1984

*Holcaspis ohauensis* Butcher, 1984: 61. Type locality: Lake Ohau Reserve, MK.

**Geographic distribution** (Map p. 240). South Island: MK.

**Ecology.** Epigean, mostly silvicolous. Lowland. Forests (beech); a tussock grassland; probably mostly silvicolous. Nocturnal; hides during the day under logs.

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

**Dispersal power.** Subapterous. Moderate runner.


*angustula group, angustula complex*

*Holcaspis angustula* (Chaudoir, 1865)

*Holcaspis angustula* Blanchard, 1843: Plate 2, Figure 4 (redescribed in 1853: 28). Type locality: Akaroa, MC. Secondary homonym of *Pterostichus elongatus* (Dufschmid, 1812).

*Feronia (Omaseus) elongata* Lacordaire, 1854: 326.

*Feronia (Holcaspis) angustula* Chaudoir, 1865b: 101. Type locality: Akaroa (=Akaroa), MC (Chaudoir, 1865b: 102); New Zealand (Butcher, 1984: 64, lectotype designated). Replacement name for *Omaseus elongatus* Blanchard, 1843.

*Feronia angustula*: Hutton, 1874: 159.


*Pterostichus angustulus* Sharp, 1886: 369.

*Pterostichus longiformis* Sharp, 1886: 369. Type locality: Christchurch, MC. Synonymised by Butcher, 1984: 64.
**Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue**

**Pterostichus disparalis** Broun, 1893a: 1324. Type locality: Moeraki, DN. Synonymised with *Holcaspis longiformis* (Sharp, 1886) by Britton, 1940: 497.

**Holcaspis longiformis** Hutton, 1904: 146.

**Geographic distribution** (Map p. 238). South Island: DN, KA, MC, MK, NC, SC.

**Ecology**. Eurytopic, epigean, xerophilous. Lowland, montane, subalpine, alpine. Dry forests (beech, broadleaf, podocarp), shrublands, and scrublands; plantations (pine, eucalypt), tussock grasslands, pastures, grass paddocks, cultivated fields (carrot), farmlands, gardens. Nocturnal; hides during the day under logs and stones.

**Biology**. Seasonality: October–August. Tenerals: March. Predacious (based on mouthpart morphology).

**Dispersal power**. Subapterous. Moderate runner.

**References**. Britton, 1940: 497 (distribution); Butcher & Emberson, 1981: 63 (distribution, ecology); Butcher, 1984: 64–65 (distribution, ecology, biology); Holm, 1964: 31 (as *Holcaspis longiformis*, distribution) and 1986: 30 (distribution); Emberson, 1993b: 20 (taxonomy); Sivasubramaniam et al., 1997: 209–210 (distribution, ecology); Howe, 1998: 17 (distribution, ecology).

**Holcaspis bathana** Butcher, 1984

**Holcaspis bathana** Butcher, 1984: 67. Type locality: Mt St. Bathans, CO.

**Geographic distribution** (Map p. 238). South Island: CO.

**Ecology**. Epigean. Montane. A tussock-scree area. Nocturnal; shelters during the day.

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

**Dispersal power**. Subapterous. Moderate runner.

**References**. Butcher, 1984: 67 (distribution, ecology); Nicholls et al., 1998: 3 (taxonomy).

**Holcaspis falcis** Butcher, 1984

**Holcaspis falcis** Butcher, 1984: 67. Type locality: Mt John, Tekapo, MK.

**Geographic distribution** (Map p. 239). South Island: MC, MK, NC.

**Ecology**. Epigean, mostly silvicolous, xerophilous. Montane. Dry forests (beech) and shrublands; tussock grasslands. Nocturnal; hides during the day under logs and stones.


**Dispersal power**. Subapterous. Moderate runner.

**References**. Britton, 1940: 477 (distribution); Butcher, 1984: 65, 94 (taxonomy, distribution); Barratt & Patrick, 1987: 82 (distribution, ecology); Patrick et al., 1993: 11 (distribution, ecology).
Notes. Britton (1940: 497) considered *H. placida* and *H. thoracica* as junior synonyms of *H. angustula* (Chaudoir), and based on his examination of the Broun Collection, he also clearly identified that the type locality “Whangarei Harbour” published by Broun (1881: 657) for *H. thoracica*, was incorrect and should have read “Taieri”, DN.

Butcher’s (1984) treatment of the names *H. placida* and *H. thoracica* was confusing. On page 65 of his revision, he seemed to indicate clearly that they are synonyms but on page 94 he listed *H. thoracica* as a valid species inquirenda while in his comment on the same page apparently not really believing this to be the valid name. However, he revised the genus *Holcaspis* and rightfully he was acting as First Reviser in selecting *H. placida* as valid name for this taxon. Recommendation 24A (International Code of Zoological Nomenclature, 1999) states that in acting as First Reviser, an author should select the name that will best serve stability and universality of the nomenclature.

*angustula group, impigra complex*

**Holcaspis impigra** Broun, 1886

*Holcaspis impiger* [sic] Broun, 1886: 879. Type locality: Flagstaff Mountain, near Dunedin and Mt Maungataua (Broun, 1886: 879); Maungatua, DN (Butcher, 1984: 59, lectotype designated).

*Pterostichus impiger* Broun, 1893a: 991.

*Pterostichus edax* Broun, 1893a: 1326. Type locality: Dusky Bay, FD. Secondary homonym of *Neoferonia edax* (Chaudoir, 1878b). Synonymised by Britton, 1940: 496.

*Holcaspis edax*: Hutton, 1904: 146.

*Pterostichus sculpturalis* Broun, 1917: 362. Type locality: Mt Dick, Lake Wakatipu, OL. Synonymised by Britton, 1940: 496.


Geographic distribution (Map p. 239). South Island: CO, DN, FD, OL, SL, WD.

Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf, podocarp), shrublands, and scrublands; tussock grasslands, herbfields, scree. Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Moderate runner.


Note. *Holcaspis* is a feminine noun which requires a specific epithet of the same gender.

**Holcaspis stewartensis** Butcher, 1984

*Holcaspis stewartensis* Butcher, 1984: 59. Type locality: Christmas Village, Stewart Island.

Geographic distribution (Map p. 241). Stewart Island.

Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (podocarp, broadleaf), shrublands, and scrublands; herbfields. Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Moderate runner.

References. Butcher, 1984: 59 (distribution); Patrick et al., 1992b: 18 (distribution).

*brouniana group*

**Holcaspis brouniana** (Sharp, 1886)

*Pterostichus brounianus* Sharp, 1886: 367. Type locality: Picton, SD.

*Holcaspis brouniana* [sic]: Hutton, 1904: 146.

Geographic distribution (Map p. 238). North Island: WN. South Island: KA, MB, SD.

Ecology. Eurytopic, epigean. Lowland, montane, subalpine. Wet or dry tussock grasslands, pastures, fellfields, sand dunes, scrublands, forests (beech, broadleaf). Nocturnal; hides during the day under stones and logs.


Dispersal power. Subapterous. Moderate runner.


**Holcaspis elongella** (White, 1846)

*Feronia (Cophosus) elongella* White, 1846: 4. Type locality: New Zealand.

*Feronia elongella*: Lacordaire, 1854: 326.

*Feronia (Holcaspis) elongella*: Chaudoir, 1865b: 104.

*Omamea elongella*: Gemminger & Harold, 1868: 312.

*Holcaspis elongella*: Bates, 1874: 244.

*Pterostichus constrictellus* Sharp, 1886: 368. Type locality: Christchurch, MC and Greymouth, BR (Sharp, 1886: 369); Christchurch, MC (Butcher, 1984: 73, lectotype designated). Synonymised by Britton, 1940: 498.

*Pterostichus detractus* Broun, 1893a: 996. Type locality: Castle Hill, MC. Synonymised by Britton, 1940: 498.


*Holcaspis detractus* [*sic*]: Hutton, 1904: 146.

*Trichosternus* (*Megadromus*) *constrictellus* Csiki, 1930: 544.

**Geographic distribution** (Map p. 239). South Island: BR, MC, NC, SC.

**Ecology.** Epigean, mostly silvicolous, xerophilous. Lowland, montane, subalpine. Dry forests (beech, broadleaf, podocarp) and shrublands; farmlands, tussock grasslands, modified grasslands, pastures, gardens. Nocturnal; hides during the day under logs and stones.

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

**Dispersal power.** Subapterous. Moderate runner.

**References.** Britton, 1940: 498 (distribution); Butcher & Emerson, 1981: 63, 68–69 (distribution, ecology, biology); Butcher, 1984: 71 (distribution); Johns, 1986: 30 (distribution).

*Holcaspis tripunctata* Butcher, 1984

*Holcaspis tripunctata* Butcher, 1984: 73. Type locality: Rarangi, SD.

**Geographic distribution** (Map p. 241). South Island: KA, MB, SD.

**Ecology.** Epigean, mostly silvicolous. Lowland. Forests (beech); a garden. Nocturnal; hides during the day under logs and stones.

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

**Dispersal power.** Subapterous. Moderate runner.

**References.** Butcher, 1984: 73 (distribution).

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* Holcaspis hudsoni  Broun, 1982


**Geographic distribution** (Map p. 239). South Island: KA, MB, NC, ?NN.

**Ecology.** Epigean, mostly silvicolous, xerophilous. Lowland, montane. Dry forests (beech, broadleaf, podocarp),
shrublands, and tree plantations (pine); tussock grasslands, pastures. Nocturnal; hides during the day under logs, stones, and in leaf litter.


**Dispersal power.** Subapterous. Moderate runner.

**References.** Britton, 1940: 499 (distribution); Johns et al., 1980: 26 (distribution, ecology); Johns, 1980: 62, 65 (distribution, ecology); Butcher, 1984: 75–76 (distribution); Townsend, 1997: 13 (distribution).

**Holcaspis suteri** (Broun, 1893)

*Pterostichus suteri* Broun, 1893a: 1324. Type locality: Dyers Pass [MC], Port Hill, Canterbury (Broun, 1893a: 1325); Canterbury (Butcher, 1984: 76, lectotype designated).

**Geographic distribution** (Map p. 241). South Island: MC.

**Ecology.** Epigean, mostly silvicolous, xerophilous. Lowland. Dry forests (broadleaf, podocarp) and shrublands; tussock grasslands, pastures. Nocturnal; hides during the day under logs, stones, and leaf litter.

**Biology.** Seasonality: Throughout the year. Tenebrionids: September. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.

**References.** Britton, 1940: 499 (distribution); Butcher & Emberson, 1981: 63, 67–69 (distribution, ecology, biology); Butcher, 1984: 76 (distribution); Johns, 1986: 30 (distribution).

**odontella group**

**Holcaspis odontella** (Broun, 1908)

*Pterostichus odontellus* Broun, 1908: 410. Type locality: Taranaki [TK], North Island.

*Trichosternus (Megadromus) odontella:* Csiki, 1930: 546.

**Holcaspis odontella:** Britton, 1940: 499.

**Geographic distribution** (Map p. 240). North Island: TK, WA. South Island: MC.

**Ecology.** Epigean. Lowland, montane. A forest (broadleaf); probably silvicolous. Nocturnal; hides during the day under logs.

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

**Dispersal power.** Subapterous. Moderate runner.

**References.** Britton, 1940: 500 (distribution); Butcher, 1984: 77, 79 (distribution, ecology).

**Note.** Broun (1908: 410) believed the type specimen was taken near Mount Egmont.

**oedicnema group, delator complex**

**Holcaspis delator** (Broun, 1883)

*Pterostichus delator* Broun, 1893a: 1397. Type locality: Ashburton, MC (Broun, 1893a: 1397), Canterbury (Butcher, 1984: 86, holotype examined).

**Holcaspis delator:** Hutton, 1904: 147.

**Geographic distribution** (Map p. 239). South Island: MC, MK, SC.

**Ecology.** Epigean, mostly silvicolous, xerophilous. Lowland, montane. Dry forests (beech, broadleaf, podocarp) and shrublands; grasslands. Nocturnal; hides during the day under logs.

**Biology.** Seasonality: September–March. Predacious (based on mouthpart morphology). Occasionally infested with mites.

**Dispersal power.** Subapterous. Moderate runner.

**References.** Britton, 1940: 501 (distribution); Butcher, 1984: 86 (distribution).

**Holcaspis intermittens** (Chaudoir, 1865)

*Feronia (Holcaspis) intermittens* Chaudoir, 1865b: 103. Type locality: Port Nicholson [WN], New Zealand (Chaudoir, 1865b: 104); New Zealand (Butcher, 1984: 89, holotype examined).

**Synonymised with Feronia subaenea and Feronia vaguepunctata** White by Tschitschérine, 1891: 166; resurrected from synonymy by Butcher, 1984: 87.


**Holcaspis sinuellus [sic]:** Hutton, 1904: 147.

**Geographic distribution** (Map p. 240). North Island: WN. South Island: MC, NC.

**Ecology.** Stenotopic, epigean, silvicolous, xerophilous. Lowland. Dry forests (broadleaf, podocarp) and scrublands. Nocturnal; hides during the day in leaf litter, among stones and logs.


**Dispersal power.** Subapterous. Moderate runner.

**References.** Britton, 1940: 502 (as a synonym of *H. vaguepunctata*, taxonomy); Butcher, 1984: 87–88 (distribution); Johns, 1986: 30 (distribution, ecology); Townsend, 1997: 13 (distribution).
**Holcaspis hispida** (Broun, 1877)

*Trichosternus hispidus* Broun, 1877a: 371. Type locality: Kikuwai (=Hikuwai) Forest, CL.


*Holcaspis hybrida* Broun, 1886: 826. Type locality: Tukau, AK. Synonymised by Britton, 1940: 500.

*Pterostichus fieldi* Broun, 1893a: 991. Type locality: Tuakau, AK. Subapterous. Moderate runner. Dispersal power

- Synonymised by Britton, 1940: 500 (distribution); Reid *et al*., 1982: 84 (biology); Butcher, 1984: 83 (distribution).

*Holcaspis vexata* (Broun, 1908)

*Pterostichus vexatus* Broun, 1908: 417. Type locality: Wellington, WN.

*Trichosternus* (Megadromus)* vexatus* Csiki, 1930: 547.


*Geographic distribution* (Map p. 241). North Island: WN.

*Ecology.* Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Wet forests (broadleaf). Nocturnal; hides during the day under stones and logs.

*Dispersal power.* Subapterous. Moderate runner.


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**Holcaspis mucronata group, mucronata complex**

**Holcaspis hispida** (Broun, 1877)

*Trichosternus hispidus* Broun, 1877a: 371. Type locality: Kikuwai (=Hikuwai) Forest, CL.


*Holcaspis pellida* Broun, 1886: 826. Type locality: Tukau, AK. Synonymised by Britton, 1940: 500.

*Geographic distribution* (Map p. 239). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO.

*Ecology.* Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp, beech) and tree plantations (pine). Nocturnal; hides during the day under logs and stones.


*Dispersal power.* Subapterous. Moderate runner.

*References.* Britton, 1940: 501 (distribution); Reid *et al*., 1982: 84 (biology); Butcher, 1984: 83 (distribution).

**Holcaspis vexata** (Broun, 1908)

*Pterostichus vexatatus* Broun, 1908: 417. Type locality: Wellington, WN.

*Trichosternus* (Megadromus)* vexatus* Csiki, 1930: 547.


*Geographic distribution* (Map p. 241). North Island: WN.

*Ecology.* Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Wet forests (broadleaf). Nocturnal; hides during the day under stones.

*Dispersal power.* Subapterous. Moderate runner.

*References.* Britton, 1940: 500 (as a synonym of *H. hispida*: taxonomy); Butcher, 1984: 86 (distribution); Townsend, 1998: 5 (taxonomy, distribution).

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**Holcaspis mucronata** Broun, 1886

*Holcaspis mucronata* Broun, 1886: 826. Type locality: Waitakerei (=Waitakere) Ranges, Auckland, AK (Broun, 1886: 826).

*Geographic distribution* (Map p. 240). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO.

*Ecology.* Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp, beech) and tree plantations (pine). Nocturnal; hides during the day under logs and stones.


*Dispersal power.* Subapterous. Moderate runner.

*References.* Britton, 1940: 501 (distribution); Reid *et al*., 1982: 84 (biology); Butcher, 1984: 83 (distribution).

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**Holcaspis dentifera** (Broun, 1880)

*Trichosternus dentiferus* Broun, 1880: 36. Type locality: Parua, Whangarei Harbour, ND.

*Pterostichus dentiferus* Broun, 1893a: 986.

*Trichosternus* (Megadromus)* dentiferus* Csiki, 1930: 546.


*Holcaspis dentifera* Broun: Britton, 1940: 499.

*Geographic distribution* (Map p. 240). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO.

*Ecology.* Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (broadleaf, podocarp, beech) and tree plantations (pine):
often along streams. Nocturnal; hides during the day under logs, fallen branches, stones, and in leaf litter.


**Dispersal power.** Subapterous. Moderate runner.

**References.** Hudson, 1934: 37 (distribution); Britton, 1940: 499 (distribution); Watt, 1971: 25 (biology); Reid et al., 1982: 84 (biology); Butcher, 1984: 81–82 (distribution).

**Note.** Holcaspis dentifera could represent a species complex.

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**Holcaspis oedicnema Bates, 1874**


_Pterostichus rugifrons_ Sharp, 1886: 451. Type locality: Greytown, BR. Secondary homonym of _Holcaspis (Rhytisternus) rugifrons_ Broun, 1880 (= _Rhytisternus miser_ (Chaudoir, 1865b)), Synonymised by Britton, 1940: 500.

_Pterostichus oedicnemus_ Broun, 1893a: 991.

_Pterostichus cribralis_ Broun, 1893a: 991.

_Pterostichus pastoricius_ Broun, 1893a: 994. Type locality: Wanganuka Valley, NN. Synonymised by Britton, 1940: 500.

_Pterostichus egmontensis_ Broun, 1893a: 997. Type locality: Mt Egmont, TK. Synonymised by Britton, 1940: 500.

_Pterostichus irregularis_ Broun, 1893a: 998. Type locality: Boatman’s, near Reefton, BR. Synonymised by Britton, 1940: 500.


_Trichosternus (Nesopterostichus) rugifrons_ Tschitscherine, 1902: 521.


_Holcaspis myrmidon_ Walker, 1904: 126.

_Holcaspis pastoricius_ Broun, 1904: 146.

_Holcaspis egmontensis_ Broun, 1904: 147.

_Holcaspis irregularis_ Broun, 1904: 147.

_Holcaspis lewisi_ Broun, 1904: 147.

_Pterostichus antennalis_ Broun, 1908: 412. Type locality: “Takaratahi [=Pakuratahi] and Mt Holdsworth”, WN (Broun, 1908: 413), “Mt Holdsworth, Pakuratahi”, WN (Butcher, 1984:


_Trichosternus (Megadromus) rugifrons_ [sic]; Csiki, 1930: 545.

_Trichosternus (Megadromus) antennalis_ Csiki, 1930: 545.

_Trichosternus (Megadromus) lewisi_ Csiki, 1930: 546.

_Trichosternus (Megadromus) settiventris_ Csiki, 1930: 546.

_Holcaspis rugifrons_ Csiki, 1930: 559.

**Geographic distribution** (Map p. 240). North Island: HB, RI, TK, TO, WA, WI, WN, WO. South Island: BR, KA, MB, MC, NN, SC, SD, WD.

**Ecology.** Epigean, mostly silvicoleous, very hygrophilous. Lowland, montane, subalpine, alpine. Mostly wet forests (broadleaf, podocarp, beech), shrublands, and tree plantations (pine): often along streams; also alpine meadows, pastures, gardens; caves (occasionally). Nocturnal; hides during the day under logs and stones.


**Dispersal power.** Subapterous. Moderate runner.


**Note.** Holcaspis oedicnema could represent a species complex.

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**Holcaspis subaenea** (Guérin-Méneville, 1841)

_Feronia (Platyasma?) subaenea_ Guérin-Méneville, 1841a: 122. Type locality: New Zealand.

_Feronia (Platyasma?) subaenea_ Lacordaire, 1854: 326.


_Feronia subaenea_ Hutton, 1874: 159.


_Pterostichus subaeneus_ [sic]; Sharp, 1886: 369.

_Feronia (Holcaspis) subaenea_ Tschitscherine, 1891: 166.

**Geographic distribution** (Map p. 241). South Island: DN.

**Ecology.** Lowland. Habitat unknown; possibly silvicoleous.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.

**References.** Britton, 1940: 502 (distribution); Johns, 1964: 8 (distribution, biogeography); Butcher & Emberson, 1981: 63, 69 (distribution, ecology, biology); Butcher, 1984: 82 (distribution).
Holcaspis sinuiventris (Broun, 1908)
Pierostichus sinuiventris Broun, 1908: 416. Type locality: Manawatu Flats, nine miles below the Gorge, W/N (Broun, 1908: 417), Manawatu Gorge, R/W (Butcher, 1984: 90, lectotype designated).

Trichosternus (Megadromus) sinuiventris: Csiki, 1930: 546.


Geographic distribution (Map p. 241). North Island: AK, BP, GB, HB, ND, RI, WA, WI, WN, WO.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (broadleaf, podocarp, beech) and shrublands. Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Moderate runner.

References. Britton, 1940: 502 (distribution); Butcher, 1984: 90 (distribution).

Note. This species is difficult to distinguish from H. vagepunctata.

Holcaspis vagepunctata (White, 1846)

Feronia vagepunctata: Lacordaire, 1854: 326.

Omaseus vagepunctata: Gemminger & Harold, 1868: 313.


Pierostichus praecox: Broun, 1893a: 991.


Geographic distribution (Map p. 241). North Island: AK, GB, HB, RI, WA, WN, WO.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech). Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Moderate runner.

References. Smith, 1902: 200 (biology); Hudson, 1934: 37 (distribution, ecology); Britton, 1940: 502 (distribution); McColl, 1975: 26 (ecology); Butcher, 1984: 90 (distribution).

Note. Previously known as punctiger group (see Notes under Holcaspis sternalis).

Holcaspis mordax Broun, 1886
Holcaspis mordax Broun, 1886: 938. Type locality: Base of Mt Egmont, TK (Broun, 1886: 938), Taranaki, TK (Butcher, 1984: 57, lectotype designated).

Pierostichus mordax: Broun, 1893a: 991. Type locality: Hunua, near Papakura, AK. Synonymised by Britton, 1940: 496.

Pierostichus scitipennis Broun, 1893a: 1396. Type locality: Mt Pirongia, WN. Synonymised by Britton, 1940: 496.

Holcaspis humensis: Hutton, 1904: 146.

Geographic distribution (Map p. 240). South Island: CO, DN, OL, SC, SL.


Dispersal power. Subapterous. Moderate runner.

References. Britton, 1940: 495 (distribution); Valentine, 1967: 1102 (biology); Butcher, 1984: 54 (distribution); Barratt & Patrick, 1987: 82 (distribution, ecology); Patrick et al., 1992a: 273 (distribution); Patrick et al., 1993: 11 (distribution, ecology).

Holcaspis ovatella group

Feronia (Holcaspis) ovatella Chaudoir, 1865

Omaseus ovatellus: Gemminger & Harold, 1868: 313.

Holcaspis ovatella: Bates, 1874: 244.


Pierostichus perbonus Broun, 1908: 418. Type locality: Westport, NN (“almost certainly incorrect” (Butcher, 1984: 54)).

Synonymised by Butcher, 1984: 53.

Trichosternus (Megadromus) perbonus: Csiki, 1930: 546.

Holcaspis ovatella: Britton, 1940: 495.

Holcaspis ovatella perbonus: Britton, 1940: 495.

Geographic distribution (Map p. 240). South Island: CO, DN, OL, SC, SL.


Dispersal power. Subapterous. Moderate runner.

References. Britton, 1940: 495 (distribution); Valentine, 1967: 1102 (biology); Butcher, 1984: 54 (distribution); Barratt & Patrick, 1987: 82 (distribution, ecology); Patrick et al., 1992a: 273 (distribution); Patrick et al., 1993: 11 (distribution, ecology).

Holcaspis sternalis group

Note. Previously known as punctiger group (see Notes under Holcaspis sternalis).
Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (broadleaf, podocarp, beech), shrublands, and tree plantations (pine). Nocturnal; hides during the day under logs, stones, and in leaf litter.


Dispersal power. Subapterous. Moderate runner.

References. Britton, 1940: 496 (distribution); Butcher, 1984: 57 (distribution).

Holcaspis sternalis Broun, 1881

Holcaspis sternalis Broun, 1881: 658. Type locality: Near Whangarei Harbour, ND [mislabeling for Maungatua, DN]. Cerabilla punctigera Broun, 1882: 223 (redescribed in 1883: 223 and 1886: 753). Type locality: Invercargill, SL. Synonymised by Britton, 1940: 478, 495; incorrectly resurrected from synonymy by Butcher, 1984: 54. Here reinstated as a junior synonym of Holcaspis sternalis, not as a valid species. Butcher (1984: 94) did not see the specimen from the Broun Collection and considered that the original description of Holcaspis sternalis was made from a specimen of Holcaspis punctigera. We disagree with Butcher, and consider that the type of Holcaspis sternalis was simply mislabelled, as explained above.

Genus Megadromus Motschulsky, 1866

Figures 19–20


Geographic distribution. New Zealand (mostly) and Australia (mainland).


Notes. Peter M. Johns (Christchurch, New Zealand) is currently revising this genus. Twelve species await description. A few species could be removed from synonymy. Most species occur in the South Island. Members of this genus are general scavengers and usually emit a strong defensive smell when disturbed.

Subgenus Megadromus Motschulsky, 1866

Geographic distribution. New Zealand (endemic).

Notes. Moore (1965b: 17) created the subgenus Protodromus for two Australian species. All other currently described species of Megadromus occur in New Zealand and belong to the nonnomotypical subgenus.
**Megadromus (Megadromus) alternus** (Broun, 1886)

*Trichosternus alternus* Broun, 1886: 877. Type locality: Near Lake Tekapo, MK.

*Trichosternus urquharti* Broun, 1886: 877. Type locality: Vicinity of Lake Tekapo, MK. Synonymised by Britton, 1940: 486.

*Trichosternus (Nesopterostichus) alternus*: Tschitscherine, 1902: 521.

*Trichosternus (Nesopterostichus) urquharti*: Tschitscherine, 1902: 521.

*Trichosternus (Megadromus) alternus*: Csiki, 1930: 544.

*Trichosternus (Megadromus) urquharti*: Csiki, 1930: 545.

**Geographic distribution** (Map p. 252). South Island: CO, MC, MK, SC.

**Ecology.** Eurytopic, epigean-fossorial, mostly xerophilous, subalpine, alpine. Dry forests (beech), screes, lakeshores. Mostly nocturnal; hides during the day under logs, stones, boards, and in deep burrows (down to 0.5m).


**Dispersal power.** Subapterous. Moderate runner.


**Megadromus (Megadromus) asperatus** (Chaudoir, 1865)

Figure 19

**Feronia (Trichosternus) antarctica Chaudoir, 1865b:** 73. Type locality: New Zealand.


**Homalosoma antarcticum** Geenminger & Harold, 1868: 329.

**Megadromus antarcticus** Bates, 1874: 242.

**Feronia antarctica** Broun, 1876: 264.

**Trichosternus crassalis** Broun, 1893a: 1395. Type locality: Albury, SC. Synonymised by Britton, 1940: 484.

**Trichosternus (Nesopterostichus) antarcticus**: Tschitscherine, 1902: 521.

**Trichosternus (Nesopterostichus) crassalis**: Tschitscherine, 1902: 521.

**Trichosternus coelocephalus** Broun, 1915: 274. Type locality: Mt Hutt, MC. Synonymised by Britton, 1940: 484.


**Megadromus (Megadromus) bugolicus** (Broun, 1903)


**Trichosternus (Megadromus) bugolicus**: Csiki, 1930: 544.

Geographic distribution (Map p. 252). South Island: SD.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Wet forests (broadleaf) and scrublands. Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Moderate runner.

References. Britton, 1940: 485 (taxonomy); Molloy et al., 1994: 59 (distribution, conservation); Townsend, 1997: 13 (taxonomy, distribution) and 1998: 5, 12, 21 (taxonomy, distribution).

Megadromus (Megadromus) bullatus (Broun, 1915)

Pterostichus bullatus Broun, 1915: 275. Type locality: Greenstone Flat, near Queenstown, Otago.

Megadromus bullatus: Broun, 1940: 483.


Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf, podocarp) and tree plantations (pine), tussock grasslands. Nocturnal; hides during the day under fallen trees, big logs and stones.


Dispersal power. Subapterous. Moderate runner.


Note. This taxon could represent a species complex.

Megadromus (Megadromus) capito (White, 1846)

Figure 20

Feronia (Platysma) capito White, 1846: 4. Type locality: New Zealand.

Feronia capito: Lacordaire, 1854: 326.

Feronia (Trichosternus) capito: Choudoir, 1865b: 74.


Trichosternus aucklandicus Broun, 1880: 33. Type locality: Auckland, AK. Secondary homonym of Pterostichus (Trichosternus) aucklandicus Bates, 1878c.


Trichosternus cephalotes Broun, 1886: 825. Type locality: Near Wellington, WN. Synonymised by Britton, 1940: 485.


Trichosternus (Nesopterostichus) capito: Tschitschérine, 1902: 521.


Trichosternus (Nesopterostichus) cephalotes: Tschitschérine, 1902: 521.

Trichosternus (Nesopterostichus) humeralis: Tschitschérine, 1902: 521.

Trichosternus hussoni Broun, 1904: 44. Type locality: Wellington, WN. Synonymised by Britton, 1940: 485.

Trichosternus ordinarius Broun, 1908: 407. Type locality: Lake Horowhenua, WN. Synonymised by Britton, 1940: 485.

Trichosternus (Megadromus) capito: Csiki, 1930: 544.

Trichosternus (Megadromus) aucklandicus: Csiki, 1930: 544.

Trichosternus (Megadromus) humeralis: Csiki, 1930: 544.

Trichosternus (Megadromus) cephalotes: Csiki, 1930: 544.

Trichosternus (Megadromus) hussoni: Csiki, 1930: 544.

Trichosternus (Megadromus) ordinarius: Csiki, 1930: 544.

Megadromus capito: Broun, 1940: 485.

Geographic distribution (Map p. 252). North Island: AK, BP, CL, GB, RI, TK, TO, WA, WI, WN, WO.

Ecology. Epigean, mostly silvicolous. Lowland, montane. Wet or dry forests (broadleaf, podocarp, beech), scrublands, and scrublands; tree hedges, flaxlands, pastures, grasslands, cultivated fields (potato). Mostly nocturnal; hides during the day under stones, logs, and in burrows dug at the base of plants.


References. Hudson, 1934: 36 (distribution, ecology); Britton, 1940: 485 (distribution); Moeed, 1980: 10 (distribution, biology); Walker, 1984: 25 (distribution, biology); Moeed & Meads, 1992: 67 (distribution, ecology); Townsend, 1994: 9, 10, 12 (distribution, ecology).

Note. The type locality of Trichosternus cephalotes could be the Tararua Ranges as implied by Broun’s description (“taken on the range near Wellington”).
**Trichosternus curtulus** (Broun, 1884), new status


*Pterostichus optabilis* Broun, 1893a: 986 (replacement name for *Trichosternus erythropus* Broun, 1884). Here reinstated as a junior synonym.

*Pterostichus curtulus* Broun, 1893a: 986.

*Pterostichus suspicax* Broun, 1893a: 986.

*Trichosternus (Megadromus) curtulus* Csiki, 1930: 545.

*Trichosternus (Megadromus) optabilis* Csiki, 1930: 546.

*Trichosternus (Megadromus) suspicax* Csiki, 1930: 546.

*Megadromus optabilis* Britton, 1940: 488.


Geographic distribution (Map p. 253). South Island: CO, DN.


Biology. September, November, January–May. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.


Note. The type locality of *T. enysi* could be Broken River, MC, as noted by Broun in his personal copy of his *Manual*.
Trichosternus amplicolis Broun, 1884: 227 (redescribed in 1884: 918). Type locality: Taiieri, DN. Synonymised by Britton, 1940: 488.

Trichosternus curvipes Broun, 1886: 878. Type locality: Taiieri, DN. Synonymised by Britton, 1940: 488.

Pterostichus fultoni: Broun, 1893a: 986.

Pterostichus erraticus: Broun, 1893a: 986.

Pterostichus amplicolis: Broun, 1893a: 986.

Trichosternus curvipes: Broun, 1893a: 986.

Trichosternus polychaetus Broun, 1893a: 987. Type locality: Taiieri, DN. Synonymised by Britton, 1940: 488.

Trichosternus (Nesopterostichus) polychaetus: Tschitschérine, 1902: 521.

Pterostichus flectipes Broun, 1908: 413. Type locality: South Island, probably Westport, NN. Synonymised by Britton, 1940: 488.

Trichosternus (Megadromus) amplicolis: Csiki, 1930: 545.

Trichosternus (Megadromus) curvipes: Csiki, 1930: 545.

Trichosternus (Megadromus) polychaetus: Csiki, 1930: 545.

Trichosternus (Megadromus) fultoni: Csiki, 1930: 546.

Trichosternus (Megadromus) erraticus: Csiki, 1930: 546.

Trichosternus (Megadromus) flectipes: Csiki, 1930: 546.

Megadromus fultoni: Britton, 1940: 488.

Geographic distribution (Map p. 253). South Island: DN.


Dispersal power. Subapterous. Moderate runner.


Note. Chaudoir’s replacement name (1865b) was overlooked by Britton (1940: 483).

Megadromus (Megadromus) haplopus (Broun, 1893)

Trichosternus haplopus Broun, 1893a: 1323. Type locality: Hampden, DN.

Trichosternus (Nesopterostichus) haplopus: Tschitschérine, 1902: 521.

Pterostichus haplopus: Hutton, 1904: 146.

Trichosternus (Megadromus) haplopus: Csiki, 1930: 544.

Megadromus haplopus: Britton, 1940: 487.

Geographic distribution (Map p. 253). South Island: CO, DN, SL.

Ecology. Epigean, stenotopic, silvicicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp). Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Moderate runner.

References. Britton, 1940: 487 (distribution); Molloy et al., 1994: 59 (distribution, conservation).

Megadromus (Megadromus) lobipes (Bates, 1878)

Pterostichus lobipes Bates, 1878b: 191. Type locality: Oira River, WD.

Trichosternus (Pterostichus) lobipes: Broun, 1880: 34.

Trichosternus lobipes: Broun, 1893a: 986.


Trichosternus (Megadromus) lobipes: Csiki, 1930: 544.

Megadromus lobipes: Britton, 1940: 482.

Geographic distribution (Map p. 253). South Island: BR, MC, NC, NN, WD.
Ecology. Epigean, mostly silvicolous. Lowland, montane. Wet forests (beech, podocarp) and tree plantations (pine); caves (occasionally). Nocturnal; hides during the day under and in large logs.


Dispersal power. Subapterous. Moderate runner.


Megadromus (Megadromus) memes (Broun, 1903)

Pterostichus memes Broun, 1903: 605. Type locality: Maniototo Plains [=Upper Taieri], CO.


Geographic distribution (Map p. 253). South Island: CO.


Biology. Seasonality unknown. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.


Megadromus (Megadromus) meritus (Broun, 1884)


Trichosternus monticola Broun, 1886: 821. Type locality: Mt Maungatua, Taieri, DN. Synonymised by Britton, 1940: 489.

Trichosternus chloris Broun, 1886: 823. Type locality: Mt Maungatua, DN. Synonymised by Britton, 1940: 489.

Trichosternus grillator Broun, 1886: 823. Type locality: Waihola, Otago, DN. Synonymised by Britton, 1940: 489.


Trichosternus fusulus Broun, 1886: 824. Type locality: Maungatua, DN. Synonymised by Britton, 1940: 489.

Pterostichus deceptus Broun, 1886: 916 (replacement name for Pterostichus riparius (Broun, 1884)). Synonymised by Britton, 1940: 489.

Pterostichus waihourensis [sic]: Broun, 1893a: 986.

Pterostichus monticola: Broun, 1893a: 986.

Pterostichus chloris: Broun, 1893a: 986.

Pterostichus grillator: Broun, 1893a: 986.

Pterostichus waihourensis [sic]: Broun, 1893a: 986.


Trichosternus (Megadromus) aeruginosus: Csiki, 1930: 545.

Trichosternus (Megadromus) agriotes [sic]: Csiki, 1930: 545.

Trichosternus (Megadromus) amicus: Csiki, 1930: 545.

Trichosternus (Megadromus) angulatus: Csiki, 1930: 545.

Trichosternus (Megadromus) chloris: Csiki, 1930: 545.

Trichosternus (Megadromus) deceptus: Csiki, 1930: 545.

Trichosternus (Megadromus) fusulus: Csiki, 1930: 546.

Trichosternus (Megadromus) grillator: Csiki, 1930: 546.

Trichosternus (Megadromus) kirkiana: Csiki, 1930: 546.

Trichosternus (Megadromus) maiae [sic]: Csiki, 1930: 546.

Trichosternus (Megadromus) meliusculus: Csiki, 1930: 546.

Trichosternus (Megadromus) meritus: Csiki, 1930: 546.

Trichosternus (Megadromus) monticola: Csiki, 1930: 546.

Trichosternus (Megadromus) waihourensis [sic]: Csiki, 1930: 547.

Pterostichus meritus: Hudson, 1934: 175.

Megadromus meritus: Britton, 1940: 489.

Geographic distribution (Map p. 253). South Island: DN, SL. Stewart Island

Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, podocarp, broadleaf) and shrublands, tussock grasslands, pastures, herbfields. Nocturnal; hides during the day under logs and fallen trees.

the female who protects her eggs and larvae against enemies.

**Dispersal power.** Subapterous. Moderate runner.

**References.** Smith, 1920: 14 (biology); Britton, 1940: 489 (distribution); Patrick et al., 1993: 11 (distribution, ecology).

**Megadromus (Megadromus) rectalis (Broun, 1881)**


*Trichosternus* (Megadromus) hammerensis: Csiki, 1930: 544.

*Trichosternus* (Megadromus) rectalis: Csiki, 1930: 545.

*Megadromus rectalis*: Britton, 1940: 486.

*Megadromus* hammerensis: Britton, 1940: 486.

**Geographic distribution.** (Map p. 253). South Island: KA, MB, MC, NC, NN.

**Ecology.** Eurytopic, epigean, mostly silvicicolous. Lowland, montane, subalpine, alpine. Both wet and dry forests (beech, broadleaf), tree plantations (pine), shrublands, tussock grasslands, screes. Nocturnal; hides during the day under stones and logs.


**Dispersal power.** Subapterous. Moderate runner.

**References.** Britton, 1940: 486 (distribution); Johns et al., 1980: 26 (distribution, ecology); Townsend, 1997: 13 (taxonomy, distribution).

**Megadromus (Megadromus) sandageri (Broun, 1883)**

*Pterostichus sandageri* Broun, 1893a: 988. Type locality: Puysegur Point, FD.

*Pterostichus oneroaens* Broun, 1908: 413. Type locality: Te Oneroa, FD and Invercargill, SL. Synonymised by Britton, 1940: 487.

*Pterostichus hamiltoni* Broun, 1912: 390. Type locality: Bold Peak, Waiapu, OL. Primary homonym of *Pterostichus hamiltoni* Horn, 1880. Synonymised by Britton, 1940: 487.

*Pterostichus pascoi* Broun, 1915: 275. Type locality: Ben Lomond, OL. Synonymised by Britton, 1940: 487.


*Trichosternus (Megadromus) aciphyllae*: Csiki, 1930: 545.

*Trichosternus (Megadromus) hamiltoni*: Csiki, 1930: 546.

*Trichosternus (Megadromus) oneroaensis*: Csiki, 1930: 546.


**Geographic distribution.** (Map p. 254). South Island: CO, FD, OL, SL.

**Ecology.** Eurytopic, epigean. Lowland, montane, subalpine, alpine. Forests (beech), shrublands, tussock grasslands, herbfields, fellfields, boggy areas; caves (occasionally). Nocturnal; hides during the day under logs and stones (mostly), and among Actephylla-roots.

**Biology.** Seasonality: September–October. Tenerals: May. Predacious (based on mouthpart morphology). Occasionally infested with mites. Defense mechanism: Either bites strongly or emits a strong musky smell when disturbed.

**Dispersal power.** Subapterous. Moderate runner.


**Note.** This taxon could represent a species complex.
Megadromus (Megadromus) temukensis (Bates, 1878)

Pterostichus (Trichosternus) temukensis Bates, 1878c: 26. Type locality: Temuka, SC.


Trichosternus (Pterostichus) sylvius: Broun, 1880: 35.


Trichosternus sylvius: Broun, 1893a: 986.

Trichosternus temukensis: Broun, 1893a: 986.


Trichosternus (Nesopterostichus) temukensis: Tschitschérine, 1902: 521.

Trichosternus (Nesopterostichus) sylvius: Tschitschérine, 1902: 521.

Trichosternus (Nesopterostichus) smithii: Tschitschérine, 1902: 521.

Trichosternus (Megadromus) sylvius: Csiki, 1930: 545.


Geographic distribution (Map p. 254). South Island: MC, MK, SC.

Ecology. Eurytopic, epigean. Lowland, montane, subalpine, alpine. Tussock grasslands, fellfields, screes, flaxlands, gardens, scrublands, forests (broadleaf). Nocturnal; hides during the day under stones.

Biolog. Seasonality: September–May. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.


Megadromus (Megadromus) turgidiceps (Broun, 1908)

Pterostichus turgidiceps Broun, 1908: 409. Type locality: Manawatu Gorge, RI, WN.


Geographic distribution (Map p. 254). North Island: HB, RI, TK, WA, WI, WN.

Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, podocarp, broadleaf), shrublands and scrublands (native, exotic); tussock grasslands, urban gardens. Nocturnal; hides during the day under logs and big stones.


Dispersal power. Subapterous. Moderate runner.


Note. Megadromus turgidiceps could represent a species complex belonging to an undescribed genus.

Megadromus (Megadromus) vagans (Broun, 1886)

Trichosternus vagans Broun, 1886: 825. Type locality: Mt Maungataua, DN.


Pterostichus vagans: Hutton, 1904: 146.


Geographic distribution (Map p. 254). South Island: CO, DN.


Biolog. Seasonality: September–March, August. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.


Note. This taxon could be conspecific with M. fultoni.

Megadromus (Megadromus) vigil (White, 1846)

Feronia (Platysma) vigil White, 1846: 3. Type locality: Port Nicholson, WN.

Feronia vigil: Lacordaire, 1854: 326.


Pterostichus (Trichosternus) difformipes Bates, 1878b: 191. Type locality: Wellington, WN. Synonymised by Britton, 1940: 482.

Trichosternus (Pterostichus) difformipes: Broun, 1880: 33.

Holcaspis (Platysma) vigil: Broun, 1880: 41.

Trichosternus (Nesopterostichus) difformipes: Tschitschérine, 1902: 521.

Pterostichus difformipes: Broun, 1893a: 986.

Trichosternus (Nesopterostichus) difformipes: Tschitschérine, 1902: 521.

Holcaspis vigil: Hutton, 1904: 147.


Geographic distribution (Map p. 254). North Island: HB, RI, TO, WA, WN.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech, broadleaf, podocarp), tree plantations (pine), and shrublands. Nocturnal; hides during the day under logs, fallen branches and trees, and stones.

Biolog. Seasonality: Throughout the year. Tenebrals: March. Predacious. Adult and larval food: Small inverte-
brates. Occasionally infested with mites. Defense mechanism: Bites strongly when disturbed; parental care exhibited by the female who protects her eggs against enemies (J. Nunn and J.I. Townsend, personal communications).

**Dispersal power.** Subapterous. Moderate runner.

**References.** Hudson, 1934: 35–36 (as Trichosternus difformipes, larval description, distribution, ecology, biology); Britton, 1940: 482 (distribution); Emden, 1942: 10, 67 (as Trichosternus vigil, larval description); McColl, 1975: 25 (ecology, biology); Moeed & Meads, 1985: 22 (distribution, ecology, biology).

**Megadromus (Megadromus) virens** (Broun, 1886)

Trichosternus virens Broun, 1886: 937. Type locality: Oamaru, DN.

Trichosternus hampdenensis Broun, 1893a: 1323. Type locality: Hampden, near Moeraki, DN. Synonymised by Britton, 1940: 484.


Trichosternus (Neopterostichus) hampdenensis: Tschitschérine, 1902: 521.

Trichosternus (Megadromus) hampdenensis: Csiki, 1930: 544.

Trichosternus (Megadromus) virens: Csiki, 1930: 545.

Megadromus virens: Britton, 1940: 484.

**Geographic distribution** (Map p. 254), South Island: CO, DN, SC.

**Ecology.** Eurytopic, epigean. Lowland. Forests (podocarp, broadleaf), tree plantations (pine), tussock grasslands, modified grasslands, gardens. Nocturnal; hides during the day under logs and stones.

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

**Dispersal power.** Subapterous. Moderate runner.

**References.** Britton, 1940: 484 (distribution); Molloy et al., 1994: 60 (distribution, conservation).

**Neoferonia ardua** (Broun, 1893)

Pterostichus arduus Broun, 1893a: 1395. Type locality: Mt Arthur, NN (Broun, 1893a: 1396), Flora River, Mt Arthur (Britton, 1940: 505).

Holcaspis arduus [sic]: Hutton, 1904: 146.

Neoferonia ardua: Britton, 1940: 505.

**Geographic distribution** (Map p. 258), South Island: BR, NN, WD.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech, podocarp). Nocturnal; hides during the day under logs.


**Dispersal power.** Subapterous. Moderate runner.

**References.** Hudson, 1934: 36 (distribution, ecology); Britton, 1940: 505 (distribution); Johns, 1980: 62, 65 (distribution, ecology); Townsend, 1997: 13 (distribution).

**Neoferonia edax** (Chaudoir, 1878)

Feronia (Holcaspis) edax Chaudoir, 1878b: 69. Type locality: New Zealand.

Holcaspis edax: Csiki, 1930: 558.

Neoferonia edax: Butcher, 1984: 94.

**Geographic distribution** (Map p. 258), South Island: CO.
Neoferonia fossalis (Broun, 1914)


Geographic distribution (Map p. 258). South Island: DN, FD, SL.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane, Subalpine, alpine. Wet forests (beech, podocarp, broadleaf), tree plantations (pine), scrublands, and scrublands; tussock grasslands. Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Moderate runner.


Neoferonia prasignis (Broun, 1903)

Pterostichus prasignis Broun, 1903: 606. Type locality: Westport, NN.


Geographic distribution (Map p. 259). South Island: NN.


Dispersal power. Subapterous. Moderate runner.


Neoferonia procerula (Broun, 1886)

Pterostichus procerulus Broun, 1886: 827. Type locality: Mt Maungatua, DN.

Holcaspis procerulus [sic]: Hutton, 1904: 146.

Neoferonia procerula: Britton, 1940: 506.


Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf, podocarp), tree plantations (pine), scrublands, and scrublands; tussock grasslands. Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Moderate runner.

Ecology. Silvicolous. Lowland, montane. Forests (beech). Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Moderate runner.


Neoferonia straneoi Britton, 1940
Neoferonia straneoi Britton, 1940: 504. Type locality: New Zealand.

Geographic distribution. “New Zealand”; probably South Island.

Ecology. Habitat unknown; probably silvicolous.

Biology. Seasonality unknown. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.


Neoferonia truncatula (Broun, 1923)
Pterostichus truncatulus Broun, 1923: 674. Type locality: Mt Owen, NN.

Trichosternus (Megadromus) truncatulus: Csiki, 1930: 547.

Geographic distribution (Map p. 259). South Island: NN.


Dispersal power. Subapterous. Moderate runner.


Note. Neoferonia is a feminine noun requiring a specific epithet of the same gender.

Genus Plocamostethus Britton, 1940
Plocamostethus Britton, 1940: 503. Type species: Feronia (Platysma) planiuscula White, 1846, by original designation.

Geographic distribution. New Zealand (endemic).


Note. A new species awaits description.

Plocamostethus planiusculus (White, 1846)
Feronia (Platysma) planiuscula White, 1846: 3. Type locality: Wellington, WN.

Feronia planiuscula: Lacordaire, 1854: 326.
Trichosternus planiusculus: Broun, 1880: 36.
Trichosternus (Nesopterostichus) planiusculus: Tschitschérine, 1902: 521.

Trichosternus (Megadromus) planiusculus: Csiki, 1930: 545.
Plocamostethus planiusculus planiusculus: Britton, 1940: 503.

Geographic distribution (Map p. 264). South Island: BR, KA, MB, NN, SD.

Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, broadleaf, podocarp), tree plantations (pine), shrublands, and scrublands; grasslands, pastures, fellfields; caves occasionally. Nocturnal; hides during the day under logs, big fallen branches, and stones.


Dispersal power. Subapterous. Moderate runner.

Genus Prosopogmus Chaudoir, 1865
Prosopogmus Chaudoir, 1865b: 92 (originally proposed with subgeneric rank in Feronia Latreille, 1817; first used with generic rank by Sloane, 1895: 428). Type species: Feronia (Prosopogmus) impressifrons Chaudoir, 1865b, by monotypy.
Hormochilus Chaudoir, 1874a: 1. Type species: Feronia (Ceneus) monochroa Chaudoir, 1865b, by original designation. Synonymised by Sloane, 1920a: 159.

Geographic distribution. Australia (including Tasmania), Lord Howe Island, New Guinea, Fiji; New Zealand (adventive).

Prosopogmus oodiformis (Macleay, 1871)


Ecology. Eurytopic, epigean. Lowland, upland. Cultivated fields (maize), pastures, tussock grasslands, sand dunes. Low open woodland (Australia; Moore et al., 1987: 201). Nocturnal; hides during the day under dead leaves and in soil burrows.


Dispersal power. Macropterous, capable of flight. Moderate runner.

Genus Psegmatopterus Chaudoir, 1878
Psegmatopterus Chaudoir, 1878b: 57 (originally proposed with a subgeneric rank in Feronia Latreille, 1817; first used with generic rank by Csiki, 1930: 562). Type species: Psegmatopterus anchemenoides Chaudoir, 1878b, by monotypy.

Geographic distribution. New Zealand (endemic).

Psegmatopterus politissimus (White, 1846)

Geographic distribution (Map p. 265). North Island: AK, HB, TK, WA, WI, WN, WO, South Island: BR, KA, NN.

Ecology. Eurytopic, epigean, very hygrophilous. Lowland. Edges of swamps, marshes, ponds, and streams; sandy sea beaches, cultivated fields (maize), pastures, paddocks, farmlands. Nocturnal; hides during the day under stones, logs, fallen branches, and in soil burrows dug at the base of plants.


Note. The genus Psegmatopterus should be treated as masculine (Article 30.1.3, International Code of Zoological Nomenclature, 1999).
Genus Rhytisternus Chaudoir, 1865


**Geographic distribution.** Australia (including Tasmania); New Zealand (adventive).

**References.** Sloane, 1895: 437–438 and 1920a: 164 (key to species); Britton, 1940: 506–507 (taxonomy); Moore, 1965b: 23–24 (taxonomy).

**Rhytisternus lioleuca** (Chaudoir, 1865)

*Feronia (Rhytisternus) lioleuca* Chaudoir, 1865b: 106. Type locality: Near Melbourne (Chaudoir, 1865b: 107), Melbourne (Moore et al., 1987: 207, syntypes examined).

*Amastus* nigricolor Motschulsky, 1866: 246. Type locality: Australia. Synonymised by Chaudoir, 1874b: 598.

*Abax* liopleurum Gemminger & Harold, 1868: 328.

*Feronia lioleuca* Chaudoir, 1874b: 598.

**Rhytisternus lioleuca** (Chaudoir, 1865)


**Ecology.** Epigean, campicolous, mesophilous, synanthropic. Lowland. Cultivated fields (kumara). Nocturnal; hides during the day under pieces of wood.


**Dispersal power.** Macropterous, capable of flight. Regular in sea beach drift material, which indicates previous flight. Moderate runner. Occasional burrower.


Genus Zeopoecilus Sharp, 1886

*Zeopoecilus* Sharp. 1886: 365 (originally proposed with subgeneric rank in *Pterostichus* Bonelli, 1810; first used with generic rank by Broun, 1893a: 986). Type species: *Pterostichus (Zeopoecilus) calcarius* Sharp, 1886, designated by Britton, 1940: 489.

**Geographic distribution.** New Zealand (endemic; South Island and W.I, North Island).

**References.** Britton, 1940: 489–491 (revision); Molloy et al., 1994: 60 (distribution, conservation).

**Notes.** Peter M. Johns (Christchurch, New Zealand) is currently revising this genus. Several species await description. *Zeopoecilus* species live in dense forests and emit a strong defensive smell when disturbed (P.M. Johns, personal communication).
Zeopoecilus calcaratus (Sharp, 1886)

Pterostichus (Zeopoecilus) calcaratus Sharp, 1886: 366. Type locality: Picton, SD.

Geographic distribution

References


Dispersal power. Subapterous. Moderate runner. Dispersal power when disturbed (P. M. Johns, personal communication).

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech, broadleaf, podocarp). Nocturnal; hides during the day under logs.

Zeopoecilus putus (Broun, 1882)


Zeopoecilus putus: Broun, 1893a: 986.

Zeopoecilus opulentus: Broun, 1893a: 986.

Zeopoecilus achilles: Broun, 1893a: 986.

Zeopoecilus princeps Broun, 1893a: 990 (replacement name for Trichosternus opulentus Broun, 1886; overlooked by Britton, 1940: 490).

Trichosternus (Nesopterostichus) combesi: Tschietchéine, 1902: 521.

Zeopoecilus optandus Broun, 1908: 408. Type locality: Nelson, NN. Synonymised by Britton, 1940: 490.

Trichosternus (Megadromus) combesi: Caiki, 1930: 544.

Geographic distribution

Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Mostly wet forests (beech), tree plantations (pine), scrublands; also fellfields. Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Moderate runner.

References. Sloane, 1898: 488 (key to genera); Matthews, 1980: 35 (key to genera); Ball, 1992: 325–380 (world review of genus-groups, key to subtribes).

Note. Rowan M. Emberson (Lincoln, New Zealand) is currently revising this tribe.

Dicrochile guerin-menevillei, 1846

Figure 21


Pedalopia Laporte de Castelnau, 1867: 68. Type species: Pedalopia novaezelandiae Laporte de Castelnau, 1867, by monotypy. Synonymised by Britton, 1941: 191 (synonymy of Pedalopia (monotypic genus) with Dicrochile through the synonymy of Dicrochile cinctiger with Pedalopia novaezelandiae).

Geographic distribution. New Guinea, the Moluccas, the Solomon, New Caledonia, Australia (including Tasmania), Norfolk Island, New Zealand.

References. Sloane, 1898: 488 (key to genera); Hudson, 1934: 174 (list); Britton, 1941: 191 (taxonomy); Ball, 1959: 7–9 (classification).
Notes. The type species of *Dicrochile* Guérin-Méneville selected by Moore (1985: 249), *Rhembus goryi* Boisduval, is invalid since *goryi* was not an originally included species. *Dicrochile anchomenoides* is here selected as type species. The validity of this taxon is discussed under *D. anchomenoides* and *D. fabrii*. Several species await description. Members of this genus seem to be regular tree climbers at night. Like *Megachile* (Hymenoptera) which is a feminine noun (Brown, 1985: 486), the generic name *Dicrochile* requires specific epithets of feminine gender.

*Dicrochile anchomenoides* Guérin-Méneville, 1846

*Dicrochile anchomenoides* Guérin-Méneville, 1846a: CIII. Type locality: New Zealand.

**Geographic distribution.** “New Zealand.”

**Ecology.** Habitat unknown.

**Biology.** Seasonality unknown. Predacious, molluscophagous (based on mouthpart morphology).

**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.

**References.** Lacordaire, 1854: 345 (taxonomy), Plate 11, Figure 6 (illustration); Bates, 1874: 238 (taxonomy).

**Note.** Contrary to Bates’ (1874: 238) interpretation, Guérin-Méneville’s description is equivalent to a formal description. Article 12.1 of the International Code of Zoological Nomenclature states that “To be available every new scientific name published before 1931 must satisfy the provisions of Article 11 and must be accompanied by a description or a definition of the taxon that it denotes, or by an indication”. On page CIII, Guérin-Méneville’s (1846) description complies with this article by characterising two taxa, stating “la plus grande espèce [the larger species] portera le nom de *Dicrochile Fabrii*, et la seconde [and the second; thus the smaller one] celui de *Dicrochile anchomenoides*”.

*Dicrochile aterrima* Bates, 1874

*Dicrochile aterrima* Bates, 1874: 238 (redescribed in 1875: 301). Type locality: Lake Coleridge, MC.

**Geographic distribution.** (Map p. 234). North Island: WI, WN. South Island: CO, MC, MK, OL.

**Ecology.** Eurytopic, epigean, very hygrophilous. Lowland, montane. River banks, sand beaches, sand dunes, pastures, lagoon edges. Nocturnal; hides during the day under stones and in rotten pieces of wood. Gregarious.

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

**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.


*Dicrochile cephalotes* Broun, 1894

*Dicrochile cephalotes* Broun, 1894: 306. Type locality: Ngatira, WO.

**Geographic distribution.** (Map p. 235). North Island: BP, CL, GB, HB, RI, TK, TO, WO.

**Ecology.** Epigean, mostly silvicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp, beech); caves (occasionally). Nocturnal; hides during the day under logs, in leaf litter, and under stones.

**Biology.** Seasonality: September, November–March. Tenerals: April. Predacious, molluscophagous (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales).

**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.


*Dicrochile anthropica* Broun, 1893

*Dicrochile anthropica* Broun, 1893b: 161. Type locality: Ligar’s Bush, Papakura, AK.

**Geographic distribution.** (Map p. 234). North Island: AK.

**Ecology.** Lowland. Habitat unknown.

**Biology.** Seasonality unknown. Predacious, molluscophagous (based on mouthpart morphology).

**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.

**Dispersal power.** Brachypterous, incapable of flight. Moderate runner. Good swimmer.


**Dicrochile fabrii** Guérin-Méneville, 1846

*Dicrochile fabrii* Guérin-Méneville, 1846a: CIII. Type locality: New Zealand.

**Dicrochile fabrei** [sic]: Gemminger & Harold, 1868: 365 (mis-spelling).

**Geographic distribution.** “New Zealand.”

**Ecology.** Habitat unknown.

**Biology.** Seasonality unknown. Predacious, molluscophagous (based on mouthpart morphology).

**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.

**References.** Lacordaire, 1854: 345 (taxonomy); Bates, 1874: 238 (taxonomy).

**Note.** Contrary to Bates’ (1874: 238) interpretation, Guérin-Méneville’s description is equivalent to a formal description (see Note under *D. anchomenoides*).

**Dicrochile flavipes** Broun, 1917

*Dicrochile flavipes* Broun, 1917: 360. Type locality: Gordon’s Knob [≈ Mt Arthur], near Belgrove, NN.


**Geographic distribution** (Map p. 235). South Island: BR, MB, MC, NC, NN, SD, WD.

**Ecology.** Epigean-arboreal, silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech). Nocturnal; hides during the day in leaf litter and under stones.


**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.


**Note.** Townsend (1997: 16) mentioned a second undescribed subspecies from Mt Arthur, NN.

**Dicrochile insignis** Broun, 1917

*Dicrochile insignis* Broun, 1917: 359. Type locality: Routeburn and Hollyford, northwest of Lake Wakatipu, OL.

**Geographic distribution** (Map p. 235). South Island: FD, OL, WD.

**Ecology.** Epigean, hygrophilous. Montane, subalpine. A river bank, a grassland, a scree, and a roadside. Nocturnal; active at night on moss; hides during the day under logs.

**Biology.** Seasonality: September, December–February. Predacious, molluscophagous (based on mouthpart morphology).

**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.

**References.** Lacordaire, 1854: 345 (taxonomy); Bates, 1874: 238 (taxonomy).

**Note.** Townsend (1997: 16) mentioned a second undescribed subspecies from Mt Arthur, NN.

**Dicrochile maura** Broun, 1880

*Dicrochile maura* Broun, 1880: 18. Type locality: Pana, ND.

**Geographic distribution** (Map p. 235). North Island: BP, GB, HB, ND.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp, beech). Nocturnal; hides during the day in leaf litter and under logs.


**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.


**Note.** Townsend (1997: 16) mentioned a second undescribed subspecies from Mt Arthur, NN.

**Dicrochile nitida** Broun, 1882

*Dicrochile nitida* Broun, 1882: 216 (redescribed in 1883: 216 and 1886: 746). Type locality: Outram, DN.

**Geographic distribution** (Map p. 235). South Island: DN.

**Ecology.** Lowland. Habitat unknown.

**Biology.** Seasonality unknown. Predacious, molluscophagous (based on mouthpart morphology).

**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.


**Note.** Townsend (1997: 16) mentioned a second undescribed subspecies from Mt Arthur, NN.

**Dicrochile novaezelandiae** (Laporte de Castelnau, 1867)


**Ecology.** Lowland. Habitat unknown.

**Biology.** Seasonality unknown. Predacious, molluscophagous (based on mouthpart morphology).

**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.


**Note.** Townsend (1997: 16) mentioned a second undescribed subspecies from Mt Arthur, NN.
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Dicrochile novaezelandiae: Britton, 1941: 191 (new combination resulting from the synonymy of Pedalopia (monotypic genus) with Dicrochile through the synonymy of D. cinctiger with P. novaezelandiae).

Geographic distribution (Map p. 235). South Island: CO, DN, SL.

Ecology. Epigean, very hygrophilous. Lowland, upland. Wet tussock grasslands and forests (beech). Nocturnal; hides during the day under well-embedded stones and in leaf litter (Aciphylla).


Dispersal power. Brachypterous, incapable of flight. Moderate runner.


Dicrochile rugicollis Broun, 1917

Dicrochile rugicollis Broun, 1917: 360. Type locality: [Mt] Oakden, near Mt Algidus, MC.

Geographic distribution (Map p. 235). South Island: MC.

Ecology. Montane or subalpine. Habitat unknown; probably wet areas.


Dispersal power. Brachypterous, incapable of flight. Moderate runner.

References. Hudson, 1934: 34 (distribution, ecology); Harris, 1970a: 54 (distribution, ecology); Butcher & Emberson, 1981: 64 (distribution, ecology).

Dicrochile subopaca Bates, 1874

Dicrochile subopaca Bates, 1874: 237 (redescribed in 1875: 301). Type locality: Near Christchurch, MC.

Geographic distribution (Map p. 235). South Island: MC.

Ecology. Stenotopic, epigean, silvicolous. Lowland. Damp situations at the margin of broadleaf forests. Nocturnal; hides during the day under stones.


Dispersal power. Brachypterous, incapable of flight. Moderate runner.

References. Hudson, 1934: 34 (distribution, ecology); Harris, 1970a: 54 (distribution, ecology); Butcher & Emberson, 1981: 64 (distribution, ecology).

Dicrochile thoracica Broun, 1908

Dicrochile thoracica Broun, 1908: 345. Type locality: Broken River, MC.

Geographic distribution (Map p. 236). South Island: KA, MB, MC, NC.

Ecology. Eurytopic, epigean, very hygrophilous. Lowland, montane, subalpine, alpine. Forests (beech), tree plantations (pine), scrublands, screes, stony beaches, river beds. Nocturnal; hides during the day under stones and logs.


Dispersal power. Brachypterous, incapable of flight. Moderate runner.


Dicrochile whitei (Csiki, 1931), new combination

Anchomenus atratus Blanchard, 1842: Plate 1, Figure 15 (redescribed in 1853: 21). Type locality: New Zealand. Secondary homonym of Agonum atratum (Duftschmid, 1812).


Platynus atratus: Gemminger & Harold, 1868: 368.

Platynus deplanatus: Bates, 1874: 239.

Anchomenus (Platynus) deplanatus: Broun, 1880: 25.


Agonum (Platynus) whitei Csiki, 1931: 854 (replacement name for A. deplanatus White, 1846 as a secondary homonym of Agonum deplanatum Ménétriés, 1843).


Geographic distribution (Map p. 236). South Island: KA, MB, MC, NC.


Dispersal power. Brachypterous, incapable of flight. Moderate runner.


Note. Emberson (1993b: 20) established that Plate 1, Figure 15 of Blanchard should be treated as having been
published in 1842. Bates (1874: 239) was not aware of this and took Anchomenus atratus Blanchard as having been described in 1853, instead of 1842. Consequently, when he synonymised Anchomenus deplanatus White, 1846 and Anchomenus atratus, he considered the latter to be a junior synonym of the former. Csiki (1931: 854) following Bates’ interpretation created the name Agonum (Platynus) whitei in replacement of Anchomenus deplanatus, which he found to be a secondary homonym of Agonum deplanatum Ménetriés, 1843, with Anchomenus atratus as its synonym. Dicrochile whitei (Csiki) is therefore the valid name for this species.

**Subtribe LICININA**

**Geographic distribution.** Worldwide.


**Genus Physolaesthus** Chaudoir, 1850


**Geographic distribution.** New Guinea, Java, the Philippines, Australia (mainland), New Zealand.


**Physolaesthus insularis** Bates, 1878

Physolaesthus insularis Bates, 1878c: 22. Type locality: Canterbury Province, South Island.

**Geographic distribution (Map p. 264).** North Island: AK, BP, GB, WI, WN. South Island: BR, WD, “Canterbury Province”. Extralimital range: Australia (mainland). Native to the Australian Region.


**Dispersal power.** Macropterous, capable of flight. Moderate runner.

**References.** Moore et al., 1987: 269 (distribution, ecology, biology, dispersal power); Townsend, 1994: 9, 11–12 (distribution, ecology).

**Physolaesthus limbatus** (Broun, 1880)


**Geographic distribution (Map p. 264).** North Island: AK.

**Ecology.** Lowland. Habitat unknown; probably wet areas.

**Biology.** Seasonality unknown. Predacious, molluscophagous (based on mouthpart morphology).

**Dispersal power.** Macropterous, capable of flight. Moderate runner.

**Note.** This taxon could be conspecific with *P. insularis*.

**Supertribe HARPALITAE**

**Tribe HARPALINI**

Figure 22

**Geographic distribution.** Worldwide.

**References.** Sloane, 1898: 456 (key to Australian genera); Hudson, 1934: 176–177 (list); Noonan, 1973: 266–480 (taxonomy of Anisodactylina; key to genera) and 1976: 3–87 (taxonomy of world Harpalini); Matthews, 1980: 36–37 (key to South Australian genera).

**Notes.** A revision is under way by the authors. Several genera and species await description. A few exotic species have been recently introduced in New Zealand.

**Subtribe PELMATELLINA**

**Geographic distribution.** Mostly Neotropical and Australian Regions; also Nearctic Region.


**Genus Lecanomerus** Chaudoir, 1850


**Geographic distribution.** New Guinea, New Caledonia, Australia (including Tasmania), New Zealand.

**References.** Hudson, 1934: 176 (list); Noonan, 1976: 7 (taxonomy).

**Notes.** A few species await description. Sloane (1920a: 137) incorrectly synonymised Lecanomerus with Nemaglossa Solier, 1849 which is a valid genus restricted to Chile (Noonan, 1976: 7).
Lecanomerus atriceps (Macleay, 1871)
Trechus atriceps Macleay, 1871: 113. Type locality: Gayndah, Queensland, Australia.


Ecology. Eurytopic, epigean-fossorial, very hygrophilous. Lowland. Borders of eutrophic marshes and ponds, and open swamp forests; mud flats, wet pastures, cultivated fields (maize), paddocks, vacant lots, roadside ditches; caves (occasionally). Nocturnal; hides during the day in burrows, under clay cakes, in fallen plant debris and compost heaps, under logs and stones. Gregarious.


Lecanomerus fallax Broun, 1880

Lecanomerus fallax Broun, 1880: 48. Type locality: Parua, near Whangarei Harbour, ND.

Geographic distribution (Map p. 242). North Island: ND.


Biology. Seasonality unknown. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.


Lecanomerus fuliginosus Broun, 1880

Lecanomerus fuliginosus Broun, 1880: 48. Type locality: Otago, South Island.

Geographic distribution (Map p. 242). South Island: CO, DN, KA, MC, SL. Offshore Islands: CH.

Ecology. Eurytopic, epigean. Lowland, upland, subalpine, alpine. Tussock grasslands, farmlands, gardens, river banks, forests (beech, broadleaf, podocarp). Nocturnal; hides during the day in moss, mat plants, plant debris, under stones, and in leaf litter.


Dispersal power. Subapterous. Moderate runner.


Lecanomerus incertus Broun, 1914

Lecanomerus incertus Broun, 1914b: 151. Type locality: Mt Hutt, near Methven, MC.

Geographic distribution (Map p. 243). South Island: MC.


Dispersal power. Subapterous. Moderate runner.


Lecanomerus insignitus Broun, 1880

Lecanomerus insignitus Broun, 1880: 47. Type locality: Parua, near Whangarei Harbour, ND.
Nemaglossa insignita: Sloane, 1920a: 137.

Geographic distribution (Map p. 243). North Island: ND.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Wet forests (podocarp, broadleaf): often along streams. Nocturnal; hides during the day in leaf litter and under logs.


Dispersal power. Subapterous. Moderate runner.


Lecanomerus latimanus Bates, 1874

Nemaglossa latimanus: Sloane, 1920a: 137.
Geographic distribution (Map p. 243). South Island: CO, DN, MC.

Ecology. Epigean, mostly steppicolous. Lowland, upland, subalpine. Tussock grasslands (mostly), screes, forests (beech). Nocturnal; hides during the day under stones (mostly), under and in logs.


Dispersal power. Subapterous. Moderate runner.

Lecanomerus obesuslus Bates, 1878

Lecanomerus obesuslus Bates, 1878c: 23. Type locality: West Coast, South Island.


Geographic distribution (Map p. 243). South Island: BR, MB, MC, NN, OL, WD.

Ecology. Epigean, silvicolous. Lowland, montane. Forests (beech) and scrublands (bog pine). Nocturnal; hides during the day in moss, under stones and logs.


Dispersal power. Subapterous. Moderate runner.


Note. This taxon could represent a species complex.

Lecanomerus pallipes Broun, 1894

Lecanomerus pallipes Broun, 1894: 379. Type locality: Dyers Pass, MC.

Nemaglossa pallipes: Sloane, 1920a: 137.


Geographic distribution (Map p. 243). South Island: MC.


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

Dispersal power. Subapterous. Moderate runner.

Note. This taxon could be conspecific with Lecanomerus fuliginosus.

Lecanomerus sharpi (Csiki, 1932)

Lecanomerus marginatus Sharp, 1883: 25. Type locality: Auckland, AK. Primary homonym of Lecanomerus marginatus Reed, 1874.

Nemaglossa sharpi Csiki, 1912a: 1059 (replacement name for Lecanomerus marginatus Sharp, 1883).

Nemaglossa marginata: Sloane, 1920a: 137.


Geographic distribution (Map p. 243). North Island. AK, BP, CL, GB, ND, TK, TO, WI, WN, WO. South Island: MC.

Ecology. Epigean, silvicicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp) and swamp forests. Nocturnal; hides during the day under stones and in leaf litter. Gregarious.


Dispersal power. Subapterous. Moderate runner.


Note. This taxon could represent a species complex.

Lecanomerus verticalis (Erichson, 1842)

Harpalus verticalis Erichson, 1842: 126. Type locality: Tasmania, Australia.


Lecanomerus flavocinctus Blackburn, 1888b: 188. Type locality: Port Lincoln, South Australia. Synonymised by Moore, in Moore et al., 1987: 227.


Lecanomerus verticalis: Sloane, 1911: 835.


Nemaglossa flavocincta: Sloane, 1920a: 137.


Lecanomerus vestigialis (Erichson, 1842)
Harpalus vestigialis Erichson, 1842: 127. Type locality: Tasmania, Australia.
Acupalpus mastersii Macleay, 1871: 104. Type locality: Gayndah, Queensland, Australia. Synonymised by Moore, in Moore et al., 1987: 227.
Lecanomerus mastersii: Sloane, 1911: 836.
Lecanomerus labralis Broun, 1914b: 151. Type locality: Epsom, AK.
Acupalpus (Egadroma) vestigialis: Csiki, 1932a: 1242.


Genus Syllectus Bates, 1878

Geographic distribution. New Zealand (endemic).


Note. A new species awaits description.

Syllectus anomalus Bates, 1878
Syllectus anomalus Bates, 1878b: 192. Type locality: Auckland, AK.

Geographic distribution (Map p. 267). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO. South Island: BR, DN, KA, MB, MC, NN, SD, WD.

Ecology. Epigean, mostly riparian, very hygrophilous. Lowland, montane, subalpine, alpine. Stream banks (mostly brooks) crossing cool wet forests (beech, broadleaf), tree plantations (pine), and scrublands; seepage edges, swamps, mud flats, scree, gardens; caves (occasionally). Gregarious. Nocturnal; hides during the day under stones and logs.


Syllectus magnus Britton, 1964
Syllectus magnus Britton, 1964a: 629. Type locality: Profanity Cave, Buller River, near Inangahua, BR.

Geographic distribution (Map p. 267). South Island: BR, NN.


Biology. Seasonality: October. Predacious (based on mouthpart morphology).


Syllectus spelaeus Britton, 1964
Syllectus spelaeus Britton, 1964a: 631. Type locality: Nile River Cave, Charleston, BR.

Geographic distribution (Map p. 267). South Island: BR, NN.


Subtribe ANISODACTYLINA

Geographic distribution. Worldwide.


Genus Allocinopus Broun, 1903
Allocinopus Broun, 1903: 607. Type species: Allocinopus sculpticollis Broun, 1903, by monotypy.

Geographic Distribution. New Zealand (endemic).


Notes. This taxon probably represents two genera (Broun, 1912: 392). A few species await description. These beetles live in forests, along streams.

Allocinopus angustulus Broun, 1912
Allocinopus angustulus Broun, 1912: 392. Type locality: Forty-mile Bush, near Napier, WA.

Geographic distribution (Map p. 223). North Island: WA.

Ecology. Lowland. A forest. Nocturnal; shelters during the day.


Dispersal power. Brachypterous, incapable of flight. Moderate runner.


Allocinopus castaneus Broun, 1912
Allocinopus castaneus Broun, 1912: 392. Type locality: Maketu [Stream], Hunua Ranges, AK.

Geographic distribution (Map p. 223). North Island: AK, TK.


Biology. Seasonality: October, April. Omnivorous, mostly phytophagous (based on mouthpart morphology).

Dispersal power. Brachypterous, incapable of flight. Moderate runner.


Allocinopus latitarsis Broun, 1911
Allocinopus latitarsis Broun, 1911: 95. Type locality: Pitt Island, CH.

Geographic distribution (Map p. 223). Offshore Islands: CH.

Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland. Wet forests (broadleaf), shrublands, scrublands, pastures, gardens, stream edges, coastal rocky faces. Nocturnal; hides during the day under logs and stones (mostly), under fallen bark, plant debris, in leaf litter; in and around bird nests (Puffinus). Gregarious.


Allocinopus ocularius Broun, 1908
Allocinopus ocularius Broun, 1908: 344. Type locality: Manawatu Flats, nine miles below the Gorge, WI/WN.

Geographic distribution (Map p. 223). North Island: WI/WN.


Biology. Seasonality unknown. Omnivorous, mostly phytophagous (based on mouthpart morphology).

Dispersal power. Brachypterous, incapable of flight. Moderate runner.

**Allocinopus sculpticollis** Broun, 1903

*Figure 22*
*Allocinopus sculpticollis* Broun, 1903: 608. Type locality: Motueka River, NN.

**Geographic distribution** (Map p. 223). North Island: BP, GB, HB, RI, TK, TO, WA, WI, WN. South Island: BR, NN, SD, WD.

**Ecology.** Stenotopic, epigean-fossorial, silvicolicous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp, beech), swamp forests, and shrublands: along streams and mud flats. Nocturnal; hides during the day in burrows dug under logs and stones Gregarious.


**Dispersal power.** Brachypterous, incapable of flight. Moderate runner. Good burrower.


**Note.** This taxon could represent a species complex.

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**Allocinopus smithi** Broun, 1912

*Allocinopus smithi* Broun, 1912: 391. Type locality: Ratapihipihi Forest, TK.

**Geographic distribution** (Map p. 223). North Island: AK, BP, TK, WN.

**Ecology.** Stenotopic, epigean, silvicolicous, very hygrophilous. Lowland. Wet forests: along streams. Nocturnal; hides during the day under stones and in leaf litter.


**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.

**References.** Hudson, 1934: 37 (distribution, ecology); Noonan, 1973: 285 (taxonomy).

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**Genus Anisodactylus** Dejean, 1829


**Geographic distribution.** North America, Europe, Asia, northern Africa; New Zealand (adventive).


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**Subgenus Anisodactylus** Dejean, 1829

**Geographic distribution.** Holarctic Region, Oriental Region, northern Africa; New Zealand (adventive).

**Anisodactylus (Anisodactylus) binotatus** (Fabricius, 1787)

*Carabus 2notatus* Fabricius, 1787: 199. Type locality: Kiel, Germany.

Multiple other combinations exist in the Old World literature for this adventive species.


**Ecology.** Epigean, mostly campicolous, mesophilous, synanthropic. Lowland, upland. Gardens, pastures, tussock grasslands, dried stream beds, sand dunes, orchards, forests (beech, podocarp). Mostly nocturnal; hides during the day under logs, stones, plant debris, and in soil burrows. Sometimes active in the sunshine (P. Howe, personal communication).


**Dispersal power.** Macropterous, capable of flight. Moderate runner. Occasional burrower.


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**Genus Gaioxenus** Broun, 1910

*Gaioxenus* Broun, 1910b: 7. Type species: *Gaioxenus pilipalpis* Broun, 1910b, by monotypy.

**Geographic distribution.** New Zealand (endemic; North Island).

**References.** Hudson, 1934: 177 (list); Noonan, 1976: 9 (taxonomy).

**Note.** A new species awaits description.

**Gaioxenus pilipalpis** Broun, 1910

*Gaioxenus pilipalpis* Broun, 1910b: 8. Type locality: Raurimu, TO.

**Geographic distribution** (Map p. 238). North Island: RI, TK, TO, WN, WO.
Ecology. Epigean-fossorial, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Mostly wet forests (beech, broadleaf); also tussock grasslands. Nocturnal; hides during the day often in burrows dug under stones, logs, fallen branches, and fallen epiphyte crowns.


Genus Hypharpax W. S. Macleay, 1825

Hypharpax Macleay, 1825: 22 (proposed with subgeneric rank in Harpalus Latreille, 1802; first used with generic rank by Lacordaire, 1854: 282). Type species: Harpalus (Hypharpax) lateralis Macleay, 1825, by monotypy.


Geographic distribution. Australia (including Tasmania), Lord Howe Island, New Guinea, Indonesia, New Zealand.


Hypharpax abstrusus Bates, 1878

Hypharpax abstrusus Bates, 1878c: 23. Type locality: Auckland, AK.

Geographic distribution (Map p. 242). North Island: AK, HB, WN. South Island: MB, MC, NC.

Ecology. Epigean, mostly campicolous, heliophilous. Lowland, montane. Tussock grasslands, cultivated fields (Lucerne), pastures, sand hills, river flats, scrublands. Mostly diurnal; active in the sunshine; hides on cloudy days under stones.


Hypharpax australasiae (Dejean, 1829)

Harpalus australasiae Dejean, 1829: 36. Type locality: Australia.


Diaphoromerus australasiae: Chaudoir, 1878a: 480.


Hypharpax australasiae: Moore, in Moore et al., 1987: 237.


Ecology. Eurytopic, epigean-fossorial, heliophilous. Lowland. Cultivated fields (strawberry), sand dunes. Mostly diurnal; active on plants in the sunshine; hides on cloudy days in burrows dug at the base of plants (Muhlenbeckia).


Hypharpax australis (Dejean, 1829)

Harpalus australis Dejean, 1829: 385. Type locality: Australia. Synonymised by Chaudoir, 1878a: 484.

Harpalus inornatus Germar, 1848: 169. Type locality: Adelaide, South Australia. Synonymised by Chaudoir, 1878a: 484.


Hypharpax australis Bates, 1874: 272.

Diaphoromerus australis: Chaudoir, 1878a: 484.

Hypharpax australis: Broun, 1880: 51.


Hypharpax (Harpalus) australis: Blackburn, 1892: 83.

Hypharpax australis: Hutton, 1904: 351.


Parabararis australis Broun, 1881

Parabararis australis Broun, 1881: 655. Type locality: Parua, near Whangarei Harbour, ND.

Geographic distribution (Map p. 263). North Island: AK, BP, CL, GB, ND, TK, WO.

Ecology. Stenotopic, epigean, silvicocolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp). Nocturnal; hides during the day under logs (mostly) and stones.


Dispersal power. Subapterous. Moderate runner.

Parabararis gourlayi Britton, 1964

Parabararis gourlayi Britton, 1964b: 523. Type locality: Great Island, TH.

Geographic distribution (Map p. 263). Offshore Islands: TH.

Ecology. Stenotopic, epigean, silvicocolous, very hygrophilous. Lowland. Wet forests (broadleaf). Nocturnal; hides during the day under stones.


Dispersal power. Subapterous. Moderate runner.


Genus Triplosarus Bates, 1874


Geographic distribution. New Zealand (endemic).


Note. A new species awaits description.

Triplosarus novaezelandiae (Laporte de Castelnau, 1867)

Egadroma picea (Guérin-Méneville, 1830)

Acupalpus piceus Guérin-Méneville, 1830: Plate 1, Figure 12. Type locality: Port Jackson [=Port Jackson], New South Wales, Australia.


Stenolophus dingo: Chaudoir, 1878a: 514.


Egadroma piceus [sic]: Serrano et al., 1994: 56.

Geographic distribution. Worldwide.


Subtribe STENOLOPHINA

Geographic distribution. Worldwide.


Genus Egadroma Motschulsky, 1855

Egadroma Motschulsky, 1855: 43. Type species: Carabus smaragdulus Fabricius, 1798, by monotypy.

Stenolophus (Egadroma): Ganglbauer, 1892: 370.

Acupalpus (Egadroma): Csiki, 1932a: 1239


Egadroma: Serrano et al., 1994: 56.

Geographic distribution. Ethiopian, Australian, Palearctic, and Oriental Regions, the Pacific Islands; New Zealand (adventive).


Note. Serrano et al., 1994: 56 and Serrano & Galián (1998: 198) separated Egadroma from Stenolophus Dejean on the basis of chromosome number, meiotic behaviour of chromosomes, and geographic distribution, the latter taxon being restricted to the Holarctic Region.

Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue
**Euthenarus brevicollis** Bates, 1874

*Euthenarus brevicollis* Bates, 1874: 273 (redescribed in 1875: 311). Type locality: Lake Coleridge, MC.

**Geographic distribution.** (Map p. 237). South Island: MC, NN. Offshore Islands: CH.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, upland, subalpine. Wet scrublands and forests: often along creeks. Nocturnal; hides during the day under stones and debris. Gregarious.


**Euthenarus puncticollos** Bates, 1874

*Euthenarus puncticollos* Bates, 1874: 273 (redescribed in 1875: 311). Type locality: Auckland, AK.


**References.** Kuschel, 1990: 24, 40 (as *Haplaner* sp., distribution, ecology, biology, dispersal power); Townsend, 1994: 9, 11 (as *Haplaner* sp., distribution, ecology); Moore 1996: 97–99 (distribution, ecology); Emberson, 1998: 30 (distribution, ecology, biology).

**Genus Haplanister** Moore, 1996


**Geographic distribution.** New Zealand (apparently adventive).


**Haplanister crypticus** Moore, 1996

*Haplanister crypticus* Moore, 1996: 98. Type locality: Hastings, HB.


**Ecology.** Eurytopic, epigean-fossorial-planticolous, heliophilous, synanthropic. Lowland, montane, subalpine, alpine. Sandy pastures, gardens, golf courses, coastal swards, alpine meadows, sandy banks, brook and lagoon edges, open forests (broadleaf). Mostly diurnal; active in the sunshine; hides on cloudy days in leaf litter, under logs, in rotten logs and moss, under dried algal mats and stones. Gregarious.


**Dispersal power.** Macropterous. Frequent flier. Regular in drift material, which indicates previous flight. Moderate runner. Good climber (on plants and logs). Occasional burrower.


**Geographic distribution.** New Zealand (endemic; South Island).


**Note.** Three species await description.

**Pholeodytes cerberus** Britton, 1964

*Pholeodytes cerberus* Britton, 1964a: 631. Type locality: Fenian Creek Cave, Oparara, NN.

**Geographic distribution.** (Map p. 264). South Island: NN.

**Ecology.** Stenotopic, cavernicolous (troglobitic). Lowland.
Caves: in dry gypsum sand at some distance from dripping or wet areas.

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

**Dispersal power.** Subapterous. Fast runner.


*Pholeodytes townsendi* Britton, 1962

*Pholeodytes townsendi* Britton, 1962: 666. Type locality: Twin Forks Cave, Paturau District, NN.

**Geographic distribution.** South Island: NN.

**Ecology.** Stenotopic, cavernicolous (troglobitic). Lowland.

Caves: in dry gypsum sand at some distance from dripping or wet areas.


**Dispersal power.** Subapterous. Fast runner.


**Subtribe HARPALINA**

**Geographic distribution.** Worldwide.


**Genus Harpalus** Latreille, 1802


**Geographic distribution.** Nearctic, Palearctic, Ethiopian, Oriental, and Australian Regions; New Zealand (adventive).


**Note.** Another European species has been recently introduced in the South Island (R.M. Emberson, personal communication).

**Subgenus Harpalus** Latreille, 1802

*Harpalus Latreille 1802: 92 (see above).

*Ambyllus* Motchulsy, 1864: 209. Type species: *Carabus rubripes* Duftschmid, 1812, by original designation. Author of synonymy unknown for this European genus.

**Geographic distribution.** Same as genus.

*Harpalus (Harpalus) affinis* (Schrank, 1781)

*Carabus aeneus* Fabricius, 1775: 245. Type locality: Germany.

Primary homonym of *Carabus aeneus* DeGeer, 1774.

*Carabus affinis* Schrank, 1781: 212. Type locality: Austria.

*Harpalus affinis* Author of combination uncertain for this European species.


**Ecology.** Epigean, mostly campicolous, synanthropic. Lowland. Cultivated fields (seradella, pea, wheat, quinoa, buckwheat, phacelia, coriander, barley), pastures, gardens, kiwifruit orchards, tomato glasshouses. Soil sandy (moisty) or silty. Mostly nocturnal; shelters during the day.


**Dispersal power.** Macropterous. Frequent flier. Moderate runner.


**Supertribe PLATYNITAE**

**Tribe PLATYNINI**

**Figure 23**

**Geographic distribution.** Worldwide.


**Notes.** Tribe previously known as Agonini. This is New Zealand’s third largest carabid tribe. A revision is needed.

**Subtribe SPHODRINA**

**Geographic distribution.** Worldwide; New Zealand (adventive).


**Genus Laemostenus** Bonelli, 1810

*Laemostenus* Bonelli, 1810: Tabula Synoptica. Type species: *Carabus janthinus* Duftschmid, 1812, designated by Madge, 1975: 583.

*Laemosthenes:* Agassiz, 1847: 199 (incorrect subsequent spelling).

*Laemosthenes:* Winkler, 1924: 187 (incorrect subsequent spelling).
**Geographic distribution.** Worldwide; New Zealand (adventive).

**References:** Britton, 1940: 508 (taxonomy); Casale, 1988: 448–892 (world revision).

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**Subgenus Laemostenus Bonelli, 1810**

**Geographic distribution.** Palearctic and Oriental Regions, Middle East, North Africa; North America, Australia (including Tasmania), and New Zealand (adventive).

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**Laemostenus (Laemostenus) complanatus** (Dejean, 1828)

*Pristonychus complanatus* Dejean, 1828: 58. Type locality: Southern France.

*Laemostenus complanatus* Schaufuss, 1865: 54.

*Pristonychus australis* Blackburn, 1888d: 811. Type locality: Port Lincoln, Wallaroo and near Roseworthy, South Australia. Primary homonym of *Pristonychus australis* Fairmaire, 1859.

Synonymised by Sloane, 1903: 631.

*Laemostenus (Laemostenus) complanatus* Casale, 1988: 458.

*Pristonychus australius* Casale, 1988: 458 (replacement name for *Pristonychus australis* Blackburn, 1888d).

The extensive list of synonyms and combinations for this cosmopolitan species has been omitted to conserve space.


**Ecology.** Eurytopic, epigean, synanthropic. Lowland, montane. Gardens, near houses, pastures, cultivated fields (lucerne), modified grasslands, gardens, sand dunes, hedges, orchards (apricot), open forests (broadleaf), tree plantations (pine), sheds, outbuildings, bird and bumblebee nest boxes, supralittoral shores. Nocturnal; hides during the day under rubbish heaps, garden clippings, grass sacks, stones, logs, piles of wood, fence posts, garden plant debris, in leaf litter, grass sods, in the soil, in tree trunks and stumps, in log fissures, and under the loose bark of trees.


**Dispersal power.** Macropterous. Occasional flyer to artificial lights at night. Occasionally found in drift material, which indicates previous flight. Moderate runner. Occasional climber (on trees).


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**Subtribe PLATYNINA**

**Geographic distribution.** Worldwide.


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**Genus “Anchomenus” Bonelli, 1810**

*Anchomenus* Bonelli, 1810: Tabula Synoptica. Type species: *Carabus prasinus* Thunberg, 1784, designated by Westwood, 1838: 3.

**Geographic distribution.** New Zealand (endemic).

**References.** Csiki, 1931: 853–854, 865 (list); Hudson, 1934: 174 (list); Liebherr, 1991b: 33–60 (revisions of *Anchomenus*).

**Notes.** The generic name “*Anchomenus*” is here given between quotation marks to indicate that the New Zealand species ascribed to this Holarctic genus, do not belong here. Over time, some species have also been incorrectly ascribed to *Agonum* Bonelli, 1810, another Holarctic genus, but they do not bear any more relation to this genus than to *Anchomenus*. All combinations listed below follow Hudson (1934: 174), except when stated otherwise.

At least one new genus will need to be described to accommodate both described and numerous currently undescribed New Zealand species, but this cannot be done until the group is formally revised. These beetles live mostly in the South Island in wet forests along streams and mud flats. They appear to be regular tree climbers at night.
“Anchomenus” arnaudensis Broun, 1921
Anchomenus arnaudensis Broun, 1921: 598. Type locality: Mt St. Arnaud, BR/MB.
Agonum (Anchomenus) arnaudensis: Csiki, 1931: 865.
Geographic distribution (Map p. 224). South Island: BR/MB.
Ecology: Montane. Habitat unknown; probably silvicolous.
Biology. Seasonality: June. Predacious (based on mouthpart morphology).
Dispersal power. Subapterous. Moderate runner.

“Anchomenus” colensonis White, 1846
Anchomenus colensonis White, 1846: 3. Type locality: New Zealand.
Platynus colensonis: Bates, 1874: 239.
Agonum (Platynus) colensonis [sic]: Csiki, 1931: 858.
Geographic distribution. “New Zealand”.
Ecology. Habitat unknown; probably silvicolous.
Biology. Seasonality unknown. Predacious (based on mouthpart morphology).
Dispersal power. Subapterous. Moderate runner.

“Anchomenus” edwardsii (Bates, 1874)
Type locality: New Zealand.
Anchomenus edwardsii: Hudson, 1923: 356.
Agonum (Platynus) edwardsii: Csiki, 1931: 853.
Geographic distribution. “New Zealand”.
Ecology. Habitat unknown; probably silvicolous.
Biology. Seasonality unknown. Predacious (based on mouthpart morphology).
Dispersal power. Subapterous. Moderate runner.

“Anchomenus” helmsi Sharp, 1881
Anchomenus helmsi Sharp, 1881: 47. Type locality: Greymouth, BR.
Geographic distribution (Map p. 224). North Island: TK, WN. South Island: BR, MC, NN, WD.
Ecology. Stenotopic, arboreal-epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (podocarp, beech) and scrublands. Nocturnal; hides during the day under logs, stones, and fallen nikau palm fronds.
Dispersal power. Subapterous. Moderate runner. Excellent climber (on trees) (P.M. Johns, personal communication).

“Anchomenus” integratus Broun, 1908
Anchomenus integratus Broun, 1908: 348. Type locality: Broken River, MC.
Agonum (Anchomenus) integratum: Csiki, 1931: 865.
Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech, podocarp, broadleaf): along streams. Nocturnal; hides during the day under logs, stones, and fallen plants.
Dispersal power. Subapterous. Moderate runner.
Note. Original combination reinstated on the basis of morphology.

“Anchomenus” intermedius Broun, 1908
Anchomenus intermedius Broun, 1908: 347. Type locality: Manawatu Flats, nine miles below the Gorge, WI/WN.
Agonum (Anchomenus) intermedium: Csiki, 1931: 865.
Geographic distribution (Map p. 224). North Island: WI/WN.
Ecology. Habitat unknown; probably silvicolous.
Dispersal power. Subapterous. Moderate runner.
“Anchomenus” libitus Broun, 1914
Anchomenus libitus Broun, 1914a: 84. Type locality: Hakapoua, FD.

Geographic distribution (Map p. 224). South Island: FD.

Ecology. Habitat unknown; probably silvicolous.


Dispersal power. Subapterous. Moderate runner.

“Anchomenus” macrocoelis Broun, 1908
Anchomenus macrocoelis Broun, 1908: 346. Type locality: The Hermitage, Mt Cook, MK.

Agonum (Anchomenus) macrocoele: Csiki, 1931: 865.

Geographic distribution (Map p. 224). South Island: MK, NN, OL, WD.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech) and scrublands: along streams. Nocturnal; shelters during the day.


“Anchomenus” oreobius Broun, 1886
Anchomenus oreobius Broun, 1886: 876. Type locality: Mt Maungatua, Taieri, DN.

Agonum (Platynus) oreobium: Csiki, 1931: 853.

Geographic distribution (Map p. 224). South Island: DN.


Biology. Seasonality unknown. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.

“Anchomenus” otagoensis Bates, 1878
Anchomenus (Platynus) otagoensis Bates, 1878c: 27. Type locality: Otago, South Island.

Agonum (Platynus) otagoensis: Broun, 1880: 25.
Agonum (Platynus) otagoensis: Csiki, 1931: 853.
Agonum otagoense: Patrick et al., 1985: 8.


Ecology. Eurytopic, epigean. Lowland, montane. Forests (beech), shrublands, tree plantations (pine), tussock grasslands, herbfields. Nocturnal; hides during the day under logs and stones.


References. Hudson, 1934: 35 (distribution); Patrick et al., 1986: 13 (distribution); Barratt & Patrick, 1987: 82 (distribution, ecology, biology); Patrick et al., 1993: 11 (distribution, ecology); Liebherr & Zimmerman, 1998: 147 (part of outgroup for the Hawaiian Platynini).

Note. Original combination reinstated on the basis of morphology.

“Anchomenus” punctulatus Broun, 1877
Anchomenus punctulatus Broun, 1877a: 371. Type locality: Auckland, AK.

Agonum (Anchomenus) punctatum [sic]: Csiki, 1931: 865.

Geographic distribution (Map p. 224). North Island: AK.


Biology. Seasonality unknown. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.

Note. Original combination reinstated on the basis of morphology.

“Anchomenus” sandageri Broun, 1882


Geographic distribution (Map p. 225). North Island: WN. South Island: NN.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Wet forests: along ravine streams. Nocturnal; hides during the day under stones.


Dispersal power. Subapterous. Moderate runner.


Note. Type locality probably Port Nicholson [= Wellington] or The Brothers where Sandager collected.
“Anchomenus” sophronitis Broun, 1908

*Anchomenus* sophronitis Broun, 1908: 349. Type locality: West Plains, Invercargill, SL.  
*Agonum (Anchomenus)* sophronitis: Csiki, 1931: 865.  

**Geographic distribution** (Map p. 225). South Island: SL.

**Ecology.** Lowland. Habitat unknown; probably silvicolous.

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

**Dispersal power.** Subapterous. Moderate runner.

“Anchomenus” sulcitarsis Broun, 1880

*Anchomenus* (Platynus) sulcitarsis Broun, 1880: 27. Type locality: Parua, near Whangarei Harbour, ND.  
*Anchomenus* sulcitarsis: Hutton, 1904: 144.  
*Agonum (Platynus)* sulcitarse: Csiki, 1931: 853.  

**Geographic distribution** (Map p. 225). North Island: AK, Cl, ND.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (podocarp, broadleaf). Nocturnal; hides during the day under logs and stones.


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

**References.** Watt, 1971: 25 (biology); Reid et al., 1982: 84 (biology).

**Note.** Original combination reinstated on the basis of morphology.

“Anchomenus” xanthomelas Broun, 1908

*Anchomenus* xanthomelas Broun, 1908: 346. Type locality: Manawatu Gorge, RI/WN.  
*Anchomenus xanthomelas* Hudson, 1923: 356 (justified subsequent spelling).  
*Agonum (Anchomenus)* xanthomelas: Csiki, 1931: 865.  

**Geographic distribution** (Map p. 225). North Island: RI/WN.

**Ecology.** Lowland. Habitat unknown; probably silvicolous.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology). Occasionally infested with mites.

**Dispersal power.** Subapterous. Moderate runner.

Genus Cerabilia Laporte de Castelnau, 1867

*Zabronothus* aphelus Broun, 1912: 394. Type locality: Wairiri, Kaikoura, KA.  

**Geographic distribution** (Map p. 229). South Island: KA, MB.

**Ecology.** Epigean. Lowland, alpine. A forest, a river bed, a fellfield; probably mostly silvicolous. Nocturnal; hides during the day under stones.


**Dispersal power.** Subapterous. Moderate runner.

**References.** Johns et al., 1980: 27 (nomenclature, distribution); Townsend, 1997: 15 (taxonomy, distribution).

*Cerabilia major* (Broun, 1912)

*Zabronothus major* Broun, 1912: 393. Type locality: Broken River, MC.  
*Cerabilia major*: Townsend, 1997: 15.

**Geographic distribution** (Map p. 229). South Island: KA, MB, MC, NC.

**Ecology.** Epigean, mostly silvicolous, xerophilous. Lowland, montane, subalpine. Dry forests (beech) and shrublands; tussock grasslands. Nocturnal; hides during the day under stones and logs.


**Dispersal power.** Subapterous. Moderate runner.

**Cerabila maori** Laporte de Castelnau, 1867
*Cerabila maori* Laporte de Castelnau, 1867: 116 (redescribed in 1868: 202). Type locality: Dunedin, DN.

**Feronia** (*Cerabila*) *maori* [sic]: Tschitschérine, 1891: 161.

**Cerabila maori**: Hutton, 1904: 147.

**Geographic distribution** (Map p. 229). South Island: DN, MK.

**Ecology.** Stenotopic, epigean, silvicolous, xerophilous. Lowland. Dry forests (beech). Nocturnal; hides during the day under stones.

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

**Dispersal power.** Subapterous. Moderate runner. Occasional climber (on plants).


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**Genus Ctenognathus** Faqnaire, 1843

**Ctenognathus** Faqnaire, 1843: 13. Type species: *Anchomenus novae-zelandiae* Faqnaire, 1843, by monotypy.

**Geographic distribution.** New Zealand (endemic; mostly the North Island).

**References.** Lacordaire, 1854: 353–354 (taxonomy); Sharp, 1886: 363 (taxonomy); Csiki, 1931: 744–745 (list); Hudson, 1934: 174 (list); Watt, 1961: 91–94 (partial revision of Auckland species).

**Notes.** A revision is needed. This taxon could represent two genera. Several species await description. These beetles are either widespread in the interior or restricted to the coast. They live in wet forests.

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**Ctenognathus actocharis** Broun, 1894
*Ctenognathus actocharis* Broun, 1894: 307. Type locality: Wellington, WN.

**Geographic distribution** (Map p. 231). North Island: WN, South Island: NN.

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Coastal lowland. Wet native forests areas: along streams and seepages. Nocturnal; shelters during the day.


**Dispersal power.** Subapterous. Moderate runner.

**References.** Walker, 1904: 76 (distribution); Grehan, 1990: 73 (distribution); Townsend, 1997: 15 (distribution).

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**Ctenognathus adamsi** (Broun, 1886)

*Anchomenus adamsi* Broun, 1886: 937. Type locality: Base of Mt Egmont, TK and Waitareitei (=Waitakere) Ranges, AK.

**Ctenognathus adamsi**: Broun, 1893a: 986.

**Geographic distribution** (Map p. 231). North Island: AK, HB, RI, TK, TO, WA, WI, WN. South Island: MB, SD.

**Ecology.** Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, subalpine, alpine. Wet forests (beech, podocarp), tree plantations (pine), and shrublands, and alpine meadows: along streams and mud flats. Nocturnal; hides during the day under logs, fallen branches, and stones. Gregarious.

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

**Dispersal power.** Subapterous. Moderate runner. Occasional climber (on plants).

**References.** Hudson, 1934: 35 (distribution, ecology); Townsend, 1997: 15 (taxonomy, distribution).

**Note.** *Ctenognathus adamsi* could represent a species complex.

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**Ctenognathus bidens** (Chaudoir, 1878)


**Ctenognathus bidens**: Broun, 1893a: 986.
Geographic distribution (Map p. 232). North Island: AK, BP, CL, GB, ND, TK, WN, WO.

Ecology. Stenotopic, epigean-arboreal, silvicolous, very hygrophilous. Lowland, montane. Wet forests (podocarp, broadleaf), tree plantations (pine), and shrublands. Nocturnal; hides during the day under stones and logs. Gregarious.


Ctenognathus cardiophorus (Chaudoir, 1878)

Colpodes cardiophorus Chaudoir, 1878c: 305. Type locality: New Zealand.

Ctenognathus cardiophorus: Hutton, 1904: 144.

Geographic distribution (Map p. 232). North Island: AK, BP, CL, GB, HB, ND, WO.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp) and tree plantations (pine): along streams, seepages, and mud flats. Nocturnal; hides during the day under logs, fallen branches, and stones. Gregarious.


Dispersal power. Subapterous. Moderate runner.


Ctenognathus crenatus (Chaudoir, 1878)

Colpodes crenatus Chaudoir, 1878c: 304. Type locality: New Zealand.

Ctenognathus crenatus: Hutton, 1904: 144.

Geographic distribution (Map p. 232). North Island: AK, BP, CL, ND, TK, TO, WO.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane. Wet forests (podocarp, broadleaf) and tree plantations (pine): along streams. Nocturnal; hides during the day under logs.


Ctenognathus deformipes (Broun, 1880)

Calathus deformipes Broun, 1880: 19. Type locality: Parua, Whangarei Harbour, ND.

Anchomenus deformipes: Broun, 1886: 820.

Ctenognathus deformipes: Broun, 1893a: 986.

Geographic distribution (Map p. 232). North Island: ND.


Biology. Seasonality unknown. Predacious (based on mouthpart morphology).

Dispersal power. Subapterous. Moderate runner.

Note. This taxon could be conspecific with Ctenognathus cardiophorus.

Ctenognathus littorellus Broun, 1908

Ctenognathus littorellus Broun, 1908: 349. Type locality: Invercargill, SL.

Geographic distribution (Map p. 232). South Island: SL.

Ecology. Lowland. Seaside; probably silvicolous. Nocturnal; hides during the day under pieces of wood.

Biology. Seasonality unknown. Predacious (based on mouthpart morphology)

Dispersal power. Subapterous. Moderate runner.


Note. This taxon could be conspecific with Ctenognathus adamsi.
**Ctenognathus lucifugus** (Broun, 1886)

*anchomenus lucifugus* Broun, 1886: 819. Type locality: Near the Waitakerei (=Waitakere) Railway-station, AK.

*Ctenognathus lucifugus* Broun, 1893a: 986.

**Geographic distribution** (Map p. 232). North Island: AK, BP, CL, ND, TK, WO.

**Ecology.** Epigean-arboreal, silvicolous, very hygrophilous. Lowland, montane. Wet forests (podocarp, broadleaf) and tree plantations (pine). Nocturnal; hides during the day under logs (mostly) and in rotten logs.


**Dispersal power.** Subapterous. Moderate runner. Regular climber (on trees).


**Ctenognathus montivagus** (Broun, 1880), new combination

*anchomenus montivagus* Broun, 1880: 22. Type locality: Near Whangarei Heads, ND.

*Ctenognathus latipennis* Sharp, 1886: 363. Type locality: Auckland, AK. Synonymised by Csiki, 1930: 744.

**Geographic distribution** (Map p. 232). North Island: AK, ND.

**Ecology.** Lowland. Habitat unknown; probably silvicolous.

**Biology.** Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power.** Subapterous. Moderate runner.

**References.** Sharp, 1886: 364 (taxonomy); Broun, 1886: 749 (taxonomy).

**Note.** This taxon could be conspecific with *Ctenognathus lucifugus*.

**Ctenognathus neozelandicus** (Fairmaire, 1843)

*colpodes neozelandicus* Fairmaire, 1843: 12. Type locality: New Zealand.


*Ctenognathus neozelandicus* [sic]: White, 1846: 3.

**Geographic distribution** (Map p. 233). North Island: AK, BP, CL, ND, TK, WN, WO.

**Ecology.** Epigean-arboreal, mostly silvicolous, very hygrophilous. Coastal lowland. Mostly wet forests (broadleaf, podocarp), shrublands, and tree plantations (pine); also sand dunes. Larval habitat: Leaf litter and rotten logs. Nocturnal; hides during the day in leaf litter, under logs, fallen branches, stones, and at the base of plants (*Muehlenbeckia*, grass). Gregarious.


**References.** Dohrn, 1884: 319–320 (taxonomy); Sharp, 1884: 297 (taxonomy); Hudson, 1934: 34 (distribution, ecology); Helmore, 1982: 40 (distribution, ecology, biology).
Ctenognathus parabilis (Broun, 1880)
Anchomenus parabilis Broun, 1880: 20. Type locality: Whangarei Heads, ND.

**Geographic distribution** (Map p. 233). North Island: ND.

**Ecology**. Lowland. Habitat unknown; probably silvicolous.

**Biology**. Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power**. Subapterous. Moderate runner.


**Note**. This taxon could be conspecific with Ctenognathus cardiophorus.

Ctenognathus perrugithorax (Broun, 1880)
Anchomenus perrugithorax Broun, 1880: 24. Type locality: near Whangarei Heads, ND.

**Geographic distribution** (Map p. 233). North Island: ND.

**Ecology**. Lowland. Habitat unknown; probably silvicolous.

**Biology**. Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power**. Subapterous. Moderate runner.

**Note**. This taxon could be conspecific with Ctenognathus novaezelandiae.

Ctenognathus politulus (Broun, 1880)
Anchomenus politulus Broun, 1880: 22. Type locality: Near Whangarei Heads, ND.

**Geographic distribution** (Map p. 233). North Island: ND.

**Ecology**. Lowland. Habitat unknown; probably silvicolous.

**Biology**. Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power**. Subapterous. Moderate runner.


**Note**. This taxon could be conspecific with Ctenognathus adamsi.

Ctenognathus simmondsi Broun, 1912
Ctenognathus simmondsi Broun, 1912: 386. Type locality: Mt Quoin, WN.

**Geographic distribution** (Map p. 233). North Island: WN.

**Ecology**. Montane. Habitat unknown; probably silvicolous.

**Biology**. Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power**. Subapterous. Moderate runner.

**Note**. This taxon could be conspecific with Ctenognathus novaezelandiae.

Ctenognathus suborbithorax (Broun, 1880)
Anchomenus suborbithorax Broun, 1880: 24. Type locality: Mt Manaia, near Whangarei Harbour, ND.

**Geographic distribution** (Map p. 233). North Island: ND.

**Ecology**. Lowland. Habitat unknown; probably silvicolous. Nocturnal; hides during the day under stones.

**Biology**. Seasonality unknown. Predacious (based on mouthpart morphology).

**Dispersal power**. Subapterous. Moderate runner.

**Reference**. Hudson, 1934: 35 (distribution, ecology).

**Note**. This taxon could be conspecific with Ctenognathus novaezelandiae.
**Genus Notagonum Darlington, 1952**


**Geographic distribution.** Indonesia, New Guinea, Fiji, Samoa, New Caledonia, Australia (including Tasmania), Norfolk Island, Lord Howe Island, New Zealand.

**References.** Hudson, 1934: 174 (as *Anchomenus*, list); Moore, 1985: 241 (partial key).

**Notes.** A revision is needed. Two species await description.

**Notagonum chathamense** (Broun, 1909)

*Anchomenus chathamensis* Broun, 1909a: 147. Type locality: Chatham Islands.


**Geographic distribution** (Map p. 259). Offshore Islands: CH.

**Ecology.** Epigean-arboreal, mostly silvicolous, very hygrophilous. Lowland. Wet forests (broadleaf) and shrublands; boggary pastures, stream banks; bird nests (occasionally). Nocturnal; hides during the day under logs and stones. Gregarious.


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


**Notagonum feredayi** (Bates, 1874)

*Anchomenus feredayi* Bates, 1874: 240 (redescribed in 1875: 303). Type locality: Auckland, AK.


**Geographic distribution** (Map p. 259). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO. South Island: SD.


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

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

**References.** Hudson, 1934: 34 (distribution); Watt, 1982a: 289, 297, 316 (distribution); Kuschel, 1990: 24, 40 (distribution, ecology, biology, dispersal power); Townsend, 1994: 9, 11, 13 (distribution, ecology).

**Notagonum marginellum** (Erichson, 1842)


**Geographic distribution** (Map p. 260). North Island: AK. Extralimital range: Australia (including Tasmania), Lord Howe Island, Norfolk Island. Adventive. First New Zea-
Notagonum submetallicum (White, 1846)

Colpodes submetallicus White, 1846: 2. Type locality: New Zealand.

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


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


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

Geographic distribution


Dispersal power. Macropterous. Frequent flier to artificial lights at night. Moderate runner. Occasional climber (on trees and shrubs).


Genus Platynus Bonelli, 1810

Platynus Bonelli, 1810: Tabula Synoptica. Type species: Carabus angusticollis Fabricius, 1801 (=Carabus assimilis Paykull, 1790), by subsequent monotypy in Germar, 1817: 303.

Geographic distribution. Worldwide.


Note. According to Liebherr (1998: 987, 997) “Application of the generic-level name Colpodes W.S. MacLeay is restricted to a clade of Javanese species also including Colpodes brittoni Louwerens and C. latus Louwerens”, and “the [other] species previously assigned to Colpodes are considered representatives of a broader Platynus.” These lineages may be ascribed to subgenera within Platynus, but the exact subgeneric placement of the New Zealand species will remain unknown until Australasian taxa are reviewed and their phylogenetic relationships are deciphered.

Platynus macropterus (Chaudoir, 1879), new combination

Colpodes macropterus Chaudoir, 1879: 370. Type locality: New Zealand.


Ctenognathus macropterus: Hutton, 1904: 144.

Agonum (Platynus) haasti: Csiki, 1931: 853.


Geographic distribution. (Map p. 264). North Island: AK, BP, GB, HB, ND, TO, WA, WN, South Island: BR, CO, DN, FD, KA, MB, MC, NC, NN, SD, SL, WD.

Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland, montane. Mostly open wet forests (broadleaf, podocarp, beech), shrublands, scrublands, forest edges, and tree plantations (pine); also tussock grasslands, pastures. Nocturnal; hides during the day under logs and stones.


Note. Colpodes macropterus and A. haastii have been used interchangeably in the New Zealand literature (e.g., Johns, 1980: 62, Johns et al., 1980: 27, Johns, 1981: 64 and 1986: 31) and among carabidologists to denote the same biological entity, but nobody until now has formally synonymised these two taxonomic names.

Genus Prosphodrus Britton, 1959


Geographic distribution. New Zealand (endemic; North Island).


Notes. A revision is needed. A few species await description. These beetles live in colonies in dense forests gulies and ravines, along seepages and rills, under well-embedded stones. They try to dive in the water when disturbed. These carabids were considered rare and thought to be cave-dwellers before the discovery of their ecological requirements. A closely allied large-sized genus (ND, AK, CL) showing the same habits awaits description.

Prosphodrus occultus Britton, 1960

Prosphodrus occultus Britton, 1960a: 123. Type locality: Simpson's Cave, Wairoa, GB.

Geographic distribution (Map p. 265). North Island: BP, GB, HB, RI, WA, WN.

Ecology. Stenotopic, riparian, subaquatic. Lowland, montane. Wet margins of seepages and swifts rills crossing dark wet forests (broadleaf, podocarp); caves (occasionally). Nocturnal; hides during the day under well-embedded stones (mostly) and logs. Gregarious.


Prosphodrus waltoni Britton, 1959

Prosphodrus waltoni Britton, 1959: 106. Type locality: Waipuna Caves, Te Kuiti, WO.

Geographic distribution (Map p. 265). North Island: AK, RI, TK, WO, WN.

Ecology. Stenotopic, riparian, subaquatic. Lowland, montane. Wet margins of seepages and swifts rills crossing dark wet forests (broadleaf, podocarp); caves (occasionally). Nocturnal; hides during the day under well-embedded stones. Gregarious.


Genus Zabronothus Broun, 1893

Zabronothus Broun, 1893a: 1327. Type species: Zabronothus striatulus Broun, 1893a, designated here.

Geographic distribution. New Zealand (endemic).


Note. This taxon could be congeneric with Cerabilia Laporte de Castelnau. M.R. Butcher (Lincoln, New Zealand) apparently started revising this genus around 1985.

Zabronothus rufipes Broun, 1893

Zabronothus rufipes Broun, 1893a: 1328. Type locality: New Zealand.

Geographic distribution (Map p. 268). North Island: WA, WN.

Ecology. Epigean, silvicolous. Lowland. Both wet and dry forests (podocarp, beech). Nocturnal; hides during the day under stones and logs.


Dispersal power. Subapterous. Moderate runner.

Note. Broun’s comment that the type specimen was sent to him by G.V. Hudson “some time ago” suggests that it was collected by Hudson in the Wellington area which was his place of residence and perhaps the type locality for this species.
Zabronothus striatulus  Broun, 1893
Zabronothus striatulus Broun, 1893a: 1327. Type locality: Dyers Pass, MC.

Geographic distribution (Map p. 268). South Island: MC, NC.

Ecology. Stenotopic, epigean, silvicolous, xerophilous. Lowland. Dry forests (broadleaf, beech) and scrublands. Nocturnal; hides during the day under stones and logs.


Dispersal power. Subapterous. Moderate runner.


Supertribe LEBITAE
Tribe PERIGONINI

Figure 24

Geographic distribution. Worldwide; mostly tropical and warm temperate regions.


Genus Perigona Laporte de Castelnau, 1835
Figure 24

Geographic distribution. Worldwide; New Zealand (adventive).


Subgenus Trechicus LeConte, 1853
Trechicus LeConte, 1853: 386. Type species: Trechicus umbripennis LeConte, 1853 (=Bembidium nigriceps Dejean, 1831), designated by Jeannel, 1926: 247. Synonymised by Csiki, 1931: 895.

Geographic distribution. Same as genus.


Perigona (Trechicus) nigriceps (Dejean, 1831), first New Zealand record
Figure 24
Bembidium nigriceps Dejean, 1831: 44. Type locality: North America.
Trechicus umbripennis LeConte, 1853: 386. Type locality: Georgia and Carolina, North America. Synonymised by Horn, 1875: 126.
Perigona nigriceps: Horn, 1892a: 44.
Perigona (Trechicus) nigriceps: Moore et al., 1987: 224.

Geographic distribution (Map p. 264). Worldwide; tropical and warm regions. Adventive in Europe, North America, New Caledonia, Australia (mainland), New Zealand. First New Zealand record: Newmarket Park, Auckland, AK, 1999 (First example collected by S. Thorpe, deposited in AMNZ.). Another thirty examples collected since then, also deposited in AMNZ. Well established.

Ecology. Epigean-fossorial, synanthropic. Lowland. Parks. Nocturnal; hides during the day in compost heaps and also in/under piles of dead grass. Outside New Zealand, known to occur in gardens and parks, in heaps of compost, straw, and sawdust.


Dispersal power. Macropterous. Regularly attracted to artificial lights at night (literature). Moderate runner.


Tribe PENTAGONICINI

Figure 25

Geographic distribution. Mostly in the Tropics.


Note. A new revision is needed.

Genus Pentagonica Schmidt-Goebel, 1846
Figure 25
Geographic distribution. Pantropical and Nearctic Regions, New Caledonia, Australia (including Tasmania), Norfolk Island, Lord Howe Island, New Zealand.


Pentagonica vittipennis Chaudoir, 1877

Figure 25

Pentagonica vittipennis Chaudoir, 1877: 217. Type locality: Australia.


Pentagonica vittipennis: DuPuis, 1913: 3.

Pentagonica vittipennis: Sloane, 1898: 513 (incorrect subsequent spelling).

Geographic distribution (Map p. 263). North Island: AK, BP, CL, GB, HB, ND, RI, TO, WI, WN. South Island: BR, CO, DN, FD, MB, MC, NN, OL, SD, WD. Offshore Islands: CH. Extralimital range: Australia (including Tasmania), Lord Howe Island. Native to the Australian Region.


Notes. The name of this species reads "vittipenis" in Chaudoir's description, but the incorrect subsequent spelling "vittipennis" is in prevailing usage and is attributed to the publication of the original spelling; it is to be preserved according to the 1999 edition of the International Code of Zoological Nomenclature (article 33.3.1). Broun's syntypes of Wakefieldia vittata were probably collected in the northern North Island which was the area where he did most of his collecting before 1880.

Genus Scopodes Erichson, 1842

Scopodes Erichson, 1842: 123. Type species: Scopodes boops Erichson, 1842, by monotypy.


Helaeotrechus White, 1846: 5. Type species: Helaeotrechus elaphroides White, 1846, by monotypy. Synonymised by Lacordaire, 1854: 149.

Helaeotrechus Chenu, 1851: 187 (incorrect subsequent spelling).


Scopodes basalis Broun, 1893

Scopodes basalis Broun, 1893a: 1012. Type locality: Mt Maungatua, Otago, DN.

Geographic distribution (Map p. 265). South Island: CO, DN.

Ecology. Epigean, heliophilous. Montane. A tussock grassland; edge of a swamp. Diurnal; active in the sunshine; shelters on cloudy days.


Dispersal power. Wing condition unknown. Fast runner.


Scopodes bryophilus Broun, 1886

Scopodes bryophilus Broun, 1886: 882. Type locality: Mt Maungatua, DN (Broun, 1886: 882); Maungatua, Otago, DN (Britton, 1941: 194).

Geographic distribution (Map p. 265). South Island: CO, DN.


Dispersal power. Wing condition unknown. Fast runner.

References. Broun, 1886: 882 (distribution, ecology); Britton, 1941: 194 (distribution); Patrick et al., 1993: 11 (distribution, ecology).

Scopodes cognatus Broun, 1886
Scopodes cognatus Broun, 1886: 882. Type locality: Mt Maungatua, DN (Broun, 1886: 882); Maungatua, Otago, DN (Britton, 1941: 195).

Geographic distribution (Map p. 265). South Island: BR, CO, DN, NN.

Ecology. Stenotopic, epigean, muscicolous, heliophilous. Lowland, montane, subalpine, alpine. Tussock grasslands, herbfields, scree, river banks, rocky slopes, shrublands, edges and openings of forests (beech, broadleaf). Diurnal; active in the sunshine on moss; shelters on cloudy days. Gregarious.

Biology. Seasonality: Throughout the year, except March and June. Predacious (based on mouthpart morphology).

Dispersal power. Wing condition unknown. Fast runner.


Scopodes edwardsii Bates, 1878


Scopodes nigerrimus Sharp, 1882: 77. Type locality: Greymouth, BR. Synonymised by Britton, 1941: 196.

Scopodes antennalis Broun, 1886: 883. Type locality: Lake Tekapo region, MK. Synonymised by Britton, 1941: 196.


Ecology. Eurytopic, epigean, heliophilous. Lowland, montane, subalpine, alpine. Tussock grasslands, herbfields, cushion bogs, moorlands, swamps, river banks, scrublands, open forests (beech). Diurnal; active in the sunshine on moss, cushion plants, flowers, and stones; hides on cloudy days in moss, leaf litter, and under stones. Gregarious.


uted to the publication of the original spelling, it is to be preserved according to the 1999 edition of the International Code of Zoological Nomenclature (article 33.3.1). Until Emberson (1993) correctly dated Blanchard’s separata as having been published in 1843, the valid name of this species was thought to be *Scopodes elaphroides* (White, 1846).

**Scopodes laevigatus** Bates, 1878
*Scopodes laevigatus* Bates, 1878c: 58. Type locality: West Coast, South Island.


**Geographic distribution** (Map p. 266). South Island: BR, MC, FD, MK, NC, NN, SC, WD.

**Ecology.** Eurytopic, epigean, heliophilous. Lowland, montane, subalpine, alpine. Borders of rivers, brooks, seepages, ice- and snow-patches; screes, moraines, tussock grasslands, forests (beech). Diurnal; active in the sunshine on moss; hides on cloudy days under stones.


**Dispersal power.** Wing condition unknown. Fast runner.

**References.** Britton, 1941: 195 (distribution); Johns, 1980: 63 (distribution, ecology); Townsend, 1997: 18 (distribution).

**Scopodes levistriatus** Broun, 1886
*Scopodes levistriatus* Broun, 1886: 829. Type locality: Wangapeka Valley, NN.

**Geographic distribution** (Map p. 266). South Island: BR, CO, MC, NN.

**Ecology.** Stenotopic, epigean, muscicolous, heliophilous. River banks inside and outside forests (beech) and shrublands, tussock grasslands, fellfields. Diurnal; active in the sunshine on moss; hides on cloudy days under logs.

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

**Dispersal power.** Wing condition unknown. Fast runner.

**References.** Britton, 1941: 195 (distribution); Townsend, 1997: 18 (distribution).

**Scopodes multipunctatus** Bates, 1878
*Scopodes multipunctatus* Bates, 1878c: 58. Type locality: Auckland, AK.

**Geographic distribution** (Map p. 266). North Island: AK, BP, CL, ND, TK, TO, WA, WN, WO. South Island: BR, NN.

**Ecology.** Epigean, muscicolous, heliophilous. Lowland, montane. River banks and open forests (beech, broadleaved, podocarp). Diurnal; active in the sunshine on moss; hides on cloudy days in leaf litter, under the loose bark of fallen trees, and in rotten logs.


**Dispersal power.** Wing condition unknown. Fast runner.

**References.** Britton, 1941: 194 (distribution); Moeed & Meads, 1985: 36 (distribution); Townsend, 1997: 18 (distribution).

**Scopodes pustulatus** Broun, 1882
*Scopodes pustulatus* Broun, 1882: 227 (redescribed in 1883: 227 and 1886: 757). Type locality: Wellington, WN.


**Ecology.** Eurytopic, epigean, heliophilous. Lowland, montane, subalpine, alpine. Open forests (beech, broadleaf), river banks, tussock grasslands, herbfields, screes. Diurnal; active in the sunshine on mat plants and flowers; hides on cloudy days in leaf litter, under stones, logs, and the loose bark of fallen trees.

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

**Dispersal power.** Wing condition unknown. Fast runner. Occasional climber (on plants).

**References.** Britton, 1941: 195 (distribution); Johns, 1977: 320 (distribution, ecology); Mark et al., 1989: 379 (distribution, ecology); Patrick, 1994: 12 (distribution); Townsend, 1997: 18 (distribution); Nicholls et al., 1998: 3 (taxonomy).
Ecology. Epigean, muscicolous, heliophilous. Lowland, montane, subalpine, alpine. Open forests (beech), tussock grasslands. Diurnal; active in the sunshine on moss; hides on cloudy days in leaf litter. Gregarious.

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

Dispersal power. Wing condition unknown. Fast runner.

References. Hudson, 1934: 41 (distribution); Britton, 1941: 196 (distribution); Moed & Meads, 1985: 36 (distribution); Townsend, 1997: 18 (distribution).

Scopodes versicolor Bates, 1878

Scopodes versicolor Bates, 1878c: 57. Type locality: Otira Pass, WD.


Tribe LEBIINI

Geographic distribution. Worldwide.


Notes. A new revision is needed. A few exotic species have been introduced since Britton’s revision.

Subtribe PERICALINA

Genus Agonocheila Chaudoir, 1848

Figure 26


Geographic distribution. New Guinea, Australia (including Tasmania), New Zealand.

References. Lacordaire, 1854: 140–141 (taxonomy); Britton, 1941: 187–188 (taxonomy).

Note. Agonocheila has often been misspelled Agonochila.

Agonocheila antipodum (Bates, 1867), new combination

Figure 26

Lebia binotata Blanchard, 1842: Plate 1, Figure 8 (redescribed 1853: 12 as Gomelina binotata). Type locality: Akaroa, MC (Blanchard, 1842: Plate 1, Figure 8); Port Nicholson, WN (Britton, 1941: 188, “holotype’). Primary homonym of Lebia binotata Buquet, 1834.


Ecology. Stenotopic, arboreal (corticolous). Lowland, montane, subalpine, alpine. Both dry or moist forests (broadleaf, podocarp, beech), tree plantations (pine, eucalypt, willow), and scrublands; fields, grasslands, meadows, fellfields, pastures, farmlands, gardens. Nocturnal; hides during the day under the loose bark of trees and logs (mostly), in leaf litter, plant mats, moss, clumps of grass, and bird nests.
**Genus Philophloeus Chaudoir, 1844**

*Philophloeus Chaudoir, 1844: 472. Type species: *Cymindis australis* Dejean, 1826, by original designation.*


**Geographic distribution.** Australia (including Tasmania); New Zealand (adventive).


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**Philophloeus luculentus (Newman, 1842)**


**Ecology.** Stenotopic, arboreal (corticolous). Lowland, montane, subalpine, alpine. Forests (broadleaf), tree plantations (pine), shrublands. Nocturnal; hides during the day under the loose bark of trees and shrubs (*Leptospermum, Pseudopanax, Acacia*), plants and logs (mostly), in leaf litter and mat plants.


**References.** Newman, 1842a: 368 (ecology); Moore et al., 1987: 287 (distribution, ecology, biology, dispersal power); Kuschel, 1990: 24, 40 (distribution, ecology, biology, dispersal power).

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**Subtribe ACTENONYCINA**

**Geographic distribution.** New Zealand (endemic).

**References.** Bates, 1871b: 30 (classification); Ball et al., 1995: 278, 302 (classification).

**Genus Actenonyx White, 1846**


**Geographic distribution.** New Zealand (endemic).

**References.** Bates, 1871b: 30 (classification); Britton, 1941: 186–187 (taxonomy).

**Notes.** A revision is needed. Two species await description.

**Actenonyx bembidioides White, 1846**


**Geographic distribution (Map p. 223).** North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO. South Island: BR, CO, FD, KA, MB, MC, MK, NC, NN, OL, SC, SD, SL, WD.

**Ecology.** Stenotopic, epigean, riparian, xerophilous, heliophilous. Lowland, montane, subalpine, alpine. Open dry gravelly-stony banks of streams. At some distance from the water. Diurnal; active in the sunshine (adult and larva); hides on cloudy days under stones. Gregarious.


**Dispersal power.** Brachypterous, incapable of flight. Fast runner. Occasional climber.

**References.** Hudson, 1934: 39 (distribution, ecology); Britton, 1941: 187 (distribution); Townsend, 1960: 15–18 (behaviour); Johns, 1977: 320 (distribution, ecology); Johns, 1980: 63 (distribution, ecology, biology, dispersal power); Johns et al., 1980: 28 (distribution, ecology); Townsend, 1992b: 45 (behaviour); Ball et al., 1995: 275–311 (classification, taxonomy).
Subtribe CALLEIDINA

Geographic distribution. Worldwide.

Reference. Ball et al., 1995: 297 (phylogeny).

Genus Anomotarus Chaudoir, 1875

Anomotarus Chaudoir, 1875: 48. Type species: Anomotarus olivaceus Chaudoir, 1875, by monotypy.


Geographic distribution. Japan, Oriental Region to New Guinea, Fiji, New Caledonia, Australia (including Tasmania), Norfolk Island, Lord Howe Island; New Zealand (adventive).


Subgenus Anomotarus Chaudoir, 1875

Geographic distribution. Same as genus.

Anomotarus (Anomotarus) illawarrae (Macleay, 1873)

Cymindis illawarracae Macleay, 1873: 320. Type locality: Illawarra District, New South Wales, Australia.


Ecology. Eurytopic, epigean. Lowland. Forests, forest edges, flaxlands, gardens, paddocks, pastures, cultivated fields (potato), sand dunes. Nocturnal; hides during the day in leaf litter, in burrows dug at the base of plants (Lupinus), and in garden refuse. Gregarious.


Genus Demetrida White, 1846

Demetrida White, 1846: 2. Type species: Demetrias (Demetrida) lineella White, 1846, designated by Chenu, 1851: 72.


Xanthophaea: Lacordaire, 1854: 106 (incorrect subsequent spelling).

Geographic distribution. The Moluccas, New Guinea, New Caledonia, Australia (including Tasmania), New Zealand.


Notes. A new revision is needed. A few species await description. An Australian species could have been introduced. Xanthophaea has often been misspelled Xanthophoea. White (1846: 2) described the genus Demetrida with two included species, lineella and nasuta; Demetrias (Demetrida) lineella (page 2) is a lapsus calami which he corrected to Demetrida lineella on Plate 1, Figure 3.
Subgenus *Demetrida* White, 1846

*Demetrida* (Demetrida): Britton, 1941: 189.

**Geographic distribution.** Same as genus.

*Demetrida* (Demetrida) *dieffenbachii* (White, 1843)

*Cymindis australis* Blanchard, 1842: Plate 1, Figure 7. Type locality: Otago, South Island. Primary homonym of *Cymindis australis* Dejean, 1826.


*Demetrida picea* Chaudoir, 1848: 77. Type locality: New Zealand. Synonymised by Bates, 1874: 277 (as a valid species with *Cymindis australis* Blanchard, 1842 and *Cymindis dieffenbachii* White, 1843 as its junior synonyms).

*Xanthophaea* (Demetrida) *pine* Chaudoir, 1872: 195.

*Xanthophaea* (Demetrida) *dieffenbachii* Csiki, 1932b: 1459 (as a valid species with *Demetrida picea* Chaudoir, 1848 and *Cymindis australis* Blanchard, 1853 [1842] as its junior synonyms).


**Geographic distribution** (Map p. 233). South Island: BR, KA, MB, MC, MK, NC, SC, WD.

**Ecology.** Stenotopic, arboresal (corticicolous)-epigean. Lowland, montane, subalpine, alpine. Forests (beech, broadleaf, podocarp), scrublands, shrublands, tree plantations (pine), sand dunes, tussock grasslands, alpine meadows, pastures, scree, vicinity of snow patches. Nocturnal; hides during the day under the loose bark of logs and dead tree trunks (mostly), in rotten logs, under stones, and at the base of plant clumps (*Chinochloa, Muehlenbeckia*).


**Dispersal power.** Brachypterous, incapable of flight. Fast runner. Excellent climber (on trees and logs).


**Note.** *Demetrida picea* could prove to be a valid species.

*Demetrida* (Demetrida) *lateralis* Broun, 1910

*Demetrida lateralis* Broun, 1910b: 10. Type locality: Mt Cook, MK.


**Geographic distribution** (Map p. 234). South Island: MC, MK, OL.

**Ecology.** Epigean, mostly steppicolous. Montane, subalpine. Tussock grasslands, herbfields, and screes (mostly); scrublands and shrublands (occasionally). Nocturnal; hides during the day under stones (mostly) and in roots of small rotting stumps.

**Biology.** Seasonality: October–April. Tenerals: October. Predacious (based on mouthpart morphology).


*Demetrida* (Demetrida) *lineella* White, 1846

*Demetrias* (Demetrida) *lineella* White, 1846: 2 (illustrated on Plate 1, Figure 3, as *Demetrida lineella*). Type locality: Port Nicholson, WN.


**Geographic distribution** (Map p. 234). North Island: TK, WI, WN. South Island: BR, MB, NN, SD.

**Ecology.** Eurytopic, arboresal-planticolous-epigean, heliophilous. Lowland, montane, subalpine, alpine. Forests (beech, podocarp, broadleaf), shrublands, flaxlands, tussock grasslands. Diurnal; active in the sunshine on trees, shrubs, plants, and logs; hides under bark on cloudy days.

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

**Dispersal power.** Brachypterous, incapable of flight. Fast runner. Frequent climber.


*Demetrida* (Demetrida) *moesta atra* Broun, 1880

*Demetrida* *ater* [sic] Broun, 1880: 66. Type locality: Queenstown, OL.


**Geographic distribution** (Map p. 234). South Island: CO, DN, OL.

**Ecology.** Epigean, steppicolous. Lowland, upland. Tussock grasslands. Nocturnal; hides during the day under stones.

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


Demetrida (Demetrida) moesta moesta Sharp, 1878
Demetrida moesta Sharp, 1878: 47. Type locality: Otago, South Island.
Xanthophaea (Demetrida) moesta: Csiki, 1932b: 1460.
Demetrida (Demetrida) moesta moesta: Britton, 1941: 191.

Geographic distribution (Map p. 234). South Island: CO, DN, OL.


Demetrida (Demetrida) nasuta White, 1846
Demetrida nasuta White, 1846: 2. Type locality: New Zealand.
Xanthophaea (Demetrida) nasuta: Chaudoir, 1872: 195.
Demetrida (Demetrida) nasuta: Britton, 1941: 190.

Geographic distribution (Map p. 234). North Island: AK, BP, CI, GB, HB, ND, TK, TO, WA, WI, WN, WO. South Island: BR, DN, FD, MB, MC, NC, NN, OL, SD, SL, WD.

Ecology. Eurytopic, arboreal-planticolous-epigean. Lowland, montane, subalpine, alpine. Forests (beech), tree plantations (pine), shrublands, scrublands, orchards, tussock grasslands, pastures, gardens, screes, rocky open places, gravel pits, river banks. Nocturnal; active at night on trees, shrubs, plants, logs, and stones; hides during the day under stones and logs, in leaf litter and moss, and under the loose bark of fallen trees. Gregarious.


Note. Demetrida nasuta could represent a species complex.

Demetrida (Demetrida) sinuata maculata Britton, 1941
Demetrida (Demetrida) sinuata maculata Britton, 1941: 190. Type locality: Ben Lomond, OL.

Geographic distribution (Map p. 234). South Island: OL.

Ecology. Montane or subalpine. Habitat unknown.


Demetrida (Demetrida) sinuata sinuata Broun, 1917
Demetrida sinuata Broun, 1917: 370. Type locality: Clipping’s Bush, OL, and Staircase, CO.
Xanthophaea (Demetrida) sinuata: Csiki, 1932b: 1460.
Demetrida (Demetrida) sinuata sinuata: Britton, 1941: 189.

Geographic distribution (Map p. 234). South Island: CO, MB, MK, OL.

Ecology. Eurytopic, epigean. Lowland, montane, subalpine, alpine. Screes (mostly), herbfields, tussock grasslands, scrublands. Nocturnal; hides during the day under stones.


References. Britton, 1941: 190 (distribution); Townsend, 1997: 16 (distribution).
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### Appendix A. Glossary of technical terms

**adventive** — not native; an organism carried into a new habitat by natural means, or by man.

**altitudinal distribution** — distribution related to altitude, i.e., lowland, upland or montane, subalpine, alpine.

**apterous** — without membranous wings.

**arboreal** — living on trees or shrubs.

**arenicolous** — living in sandy environments.

**brachypterous** — with abbreviated membranous wings, shorter than those of macropterous species but not vestigial like those of subapterous species; incapable of flight.

**campicolous** — living in fields.

**cavernicolous** — living in caves.

**corticolous** — living under or in the bark of trees or shrubs.

**cryptic coloration** — colour pattern imitating the environmental background, which conceals an organism from detection.

**dispersal power** — capacity of self-dispersal.

**diurnal** — active during the day.

**endemic** — restricted to a geographic area.

**endogean** — living in soil crevices or fissures, in deep humus or leaf litter, or under well-embedded stones.

**epigean** — living on the surface of the ground.

**eurytopic** — tolerant of wide variation in environmental conditions.

**fossorial** — digging holes or burrows.

**geographic distribution** — distribution related to geography, i.e., districts, regions.

**grainivorous** — eating grains or seeds.

**gregarious** — living in groups or colonies.

**halophilous** — living in environments with relatively high concentrations of salt.

**halotolerant** — tolerating life in environments with relatively high concentrations of salt.

**heliophilous** — active in the sunshine.

**hygrophilous** — living in moist or wet environments.

**indigenous** — see native.

**intertidal** — living between the low and high tide levels.

**macropterous** — with long or fully developed membranous wings.

**mesophilius** — living in moderately humid environments.

**molluscophagous** — eating snails or slugs.

**muscicolous** — living in moss.

**native** — occurring naturally in one, two, or several areas.

**nidicolous** — living in the nests of other animals.

**nocturnal** — active during the night.

**omnivorous** — feeding on both animal and vegetable matter.

**parental care** — protection of eggs and larvae by the female.

**planticolous** — living on plants (not on trees or shrubs).

**polyphagous** — eating many types of food.

**predacious** — eating live animals.

**riparian** — living at the border of streams, lakes, or ponds.

**seasonality** — period of the year when an animal is active.

**scree** — accumulation of loose stones on a slope.

**scrubland** — vegetation unit with dense cover and about 1-2 metres tall.

**shrubland** — vegetation unit with sparse or moderate cover and often taller than 2 metres.

**shuttling** — moving back and forth frequently.

**silvicolous** — living in forests, tree plantations, shrublands, or scrublands.

**stenotopic** — tolerant of narrow variation in environmental conditions.

**steppicolous** — living in steppes, tussock grasslands, or prairies.

**subapterous** — with vestigial membranous wings (reduced to small wing buds).

**subaquatic** — nearly aquatic.

**synanthropic** — living in and around human dwellings.

**teneral** — a new or young adult, recently emerged, sexually immature, with softer or paler exoskeleton.

**thermophilous** — active in the heat or the hottest part of the day.

**thermophobous** — avoiding activity in the heat or the hottest part of the day.

**thermoregulation** — maintenance of a constant body temperature.

**troglobitic** — living exclusively in caves.

**trogophilous** — living usually, but not exclusively in caves.

**trogloxenous** — living occasionally in caves.

**vertical distribution** — distribution related to the horizon, i.e., cavernicolous, endogean, epigean, planticolous, arboreal.

**xerophilous** — living in dry environments.

**xylophilous** — living in wood tissues.
Appendix B. Nomina nuda

A list of Nomina nuda for New Zealand Carabidae is annexed herein. These taxa have never been formally described and have no taxonomic value.

*Anchomenus elevatus* Bates, 1874: 10 (according to Sharp, 1886: 363 and Csiki, 1931: 744).
*Bembidium anilloides* Broun, 1887: 604.
*Demetrida longula* Sharp “n.sp.” (according to Reitter, 1880: 165).
*Dicrochile flavipes flavipes* Broun, 1917: 360 (according to Townsend, 1997: 16).
*Oopterus collaris* Broun, 1887: 604.
*Pterostichus minor* Broun, 1893a: 991.
*Tachys monochrous* Schaum, 1863: 90.
*Tarastethus alpinalis* Broun, 1887: 604.

Appendix C. Alphabetical list of unjustified emendations

The following names are emendations. They are invalid and have no taxonomic status.

*Agonochila* by Chaudoir (1869: 223) for *Agonocheila* Chaudoir, 1848.
*Bembecidium* by Agassiz (1847: 43) for *Bembidion* Latreille, 1802.
*Bembicidium* by Gemminger & Harold (1868: 405) for *Bembidion* Latreille, 1802.
*Bembidium* by Gyllenhal (1810: 12) for *Bembidion* Latreille, 1802.
*Cicindela dunedinensis* by Hutton (1874: 158) for *Cicindela dunedensis* Laporte de Castelnau, 1867.
*Dicronochilus* by Guérin-Méneville (1846b: 428) for *Dicrochile* Guérin-Méneville, 1846a.
*Euthenaris* by Csiki (1932a: 1268) for *Euthenarus* Bates, 1874.
*Helaeotrechus* by Chenu (1851: 187) for *Helaeotrechus* White, 1846.
*Laemosthenes* by Agassiz (1847: 199) for *Laemostenus* Bonelli, 1810.
*Laemosthenus* by Winkler (1924: 187) for *Laemostenus* Bonelli, 1810.
*Philophloeus* by Lacordaire (1854: 139) for *Philophlaeus* Chaudoir, 1844.
*Physoloesthus* by Sloane (1898: 488) for *Physolaesthus* Chaudoir, 1850.
*Physoloesthus* by Lacordaire (1854: 235) for *Physolaesthus* Chaudoir, 1850.
*Stomatocolus* by Chaudoir (1871: 283) for *Stomatocoelus* Macleay, 1864.
*Xanthophoea* by Lacordaire (1854: 106) for *Xanthophae* Chaudoir, 1848.
Appendix D. Alphabetical synopsis of species incorrectly or doubtfully recorded from New Zealand

Thirty species recorded in the literature from New Zealand represent mislabelled specimens or misidentifications. Thirteen others were erroneously described from New Zealand. These records are addressed here. Species are listed by their valid name.

Abacetus grandis Laferté-Sénectère, 1853: 304
Described from New Zealand as Alogus monachicus by Motschulsky (1866: 245). Subsequently recorded from this area by Gemminger & Harold (1868: 312), Bates (1874: 147), Hutton (1904: 147), Hudson (1923: 357), Csiki (1930: 557), Hudson (1934: 176), and Britton (1940: 478). A. monachicus was made synonymous with Abacetus grandis from West Africa by Moore (1980a: 173-174). The type was obviously mislabelled.

Anchomenus raptor Redtenbacher, 1868: 18
Recorded from New Zealand by Gemminger & Harold (1868: 376), Hutton (1904: 144), Hudson (1923: 356), Csiki (1931: 865), and Hudson (1934: 174). Described from Tahiti and restricted to that area.

Anomotarus monarensis Moore, 1987: 305
Recorded from Swanson, AK by Pilgrim (1963: 840) as Anomotarus aeneus (=Cymindis aenea Macleay, 1873: 320), a species restricted to Australia (Moore et al., 1987: 168). Not seen in New Zealand entomological collections.

Calathus glabricollis Dejean, 1828: 68
Described from Auckland, New Zealand as Calathus zeelandicus by Redtenbacher (1868: 17). Subsequently recorded from this area by Gemminger & Harold (1868: 364), Hutton (1874: 159), Bates (1874: 238), Broun (1880: 19), Walker (1904: 76), Hutton (1904: 143), and Thomson (1922: 284). Restricted to Europe (Csiki, 1931: 779). The type was obviously mislabelled.

Castelnaudia cordata (Chaudoir, 1865b: 69)
Recorded from New Zealand by Gemminger & Harold (1868: 329), as Homalosoma cunninghami (=Feronia cunninghamii) Laporte de Castelnaud, 1867: 120. Restricted to Australia (Moore et al., 1987: 168).

Castelnaudia cyanea (Laporte de Castelnaud, 1840: 113)
Recorded from New Zealand by Gemminger & Harold (1868: 329), as Homalosoma episcopalis (=Feronia episcopalis) Laporte de Castelnaud, 1867: 118. Restricted to Australia (Moore et al., 1987: 168).

Castelnaudia marginifera (Chaudoir, 1865b: 68)
Recorded from New Zealand by Gemminger & Harold (1868: 330), as Homalosoma viridescens (=Feronia viridescens) Laporte de Castelnaud, 1867: 120. Restricted to Australia (Moore et al., 1987: 169).

Castelnaudia septemcostata (Chaudoir, 1874b: 572)
Recorded from New Zealand by Gemminger & Harold (1868: 329), as Homalosoma nitidicolle (=Feronia nitidicolle) Laporte de Castelnaud, 1867: 120. Restricted to Australia (Moore et al., 1987: 170).

Castelnaudia superba (Laporte de Castelnaud, 1867: 119)
Recorded from New Zealand by Gemminger & Harold (1868: 330), as Homalosoma superbum (=Feronia superba) Laporte de Castelnaud, 1867. Restricted to Australia (Moore et al., 1987: 170).

Castelnaudia wilsoni (Laporte de Castelnaud, 1867: 119)
Recorded from New Zealand by Gemminger & Harold (1868: 330), as Homalosoma wilsoni (=Feronia wilsoni) Laporte de Castelnaud, 1867. Restricted to Australia (Moore et al., 1987: 171).

Cicindela klugii Dejean, 1831: 45
Described from New Zealand as Cicindela douei by Chenu (1840: 45). Subsequently recorded from this area by White & Doubleday (1843: 272), White (1846: 1), Gemminger & Harold (1868: 14), Wakefield (1873: 297), Hutton (1874: 158), Bates (1874: 234), Broun (1880: 3-4), Fleutiaux (1892: 63), Hutton (1904: 141), Hudson (1923: 354; 1934: 172), and White (1958: 9). Restricted to Mexico (Wiesner, 1992: 144-145). The type was obviously mislabelled (Horn, 1892d: 215).

Clivina dilutipes Putzeys, 1868a: 12
Recorded from New Zealand by Sloane (1920b: 320) and Csiki (1927: 502). Restricted to Australia (Moore et al., 1987: 70). Not seen in New Zealand entomological collections.
**Clivina impressefrons** LeConte, 1844: 50

**Crossonychus viridis** (Dejean, 1831: 356)
Recorded from New Zealand as *Lebia bembidioidea* Fairmaire, 1849: 34 by Lacordaire (1854: 128), Gemminger & Harold (1868: 136), Hutton (1904: 150), and Hudson (1923: 359; 1934: 178). This species was described from Tahiti and synonymised with *C. viridis* from Chile and Argentina by Britton (1941: 191).

**Darodilia mandibularis** Laporte de Castelnau, 1867: 71
Recorded from New Zealand by Gemminger & Harold (1868: 246). Restricted to Australia (Moore et al., 1987: 162).

**Dicrochile gigas** Laporte de Castelnau, 1867: 66
Recorded from New Zealand by Gemminger & Harold (1868: 365). Restricted to Australia (Moore et al., 1987: 264).

**Dicrochile goryi** (Boisduval, 1832: 32)

**Dicrochile minuta** Laporte de Castelnau, 1867: 68
Recorded from New Zealand by Gemminger & Harold (1868: 365). Restricted to Australia (Moore et al., 1987: 264).

**Dicrochile punctatostriata** Laporte de Castelnau, 1867: 67
Recorded from New Zealand by Gemminger & Harold (1868: 366). Restricted to Australia (Moore et al., 1987: 264).

**Distipsida flavicans** (Chaudoir, 1854: 125)
Described from New Zealand as *Rembus zeelandicus* by Redtenbacher (1868: 10). Subsequently recorded from this area by Gemminger & Harold (1868: 239), Hutton (1874: 159), Walker (1904: 76), Hutton (1904: 143), Hudson (1923: 355), Csiki (1931: 1003), and Hudson (1934: 174). Restricted to Korea, Japan, China, and Taiwan. The type was obviously mislabelled (Bates, 1874: 237; Broun, 1880: 15; Ball, 1959: 50).

**Eurylychnus blagravii** (Laporte de Castelnau, 1867: 75)
Recorded from New Zealand by Gemminger & Harold (1868: 241) and Csiki (1928: 16). Restricted to Australia (Moore et al., 1987: 120).

**Eurylychnus dyschirioides** (Laporte de Castelnau, 1867: 78)
Described as *Maoria dyschirioides* from “Crooked River, in New Zealand”. Subsequently recorded from this area by Gemminger & Harold (1868: 243), Putzeys (1873a: 316), Hutton (1874: 159), Bates (1874: 237), Broun (1880: 13), Hutton (1904: 142), Hudson (1923: 355), Csiki (1928: 18), and Hudson (1934: 173). Restricted to Australia (Britton, 1949: 538; Moore et al., 1987: 121). Crooked River is situated in Victoria, Australia.
Laemostenus (Pristonychus) terricola terricola (Herbst, 1784: 140)

Leiradira auricollis Laporte de Castelnau, 1867: 73
Recorded from New Zealand by Gemminger & Harold (1868: 246). Restricted to Australia (Moore et al., 1987: 163).

Leiradira latreilli latreilli Laporte de Castelnau, 1867: 72
Recorded from New Zealand by Gemminger & Harold (1868: 246). Restricted to Australia (Moore et al., 1987: 164).

Lophyridia decemguttata (Fabricius, 1801: 241)

Loxodactylus carinulatus amaeropterus (Chaudoir, 1865b: 97)
Recorded from New Zealand by Gemminger & Harold (1868: 330), as Homalosoma yarrae (=Feronia yarrae Laporte de Castelnau, 1867: 120). Restricted to Australia (Moore et al., 1987: 198).

Notomonus mediosulcatus (Chaudoir, 1865b: 88)
Recorded from New Zealand by Gemminger & Harold (1868: 246), as Adetipa punctata Laporte de Castelnau, 1867: 71. Restricted to Australia (Moore et al., 1987: 183).

Nurus atlas (Laporte de Castelnau, 1867: 117)
Recorded from New Zealand by Gemminger & Harold (1868: 329), as Homalosoma atlas (=Feronia atlas Laporte de Castelnau, 1867: 118) and H. obesum (=Feronia obesa Laporte de Castelnau, 1867). Restricted to Australia (Moore et al., 1987: 171).

Nurus brevis Motschulsky, 1866: 236
Recorded from New Zealand by Gemminger & Harold (1868: 329), as Homalosoma solandersii (=Feronia solandersii Laporte de Castelnau, 1867: 118). Restricted to Australia (Moore et al., 1987: 171).

Oceanella vitiensis vitiensis (Blanchard, 1842: Plate 1, Figure 5)
Described from Greyhounds, New Zealand as Cicindela ezonata by Broun (1921: 594). Subsequently recorded from this area by Hudson (1923: 354), Horn (1926b: 200), Hudson (1934: 172), Edwards (1950b: 85), and Palma et al. (1989: 21). Restricted to Fiji (Wiesner, 1992: 229). The type of C. ezonata was obviously mislabelled (Horn, 1936: 9; Brouerius van Nidek, 1965: 353).

Percosoma carenoides (White, 1846: 4)
Described from New Zealand as Brosus carenoides by White (1846: 4). Subsequently recorded from this area by Gemminger & Harold (1868: 243), Hutton (1874: 159). Restricted to Australia (Moore et al., 1987: 122). The type was obviously mislabelled.

Promecoderus lottini Brullé, 1834: 450
Described from New Zealand and subsequently recorded from this area by White & Doubleday (1843: 273), White (1846: 5), Gemminger & Harold (1868: 242), Hutton (1874: 159), and Csiki (1928: 25). Restricted to Australia (Moore et al., 1987: 113). The type was obviously mislabelled (Laporte de Castelnau, 1867: 73; Bates, 1874: 237).

Promecoderus tasmanicus Laporte de Castelnau, 1867: 80
Described from New Zealand as Acallistus simplex by Sharp (1886: 362). Subsequently recorded from this area by Broun (1893a: 984), Hutton (1904: 143), Hudson (1923: 355), Csiki (1928: 22), and Hudson (1934: 174). Restricted to Australia (Britton, 1949: 537; Moore et al., 1987: 115). The type of A. simplex was obviously mislabelled.
Prosopogmus impressifrons (Chaudoir, 1865b: 93)
Described from New Zealand as Feronia (Prosopogmus) impressifrons by Chaudoir (1865b: 93). Subsequently recorded from this area by Gemminger & Harold (1868: 300), Hutton (1874: 159), Bates (1874: 242), Broun (1880: 31), Hutton (1904: 144), Hudson (1923: 356), Csiki (1930: 565), Hudson (1934: 174), and Darlington (1962b: 536). Restricted to Australia (Britton, 1940: 476; Moore, 1965b: 13; Moore et al., 1987: 200). The type was obviously mislabelled.

Rhabdotus reflexus (Chaudoir, 1865b: 94)
Described from New Zealand as Feronia (Rhabdotus) reflexa by Chaudoir (1865b: 94). Subsequently recorded from this area by Gemminger & Harold (1868: 321), Hutton (1904: 147), and Hudson (1923: 176). Restricted to Australia (Csiki, 1930: 548; Britton, 1940: 476; Moore, 1965b: 29; Moore et al., 1987: 197). The type was obviously mislabelled (Chaudoir, 1874b: 594; Bates, 1874: 246).

Rhytisternus puellus (Chaudoir, 1865b: 105)

Sarothrocrepis posticalis (Guérin-Méneville, 1830: Plate 1, Figures a & b)
Recorded from New Zealand as Lebia posticalis Guérin-Méneville by Lacordaire (1854: 128), Gemminger & Harold (1868: 140), Hutton (1904: 150), and Hudson (1923: 359; 1934: 178). Restricted to Australia (Csiki, 1932b: 1304; Britton, 1941: 191; Moore et al., 1987: 281).

Sphodrosomus saisseti Perroud & Montrouzier, 1864: 59

Trichosternus renardi (Chaudoir, 1865b: 71)
Recorded from New Zealand as Homalosoma hercules (= Feronia hercules) by Gemminger & Harold (1868: 329). Restricted to Australia (Moore et al., 1987: 167).

Appendix E. Alphabetical synopsis of species deliberately introduced into New Zealand

Barypus clivinoides Curtis, 1839: 185
Introduced from Argentina against grass grub, Costelytra zealandica (White) (Coleoptera: Scarabaeidae), and released in the Nelson and Marlborough regions from 1968 to 1970 (Cameron et al., 1980: 214; Cameron & Wigley, 1989: 13). No recoveries have been recorded.

Cnemalobus gayi Putzeys, 1868: 366
Introduced from Argentina against grass grub, Costelytra zealandica (White) (Coleoptera: Scarabaeidae), and released in the Marlborough region from 1968 to 1970 (Cameron et al., 1980: 214; Cameron & Wigley, 1989: 13). No recoveries have been recorded.

Scarites “spp.”
Introduced from South Africa against black beetle, Heteronychus arator (Fabricius) (Coleoptera: Scarabaeidae), and released at Woodhill, AK and Ruakaka, ND in 1977-1978 (Cameron & Thomas, 1989: 19). Doubtfully established (Longworth, 1982: 142-143).

Trirammatus unistriatus (Dejean, 1828: 232)
Introduced from Argentina against grass grub, Costelytra zealandica (White) (Coleoptera: Scarabaeidae), and released in the Nelson region from 1968 to 1970 (Cameron et al., 1980: 214; Cameron & Wigley, 1989: 13). No recoveries have been recorded.

None of these deliberate introductions are likely to have survived (personal communication P.J. Cameron, 1998).
Appendix F. Geographical coordinates of main localities. Coordinates should read as 00°00'S/000°00'E. The two-letter area codes follow Crosby et al. (1998). A "—" indicates a locality with unknown coordinates.

Adams Island, AU ................................5053/16603
Ahaura, BR .......................................... 4221/17132
Akaroa, MC .......................................... 4339/17258
Albury, SC ........................................... 4414/17054
Ashburton, MC .................................... 4354/17145
Auckland, AK ....................................... 3651/17446
Auckland Island, AU ............................ 5042/16606
Auckland Islands, AU........................... 5035/16610
Bay of Islands, ND ............................... 3513/17412
Bealey, NC ........................................... 4302/17138
Belgrave, NN ....................................... 4127/17258
Ben Lomond, OL ................................... 4501/16837
Bluff, SL ............................................. 4636/16820
Boatmans Creek, BR ...........................4200/17153
Bold Peak, OL ......................................4451/16818
Bounty Island, BO ................................ 4745/17901
Brightwater, NN ................................... 4123/17306
Broken River, MC .................................. 4313/17156
Campbell Island, CA ............................. 5233/16908
Canaan [Little], Takaka Hill, NN ........... 4058/17251
Caplestone, BR .................................... 4204/17155
Carnley Harbour, AU ........................... 5051/16607
Cass, MC ............................................ 4302/17145
Castle Hill, MC .................................... 4314/17143
Castle Hill Station, MC ......................... 4314/17143
Central Plateau [= Desert Road], TO ... 3914/17544
Chatham Islands, CH .........................4400/17630W
Chetwode Islands, SD .........................4054/17405
Christchurch, MC ................................ 4332/17238
Christmas Village, SI ........................... 4645/16759
Clevedon, AK ...................................... 3659/17503
Clippings Bush [= Kingston], OL ..........4520/16843
D'Urville Island, SD .............................4050/17351
Dun Mountain, NN ............................... 4121/17322
Dunedin, DN ...................................... 4553/17030
Dusky Bay [= Dusky Sound], FD .......... 4546/16626
Dyers Pass, MC .................................... 4337/17239
Epsom, AK ......................................... 3654/17446
Erua, TO ........................................... 3914/17524
Eyrewell, NC ...................................... 4323/17218
Fenian Creek, Oparara, NN ............... 4112/17211
Flagstaff Hill, Dunedin, DN ............... 4553/17030
Flora River, Mt Arthur, NN ............... 4110/17241
Forty Mile Bush, WA —......................
Fox River [cave], BR ........................... 4202/17123
Gordons Knob, NN .............................. 4136/17256
Gordons Pyramid, NN ....................... 4111/17241
Great Island, TH ................................. 3410/17208
Greenstone Flat, OL ........................... 4459/16818
Greymouth, BR ................................. 4227/17112
Hakapoua [Lake], FD .......................... 4610/16657
Hampden, DN ..................................... 4520/17049
Hamner Springs, MB ........................... 4231/17250
Hastings, HB ...................................... 3939/17651
Hastwells, WA .................................... 4043/17542
Hermitage, Mt Cook, MK ..................... 4344/17005
Hicks Bay, BP ..................................... 3735/17817
Hikawai, CL ...................................... 3810/17816
Hokianga [Harbour], ND ..................... 3526/17325
Hokitika, WD ...................................... 4243/17058
Hollyford [River], OL ........................... 4420/16800
Howick, AK ....................................... 3654/17456
Hump Ridge, FD ................................. 4607/16720
Hunter Mountains, FD ....................... 4538/16724
Hunua Ranges, AK .............................. 3701/17513
Ida Valley, CO .................................... 4502/16949
Inangahua, BR .................................... 4152/17157
Invercargill, SL ................................. 4625/16822
Kai Iwi Beach, WI .............................. 4552/17454
Karekare, AK ..................................... 3659/17429
Karori, WN ........................................ 4117/17444
Kinloch, OL ....................................... 4451/16821
Kumara, WD ...................................... 4239/17111
Kuriwai Bush, SL ................................. 4625/16851
Lake Coleridge, MC ............................ 4322/17132
Lake Horowhenua, WN ..................... 4037/17515
Lake Mackenzie, OL ......................... 4446/16810
Lake Ohau, MK .......................... 4144/16959
Lake Paroa [= Lake Poerua], BR .... 4242/17130
Lake Rototiti, BR .......................... 4150/17250
Lake Tekapo, MK ...................... 4401/17029
Lake Waikaremoana, GB ........... 3846/17706
Lake Wakatipu, OL ..................... 4506/16831
Lee Stream, Taieri, DN ............... 4550/17016
Levin, WN .................................. 4037/17517
Limestone Creek, Teal Valley, NN ... 4114/17324

Maeraki, DN ............................. 4177/17230
Maketu [Stream], Hunua Ranges, AK .... 3708/17500
Manai, ND .................................. 3549/17431
Manawatu Flats [River], Wi/WN .... 4028/17513
Manawatu Gorge, RI/WN ............. 4018/17546
Manawatu River, Palmerston North, WI ... 4022/17537
Mangakirikiri Stream, Urewera National Park, GB ........ 3834/17648
Maniototo [= Upper Taieri River], CO ... 4509/17003
Maniototo Plains [= Upper Taieri River], CO .... 4509/17004
Marsden [Point], ND ...... 4234/17113
Martinborough, WA ................... 4113/17527
Martins Bay, FD ....................... 4422/16758
Mason Bay, SI ......................... 4655/16745
Matukitiuki River (West Branch), OL ... 4429/16849
Maungatua, DN ...................... 4553/17007
Midhirst, TK .......................... 3918/17416
Mistake Creek, MC .................... 4315/17114
Moa Basin [Stream], MC ............ 4307/17120
Moa Stream, MC ..................... 4307/17120
Moeraki, DN .......................... 4521/17049
Mokohinau Islands, ND ............. 3555/17506
Molyneux [= Puerua] River, SL .... 4621/16948
Motueka River, NN .................. 4105/17301
Mount’s Lookout, Awatere Valley, KA . 4201/17330
Moumoukai [Valley], Hunua Ranges, AK .... 3706/17509
Mt Alfred, OL .......................... 4446/16822
Mt Algidus, MC ....................... 4314/17121
Mt Arthur, NN ......................... 4113/17241
Mt Constitution, OL ................. 4418/16915
Mt Cook, MK .......................... 4336/17009
Mt Dick, OL ............................ 4516/16841
Mt Earnslaw, OL ................. 4438/16824
Mt Egmont (Taranaki), TK .......... 3918/17404

Mt Hector, WN ........................ 4057/17517
Mt Holdsworth, WN .................. 4052/17525
Mt Horrible, MC ................. 4302/17143
Mt Hutt, MC .......................... 4328/17132
Mt John, MK .......................... 4359/17028
Mt Kiwi, MC .......................... 4307/17119
Mt Manaia, ND ...................... 3549/17431
Mt Maungatua, DN .................. 4553/17007
Mt Misery, MC ........................ 4303/17142
Mt Owen, NN .......................... 4133/17233
Mt Pirongia, WO ...................... 3800/17506
Mt Quoin, WN ........................ 4100/17514
Mt Raynalid, AU .......................... 5044/16603
Mt Robert, BR .......................... 4150/17249
Mt St Arnaud, BR/MB .......... 4149/17254
Mt St Bathans, CO .................. 4444/16946
Mt Table Top [= Table Hill], DN .. 4605/16952
Mt Taranaki (Egmont), TK .......... 3918/17404

Napier, HB ......................... 3930/17654
Nelson, NN ......................... 4116/17317
Ngatira, BP/WO .................... 3806/17552
Nile River Cave, Charleston, BR .... 4156/17130

Oakden [Mt], MC .................... 4315/17125
Oamaru, DN ......................... 4506/17058
Obelisk [Peak], CO .... 4519/16912
Ohakune, TO .......................... 3925/17525
Ohaupo, WO .......................... 3755/17518
Oio, TO .............................. 3903/17523
Okauia, WO .......................... 3747/17550
Opotiki, BP .......................... 3801/17717
Otara, SL ............................. 4638/16853
Otaraia, WA ........................... 4612/16905
Otitira Gorge, WOr .................. 4248/17134
Otrira Pass [= Otrira Gorge], WOr .... 4248/17134
Otrira River, WD ................... 4245/17138
Outram, DN .......................... 4552/17014

Pakarau [= Pekerau], ND .......... 3500/17321
Pakuratahi Stream [River], WN ...... 4103/17512
Palmerston North, WI .......... 4022/17537
Papakura, AK ......................... 3704/17457
Parua [Bay], ND ................... 3546/17427
Peel Forest, SC .................... 4355/17116
Picton, SD ........................... 4118/17400

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Appendix G. Alphabetical list of valid taxa for New Zealand. N = native, but not endemic to New Zealand; A = adventive.

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Holcaspis intermittens
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Holcaspis ovatella
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Holcaspis vexata
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Hypharpax abstrusus
Hypharpax antarcticus
Hypharpax australasiae
Hypharpax australis
Kenodactylus audouini
Laemostenus complanatus
Lecanomerus atriceps
Lecanomerus fallax
Lecanomerus fuliginosus
Lecanomerus incertus
Lecanomerus insignitus
Lecanomerus latimanus
Lecanomerus obsesus
Lecanomerus pallipes
Lecanomerus sharpi
Lecanomerus verticalis
Lecanomerus vestigialis
Loxomerus brevis
Loxomerus huttoni
Loxomerus nebridoides
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Maorirechus rangitotoensis
Mecodema allani
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Mecodema afrom
Mecodema brittoni
Mecodema bullatum
Mecodema chiltoni
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gordonense
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Mecodema costellum obsesus
Mecodema costipenne
Mecodema crenaticolle
Mecodema crenicolle
curvidens
ducale
dunense
dux
elongatum
femorale
floria
fulgidum
gourlayi
hector
howitti
huttense
impressum
inimate
integratum
laeviceps
laterale
litoreum
longicolle
lucidum
metallicum
minax
morio
nitidum
oblongum
occiputale
oconnori
oregoides
pavidum
pluto
politanum
proximum
pulchellum
punctatum
punctellum
quioidense
rectolineatum
regulus
rex
rugiceps anomalum
rugiceps rugiceps
sculptatum
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antarcticus
asperatus
buclusicus
bullatus
capito
compressus
curtulus
enysi
fultoni
guerini
haplopus
lobipes
memes
meritus
rectalis
rectangulus
sandageri
temukensis
turgidiceps
vagans
vilig
virens
wallacei
aberrans
moniliferum
tibiale
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Molopsida convexa
Molopsida cordpellennis
Molopsida debilis
Molopsida diversa
Molopsida dubia
Molopsida fovealis
Molopsida fusipes
Molopsida halli
Molopsida longula
Molopsida marginals
Molopsida optata
Molopsida oxygona
Molopsida phylocharis
Molopsida polita
Molopsida pretiosa
Molopsida propinqua
Molopsida puncticollis
Molopsida robusta
Molopsida seriatoporus
Molopsida simplex
Molopsida simulans
Molopsida southlandica
Molopsida strenua
Molopsida sulcicollis
Neanops caecus
Neanops pritchardi
Neoferonia ardua
Neoferonia fossalis
Neoferonia integrata
Neoferonia prasignis
Neoferonia procerula
Neoferonia prolixia
Neoferonia straneoi
Neoferonia truncatula
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Nesamblyops subcaecus
Notagonum chathamense
Notagonum feredayi
Notagonum lawsoni
Notagonum marginellum
Notagonum submetallicum
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Oopterus faevigatus
Oopterus faeviventris
Oopterus latifossus
Oopterus latipennis
Oopterus lewisi
Oopterus marrineri
Oopterus minor
Oopterus nigritulus
Oopterus pallidipes
Oopterus parvulus
Oopterus patulus
Oopterus plicaticollis
Oopterus probus
Oopterus puncticeps
Oopterus pygmeatus
Oopterus sculpturatus ovinotatus
Oopterus sculpturatus sculpturatus
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Oopterus suavis
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Oregus inaequalis
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Paratachys cryptica
Pelodiaetodes promiens
Pelodiaetus lewisi
Pelodiaetus sulcatipennis
Pericompsus australis
Perigona nigriceps
Philphaeus luculentus
Phloeodytes cerberus
Phloeodytes townsendi
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Physolaesthus limbatus
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Plocamostethus planisculus
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Scopodes fuscatus
Scopodes levistriatus
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Scopodes versicolor
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Selenochilus frontalis
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Selenochilus piceus
Selenochilus ruficornis
Selenochilus syntheticus
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Syllectus magnus
Syllectus speleus
Synteratus ovalis
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Tachys captus
Tachys cavelli
Tachys latipennis
Taenarthus capito
Taenarthus philpotti
Triplosarus novaezelandiae
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Zabronothus striatulus
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Zeanillus phyllobius
Zeanillus punctiger
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Zecillenus chamferi
Zecillenus embersoni
Zecillenus tillyardi
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Zeopoecilus putus
Zolus atratus
Zolus carinatus
Zolus femoralis
Zolus helmsi
Zolus labialis
Zolus ocularius
Zolus subopacus
Appendix H. Alphabetical list of valid taxa by areas of New Zealand. E = endemic to country; N = native, but not endemic to country; A = adventive; R = restricted to a single area of country.

### North Island

**AK**

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<th>Endemicity</th>
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Piatynus macropterus
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Prosphodrus occultus
Scopodes fossulatus
Scopodes multipunctatus
Syllectus anomalous
Tachys antarcticus

CL
64 taxa
E, 47; N, 3; A, 14; R, 0.

Actenonyx bembidioides
Agonocheila antipodum
Amarotypus edwardsii
Anchomenus sulcilaris
Anomotarus variegatus
Aulacopodus calathoides
Bembidion anchoronoderus
Bembidion callipeplum
Bembidion parviceps
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Cicindela spilleri
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Clivina vagans
Clenognathus bidens
Clenognathus cardiophorus
Clenognathus crenatus
Clenognathus lucifugus
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Demetrida nasuta
Dicrochile cephalotes
Dicrochile cordicollis
Duvaliomyxin watti
Eugadroma picea
Euthenarus punclicollis
Haplanister crypticus
Holcaspis hispida
Holcaspis mordax
Holcaspis munronata
Hypharpax australis
Hypharpax amplipennis
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Hypharpax xanthalepis
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Mecyclothorax placens
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Scopodes fossulatus
Scopodes multipunctatus
Syllectus anomalous
Tachys antarcticus
Triplosarus novaeseelandiae
Zecillenus albecens

GB
63 taxa
E, 48; N, 3; A, 12; R, 0.

Actenonyx bembidioides
 Allocinopus sculpcollics
Amarotypus edwardsii
Aulacopodus calathoides
Bembidion actuarium
Bembidion anchoronoderus
Bembidion brullei
Bembidion callipeplum
Bembidion charile

HB
70 taxa
E, 57; N, 3; A, 10; R, 0.

Actenonyx bembidioides
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<td>Pentagonica vittipennis</td>
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<td>Pericompus australis</td>
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<td>Platynus macropeters</td>
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<td>Rhytisternus miser</td>
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<td>Scopodes fossulatus</td>
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<td>Scopodes multipunctatus</td>
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<td>Tachys antarcticus</td>
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<td>Tachys captus</td>
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<td>Triplosorus novaezelandiae</td>
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<td>Zecillenus albecens</td>
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**Total taxa:** 57

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<td>Cicindela tuberculata</td>
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<td>Clivina heterogena</td>
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<td>Dicrochile cordinicolis</td>
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<td>Holcaspis mucronata</td>
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<td>Holcaspis sinuiventris</td>
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### RI

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<th>Taxonomy</th>
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<tr>
<td>Actenonexy bembidioides</td>
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<td>Dicrochile cephalotes</td>
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**Total taxa:** 85
Duvaliomimus watti
Euthenarus puncticollis
Gaioxenus pilipalpis
Haplanister crypticus
Harpalus affinis
Holcaspis dentifera
Holcaspis hispida
Holcaspis mordax
Holcaspis mucronata
Holcaspis oedicnema
Holcaspis sinuiventris
Hypharpax australis
Mecodema crenaticolle
Mecodema dux
Mecodema florae
Mecodema simplex
Mecodema sinuiventris
Moelleria polita
Molopsida polita
Molopsida pretiosa
Molopsida seriatoporus
Molopsida strenua
Nesamblyops oreobius
Notagonum lawsoni
Pentagonica vittipennis
Periconopsis australis
Plocamostethus planiusculus
Prosphodrus occulitus
Prosphodrus waltori
Rhytisternus miser
Scopodes fossulatus
Scopodes postulatus
Syllectus anomalus

| Cicindela spilleri |
| Cicindela tuberculata |
| Clivina vagans |
| Clenognathus adamsi |
| Clenognathus bidens |
| Clenognathus cretnatus |
| Clenognathus lucifulus |
| Clenognathus novaezelandiae |
| Demetrida lineella |
| Demetrida nasuta |
| Dicrochile cephalotes |
| Duvaliomimus styx |
| Euthenarus puncticollis |
| Gaioxenus pilipalpis |
| Haplanister crypticus |
| Holcaspis dentifera |
| Holcaspis hispida |
| Holcaspis mordax |
| Holcaspis mucronata |
| Holcaspis odontella |
| Holcaspis oedicnema |
| Hypharpax australis |
| Laemostenus complanatus |
| Lecanomerus sharpi |
| Mecodema crenaticolle |
| Mecodema longicolle |
| Mecodema novaezelandiae |
| Mecodema sinuiventris |
| Molopsida polita |
| Molopsida pretiosa |
| Molopsida seriatoporus |
| Molopsida strenua |
| Notagonum lawsoni |
| Notagonum submetallicum |
| Oopterus fulvipes |
| Oopterus sobrinus |
| Pararbis australis |
| Periconopsis australis |
| Philophlaeus luculentus |
| Plocamostethus planiusculus |
| Prosphodrus waltori |
| Psegnatopterus politissimus |
| Rhytisternus miser |
| Scopodes fossulatus |
| Scopodes multipunctatus |
| Scopodes postulatus |
| Syllectus anomalus |
| Tachys antarcticus |
| Zolus atratus |

TO 68 taxa
E, 60; N, 3; A, 5; R, 2.

Actenonyx bembidioides
Agonocheila antipodum
Allocinopus sculpticollis
Alloctonus smithi
Anomotarus wardi
Anomotaruius variegatus
Aulacopus calathoides
Bembidion actuarium
Bembidion charile
Bembidion taurinense
Cicindela feredayi
Cicindela hermsi
Cicindela parryi
Cicindela spilleri
Cicindela tuberculata
Cicindela waiouraensis
Clivina basalis
Clivina vagans
Clivina vulgaris
Clivina xanthea
Clivina xanthomelas
Euthenarus puncticollis
Gaioxenus pilipalpis
Haplanister crypticus
Holcaspis dentifera
Holcaspis hispida
Holcaspis mucronata
Holcaspis odontella
Holcaspis oedicnema
Hypharpax australis
Laemostenus complanatus
Lecanomerus sharpi
Mecodema crenaticolle
Mecodema longicolle
Mecodema novaezelandiae
Mecodema sinuiventris
Molopsida polita
Molopsida pretiosa
Molopsida seriatoporus
Molopsida strenua
Notagonum lawsoni
Notagonum submetallicum
Oopterus fulvipes
Oopterus sobrinus
Pararbis australis
Periconopsis australis
Philophlaeus luculentus
Plocamostethus planiusculus
Prosphodrus waltori
Psegnatopterus politissimus
Rhytisternus miser
Scopodes fossulatus
Scopodes multipunctatus
Scopodes postulatus
Syllectus anomalus
Tachys antarcticus
Zolus atratus

TK 65 taxa
E, 55; N, 2; A, 8; R, 1.

Actenonyx bembidioides
Agonocheila antipodum
Allocinopus castaneus
Allocinopus smithi
Anomotarus wardi
Anomotaruius variegatus
Aulacopus calathoides
Bembidion actuarium
Bembidion charile
Bembidion taurinense
Brulleaantarctica
Cicindela parryi

Mecodema crenaticolle
Mecodema dux
Mecodema florae
Mecodema oconnori
Mecodema validum
Mecodema xanthea
Mecodema xanthomelas
Mecodema xanthomneas
Cicindela feredayi
Cicindela hermsi
Cicindela parryi
Cicindela spilleri
Cicindela tuberculata
Cicindela waiouraensis
Clivina basalis
Clivina vagans
Clivina vulgaris
Clivina xanthea
Clivina xanthomelas
Euthenarus puncticollis
Gaioxenus pilipalpis
Haplanister crypticus
Holcaspis dentifera
Holcaspis hispida
Holcaspis mucronata
Holcaspis odontella
Holcaspis oedicnema
Hypharpax australis
Laemostenus complanatus
Lecanomerus sharpi
Mecodema crenaticolle
Mecodema longicolle
Mecodema novaezelandiae
Mecodema sinuiventris
Molopsida polita
Molopsida pretiosa
Molopsida seriatoporus
Molopsida strenua
Notagonum lawsoni
Notagonum submetallicum
Oopterus fulvipes
Oopterus sobrinus
Pararbis australis
Periconopsis australis
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Scopodes postulatus
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Mecodema crenaticolle
Mecodema dux
Mecodema florae
Mecodema xanthea
Mecodema xanthomelas
Cicindela feredayi
Cicindela hermsi
Cicindela parryi
Cicindela spilleri
Cicindela tuberculata
Cicindela waiouraensis
Clivina basalis
Clivina vagans
Clivina vulgaris
Clivina xanthea
Clivina xanthomelas
Euthenarus puncticollis
Gaioxenus pilipalpis
Haplanister crypticus
Holcaspis dentifera
Holcaspis hispida
Holcaspis mucronata
Holcaspis odontella
Holcaspis oedicnema
Hypharpax australis
Laemostenus complanatus
Lecanomerus sharpi
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Mecodema longicolle
Mecodema novaezelandiae
Mecodema sinuiventris
Molopsida polita
Molopsida pretiosa
Molopsida seriatoporus
Molopsida strenua
Notagonum lawsoni
Notagonum submetallicum
Oopterus fulvipes
Oopterus sobrinus
Pararbis australis
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Philophlaeus luculentus
Plocamostethus planiusculus
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Psegnatopterus politissimus
Rhytisternus miser
Scopodes fossulatus
Scopodes multipunctatus
Scopodes postulatus
Syllectus anomalus
Tachys antarcticus
Zolus atratus
Fauna of New Zealand

Actenonyx bembidioides
Allocinopus angustulus
Allocinopus sculpticollis
Anomotarus variipennis
Aulacopodus bruni
Bembidion actuarium
Bembidion anchonoderus
Bembidion callipeplum
Bembidion charile
Bembidion tekapoense
Bembidion urewereense
Brulleia antarctica
Cicindela tuberculata
Ctenognathus adamsi
Demetrida nasuta
Diglymma clivinoides
Duvaliominus styx
Duvaliominus watti
Euthenasurus puncticollis
Holcaspis mucronata
Holcaspis odontella
Holcaspis oedicnema
Holcaspis sinuiventris
Holcaspis vagepunctata
Laemostenus complanatus
Mecodema longicolle
Mecodema oblongum
Mecodema oconneri
Mecodema simplex
Mecodema spiniferum
Mecodema sulcatum
Mecyclothorax amplipennis
Mecyclothorax rotundicollis
Megadromus capito
Megadromus turgidiceps
Megadromus vigil
Molopsida cordipennis
Molopsida formicarius
Molopsida sternua
Molopsida sulcicollis
Notagonum lawsoni
Notagonum submetallicum
Oopterus laevigatus
Platynus macropterus
Plocamostethus planiusculus
Prophodrus occultus
Psegmopteropus parallelus
Scopodes pustulatus
Scopodes multipunctatus
Scopodes postulatus
Syllectus anomalus
Tachys antarcticus
Zabronothus rufipes

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Brulleia antarctica
Cicindela tuberculata
Ctenognathus adamsi
Demetrida nasuta
Diglymma clivinoides
Duvaliominus styx
Duvaliominus watti
Euthenasurus puncticollis
Haplanister crypticus
Haplanister affinis
Holcaspis dentifera
Holcaspis mordax
Holcaspis mucronata
Holcaspis oedicnema
Holcaspis sinuiventris
Hypharpax australiasiae
Laemostenus complanatus
Lecanomerus atriceps
Lecanomerus sharp
Lecanomerus verticalis
Lecanomerus vestigialis
Mecodema crenaticolle
Mecodema crenicolle
Mecodema occipitale
Mecyclothorax amplipennis
Mecyclothorax rotundicollis
Megadromus capito
Megadromus turgidiceps
Molopsida cordipennis
Molopsida formicarius
Molopsida sternua
Notagonum lawsoni
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Oopterus laevigatus
Platynus macropterus
Plocamostothus planiusculus
Prophodrus occultus
Psegmopteropus parallelus
Scopodes pustulatus
Scopodes multipunctatus
Scopodes postulatus
Syllectus anomalus
Tachys antarcticus
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Actenonyx bembidioides
Allocinopus angustulus
Allocinopus sculpticollis
Anomotarus variipennis
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Bembidion anchonoderus
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Brulleia antarctica
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Ctenognathus adamsi
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Duvaliominus styx
Duvaliominus watti
Euthenasurus puncticollis
Haplanister crypticus
Haplanister affinis
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Holcaspis mordax
Holcaspis mucronata
Holcaspis oedicnema
Holcaspis sinuiventris
Hypharpax australiasiae
Laemostenus complanatus
Lecanomerus aticeps
Lecanomerus sharp
Lecanomerus verticalis
Lecanomerus vestigialis
Mecodema crenaticolle
Mecodema crenicolle
Mecodema occipitale
Mecyclothorax amplipennis
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Psegmopteropus parallelus
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Scopodes multipunctatus
Scopodes postulatus
Syllectus anomalus
Tachys antarcticus
Zabronothus rufipes
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

73 taxa

WO

E, 60; N, 2; A, 11; R, 3.

Actenonyx bembidioideus
Agonochelina antipodum
Amarotypus edwardsi
Anomotaurus vaniegatus
Aulacopodus calathoides
Aulacopodus sharpi
Bembidion actuaarium
Bembidion anchonoderus
Bembidion callipeplum
Bembidion maorinum leatum
Bembidion musae
Bembidion parviceps
Bembidion rotundicolle eustictum
Bembidion tekapoense
Brullea antarctica
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Cicindela perhispida campbelli
Cicindela spiniferum
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Ctenognathus cuculfigus
Ctenognathus n_butzeleandiae
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Dicrochile corydalis
Dicrochile cordicollis
Dicrochile frons
Dicrochile cephalotes
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Gaioxenus pilipalpis
Haplanister crypticus
Harpalus affinis
Haplanister crypticus
Holcaspis bruniana
Holcaspis hispida
Holcaspis intermissus
Holcaspis mordax
Holcaspis spiceriana
Holcaspis spiceriana
Holcaspis vespertina
Hyparhax abstrusus
Hyparhax australiasiae
Hyparhax australis
Laemostenus complanatus
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Lecanomerus shari
Lecanomerus verticalis
Lecanomerus vestigiulus
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Mecodema oconnori
Mecodema quinense
Mecodema simplex
Mecodema spiniferm
Mecodema sulcatum
Mecyclothorax amplipennis
Mecyclothorax rotundicollis
Megadromus capitum
Megadromus grisculceps
Megadromus virgil
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Molopsida corydalis
Molopsida cordipennis
Molopsida dubia
Molopsida marginalis
Molopsida polita
Molopsida strenua
Molopsida sulcicollis
Molopsida sulplicatus
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Notagomnus lawsoni
Notagomnus submetalllicum
Oopterus frontalis
Oopterus laevicollis
Oopterus nigritulus
Oopterus sobrinus
Oregus aenerus
Paralchys triccinetosum
Pentagonica triccinetosum
Pericompus australis
Philophlebus luculentus
Physolaelaeous insularis
Platyurus macropsis
Placostethus planiusculus
Protophlebus occulatus
Pseglomptopterus polittisimus
Rhytisternus mizer
Scopodes edwardsii
Scopodes fusciusculus
Scopodes multipunctatus
Scopodes prasinius
Scopodes pustulatus
Selenochilus rufoneus
Syflectus anomalous
Tachys antarcticus
Triplosparus nautzeliae
Zabronothus rufipes
Zolus carinatus
Zolus femoralis
Zolus helmsi
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<td>Molopsida strenua</td>
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**South Island**

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**FD**

59 taxa

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- Actenonyx bembidioides
- Agonocheila antipodum
- Anchomenus integratus
- Anchomenus libitius
- Anchomenus otagoensis
- Bembidion anchonerus
- Bembidion chalcephy
- Bembidion charile
- Bembidion hokitikense
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- Bembidion orbiturus
- Bembidion parviceps
- Bembidion tairense
- Bembidion wanakense
- Brullea antarctica
- Cicindela feredayi
- Cicindela helmsi
- Cicindela parryi
- Demetrida nasuta
- Dicrochile insignis
- Diglymma clivinoides
- Diglymma marginale
- Diglymma obtusum
- Holcaspis ceteruluta
- Holcaspis impigra
- Holcaspis placida
- Holcaspis sternalis
- Laemostenus complanatus
- Mecodema bullatum
- Mecodema costipenne
- Mecodema femorale
- Mecodema gourlayi
- Mecodema huttense
- Mecodema impressum
- Mecodema laterale
- Mecodema littoreum
- Mecodema lucidum
- Mecodema rex
- Mecodema rugiceps nigiceps
- Mecodema striatum
- Mecyclothorax rotundicollis
- Megadromus bullatus
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- Neoferonia procerula
- Neoferonia prolaxa
- Nesamblyops subcaecus
- Notagonum feredayi
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Hypharpaxantarcticus
Laemostenus complanatus
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Mecodema fulgidum
Mecodema rugiceps rugiceps
Mecodema sulcatum
Megadromus antarcticus
Megadromus lobbipes
Megadromus rectalis
Megadromus rectangulus
Metaglymma moniliferum
Molopsida debilis
Molopsida diversa
Molopsida puncticollis
Nesamblyops oreobius
Nesamblyops subcaecus
Notagonum feredayi
Oopterus laeviventris
Oopterus laevigatus
Oopterus versicolor
Selenochilus syntheticus
Zabronothus striatulus
Zolus helmsi

NN
126 taxa
E, 115; N, 3; A, 11; R, 19.

Actenonyx bembidioides
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Allotropus scultipennis
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Anchomenus helmsi
Anchomenus macrocoelos
Anchomenus sandageri
Anomotarus variegatus
Bembidion anchonoderus
Bembidion brullei
Bembidion dehiscentis
Bembidion granuliferum

Bembidion hokitikense
Bembidion maorium maorium
Bembidion musae
Bembidion orbifera
Bembidion parviceps
Bembidion tainuense
Bembidion tekapoense
Bembidion townsendi
Bembidion wakakense
Brullea antarctica
Cicindela latecincta
Cicindela panyi
Cicindela tuberculata
Clivina basalis
Clivina vagans
Ctenognathus actochares
Ctenognathus pictonensis
Demetrida lineata
Demetrida nasuta
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Diglymma clivinoides
Diglymma marginale
Duvaliomimus lamberti
Duvaliomimus orpheus
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Lecanomerus atriceps
Lecanomerus obesulus
Lecanomerus verticalis
Lecanomerus vestigialis
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Mecodema costellum obesum
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Mecodema dunense
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Mecodema integratum
Mecodema longicolle
Mecodema metallicum
Mecodema nitidum
Mecodema pavidum
Mecodema proximum
Mecodema pulchellum
Mecodema punctatum
Mecodema rugiceps anomalum
Mecodema rugiceps rugiceps

Mecodema strictum
Mecodema sulcatum
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Megadromus rectalis
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Molopsida antarctica
Molopsida fuscipes
Molopsida pretiosa
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Molopsida robusta
Molopsida seriatoropus
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Neoferonia prasignis
Neoferonia truncatula
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Nesamblyops subcaecus
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Oopterus palidipes
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Oopterus probus
Oregus aereus
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Pentagonica vittipennis
Pericampus australis
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Pholeodytes townsendi
Platynus macropterus
Plocarnostethus planiusculus
Psegnmatopterus politissimus
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Scopodes edwardsii
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Scopodes levistriatus
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Scopodes versicolor
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Sylectus magnus
Sylectus spelaeus
Tachys antarcticus
Tachys istipennis
Triplosarum novaezelandiae
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<tr>
<td><em>Mecyclothorax rotundicolli</em></td>
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<tr>
<td><em>Megalodytes pusillius</em></td>
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<tr>
<td><em>Megalomyia belloni</em></td>
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<tr>
<td><em>Megalomyia urniger</em></td>
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<tr>
<td><em>Megalomyia cinerea</em></td>
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<td><em>Megalomyia ochracea</em></td>
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<td><em>Megalomyia pusilla</em></td>
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<td><em>Megalomyia pseudotau</em></td>
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<td><em>Megalomyia smithii</em></td>
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<td><em>Megalomyia theriops</em></td>
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<td><em>Megalomyia wrightii</em></td>
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<tr>
<td><em>Megalomyia xanthostoma</em></td>
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<td><em>Megalomyia yakutica</em></td>
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<tr>
<td><em>Neoferonia procerula</em></td>
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<tr>
<td><em>Neoferonia submetallicus</em></td>
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<td><em>Notagonum feredayi</em></td>
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<tr>
<td><em>Notagonum submetallicus</em></td>
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<tr>
<td><em>Ochoipus pallidus</em></td>
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<td><em>Oregus aereus</em></td>
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<td><em>Oregus parvipes</em></td>
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<td><em>Oregus picripennis</em></td>
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<tr>
<td><em>Scopodes atripennis</em></td>
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<td><em>Scopodes brounianus</em></td>
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<td><em>Scopodes costellum</em></td>
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<td><em>Scopodes cribrarius</em></td>
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<td><em>Scopodes humeralis</em></td>
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<td><em>Scopodes longicolli</em></td>
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<td><em>Scopodes punctatus</em></td>
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<tr>
<td><em>Scopodes rectilineatum</em></td>
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<tr>
<td><em>Scopodes sulcatus</em></td>
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<tr>
<td><em>Scopodes submetallicus</em></td>
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<tr>
<td><em>Scopodes turbidus</em></td>
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<tr>
<td><em>Scopodes williamsi</em></td>
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<tr>
<td><em>Scopodes xanthopus</em></td>
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<tr>
<td><em>Zolus subopacus</em></td>
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<tr>
<td><em>Zolus subrufescens</em></td>
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<tr>
<td><em>Zolus sulphureus</em></td>
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</table>

**OL**: 73 taxa (E, 68; N, 3; A, 2; R, 11)

**SD**: 62 taxa (E, 53; N, 3; A, 6; R, 3)
Molopsida sulcicollis  
Nesamblyops oreobius  
Nesamblyops subcaecus  
Notagonum feredayi  
Notagonum lawsoni  
Notagonum submetallicum  
Pentagonica vittipennis  
Platynus macropterus  
Plocamostethus planiusculus  
Scopodes fossulatus  
Scopodes pustulatus  
Syllectus anomalus  
Tachys antarcticus  
Tachys latipennis  
Triplosarus novaezelandiae  
Zeopoecilus putus  
Zolus atratus  
Zolus helmsi

SL  
63 taxa  
E, 59; N, 2; A, 2; R, 4.

Actenonyx bembidioides  
Agonocheila antipodum  
Amarotypus edwardsii  
Anchomenus otagoensis  
Anchomenus sophronitis  
Bembidion rotundicolle rotundicolle  
Cicindela latecincta  
Cicindela parryi  
Clivina basalis  
Clenognathus lttorellus  
Demetrida nasuta  
Dicrochile novaenzelandiae  
Diglymma clivinoides  
Diglymma obtusum  
Euthenarus puncticolle  
Holcaspis catenulata  
Holcaspis egregialis  
Holcaspis impigra  
Holcaspis implica  
Holcaspis ovatella  
Holcaspis placidia  
Holcaspis sternalis  
Laemostenus complanatus  
Lecanomeria fuliginosus  
Mecodema alternans alternans  
Mecodema bullatum  
Mecodema costipenne  
Mecodema elongatum  
Mecodema impressum  
Mecodema infimate  
Mecodema litorum  
Mecodema lucidum  
Mecodema minax  
Mecodema morio  
Mecodema punctatum  
Mecodema rex  
Mecodema sculpturatum puncticolle  
Mecodema sculpturatum sculpturatum  
Mecyclothorax rotundicolle  
Megadromus bullatus  
Megadromus haplopus  
Megadromus meritus  
Megadromus sandageri  
Metaglymma bibale  
Molopsida cincta  
Molopsida oxygona  
Molopsida southlandica  
Neoferonia fossalis  
Neoferonia proceraula  
Neoferonia stranei  
Nesamblyops subcaecus  
Notagonum feredayi  
Notagonum submetallicum  
Oopterus pygmeatus  
Oregus aereus  
Oregus inaequalis  
Platynus macropterus  
Scopodes edwardsii  
Scopodes fossulatus  
Scopodes prasinus  
Scopodes versicolor  
Zeopoecilus putus  
Zolus subopacus

WD  
67 taxa  
E, 63; N, 3; A, 1; R, 0.

Actenonyx bembidioides  
Agonocheila antipodum  
Amarotypus edwardsii  
Anchomenus otagoensis  
Anchomenus sophronitis  
Bembidion rotundicolle rotundicolle  
Cicindela latecincta  
Cicindela parryi  
Clivina basalis  
Clenognathus lttorellus  
Demetrida nasuta  
Dicrochile insignis  
Dicrochile novaezelandiae  
Diglymma clivinoides  
Duvaliomimus walkeri  
Euthenarus puncticolle  
Holcaspis impigra  
Holcaspis oedicnema  
Laemostenus complanatus  
Lecanomeria fuliginosus  
Mecodema alternans alternans  
Mecodema bullatum  
Mecodema laterale  
Mecodema lucidum  
Mecodema metallicum  
Mecodema rugiceps rugiceps  
Mecodema sculpturatum sculpturatum  
Mecyclothorax rotundicolle  
Megadromus enysi  
Megadromus lobipes  
Molopsida alpinalis  
Molopsida diversa  
Molopsida puncticolle  
Molopsida seriatorpus  
Neoferonia ardua  
Neoferonia integrata  
Nesamblyops oreobius  
Notagonum feredayi  
Oopterus laeviventris  
Oopterus latipennis  
Oopterus lewisi  
Pentagonica vittipennis  
Physolaesthus insularis  
Platynus macropterus  
Scopodes edwardsii  
Scopodes laevigatus  
Scopodes prasinus  
Scopodes pustulatus  
Scopodes versicolor  
Syllectus anomalus  
Tachys latipennis  
Triplosarus novaenzelandiae  
Zolus femoralis  
Zolus helmsi

Stewart Island  
17 taxa  
E, 16; N, 1; A, 0; R, 3.

Amarotypus edwardsii  
Bembidion musae  
Bembidion stewartense  
Bembidion tekapoense  
Cicindela parryi  
Diglymma obtusum  
Holcaspis sternalis  
Holcaspis stewartensis  
Kenodactylus audouini  
Mecodema alternans alternans
Mecodema femorale
Mecodema infimale
Mecodema littoreum
Megadromus bullatus
Megadromus meritus
Triplosurus novaezelandiae
Zecillenus embersonii

<table>
<thead>
<tr>
<th>Offshore Islands</th>
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<tbody>
<tr>
<td><strong>AN</strong></td>
</tr>
<tr>
<td>2 taxa</td>
</tr>
<tr>
<td>E, 1; N, 1; A, 0; R, 0.</td>
</tr>
<tr>
<td>Kenodactylus audouini</td>
</tr>
<tr>
<td>Oopterus clivinoides</td>
</tr>
<tr>
<td><strong>AU</strong></td>
</tr>
<tr>
<td>8 taxa</td>
</tr>
<tr>
<td>E, 6; N, 1; A, 1; R, 5.</td>
</tr>
<tr>
<td>Bembidion brullei</td>
</tr>
<tr>
<td>Calathosoma rubromarginatum</td>
</tr>
<tr>
<td>Kenodactylus audouini</td>
</tr>
<tr>
<td>Loxomerus brevis</td>
</tr>
<tr>
<td>Loxomerus huttoni</td>
</tr>
<tr>
<td>Loxomerus nebroioides</td>
</tr>
<tr>
<td>Oopterus clivinoides</td>
</tr>
<tr>
<td>Oopterus plicaticollis</td>
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</tbody>
</table>

| **BO** |
| 2 taxa |
| E, 2; N, 0; A, 0; R, 1. |
| Bountya insularis |
| Diglymma castigatum |

| **CA** |
| 4 taxa |
| E, 2; N, 1; A, 1; R, 1. |
| Kenodactylus audouini |
| Laemostenus complanatus |
| Oopterus clivinoides |
| Oopterus marrineri |

| **CH** |
| 15 taxa |
| E, 9; N, 2; A, 3; R, 2. |
| Allocinopus latitarsis |
| Bembidion rotundicollis rotundicollis |
| Euthenarus brevicollis |
| Haplanister crypticus |
| Hypharpax australis |
| Laemostenus complanatus |
| Lecanomerus fuliginosus |
| Mecodema alternans alternans |
| Mecyclothorax rotundicollis |
| Megadromus antarcticus (not established) |
| Notagonum chathamense |
| Notagonum submetallicum |
| Parabaris gourlayi |
| Pentagonica vittipennis |
| Scopodes edwardsii |
| Zecillenus albescens |

| **KE** |
| 1 taxon |
| E, 1; N, 0; A, 0; R, 0. |
| Mecyclothorax rotundicollis |

| **SN** |
| 6 taxa |
| E, 5; N, 1; A, 0; R, 3. |
| Diglymma castigatum |
| Kenodactylus audouini |
| Mecodema alternans hudsoni |
| Oopterus clivinoides |
| Oopterus strenuus |
| Synteratus ovalis |

| **TH** |
| 6 taxa |
| E, 4; N, 1; A, 1; R, 3. |
| Gourlayia regia |
| Mecodema regulus |
| Mecyclothorax rotundicollis |
| Notagonum submetallicum |
| Parabaris gourlayi |
| Rhytisternus miser |
Appendix I. Type localities of Carabidae described from New Zealand. Names in **bold italic** indicate that the species is considered valid, whereas names in italic indicate that the species is considered a synonym. Note that generic names are given as in the original combination of the description, but may now differ. (Appendix kindly provided by T. K. Crosby).

**AK** Auckland

- Anchomenus lawsoni
- Anchomenus punctulatus
- Brullea antarctica
- Ctenognathus latipennis
- Dicrochile limbata
- Euthenarus puncoticollis
- Holcaspis rugifrons
- Hypharpax abstrusus
- Lecanomerus marginatus
- Mecodema crenicolle
- Mecodema simplex
- Pterostichus aucklandicus
- Scopodes multipunctatus
- Syllectus anomalus
- Trichosternus aucklandicus
- Tachys antarcticus
- Epsom
- Lecanomerus labralis
- Howick
- Rhystisternus erythrogynathus
- Howick, Paparoa District
- Lecanomerus stenopus
- Hunua
- Pterostichus hunuensis
- Hunua Ranges
- Sympiestus oculator
- Hunua–Maketu (= Maketu Stream)
- Pterostichus obsoletus
- Karekare, West of Auckland
- Cillenum alacris
- Ligar’s Bush, Papakura
- Dicrochile anthracina
- Mecodema lineatum
- Pterostichus ithaginis
- Maketu [Stream], Hunua Ranges
- Allocinus castaneus
- Moumoukai Valley
- Duvaliomimus watti
- Near Clevendon, Southern Wairoa
- Bembidium clevelandense
- Near the Waitakere (= Waitakere) Rail-way-station

**BO** Bounty Island

- Anchomenus lucifugus
- Northern Wairoa
- Medecodema scitulum
- Rangitoto Island
- Maorirerehe rangitotoensis
- Remuera, Auckland
- Anchomenus cheesemani
- South of Clevendon and Wairoa
- Ctenognathus munroi
- Swanson
- Neocicindela spilleri
- Tuakau
- Holcaspis hybrida
- Waitakere (= Waitakere) Ranges, Auckland
- Holcaspis mucronata
- Mecodema spinifera
- AK Whangarata, near Tuakau and Ngaruawahia, WO
- Haptoferus calathoides
- AK Auckland and Christchurch, MC
- Scopodes aterrimus
- Triplosurus fulvescens
- AK/WO One of the small islands of the Lower Waikato
- Bembidium nesophilum
- AK/WO Waikato Heads
- Cicindela campbelli

**AU** Auckland Islands

- Adams Island, Auckland Islands
- Loxomerus largus
- Auckland Island
- Notaphus gameani
- Auckland Islands
- Calathus rubromarginatus
- Euthenarus huttoni
- Heterodactylus nebricioides
- Oopterus clivinoides
- Oopterus guernii
- Oopterus laticollis
- Oopterus plicaticollis
- Pristonychus brevis
- Pristonychus casaneus
- Camley Harbour, Auckland Islands
- Euthenarus cirolcis
- Loxomerus fossulatus
- Oopterus tripunctatus
- Mt Raynald (Flat Topped Mountain), Auckland Islands
- Oopterus aucklandicus
- Port Ross, Auckland Islands
- Loxomerus ambiguis

**BP** Bay of Plenty

- Hicks Bay
- Trichosternus humeralis
- Opotiki
- Metaglymma curvidens
- Pterostichus fieldi
- Rotorua
- Mecodema variolosum
- Tauranga
- Mecodema atrox
- Te Arora Trig Station
- Mecodema pluto
- BP/WO Te Arora
- Tarastethus laevicollis

**BR** Buller

- Ahoura (= Ahaura), near Greymouth
- Mecodema ducale
- Boatman’s, Near Reefton
- Pterostichus cavelii
- Pterostichus irregularis
- Capleston
- Tachys cavelii
- Tarastethus simulans
- Fox River Cave, Near Charleston
- Erebotrechus infernus
- Greyouth
- Anchomenus helmsi
- Cicindela helmsi
- Cillenum subcaecum
- Diglymma ovipenne
- Mecodema metallicum
- Pterostichus rugifrons
- Scopodes nigrinus
- Tarastethus laeviventris
- Tarastethus lewisi
- Tarastethus puncoticollis
- Trechus maori
- Zolus helmsi
- [Lake] Rotoiti
- Anchomenus hallianus
- Mt Robert
- Tarastethus robustus
- Zolus labralis
- Near Greyouth
- Pterostichus helmsi
- Nile River Cave, Charleston
- Syllectus spelaeus
- Profanity Cave, Buller River, near Inangahua
- Syllectus magnus
- BR, GREYOUTH and Kumara, WD
- Tachys latipennis
- BR/MB Mt St Arnaud
- Anchomenus arnoudensis
CA  Campbell Island
Campbell Island
Kenodactylus capito
Ooapterus elongellus
Ooapterus marrineri
Ooapterus tarsalis

CH  Chatham Islands
Chatham Islands
Anchomenus chathamensis
Pitt Island
Allocinopus latitarsis

CL  Coromandel
Hikuwai
Cicindela hufoni
Hikuwai Forest
Trichosternus hispidus
Tairua
Bembidium anchonoderum
Bembidium eustictum
Bembidium parviceps
Cillenumalbescens
Holcaspis hispidulus

CO  Central Otago
Ida Valley
Mecodema laevisceps
Scopodes vitidis
Manitoto (= Upper Taieri)
Metaglymma calcareatum
Pterostichus memes
Mt St Bathans
Holcaspis bathana
Near Obelisk Peak, [Old Man Range]
Ooapterus pygmeatus
Rock and Pillar Mountains
Trichosternus curtulus
Trichosternus suspicax
Staircase [= Devil’s Staircase]
Mecodema politanum
Pterostichus egregialis
Strath–Taieri
Metaglymma junctum
Trichosternus erythropus

DN  Dunedin
Dunedin
Cerabilia maori
Cicindela dunedensis
Maoria punctata
Mecodema inequale
Pterostichus chalmeri
Dunedin (Flagstaff Hill)
Pterostichus perfidiosus

Flagstaff Mountain, near Dunedin and
Maugatua
Holcaspis impiger [sic]
Hamden, near Moeraki
Trichosternus haplopus
Trichosternus hamptenensis
Lee Stream, Taieri
Trichosternus riparius
Maugatua
Trichosternus fusulus
Moeraki
Metaglymma thoracicum
Pterostichus disparalis
Mt Maugatua
Anchomenus oreobius
Metaglymma obtusum
Pterostichus procerulus
Scopodes basalis
Scopodes bryophilus
Scopodes cognatus
Trichosternus aeruginosus
Trichosternus asperatus
Trichosternus chlortis
Trichosternus monticola
Trichosternus patreulis
Trichosternus vagans
Tropopterus oxygonus
Mt Table Top, near Milton
Mecodema minax
Near Dunedin
Holcaspis placidus
Mecodema impressum
Mecodema rectolineatum
Metaglymma punctifer
Near Outram
Metaglymma rufipes
Oamaru
Trichosternus virens
Outram
Dicrochile cinctiger
Dicrochile nitida
Holcaspis catenulata
Trichosternus fultoni
Port Chalmers
Cillenum chalmeri
Tarastethus simplex
Taieri
Anillus pallidus
Holcaspis thoracicus
Trichosternus amplicollis
Trichosternus curvipes
Trichosternus erraticus
Trichosternus polychaetus
Taieri Beach
Mecodema litoreum
Metaglymma asperum
Totara
Mecodema puncticolle

Waihora
Trichosternus grassator
Waikouati
Cicindela latecincta
Molopsis polita
Waitati, near Dunedin
Pterostichus melanostolus
DN, Dunedin and Otago
Pterostichus oscillator
[DN] Dunedin and the North Island
Harpalus antarcticus
[DN] Port Otago, Bay of Islands [ND], etc
Feronia australasiae

FD  Fiordland
Dusky Bay
Pterostichus edax
Hakapou
Anchomenus libitus
Hump Ridge
Diglymma marginale
Mecodema dissonum
Mecodema femorale
Pterostichus fenwicki
Pterostichus fossalis
Taenarthrus phillipti
Hunter Mountains
Mecodema veratum
Martin’s Bay, west coast of Otago
Trichosternus prolixus
Preservation Inlet
Diglymma tarsalis
Puysegur Point
Diglymma nigripes
Diglymma punctipenne
Mecodema bullatum
Mecodema striatum
Pterostichus sandageri
Te Oneora
Mecodema intricaetus
FD, Te Oneora and Invercargill, SL
Pterostichus oneranaensis

GB  Gisborne
Lake Walkaremoana, Urewera National Park
Bembidion urewerense
Mangakinkink Stream, Urewera National Park
Bembidion maorinum levatum
Simpson’s Cave, Wairoa
Prosphrodrus occultus

HB  Hawke’s Bay
Hastings
**Fauna of New Zealand 43**

- **Haplanister crypticus**
- **Napier**, Hastwell [WA]
  - **Pterostichus sculptipes**
  - **Tarastethus strenuus**

**Kaikoura**
- **Mouat’s Lookout, Awatere River Basin**
- **Cicindela hamiltoni**
  - **Wairiri, Kaikoura**
  - **Trichosternus wallacei**
  - **Zabronothus aphelus**

**Marlborough**
- **KA**
  - **Hanmer**
  - **Mecodema brittoni**
  - **Trichosternus hanmerensis**

**Mid Canterbury**
- **MB**
  - **Akaroa**
    - **Argutor erythropus**
    - **Argutor pantomelas**
    - **Dromius fossalatus**
    - **Pterostichus delator**
    - **Trichosternus dissentaneus**
  - **Broken River**
    - **Anchomenus integratus**
    - **Dicrochile thoracica**
    - **Mecodema lewisi**
    - **Zabronothus major**
    - **Zabronothus oblongus**
  - **Cass**
    - **Mecodema cassense**
    - **Castle Hill**
      - **Cicindela australmontana**
      - **Mecodema constricta**
      - **Pterostichus detractus**
  - **Christchurch**
    - **Anchomenus feredayi**
    - **Haptocherus maorinus**
    - **Metaglymma oregoide**
    - **Pterostichus longifrons**
    - **Tropopterus sulcicollis**
    - **Dyers Pass**
    - **Lecanomerus pallipes**

**Near Lake Tekapo**
- **Bembidium attenuatum**
- **Bembidium tekapoense**
- **Trichosternus alternus**
- **Trichosternus urquharti**
- **Near the Hermitage, Mt Cook**
  - **Mecodema suteri**
  - **Tarastethus cinctus**
  - **The Hermitage, Mt Cook**
  - **Anchomenus macrocelis**

**North Canterbury**
- **Bealey**
  - **Diglymma dubium**
  - **Sympiestus syntheticus**
  - **Tarastethus debilis**
  - **Eyrewell**
  - **Holcaspis brevicula**
  - **Near Bealey**
  - **Mecodema rugiceps**

**Northland**
- **Bay of Islands**
  - **Colpodes neozelandicus**
  - **Opoerus rotundicollicus**
  - **Manaia and Whangarei Harbour**
  - **Holcaspis pellax**
  - **Mokohinau [= Mokohinau] Islands**
  - **Bembidium tersatum**
  - **Mt Manaia, near Whangarei Harbour**
  - **Anchomenus suborbithorax**
  - **Near Hokianga & Marsden Point**
  - **Cicindela perhispida**
  - **Near Whangarei Harbour**
  - **Holcaspis sernalis**
  - **Holcaspis thoracicus**
  - **New Zealand and Hokianga [ND]**
  - **Cicindela brevilunata**
  - **Pakarau [= Pekerau]**
  - **Tarastethus epilucus**
  - **Parua**
    - **Dicrochile maura**
    - **Parua, near Whangarei Harbour**
    - **Anchomenus sulcatis**
    - **Lecanomerus falax**
    - **Lecanomerus insignitus**
    - **Parabarís stratus**
    - **Parua, Whangarei Harbour**
    - **Galathus deformipes**
    - **Trichosternus dentiferus**
    - **Rarawa Beach**
    - **Neocicindela perhispida savilli**
    - **Spirits Bay**
    - **Neocicindela perhispida giveni**
    - **Waipoua State Forest**
    - **Waimatenui**
    - **Maoripamborus fairburni**
Pelodiaetodes prominens
Whangarei Heads

Anochomenus parabilis
Near Whangarei Heads

Anochomenus montivagus

Anochomenus perrugithorax

Anochomenus politulus
Tropopterus placens

NN Nelson
Belgrove

Tarastethus fuscipes
Canaan, Takaka Hill

Mecodema costellum obesum
Dogleg Hole, Takaka Hill

Duvaliomimus lamberti
Dun Mountain

Mecodema dunense
Ed’s Cellar, Canaan, Takaka Hill

Scototrechus orcinus
Fenian Creek Cave, Opakura

Duvaliomimus Pluto
Pholeodytes cerberus
Gordon’s Knob, near Belgrove

Dicrochile flavipes
Mecodema antennale

Mecodema gordonense
Limestone Creek, Teal Valley, near Nelson

Bembidion townsendi
Livingstons Well, Brightwater

Hygranillus kuscheli
Motueka River

Allocinopus sculpticollis

Bembidion granuliferum
Mt Arthur

Bembidium latiscutum
Bembidium musae
Holcaspis cribrale

Mecodema angustulum
Mecodema simulans

Pterostichus arduus
Scopodes planus
Scopodes tardus
Scopodes venustus
Trichosternus combesi

Trichosternus micans

Mt Owen

Pterostichus truncatulus
Near Mt Owen, Long Lookout Range

Mecodema integratum
Near Nelson

Mecodema fulgidus
Trichosternus rectalis

Nelson

Drimostoma striato-punctata

Mecodema ventriculum
Zeopoeicilus optandus
Pokororo, Near Mt Arthur
Plocostethus planiusculus ibatus
Saddle Hill

Mecodema proximus
Seddonville

Mecodema pavidum
South Island, probably Westport
Pterostichus flexipes
Tahuna (= Tahunanui)

Cillenium tillyardi
Takaka Hill

Mecodema strictum
Tapawera

Mecodema attenuatum
Twin Forks Cave, Pataura District

Duvaliomimus orpheus
Pholeodytes townsendi
Upper Maitai

Mecodema rugiceps anomalum
Wangapeka [Valley]

Bembidium tangitum
Mecodema venator
Metaglymma aureoniger
Pterostichus pastoricus

Scopodes leviatrisus
Trichosternus opulentus
West of Saddle Hill

Mecodema pulchellum
Westport

Anochomenus walker
Mecodema nitidum
Opoeterus latipennis
Opoeterus parvulus
Opoeterus prorus
Pterostichus perbonus
Pterostichus prasignis
Pterostichus setiventris

NZ New Zealand
Canterbury, South Island

Holcaspis hudsoni
Trichosternus enyski
Canterbury Province, South Island

Physolaesthus insularis

Near Dunedin

Holcaspis placidus
Near Otago, South Island

Mecodema alternans
New Zealand

Actenonyx bembidioides
Amarotopus edwardsii
Anochomenus atratus
Anochomenus colensoii
Anochomenus deplanatus
Anochomenus novaezelandiae
Anochomenus sandageri

Cicindela halli
Cicindela incognita
Cicindela novaezelandiae
Cicindela perhispida brunii

Cicindela tuberculata
Cicindela tuberculosa
Clivina rugithorax

Colpodes bidens
Colpodes cardiophorus
Colpodes crenatus

Colpodes macropterus
Colpodes submetallicus

Demetrida nasuta
Demetrida picea

Dicrochile anchomenoides
Dicrochile fabrii
Dicrochile ovicollis
Feronia anchomenoides
Feronia antarctica
Feronia capito
Feronia convexidorsis
Fironia edax
Feronia elongella
Feronia ovatella
Feronia rectangula
Feronia subaenea
Helaetrichus elaphroide
Holcaspis oedicnema

Lecanomerus latimanus
Mecodema crenaticollis
Mecodema elongatum
Feronia gourlayi
Mecodema lucidum
Mecodema rectineatul
Mecodema simulans
Metaglymma aberrans
Neoferonia straneoi
Olisthopus insularis

Opoeterus collaris
Opoeterus laevicollis
Opoeterus ovitotatus
Opoeterus pallidipes
Opoeterus s. ovitotatus
Opoeterus s. sculpturatus

Pedaloporia novaezelandiae
Pentleoposa elaphroide

Platynus edwardsii

Tarastethus alpinalis
Trichopterus seriapolus
Wakefieldia vitellata

Zabronothus rufipes
New Zealand and Hokianga, ND

Cicindela brevifunata
North Canterbury

Metaglymma doulli
Metaglymma minor

North Island

Harpalus novaezelandiae
Fauna of New Zealand 43

Otago, South Island
- Anchomenus otagoensis
- Cillernus batesi
- Cymindis australis
- Demetrida moesta
- Lecanomerus fuliginosus
- Maoria morio
- Mecodema sculpturatum
- Pelodiaetus lewisi
- Pelodiaetus sulcatipennis
- Tropopterus patulus

Powell, South Island
- Scopodes prasinus

Province of Canterbury, South Island
- Bembidium charile
- Bembidium maorinum maorinum
- Cicindela feredayi
- Coptodera antipodum
- Metaglymma monilifer
- Sphallaxis peryphoides

West Coast, South Island
- Bembidium chalceipes
- Bembidium hokitikense
- Bembidium orbiferum
- Lecanomerus obesulus
- Scopodes laeavigatus

OL Otago Lakes
- Ben Lomond
  - Demetrida sinuata maculata
  - Diglymma basale
  - Mecodema ambiguum
  - Mecodema latulum
  - Opterus basalis
  - Pterostichus pascoi
  - Tarastethus fovealis
  - Tarastethus propinquus
  - Zolus subopacus

- Bobs Cove, Lake Wakatipu
  - Holcaspis implica
  - Bold Peak
  - Mecodema laevicolle
  - Pterostichus hamiltoni

- Clipping's Bush, near Kingston and Staircase, CO
  - Demetrida sinuata

- Clipping's Bush, near Kingston
  - Mecodema erraticum
  - Pterostichus aciphyllae

- Tarastethus longulus
  - Earmsslaw
  - Duvalominimus brittoni
  - Greenstone Flat, near Queenstown
  - Pterostichus bullatus
  - Hollyford
  - Mecodema laterale

- Kinloch, Lake Wakatipu
  - Mecodema seriatum
  - Lake Mackenzie
  - Mecodema persculptum

- Lake Wakatipu (= Wakatipu)
  - Loxomerus capitio

- Matukituki River, West Branch, Northwest of Wanaka
- Bembidion wanakense

- Mt Alfred, near Paradise
  - Mecodema GRATUM

- Mt Constitution
  - Mecodema clarkei

- Mt Dick
  - Mecodema affinum
  - Tarastethus optatus

- Mt Dick, Ben Lomond, Mt Earnslaw and Mt Alfred
  - Mecodema mutabile

- Mt Earnslaw
  - Mecodema indiscrimum

- Queenstown
  - Demetrida ater

- Routenburn
  - Mecodema costipenne
  - Tarastethus convexus

- Routeburn and Hollyford
  - Dicrochile insignis
  - Opterus suavis
  - Zolus ocularius

RI Rangitikei
- Rangitikei River Flats
  - Bembidion solitium

- RIV/NW Manawatu Gorge
  - Anchomenus xanthomelas
  - Pterostichus adoxus
  - Pterostichus oxymelus
  - Pterostichus turgidiceps

SC South Canterbury
- Albury
  - Metaglymma rugiceps
  - Trichosternus crassalis

- Peel Forest
  - Pterostichus sylvius
  - Temuka
  - Pterostichus temukensis

SD Marlborough Sounds
- Chetwode Islands
  - Tarastethus insularis

- D'Urville Island
  - Piocamostethus planiusculus durvillei

Picton
- Ctenognathus pictonenensis
- Metaglymma sulcatum
  - Pterostichus achilles
  - Pterostichus bronianus
  - Pterostichus calcaratus
  - Pterostichus compressus
  - Pterostichus myrmidon

Ranangi
- Holcaspis tripectinata

Stevens Island
- Mecodema costellum
- Mecodema insulare
- Mecodema punctellum
- Trichosternus buecolicus

The Brothers
- Metaglymma oblonga

Southland
- Bluff
  - Mecodema philpotti

Invercargill
- Anillus marginatus
- Cerabilia punctigera
- Ctenognathus littorellus
  - Pterostichus inconstans
  - Pterostichus insidiosus
  - Tarastethus southlandicus
  - Trichosternus angulatus
  - Trichosternus convexus
  - Trichosternus meritus

Kurivai Bush, near Wyndham
- Pterostichus maiai

Near Molyneux River (= Puerua River)
- Maoria tibialis

Otara
- Sinoe aemulator
- Tuatapere
  - Mecodema rex

West Plains, Invercargill
- Anchomenus sopheritinis
- Mecodema infimate
- Pterostichus lepidulus
- Pterostichus philpotti
SN The Snares
Station Point
Oofterus strenueus
The Snares
Diglymma castigatum
Mecodema hudsoni
Synteratus ovalis

TH Three Kings Islands
Great Island
Gourlayia regia
Mecodema regulus
Parabaris gourlayi

TK Taranaki
Base of Mt Egmont
Holcaspis mordax
Midhirst, base of Mt Egmont
Oofterus fulvipes
Mt Egmont
Mecodema longicolle
Pterostichus egmontensis
Zolus atratus
Near Mt Egmont [= Taranaki]
Oofterus sobrinus
Near Taranaki
Mecodema rugicolle
Ratapihiphi Forest
Allocinopus smithi
Taranaki
Pterostichus odontellus
TK Mt Egmont and the Central Plateau,
TO
Pterostichus eruensis
TK, base of Mt Egmont and Waitakerei
(= Waitakere) Ranges, AK
Anchomenus adamsi

TO Taupo
Eura
Tarastethus phyllocharis
Ohakune
Mecodema florae
Mecodema validum
Oio, Taumarunui
Mecodema dux
Raurimu
Gaixemus pilipalpis
Tarastethus a. labralis
Tarastethus pretiosus
Tokaanu
Mecodema occiptuale
Waimarino
Scopodes nigripes
Waikorua
Cicindela waiouraensis

WA Wairarapa
Forty-mile Bush
Allocinopus angustulus
Hastwells
Oofterus laevigatus
Hastwell, Napier, HB
Pterrostichus sculptipes
Martinborough
Mecodema suabaeum
Napier [HB] (Hastwells)
Tarastethus strenueus
Near Martinborough
Mecodema arcuatum
Otaia, near Martinborough
Metaglymma oviocole

WD Westland
Otira Gorge
Tachys coriaceus
Otira Pass
Scopodes versicolor
Otira River
Pterostichus lobipes
WD Hokitka and Lake Paroa [= Lake Poerau], BR
Pterostichus integratus

WI Wanganganui
Manawatu River, near Palmerston
Bembidium antipodum
Bembidium diaphanum
Pipiri, Wanganui River
Bembidium actuarium
WI, Palmerston North and WN Karori
Oofterus nigritulus
WN/WI Manawatu Flats, nine miles below the Gorge
Allocinopus ocularius
Anchomenus intermedius
Pterostichus sinuventris
Tarastethus carbonarius

WN Wellington
Lake Horowhenua
Trichosternus ordinarius
Levin
Mecodema o’connori
Mt Hector
Mecodema hector
Mt Holdsworth, Tararu Range
Mecodema acuductum
Mt Quoin
Ctenognathus simmondsi
Mecodema quoinense
Tarastethus cordiphennis
Near Wellington
Anchomenus haastii
Holcaspis praecox
Maoria clivinoides
Oofterus carinatus

Trichosternus cephalotes
Pakuratahi Stream, Rimutaka Range
Bembidium dehiscens
Port Nicholson
Anchomenus elevatus
Brocas aereus
Cicindela parryi
Demetrias lineella
Feronia intermitiens
Feronia politissima
Feronia vagepunctata
Feronia vigil
Silverstream
Mecodema bryobium
Takuratahi [= Pakuratahi] and Mt Holdsworth
Pterostichus antennalis
Wellington
Bembidium calliepeplum
Cerabilia ruficorne
Ctenognathus actochares
Drimostoma antarctica
Feronia planiuscula
Metalymma modicum
Pterostichus diffomipes
Pterostichus lewisi
Pterostichus vexatus
Scopodes pustulatus
Tarastethus dubius
Trichosternus hudsoni
Troopterus marginalis
Zolus femoralis
WN, Wadestown and Palmerston North, WI
Oofterus frontalii

WO Waikato
Fred Cave, Te Kuiti
Duvaliomimus caecus
Mt Pirongia
Anillus monticola
Bembidium waikatoense
Pterostichus scitipennis
Tachys oreobius
Ngatira
Dicrochile cephalotes
Ohaupo and Hunua Ranges, AK
Pterostichus sharpianus
Okaia, near Matamata
Mecodema exitiosus
Puriri Cave, Port Waikato
Duvaliomimus styx
Eotachys crypticulus
Te Aroha
Dicrochile cordicole
Waipuna Caves, Te Kuiti
Duvaliomimus mayae
Prosthrodrus waltoni
Wairere Falls Cave, near Te Kuiti
Neanops pritchardi

Bembidium exilis
ILLUSTRATIONS

Fig. 1 Locality and biology labels.

Fig. 2 Data sheet.

| Species name: |
|______________|

**GEOGRAPHIC DISTRIBUTION**

North Island: AK B H B H B N B T K TO WA WI W N W O
South Island: BR C D N F D K A MB M C M K N C N N O L S C S D S I S L W D
Offshore Islands: AN AU BO CA CH KE SN TH
Extralimital distribution: Any
First N.Z. record:

**ECOLOGY**

Altitudinal distribution: Lowland Mountain Subalpine Alpine
Vertical distribution: Arboreal Endogean Planticolous Epigean Fossorial
Macrohabitat:

Microhabitat/Host plant:

Soil moisture: Dry Moist Wet
Light intensity: Open ground Shaded ground
Diet activity: Nocturnal Diurnal Heliophilous Arhythmic
Gregariousness: Gregarious Solitary

**BIOLOGY**

Adult seasonality: IX X XI XII I I II III IV V VI VII VIII
Breeding type:

Tenerality: IX X XI XII I I II III IV V VI VII VIII
Overwintering type:

Feeding type: Omnivorous, mostly predacious Predacious Omnivorous, mostly phytophagous Predacious, molluscoaphagous

Enemies:

Parasites:

**DISPERAL POWER**

Wing condition: Macreopterus Macreopterus, probably capable of flight Brachypterus, incapable of flight
Flight power: Occasional flier Regular flier Frequent flier
Loaccomotion: Slow runner Moderate runner Fast runner
Climbing: Occasional climber Regular climber shrubs Frequent climber plants
Favoured by human activities: Yes No

BROADLEAF FOREST: under rotten log near stream.
Figs 3–26 Habitus drawings of Carabidae representing the tribes occurring in New Zealand (Illustrator: D. W. Helmore).
(7) Migadopini: *Loxomerus nebrioides*

(8) Clivinini: *Clivina basalis*

(9) Broscini: *Mecodema fulgidum*

(10) Mecyclothoracini: *Mecyclothorax rotundicollis*
(11) Meonini: *Selenochilus syntheticus*

(12) Tropopterini: *Molopsida seriatoporus*

(13) Trechini: *Duvatiomimus styx*

(14) Zolini: *Zolus femoratis*
(15) Bembidiini, Bembidiina: *Bembidion anchonoderus*

(16) Bembidiini, Bembidiina: *Zecillenus alacris*

(17) Bembidiini, Tachyina: *Tachys antarcticus*

(18) Bembidiini, Anillina: *Nesamblyops oreobius*
(19) Pterostichini: *Megadromus antarcticus*  

(20) Pterostichini: *Megadromus capito*  

(21) Licinini: *Dicrochile cordicollis*  

(22) Harpalini: *Allocinopus sculpticollis*
(23) Platynini: Ctenognathus novaezelandiae
(24) Perigonini: Perigona nigriceps
(25) Pentagonicini: Pentagonica vittipennis
(26) Lebiini: Agonocheila antipodum
Map 1 The New Zealand subregion with area codes (from Crosby et al. 1998).
Map 2 Area codes and collecting localities from mainland New Zealand, North Island (from Crosby et al. 1998).
Map 3 Area codes and collecting localities from mainland New Zealand, South Island and Stewart Island (from Crosby et al. 1998).
Map 4 Total number of known taxa by areas of New Zealand.
Map 5 Number of known endemic taxa by areas of New Zealand.
Map 6 Number of taxa known to be restricted to single areas of New Zealand.
Map 7 Number of known adventive taxa by areas of New Zealand.
Species distribution maps (pages 223–270) Presented alphabetically by taxa (for all but 7 species for which the only known information is “New Zealand”). Area boundaries follow the area codes of Crosby et al. 1998.
| Fauna of New Zealand 43 | 227 |

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Dicrochile whitei
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Diglymma clivinoides
Diglymma marginale
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Duvaliommus lamberti
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Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue
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Mecodema rectolineatum
Mecodema regulus
Mecodema rex
Mecodema rugiceps anomalous
Mecodema rugiceps rugiceps
Mecodema sculpturatum puncticolle
Mecodema sculpturatum sculpturatum
Mecodema simplex
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

Megadromus rectangulus

Megadromus sandageri

Megadromus temukensis

Megadromus turgidiceps

Megadromus vagans

Megadromus vigil

Megadromus virens

Megadromus wallacei

Metaglymma aberrans
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- Oopterus plicaticollis
- Oopterus probus
- Oopterus puncticeps
- Oopterus pygmeatus
- Oopterus sobrinus
- Oopterus strenuus
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- Oregus aereus
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**Mantodea**

**Protura** (*S.L. Tuxen*, FNZ 9, 1986)

**Thysanoptera**
- Terebrantia (*Laurence A. Mound & Annette K. Walker*, FNZ 1, 1982)

**Arachnida**

**Acari**
- Cryptostigmata – a concise review (*M. Luxton*, FNZ 7, 1985)
- Eriophyoidea except Eriophyinae (*D.C.M. Manson*, FNZ 4, 1984)
- Eriophyinae (*D.C.M. Manson*, FNZ 5, 1984)

**Crustacea**

**Amphipoda**
- Talitridae (*K.W. Duncan*, FNZ 31, 1994)

**Mollusca**

**Gastropoda**
- Naturalised terrestrial Stylommatophora (*G.M. Barker*, FNZ 38, 1999)
NOTICES

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NGĀ PĀNUI

Kua whakatūria tēnei huia pukapuka hei whakahauhau i ngā tohunga whai mātauranga kia whakaputa i ngā kōrero poto, engari he whaikīko tonu, e pā ana ki ngā aitanga pepeke o Aotearoa. He tōtika tonu te āhua o ngā tuhitūhi, engari ko te tino whāinga, kia mārama te marea ki ngā tohu tautuhi o ia ngārara, o ia ngārara, me te roanga atu o ngā kōrero mō tēnā, mō tēnā.

He titiro whāiti tā tēnei pukapuka ki ngā mea noho whenua, kāore he tuarā; i pēnei ai i te mea kei te mōhio whānuitia ngā mea whai tuarā, ā, ko ngā mea noho moana, koirā te tino kaupapa o te huia pukapuka Marine Fauna of N.Z.

Ka āhei te tangata ki te whakaruru tuhituhi mehemea kei a ia ngā tohungatanga me ngā rauemi e tutuki pai ai tana mahi. Heoi anō, e wātea ana te Kohinga Angawhao o Aotearoa hei āta tirotiro mā te tangata mehemea he āwhina kei reira.

Me whāki te kaitihi i ōna whakaaro ki tētahi o te Kāhu Ārahī Whakarōpūtanga Tuarā-Kore, ki te ġūtia rānei i mua i te timatanga, ā, mā ōtou a ia e ārahi mō te wāhi ki tana tuhituhi.

Ko te hunga pīrangī hoko pukapuka, me tuhi ki Fauna of N.Z., Manaaki Whenua Press, Manaaki Whenua, Pouaka Poutapeta 40, Lincoln 8152, Aotearoa.

E rua ngā tāmomo kaihoko: “A” – kaihoko tāmou, ka tukua ia pukapuka, ia pukapuka, me te nama, i muri tonu i te tāngā; “B” – ka tukua ngā pānui whakatairanga me ngā puka tono i āna wā anō.

Te utu (tirohia “Titles in print”, whārangī 282). Ko te kōpaki me te pane kuini kei roto i te utu. Me utu te hunga e noho ana i Aotearoa me Ahitereiria ki ngā tāra o Aotearoa. Ko ētahi atu me utu te moni kia tohua, ki ngā tāra Merikana, ki te nui o te moni rānei e rite anā.

E toe ana he pukapuka o ngā putanga katoa o mua. Mehemea e hiahia ana koe ki te katoa o ngā pukapuka, ki ētahi rānei, tonoa mai kia whakahaeke te utu. Tekau ērāra te heke iho o te utu ki ngā toa hoko pukapuka.