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Fauna of New Zealand
Ko te Aitanga Pepeke o Aotearoa

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Carabidae
(Insecta: Coleoptera): catalogue

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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 will likely reach 600 species. Endemism is high with 92% (391) of species and 58% (46) of genera currently recognised as occurring only in this country. Faunal affinities are greatest with eastern Australia (16 native genera and 4 native species are shared).

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.

(continued overleaf)
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 unknown. Population biology and locomotion are virtually undocumented. Mouthpart morphology and food data suggest that most species are opportunistic predators eating on a variety of small prey. Adults are active during most of the year, a little less so in winter. Adults are generally nocturnal. Parental care, or protection of eggs and larvae by the female, has been observed in 11 species.

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*New Zealand ground beetles have a number of enemies and parasites. Starlings, kiwis, spiders, and hedgehogs are frequent predators, while magpies, asilids, 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 kaiao. I Aotearoa, arā ētahi momo carabid maha tonu (tāe atu ki ētahi mea rahi), e kī ana ngā tohunga whakapūmāu koiora kua onge, kua mōrearea rānei te noho, ā, me tiaki ka tika.

Nā konei anō i nohoia nuiitia ai ngā whare rokiroki pepeke me ngā kōhinga pepeke o Aotearoa e ngā pitara noho papa, ina whakarite a kī ērā atu o ngā aitanga pepeke. Engari ahakoa e whāia nuiitia ana tēnei whānau, nō te tau 1934 te whakararangitanga whakamutunga o āna huāngā katoa (otirā, kua tāia he kōrero e whakau ana i ngā ingoa hou, me ngā momo hou i rito i te wā).

Nohi ai te nuinga o ngā carabid ki te mata tonu o Papatuanuku, ā, he pai ki a rātou te mākū. Heoi anō, arā ētahi ka noho rawa ki tōna poho, ki ngā ana, ki runga rānei i ngā tipu me ngā rākau. Arā anō ētahi ka noho tahi ki te hiako tangatanga, ki ngā peka pirauri rānei. Ko ngā kāngia noho māori e rua o Aotearoa e kītea ai te tokomaha o ngā momo carabid, ko te ngahere me ngā whenua pātītū. Ko ētahi momo ka noho ki ngā whenua pātītū i te tahamoana anake, engari ko te nuinga, ka kītea mai i te tahatika, piki atu ki ngā whenua āhuia teitei tonu. He tino tokoiti ngā momo ka noho ki ngā ana 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 māori, engari ko a ora tonu ētahi i ēnanga kāngia noho i whaihangatia e te ringa tangata. Tekau pea 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, mehema e pātata ana ki tētahi ngahere māori. Kua hou atu anō ngā momo o āwāhi i ētahi kāinga māori, engari kāore i panaia ngā momo tūturu ki waho.

He iti noa te mōhio ki te tupu haere o ngā Carabidae māori mai i te whānautanga tae noa ki te hemonga. Kāore e mōhiohia ana te kaupeka whakaputa urī o te nuinga. Waihoki, ko ngā āhuataanga taupori me te āhuia o tō rātou neke haere, me kī kei te huna tonu. Heoi, ko te hanga o te waha me te āhuia o ā rātou kai, e tohu ana he maha ngā momo mea ka putua e te pītara nei hei kai māia. He oreore tonu tā ngā pakeke mō te nuinga o te tau, otiirā, ka āhuia ngaokore haere ka takurua anā. He haere pō anō ngā pakeke. Kua kītea ngā uwha o ētahi momo i 11 e tiaki ariki anō i ngā hua me ngā kūi. Me ki he huna tonu tā ngā kūi, noho ai rātou ki te pōho o Papa, ā, me uua ka puta ake ki te whiaiao. Koinei anō i uua ai te hopu i a rātou ki te ringa, ki te kōpiha rānei.

Me kōrero anō ngā hoariri o ngā pitara noho papa i Aotearoa. Ko ēna hoariri matua, ko te tāringi, te kiwi, te pūngāwewere, 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 parasite 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 Brosicina. Other species emit a repulsive 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 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 māta, te toriura, te ngeru mohoao, te piopio, te taraute, me te kiore. Ko tā ngā kaituhui nei, ko te pāngāwerere peā tētahi tino hoarii i ngā whenua pātītī, me ngā whenua teitei. Ko tētahi 33% pea (137 momo) o ngā momo carabid katoa kua rangahaua, e muia ana e te pēwerekerekī (e te Acarī), ā, ko tētahi 11% (e 48 ngā momo) o ngā carabid katoa, ka muia e te kōpāravheti (e te Laboulbenialae). Ko te nuinga o ngā momo e muia ana e te Laboulbenialae, e te pēwerekerekī rānei, he noho ngahere ua, ā, ka kītea nutia i ngā rākau pīrau. Ko te nematode kia pirinoa ki ētahi momo pītara noho papa e rima.

He māmā noa ki ngā carabid whai parirau tūtūruru te re te rere ki wīwī, ki wāwā, ā, kāore e roa kua tangata whenua ki ő rātou kāinga hou. Engari ko te nuinga o ngā pītara noho papa nō kōinei tūtūruru, he rere-kore, ā, ka riro mā ngā waewae rātou e kawe haere ki hea, ki hea. Ki te whāhāriā tētahi, kua mahi kia te hina i a ia i ngā otaotao, i te oneone rānei, kua tahuti rānei. Engari tērā ētahi atu mahi pare hoarii rerekē a ngā mōno tūtūruru o Aotearoa. E rua ngā mōno pāpapa he kihihuna ō rāua, e kore ai rāua e kītea e te hoarii. He māhā ngā mōno ka whakatarunara kua mate rātou – ko te īwi Broscini ngā tōhunga ki tērā mahi. Ko ētahi mōno anō ka tuku haungaha, ngā raua mōno e hinei iha upokura. Tērā anō ngā pakeke o te īwi Amarotypus ka piri ki ngā kahiwai rākau kā pō ana, ā, ki te whakatata atu tētahi mea nui ki a ia, kua taka atu ki te papa. Ko tā ngā Prosphrodrus, he tirikohu ki te wai ki te pē he rararuru.

E 50 ngā mōno 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. He hopu rawa ētahi, ka hoatu tohu, ka tuku anō kia rere, ka hopu anō, ā, kia māhā ngā tau e pēnei ana - hei reira taea ai te whakatau 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 ahākao te tohunga, he kanohi hōmiromiro rānei te kaikohikohi. Kāore e taea e ātea whakatau tata i tū rātou tokomaha, i runga i ngā kīteka me ngā kōhinga 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 nuinga o ngā kōrero, e noho paratia ana ki ngā tāngā kōrero o te ao, e pā noa ana rānei ki ngā pītara takitahi o roto i ngā kōhinga koiora. Ko te tūmanako o ngā kaituhui, mā te rārangī pītara nei, ka āhe i mai ngā tohunga, me te marea anō hoki, ki ngā kōrero e pā ana ki te whakarōpūtanga, te tohanga, ngā āhuatanga taupuhi kaiako, ngā āhuatanga koiora, me te titaringa o ngā Carabidae. Ko te takoto o te rā rangi, he mea whakarite i runga i te

(haere tonu)
André Larochelle was born and educated in Québec, 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, Québec. 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, Québec. 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 kaitihi, a Andre Larochelle, i Québec. I reira ia e kura ana, ā, nō te tau 1974 ka whakawhiwhia ki tana tohu Brevet d’Enseignement spécialise, mai i te Whare Wānanga o Québec ki Montreal. Taka mai ki te tau 1990, e whakaako ana ia i te mātauranga 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 ēna. Mai i te 1975 ki te 1979 ko ia tētahi o ngā ētāhia hautaka mātaia pepeke, arā, o Cordulia me te Bulletin d’inventaire des insectes du Québec. Mai i te 1986 ki te 1992, ko ia te kaitiaki utu-kore o te Whare Rokiroki, Rangahau Pepeke o Lyman, i te Whare Wānanga o McGill, i Québec. I te tau 1992, ka neke mai a Andre ki Aotearoa, ka mahi hei kaipūtiaia rangahau. I tēnei wā, ko ia te kaitiaki utu-kore o te Kohinga Angawaho o Aotearoa, i Tāmaki-makau-raw. He nui ake i te 400 ngā kōrero kua tuhia e Andre mō te tohunga, te taupuhi kiaiao, te koiora, me te tītaringa o ngā aitanga pepeke o Amerika ki te Raki, o tūrā ōna te aro nui ki ngā carabid. I te tau 1993 ko ia tētahi o ngā kaitihi 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 tūtata te hītori māori o ngā carabid o Amerika ki te Raki. Ko te aronga nui o ana rangahau i tēnei wā, ko te āhua me te whakarōpūtanga o te whānau pītara noho papa o Aotearoa.

I whānau mai tērā atu kaitihi, a Marie-Claude Lariviere i Québec. I reira anō ia a rapu ana i te mātauranga ā, riro noa i a ia tana Tohu 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 Ottawa, mō te rua tau, ki reira whātōrō ai i ētāhi atu rangahautanga. Nō te tau 1992, ko neke mai a Marie-Claude ki Aotearoa, ka mahi hei kaipūtiaia rangahau mā Manaaki Whenua. Nō muri, ka riro i a ia te tūranga Kāihautū Mahi Rangahau i raro i te kaupapa e kia nei ko te “Biosystematics of New Zealand Land Invertebrates”. Nāna taua kaupapa i whakahaere i te tau 1994 ki te tau 1997. I tēnei rā, he ētāha kairangahau uikitiki tōna i Manaaki Whenua, he whakarōpū koiora te
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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.

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.
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 (Broun, 1908) for Agonum integratum (Broun, 1908); Anchomenus otagoensis Bates, 1878 for Platynus otagoensis (Bates, 1878); Anchomenus punctulatus (Broun, 1877) for Agonum punctulatum (Broun, 1877); Anchomenus sulciotarsis Bates, 1880 for Agonum sulciotars (Broun, 1880); Cicindela (Neocticindela) for Neoticindela 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 epilicus (Broun, 1923) for Molopsida epilicus (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) guerinii (Chaudoir, 1865) for Megadromus australasiae (Guérin-Méneville, 1841); Oopterus suavis Broun, 1917 for Pseudopterus suavis (Broun, 1917); Platynus macropterus (Chaudoir, 1879) for Colpodes macropterus Chaudoir, 1879; Taenarthrus capito (Jeannel, 1938) for Loxomerus (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, Laboulbeniale 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). Emberger (1936) published an extremely useful paper establishing the publication dates of species described by Blanchard in Dumont D’Urville’s Voyage au Pôle Sud.
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 (Jeannel, 1937; Lindroth, 1976 and 1980; Moore 1980b); Pterostichini (Britton, 1940; Butcher, 1984); Lebiini (Britton, 1941); Pentagonini (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 *Holcaspis* (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 (Amarotypinii); *Bountya insularis* Townsend, *Brulleia antarctica* Laporte de Castelnau, *Diglymma castigatum* Broun, *Mecodema alternans hudsoni* Broun (Broscriini); *Cicindela parryi* White, *Cicindela tuberculata* Fabricius (Cicindelinii); *Laxomerus brevicolis* (Blanchard), *Laxomerus nebrooides* (Guérin-Méneville) (Migadopinii); *Megadromus vigil* (White), *Plocamostethus planiusculus* (White), *Zeopoeculus putus* (Broun) (Pterostichini); *Duvalliomimus mayae* Britton, and *Kenodactylus audouini* (Guérin-Méneville) (Treachini).

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 Klimaszewski & 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 Klimaszewski & 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.* (1998b). 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.* (1998b), 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 Brosicina (Ball, 1956), the Oopterina (Liebherr & Will, 1998), and the Actenonychina (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, Broscriini, 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>
<th>Klimaszewski &amp; Watt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subfamily CARABINAE</td>
<td>Subfamily CARABINAE</td>
</tr>
<tr>
<td>Tribe CARABINI</td>
<td>Tribe CARABINI</td>
</tr>
<tr>
<td>Tribe PAMBORINI</td>
<td>Tribe CYCHRINI</td>
</tr>
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<td>Tribe CICINDELINII</td>
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</tr>
<tr>
<td>Tribe CICINDELINI</td>
<td>Tribe CICINDELINI</td>
</tr>
<tr>
<td>Subfamily SCARITINAE</td>
<td>Subfamily SCARITINAE</td>
</tr>
<tr>
<td>Tribe CLIVININI</td>
<td>Tribe CLIVININI</td>
</tr>
<tr>
<td>Tribe AMAROTYPINI</td>
<td>Tribe MIGADOPINAE</td>
</tr>
<tr>
<td>Tribe MIGADOPINII</td>
<td>Tribe MIGADOPINII</td>
</tr>
<tr>
<td>Tribe TROPOPTERINI</td>
<td>Tribe TRECHINI</td>
</tr>
<tr>
<td>Tribe TRECHINI</td>
<td>Tribe ZOLINI</td>
</tr>
<tr>
<td>Tribe ZOLINI</td>
<td>Tribe ZOLINI</td>
</tr>
<tr>
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<td>Tribe BEMBIDIINII</td>
</tr>
<tr>
<td>Subfamily HARPALINAE</td>
<td>Subfamily HARPALINAE</td>
</tr>
<tr>
<td>Tribe PTEROSTICHINI</td>
<td>Tribe PTEROSTICHINI</td>
</tr>
<tr>
<td>Tribe LICININI</td>
<td>Tribe LICININI</td>
</tr>
<tr>
<td>Tribe HARPALINI</td>
<td>Tribe HARPALINI</td>
</tr>
<tr>
<td>Tribe PLATYNINI</td>
<td>Tribe AGONINI</td>
</tr>
<tr>
<td>Tribe PERIGONINI</td>
<td>(not recorded)</td>
</tr>
<tr>
<td>Tribe PENTAGONICINII</td>
<td>Tribe PENTAGONICINII</td>
</tr>
<tr>
<td>Tribe LEBIINI</td>
<td>Tribe LEBIINI</td>
</tr>
</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 (121 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 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
tribes in New Zealand and Australia are the Broscini and Pterostichini. The largest carabid genus in New Zealand is *Mecodema* (58 taxa). The following world tribes appear to have their greatest diversity in New Zealand and Australia: Amatoryptini, Broscini, Mecyclobothracini, Meonini, Migadopini, Pamborini, Tropopterini, 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 *Oopterus* (Zolini) and *Kenodactylus* (Trechini) are shared with the Falkland Islands and Patagonia, but not with Australia. All Clivini 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., *Chlaenius flaviguttatus* Macleay, *C. ophonoides* Fairmaire (Callistini); *Egadroma subrobusta* Schauberger, *Euthenarus promptus* (Erichson), *Gnathaphanus melbournensis* (Laporte de Castelnau), *Notoobia melanaria* (Dejean) (Harpalini); *Eurytomis castelnaui* Chaudoir (Pterostichini); *Illaphanus stephensii* Macleay, *Paratachys transversicollis* Macleay, *Tachys plagiatius* Putzeys (Bembidini); and *Sarothrocrepis inquinata* (Erichson) (Masoreini).

**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., *Anilina*), in caves (see below), and also on plants. Several species in the genera *Oopterus*, *Zolus* (Zolini), *Molopsidea* (Tropopterini), “Anchomenus”, *Ctenognathus* (Platynini), *Agonocheila* (Lebiini), and *Amatorypus* (Amatoryptini) 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.), *Moirotrechus* (1 sp.) (*Trechini*), *Bembidion* (2 spp.), all *Zecillenus* (5 spp.) (Bembidini), *Triplosarus* (1 sp.) (Harpalini), and *Ctenognathus* (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 Amatoryptini.

Twelve (12) species from the following genera are obligatory cave-dwellers, i.e., living exclusively in caves: *Duvaliomimus*, *Erebotrechus*, *Neanops*, *Pholeodytes*, *Scototrechus* (*Trechini*), and *Syllectus* (*Harpalini*). Eighteen (18) species are occasional cave-dwellers. They belong to the genera *Taenarthus* (Migadopini), *Mecodema* (Broscini), *Duvaliomimus* (*Trechini*), *Paratachys* (Bembidini), *Holcaspis*, *Megadromus*, *Plocamostethus*, *Rhytisternus* (*Pterostichini*), *Dicrochile* (Linicini), *Lecanomerus*, *Syllectus* (*Harpalini*), and *Prophorus* (Platynini). The latter two genera occur more frequently in caves than other genera, provided that rills or small brooks run through the caves.

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

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.), *Plocamostethus* (1 sp.), and *Zeopoecilus* (1 sp.).
Table 3. Number of genera and species of Carabidae occurring in New Zealand. ( ) = number of endemic taxa; [ ] = number of adventive taxa.

<table>
<thead>
<tr>
<th>Subfamilies</th>
<th>Number of genera and status</th>
<th>Number of species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carabinae</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carabini</td>
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<td>1(0)</td>
</tr>
<tr>
<td>Carabus</td>
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</tr>
<tr>
<td>Pamborini</td>
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<td>1(1)</td>
</tr>
<tr>
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20 tribes 78 (46) [14] 424 (391) [29]
Table 4. Genera shared with Australia, New Caledonia, Norfolk Island, and Lord Howe Island. X = present; [ ] = adventive; — = absent.

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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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<th>Species (winged)</th>
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<th>New Caledonia</th>
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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 *Megadromus* (Pterostichini), live closer to the ground surface and they are more easily found.

New Zealand carabids have a number of enemies and parasites. Starlings, kiwis, spiders, and hedgehogs are major predators while magpies, 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 (Cicindelidae).

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, Mecyclothoracin, Tropoperterini, and Zolini. Fifteen (15) species were heavily infested in the genera *Duvaliominus* (Trechini), *Lecanomerus* (Harpalini), *Mecyclothorax* (Mecyclothoracin), *Molopsidea* (Tropoperterini), *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*, *Megadromus*, *Plocamostethus* (Pterostichini), *Mecodema* (Brosini), 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 tenereal carabids with Laboulbeniales or mites. Before this catalogue, only one species (*Kenodactylus audouini* (Guérin-Ménéville)) had been reported with Laboulbeniales (Rossi, 1984); no published record is available for mites. More information on 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.), (Brosini), *Holcaspis* (2 spp.), and *Megadromus* (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.) (Brosini), *Megadromus* (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.) (Amarotypini), *Diglymma* (1 sp.), *Mecodema* (3 spp.), *Oregus* (1 sp.) (Brosini), *Holcaspis* (2 spp.), *Megadromus* (5 spp.), *Plocamostethus* (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.) (Brosini), *Megadromus* (4 spp.), *Plocamostethus* (1 sp.), and *Zeopoecilus* (1 sp.) (Pterostichini). When closely approached, adults of *Amarotypus* (Amarotypini) standing on tree trunks at night let themselves drop to the ground. Finally, *Prospodius* (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 pittrap 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:
A majority of species are represented only by a
information but generally poor in biological data. Fur-
least surveyed.

Flaxlands, edges of streams crossing forests, hill tops, soil
fissures under well-embedded stones, the underside of
coastal habitats (gravelly-stony sea beaches, estu-
tors, except for the Northland, Auckland, and Wellington
island has been somewhat neglected by collec-
ties, e.g., in the Amarotypini and Migadopini. The South
island, may yet yield a number of undescribed spe-
glacial brooks and seepages) of the northern half of the
zealand, especially in the alpine habitats (edges of small
left for a period of 5–7 days. According to the world litera-
tecture, setting and spacing traps in this manner allow mini-
ference between traps and yields the greatest
number of species. Pit trapping and litter collecting was
also carried out for longer periods, especially in autumn
winter. For example, pit traps containing ethylene gly-
would be set in the Mangamuka Hills, ND for 6 weeks
winter. For example, pit traps containing ethylene gly-
were set in a straight line with a
distance of five metres between each trap and usually left

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 spe-
cies, e.g., in the Amarotypini and Migadopini. The South
Island has generally received the closest attention while
the North Island has been somewhat neglected by collec-
tors, except for the Northland, Auckland, and Wellington
areas. Coastal habitats (gravelly-stony sea beaches, estu-
aries, 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. Fur-
thermore, a majority of species are represented only by a
few specimens, impeding our ability to assess morpho-
logical variations within and between populations.

Because we are field biologists and believe that spe-
cies should be first recognised in the field, we have car-
ried 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 extrac-
tion techniques, and pit trapping. 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

Geographical and biological data associated with all
samples and specimens collected were recorded in as
much detail as possible in field notebooks. This informa-
tion was subsequently transferred to mounted specimens
on two labels (Fig. 1), one detailing the locality informa-
tion, the other one, the biological observations. More re-
cently, most locality information has also been georeferenced (attributed longitude and latitude data). Our
material is deposited in the New Zealand Arthropod Col-
lection (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 lit-
erature 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 sub-
families, divisions, tribes, and subtribes. Genera, subgenera, species, and subspecies are listed alphabeti-
cally within their respective higher category.

The nomenclature adopted in this catalogue adheres
to the provisions established in the International Code of
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 synonymy. 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 synonymy. 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 unjustified emendations.

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 MicrosoftAccess97 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 CorelDRAW (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, Wairarapa; 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, Kermadec 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, endogeian, 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 Clivini.

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.

CATALOGUE

Taxa are listed in phylogenetic order from divisions to subtribes and in alphabetical order from genera to subspecies. Valid family-group names are presented without authorship and date of publication; such information is contained in Madge (1989). Each genus-group name or species-group name is listed with its author(s), date, and page of publication. Valid species-group names are listed alphabetically in **bold italics** in their current combinations; they are also recorded in **italics** in their original combinations. Synonyms are presented chronologically and in **italics** in their original combinations. Most synonyms of species introduced from outside the Australian Region are omitted.

Family CARABIDAE

Division NEBRIIFORMES

Subfamily CARABINAE

Supertribe CARABITAE

Tribe CARABINI

Figure 3

Geographic distribution. Worldwide.


Genus Carabus Linnaeus, 1758

Figure 3

Carabus Linnaeus, 1758: 413. Type species: Carabus granulatus Linnaeus, 1758, designated by Hope, 1838: 47.

Geographic distribution. Holarctic Region; New Zealand (adventive).


Subgenus Archicarabus Seidlitz, 1887

Archicarabus Seidlitz, 1887: 6. Type species: Carabus nemoralis O.F. Müller, 1764, by monotypy.

Archeocarabus Bengtsson, 1927: 83. Type species: Carabus nemoralis O.F.Müller, 1764, by original designation.

Geographic distribution. Holarctic Region; New Zealand (adventive).
**Carabus (Archicarabus) nemoralis** O.F. Müller, 1764

*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.

**References.** Spiller, 1949: 137 (distribution); Pilgrim, 1963: 1–84 (distribution).

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**Tribe PAMBORINI**

**Figure 4**

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


**Genus Maoripamborus** Brookes, 1944


**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

*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).

**References.** Brookes, 1944: 263 (distribution, ecology); Worthy, 1983: 42 (subfossils); Meads, 1990: 37 (biology, conservation); Harris, 1992: 42–44 (distribution, ecology, biology); Molloy et al., 1994: 60 (distribution, conservation); Sherley, 1994: 115 (conservation); Klimaszewski & Watt, 1997: 168 (distribution, biology).

**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


**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, NC, SC.
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 Hokianga, 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 wakefieldi: 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
*Cicindela feredayi* Bates, 1867: 53. Type locality: Province of Canterbury, South Island.
*Neocicindela feredayi*: Rivalier, 1963: 37.

**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).

**Dispersal power.** Macropterous. Strong flier. Strong runner.

**References.** Hudson, 1934: 30 (distribution, ecology); Brouerius van Nidek, 1965: 356 (distribution); Pilgrim, 1969: 364 (dispersal power); Johns, 1977: 319 (distribution, ecology); Savill, 1999: 133, 137 (distribution, ecology).

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


**Ecology.** Stenotopic, epigean, xerophilous, heliophilous. Montane, subalpine, alpine. Dry clayey pockets from scree; snow patches (occasionally). Diurnal; active in the sunshine.

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

**Dispersal power.** Macropterous. Strong flier. Fast runner.


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**Cicindela (Neocicindela) helmsi** Sharp, 1886
*Cicindela helmsi* Sharp, 1886: 358. Type locality: Greymouth, BR.
*Cicindela novaseelandica* Horn, 1892b: 83. Type locality: New Zealand. Synonymised by Horn, 1893: 335.
*Cicindela circumpictoides* Horn, 1900: 207. Type locality: Oceania (Horn, 1907: 21). Synonymised by Savill, 1999: 129.


**Geographic distribution** (Map p. 230). North Island: TO. South Island: BR, FD, KA, MB, NC, NN, OL, SC, WD.

**Ecology.** Epigean, mostly riparian, arenicolous, xerophilous, heliophilous. Lowland, subalpine, alpine. Dry sandy pockets from open river beds; sandy spots in steppe (TO). Diurnal; active in the sunshine. Gregarious.

**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.

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**Cicindela (Neocicindela) latecincta** White, 1846
*Cicindela late-cincta* White, 1846: 1. Type locality: Waikouaiti, DN (on Plate 1 hyphen omitted).


**Ecology.** Eurytopic, epigean, xerophilous, heliophilous. Lowland, montane, subalpine, alpine. Bare or sparsely vegetated dry clay banks, roadsides, gullies, grasslands, farmlands, wastelands, parks, river beds, sea cliffs, open scrublands, tree plantations (pine). Larval burrows dug at base of steep sloping clay banks, each burrow with small lip at the entrance, preventing water from running into it. Diurnal; active in the sunshine. Gregarious.

**Biology.** Seasonality: September, November–April. Predacious. Food: Flies and centipedes.

**Dispersal power.** Macropterous. Strong, short-distance flier (1–2 m).

**References.** Longstaff, 1912: 470 (biology); Hudson, 1934: 29 (distribution); Brouerius van Nidek, 1965: 357 (distribution); Johns, 1977: 323, 325 (distribution, ecology); Johns et al., 1980: 29 (distribution, ecology); Johns, 1986: 32 (distribution, ecology); Townsend, 1997: 7 (distribution); Howe, 1998: 16 (distribution, ecology); Savill, 1999: 134, 144 (distribution, ecology).
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).


Note. This name could represent a species complex.

Cicindela (Neocicindela) perhispida campbelli Broun, 1886
Cicindela campbelli Broun, 1886: 817. Type locality: Waikato Heads, AK-WO.
Neocicindela perhispida campbelli: Horn, 1926a: 168.

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


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.


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.
**Ecology.** Stenotopic, epigean, arenicolous, xerophilous, heliophilous. Coastal lowland. Dry beaches and foredunes with yellowish-brown or creamy yellow sand. Diurnal; active in the sunshine. Gregarious.

**Biology.** Seasonality: November–February. Predacious (based on mouthpart morphology). Defense mechanism: Cryptic coloration (body colour blending perfectly with the background).


**Note.** A gentical study is required to assess the taxonomic status of *perhispida* 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.

**Ecology.** Stenotopic, epigean, silvicicolous, xerophilous. Lowland, mountains. Small openings in forests (broadleaf, podocarp, beech). Mostly diurnal; active in the sunshine; hides under stones on cloudy days. Solitary.


**Dispersal power.** Macropterous. 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.


*Cicindela tuberculata tuberculata* Chaudoir, 1865a: 28.

*Cicindela huttoni* Broun, 1877b: 375. Type locality: Hikuwai, CL. Synonymised by Horn, 1936: 10.

**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.

**Neocicindela waiouraensis** Rivalier, 1963: 37.

**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


Geographic distribution. Subantarctic New Zealand (endemic).


Calathosoma rubromarginatum (Blanchard, 1843)

Calathosoma rubromarginatum (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); Brooks, 1951: 22 (distribution); Johns, 1974: 288, 301 (distribution, ecology); Emberson, 1993b: 20 (taxonomy).

Genus Loxomerus Chaudoir, 1842

Figure 7


Loxomerus Chaudoir, 1842: 851. Type species: Loxomerus nebroioides 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) nebroioides (Guérin-Méneville, 1841)

Figure 7

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


Pristorychus castaneus Blanchard, 1843: Plate 2, Figure 1 (redescribed as Pristancylus castaneus in 1853: 23). Type locality: Auckland Islands. Synonymised by Chaudoir, 1861: 515.


Loxomerus (Loxomerus) nebroioides: 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.

References. Jeannel, 1938b: 17 (distribution); Gourlay, 1950: 179 (distribution); Broun, 1951: 21 (distribution, ecology); Johns, 1974: 291, 294, 301 (larval exoskeletal material).

Subgenus Pristancylus Blanchard, 1853


Geographic distribution. Auckland Islands.

Loxomerus (Pristancylus) brevis (Blanchard, 1843)

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


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); Broun, 1951: 21 (distribution, ecology); Johns, 1974: 291, 294, 301 (larval dispersal).
description, distribution, ecology); Emberson, 1993b: 20 (taxonomy); Nicholls et al., 1998: 3 (taxonomy).

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

_Euthenarus 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 capitatus_ (Jeannel, 1938), new combination

_Loxomerus* (*Pristancylus*) **capitatus** 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.


**Note**. This species belongs to the genus _Taenarthrus_ based on characters of the mentum and genitalia (P.M. Johns, personal communication).

_Taenarthrus philpotti_ Broun, 1914

_Taenarthrus philpotti* Broun, 1914a: 85. Type locality: Hump Ridge, Southland [FD].

_Loxomerus philpotti_: Townsend, 1963: 95.

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

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

**Biology**. Seasonality: September, December. 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.


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.

**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 flier to artificial lights at night; frequent in drift material, which indicates previous flight. Slow runner.

**Notes.** Sloane, 1920b: 320.

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Furthermore, references to other species are mentioned, including *Clivina australasiae* and *Clivina basalis*, with notes on their distribution, ecology, and biology, providing a comprehensive overview of these species in the context of New Zealand fauna.
Dispersal power. Macropterous. Frequent flier. Frequent in drift material (sea beaches, lagoons, sand dunes), which indicates previous flight. Slow runner.


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.


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

References. Moore et al., 1987: 71 (distribution, ecology, biology, dispersal power); Baehr, 1989: 12 (distribution, ecology); Sunderland et al., 1995: 40 (distribution).

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.


Dispersal power. Subapterous. Slow runner.


Subtribe BROSCINA

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

Genus Brullea Laporte de Castelnau, 1867


Geographic distribution. New Zealand (endemic).

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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.


Diglymma clivinoides (Laporte de Castelnau, 1867)

Maoria clivinoides Laporte de Castelnau, 1867: 78 (redescribed in 1868: 164). Type locality: Near Wellington, WN.

Metaglymma clivinoides: Putzeys, 1873a: 315.


Diglymma clivinoides: Hutton, 1904: 143.

Diglymma basale Broun, 1917: 358. Type locality: Ben Lomond, Mt Alfred, and Routeburn, OL. Synonymised by Britton, 1949: 541.

Geographic distribution (Map p. 236). North Island: WA, WN, South Island: BR, FD, MB, MC, MK, NC, NN, OL, SD, SL, WD.

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

Biology. Seasonality: September–July. Tenerals: September, February–March. Predacious (based on mouthpart morphology). Defense mechanism: Either feigns death with legs stiffened and held closely to the body (R.M. Emberson, personal communication) or emits a strong smell when disturbed. Regularly infested with mites.

Dispersal power. Subapterous. Slow runner.


Note. This taxon could represent a species complex.

Diglymma marginale Broun, 1914

Diglymma marginale Broun, 1914b: 148. Type locality: Hump Ridge, near Invercanigill, FD.

Geographic distribution (Map p. 236). South Island: BR, FD, MB, NN.

Ecology. Fossorial, silvicolous, very hygrophilous. Montane, subalpine. Wet forests (beech) and scrublands. Nocturnal; hides during the day under logs.

**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.

**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 under logs, in tree stumps.


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

**References.** Britton, 1949: 541 (distribution); Patrick et al., 1984: 17 (distribution); Patrick et al., 1986: 13 (distribution, ecology); Patrick et al., 1987: 35 (distribution); Patrick et al., 1992b: 18 (distribution); Patrick et al., 1993: 11 (distribution, ecology).

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

**Genus Mecodema Blanchard, 1843**

**Figure 9**
Mecodema Blanchard 1843: Plate 2, Figure 14 (redescribed in 1853: 34). Type species: Mecodema sculpturatum 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 Castelau, 1867
Mecodema alternans Laporte de Castelau, 1867: 75 (redescribed in 1868: 161). Type locality: Near Otago, South Island.
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 swarms, 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 swarms. Nocturnal; hides during the day under logs and among tussock roots. Gregarious.
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Dispersal power. Subapterous. Slow runner.

References. Britton, 1949: 568 (distribution); Townsend, 1971b: 178, 180 (taxonomy, including larval description, distribution, ecology); Johns, 1974: 284, 301 (distribution, ecology, biology); Best, 1979: 482 (biology).

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) and shrublands; tussock grasslands. Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Slow runner.


Note. This species could be a true forest inhabitant.

Mecodema dunense Townsend, 1965

Mecodema dunense Townsend, 1965: 313. Type locality: Dun Mountain, NN.

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

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


Dispersal power. Subapterous. Slow runner.


Mecodema florae Britton, 1949

Mecodema florae Britton, 1949: 572. Type locality: Ohakune, TO.

Geographic distribution (Map p. 246). North Island: GB, HB, RI, TO. South Island: BR, NN.

Ecology. Fossorial, mostly silviculous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech) and shrublands; screes. Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Slow runner.


Mecodema femorale Broun, 1921

Mecodema femorale Broun, 1921: 595. Type locality: Hump Ridge, Southland [FD].


Geographic distribution (Map p. 246). South Island: CO, FD. Stewart Island.

Ecology. Eurytopic, fossorial, very hygrophilous. Montane, subalpine, alpine. Wet forests (beech) and shrublands, tussock grasslands, herbfields, screes. Nocturnal; hides during the day under stones.


Dispersal power. Subapterous. Slow runner.


Mecodema florae Britton, 1949

Mecodema florae Britton, 1949: 572. Type locality: Ohakune, TO.

Geographic distribution (Map p. 246). North Island: GB, HB, RI, TO. South Island: BR, NN.

Ecology. Fossorial, mostly silviculous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech) and shrublands; screes. Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Slow runner.


Mecodema florae Britton, 1949

Mecodema florae Britton, 1949: 572. Type locality: Ohakune, TO.

Geographic distribution (Map p. 246). North Island: GB, HB, RI, TO. South Island: BR, NN.

Ecology. Fossorial, mostly silviculous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech) and shrublands; screes. Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Slow runner.


Mecodema longicolle Broun, 1923

Mecodema longicolle Broun, 1923: 672. Type locality: Mt Egmont/ Taranaki, TK.


Geographic distribution (Map p. 248). North Island: TK, WA. South Island: NN.
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

Ecology. Fossorial, mostly silvicolicous, 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, silvicolicous, very hygrophilous. 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, silvicolicous, very hygrophilous. Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Slow runner.


**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 silvicolicous, 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. proximis [sic], distribution, conservation); Townsend, 1997: 9 (distribution).

**Mecodema punctatum** (Laporte de Castelnau, 1867)

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

Metaglymma punctatum: Putzeys, 1873a: 312.


Mecodema aeneoniger: Broun, 1893a: 977.


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

Ecology. Stenotopic, fossorial, silvicolicous, 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.


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, NC, NN, ON, 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.

References. Townsend, 1965: 305 (key to Mecodema costellum subspecies); Townsend, 1990: 35–37 (subfossils); Worthy & Holdaway, 1993: 178 (subfossils); Townsend, 1997: 8 (subfossils).

Mecodema costellum Lewis, 1902
Mecodema costellum 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).

*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.

*Mecodema costellum costellum* Broun, 1903

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

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

**Ecology.** Stenotopic, fossorial, silviculous, 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.

*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 silviculous, very hygrophilous. 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.


*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, silviculous, 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.


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

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


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.


Dispersal power. Subapterous. Slow runner.


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

Mecodema litoreum Broun, 1886
Mecodema litoreum Broun, 1886: 875. Type locality: Taieri Beach, Otago, DN.


Ecology. Eurytopic, fossorial, silvicolous, very hygrophilous. Lowland, montane. Wet forests (beech) and scrublands; sand hills close to the sea. Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Slow runner.


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

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


Dispersal power. Subapterous. Slow runner.


Note. Enigmatic species which has not been collected for many years.
DN, MK, SC.

Ecology. Stenotopic, fossorial, silviculous. 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.


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.

Mecodema atrox Britton, 1949

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

Geographic distribution. North Island: BP.

Ecology. Fossorial, silviculous, 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: Otaki, BP.


Geographic distribution. North Island: BP.

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


Dispersal power. Subapterous. Slow runner.

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

Mecodema occipitale Broun, 1923

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

**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) and tree plantations (pine); farmlands, gardens. Mostly nocturnal; sometimes active on cloudy days; hides during the day under logs.


**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, silvicolous, 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).

**infimate group**

*Mecodema elongatum* Laporte de Castelnau, 1867


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

**Ecology.** Fossorial, mostly silvicolous. 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 silvicolous, 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.


**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. morio* [sic], distribution, conservation).
**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.


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

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

**Ecology.** Fossorial, mostly silvicolous, 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); Moeed et al., 1994: 59 (distribution, conservation).

**Mecodema fulgidum** Broun, 1881
*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 cognatum** Broun, 1908: 336. Type locality: Castle Hill and Broken River, MC. Synonymised with *M. constrictum* by Britton, 1949: 565.

**Mecodema halli** Broun, 1915: 270. Type locality: Mt Hutt, near Methven, MC. Synonymised by Britton, 1949: 564.

**Mecodema cassense** Broun, 1923: 671. Type locality: Cass, MC. Synonymised with *M. constrictum* by Britton, 1949: 565.

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

**Mecodema simulans** Hudson, 1934: 32. Type locality: 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, screes. 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, WNI (type mislabelled as Mt Hector, Otago).

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


Dispersal power. Subapterous. Slow runner.


Mecodema laeviceps Broun, 1915

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

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


Dispersal power. Subapterous. Slow runner.


Mecodema impressum Laporte de Castelnau, 1867

Mecodema impressum Laporte de Castelnau, 1867: 75 (redescribed in 1868: 161). Type locality: Near Dunedin, DN.

Mecodema mutabile Broun, 1917: 357. Type locality: Mt Dick, Ben Lomond, Mt Emnslow and Mt Alfred, OL. Synonymised by Britton, 1949: 562.

Geographic distribution (Map p. 247). South Island: BR, CO, DN, FD, 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.


Dispersal power. Subapterous. Slow runner.


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


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


Dispersal power. Subapterous. Slow runner.


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.


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 pulchellum Townsend, 1965

Mecodema pulchellum Townsend, 1965: 307. Type locality: West of Saddle Hill, NN.

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

Ecology. Fossorial. Montane. A wet forest (beech). Nocturnal; hides during the day under limestone blocks.


Dispersal power. Subapterous. Slow runner.

References Townsend, 1965: 307–308 (taxonomy, distribution, ecology); Meads, 1990: 36 (distribution, conservation); Molloy et al., 1994: 59 (distribution, conservation); Townsend, 1997: 9 (distribution).

Mecodema quoinense 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 (broadleaf, podocarp, beech). Nocturnal; hides during the day under logs.


Dispersal power. Subapterous. Slow runner.


Mecodema quoinense Broun, 1912: 384. Type locality: Mt Quoin, Tararu 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.

References Britton, 1949: 558 (distribution); Molloy et al., 1994: 59 (distribution, conservation).
**Mecodema rex** Britton, 1949

*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, WA, WN.

**Ecology.** Fossorial, mostly silvicolous, very hygrophilous. 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.** This taxon could represent a species complex.

**Mecodema validum** Broun, 1923

*Geographic distribution* (Map p. 251). North Island: BP, CL, GB, ND, TO.

**Ecology.** Fossorial, mostly silvicolous, very hygrophilous. Montane, subalpine, alpine. Wet forests (beech, podocarp, broadleaf). Nocturnal; hides during the day under big logs and fallen trees.

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

**References.** Britton, 1949: 559 (distribution); Davies, 1986: 63 (distribution, ecology, biology).

**sulcatum group**

**Reference.** Townsend, 1998: 7, 9 (key to *M. oblongum* and *M. sulcatum*).

**Note.** Species belonging to this group could require a genus of their own.

**Mecodema oblongum** (Broun, 1882)

*Geographic distribution* (Map p. 248). North Island: HB, WA, WN. South Island: SD.
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)

*Metaglymma oregoide* [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)

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


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.


Genus *Metaglymma* Bates, 1867


Geographic distribution. New Zealand (endemic).


*Metaglymma aberrans* Putzeys, 1868


Ecology. Eurytopic, fossorial. Lowland, montane. Tussock grasslands, gardens, urban areas, scrublands, tree plantations (willow), lakeshores. Nocturnal; hides during the day under stones and logs, or in the soil.


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.


Metaglymma asperum Broun, 1893a: 978. Type locality: Taiieri Beach, DN. Synonymised by Britton, 1949: 579.


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

**Ecology.** Eurytopic, fossorial. 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 aereus** (White, 1846)

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

Promecoderus aereus: Chen, 1851: 117.

Mecodema oeneum [sic]: Laporte de Castelnau, 1867: 76.


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

Oregus aereus: Putzeys, 1873a: 317.

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


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

**Oregus aeneus** (White, 1846)

Promecoderus aereus: White, 1846: 5. Type locality: Port Nicholson, WN.

Promecoderus aereus: Chen, 1851: 117.

Mecodema oeneum [sic]: Laporte de Castelnau, 1867: 76.


Oregus aeneus [sic]: Putzeys, 1868b: 327.

Oregus aereus: Putzeys, 1873a: 317.

**Geographic distribution.** North Island: WN. South Island: CO, DN, FD, MB, MC, MK, NC, NN, OL, SC, SL.

**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.

**References.** Britton, 1949: 543 (distribution); Molloy et al., 1994: 33 (distribution, conservation); Peat & Patrick, 1995: 90 (distribution).

**Division PSYDRIFORMES**

**Subfamily PSYDRINAE**

**Supertribe PSYDRITAE**

**Geographic distribution.** Worldwide.


**Tribe MECYCLOTHORACINI**

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


**Genus Mecyclothorax** Sharp, 1903

**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 Mecyclothoracin, not Tropopoterini. 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 ambiguus** (Erichson, 1842)

*Anchomenus ambiguus* Erichson, 1842: 130. Type locality: Tasmania, Australia.

*Cyclothorax ambiguus*: Sloane, 1895: 447.


**Ecology.** Eurytopic, epigean, mesophilous. Lowland. Sand dunes, cultivated fields (strawberry), pastures, lawns, gardens, vacant lots, chicken yards. Nocturnal; hides during the day under dead leaves and at the base of plants (*Lupinus*). Gregarious.


**Dispersal power.** Macropterous. Regular flier. Moderate runner.

**References.** Sloane, 1920a: 153 (distribution); Moore, 1963: 278 (distribution); Moore, 1984: 161–162 (taxonomy, distribution); Moore et al., 1987: 147 (distribution, ecology, biology, dispersal power); Deuve, 1993: 151–152 (morphology of female reproductive system).

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

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


**Geographic distribution** (Map p. 251). North Island: GB, HB, RI, TK, TO, WA, W1, 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 eplicata* Britton, 1940: 477.

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

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.

*Turastethus placens* Sharp, 1886: 373.

*Molopsida placens* Britton, 1940: 477.

*Mecyclothorax placens* Sherley et al., 1999: 299.

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.


Tribe MEONINI (MEONIDINI)

Figure 11

Geographic distribution. Australian Region.


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.

*Selenochilus fallax* : Britton, 1940: 477.

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

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


Dispersal power. Subapterous. Moderate runner.


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

*Selenochilus piceus* (Broun, 1893)

*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) picea* Lacordaire, 1854: 326.

*Selenochilus erythropus* Chaudoir, 1878b: 23.


*Selenochilus piceus* : Csiki, 1930: 736.

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


Biology. Seasonality: October. 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.

*Selenochilus ruficornis* : Britton, 1940: 478.

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.


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.

Molopsida alpinalis: Britton, 1940: 477.

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

Ecology. Epigean, mostly silvicolous, very hygrophilous. 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)

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


Tropidopterus antarcticus: Csiki, 1929: 486.

Molopsida insularis: Britton, 1940: 477.


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. Molopsida carbonaria: Britton, 1940: 477.

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


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. Molopsida cincta: Britton, 1940: 477.

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)

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

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Montane. Wet forests (beech, podocarp, broadleaf). Nocturnal; hides during the day in leaf litter and moss.


Note. This taxon could be conspecific with Molopsida oxygona.

Molopsida cordipennis (Broun, 1912)
Tarastethus cordipennis Broun, 1912: 388. Type locality: Mt Quoin, Taranua Range, WN. Molopsida cordipennis: Britton, 1940: 477.

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.


Dispersal power. Subapterous. Moderate runner.

Molopsida debilis (Sharp, 1886)

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


Dispersal power. Subapterous. Moderate runner.


Molopsida diversa (Broun, 1917)

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


Dispersal power. Subapterous. Moderate runner.


Molopsida dubia (Broun, 1894)

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 *Molopsida strenua*.

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

*Molopsida fuscipes* (Broun, 1923)
*Tarastethus fuscipes* Broun, 1923: 675. Type locality: Belgrove, NN.
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 *Molopsida seriatoporus*.

*Molopsida halli* (Broun, 1917)
*Tarastethus halli* Broun, 1917: 367. Type locality: Mt Kiwi and Moa Basin, near Mt Algidus, MC.
Geographic distribution (Map p. 256). South Island: MC.
Biology. Seasonality: October. Predacious (based on mouthpart morphology).
Dispersal power. Subapterous. Moderate runner.
Note. This taxon could be conspecific with *Molopsida oxygona*.
Molopsida oxygona (Broun, 1886)
Tropopterus oxygona Broun, 1886: 820. Type locality: Mt Maungatua, DN.
Tarastethus oxygonus Sharp, 1886: 373. 
Molopsida oxygona: Britton, 1940: 477.

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.


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: TO, CL, GB, HB, RI, TK, TO, WN, WO.

Ecology. Stenotopic, epigean, silvicolous, very hygrophilous. Lowland, montane, subalpine. Wet forests (beech, broadleaf, podocarp, shrublands, and scrublands). Nocturnal; hides during the day under and in rotten logs as well as in rotten branches.


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.
Molopsida pretiosa: Britton, 1940: 477.

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; fellfields. Nocturnal; hides during the day in leaf litter (mostly), moss, under fallen branches and epiphyte crowns. Gregarious.


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.
Molopsida propinqua: Britton, 1940: 477.

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


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.

Dispersal power. Subapterous. Moderate runner.


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.

Tropopterus 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. Tenebrids: September, January–April, July. Predacious (based on mouthpart morphology). Occasionally infested with fungi (Laboulbeniales) and mites.


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.

Molopsida simulans (Broun, 1894)

Tarastethus simulans Broun, 1894: 309. Type locality: Capleston, BR.

Geographic distribution (Map p. 257). South Island: BR.


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

Dispersal power. Subapterous. Moderate runner.

Note. This taxon could be conspecific with Molopsida alpinalis.

Molopsida strenua (Broun, 1894)

Tarastethus strenuus Broun, 1894: 308. Type locality: Napier [HB] (Hastwells), WA.

Geographic distribution (Map p. 258). North Island: BP,
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)  
*Trachelopterus sulcicollis* Bates, 1874: 241 (redescribed in 1875: 304). Type locality: Christchurch, MC.  
*Trachopterus 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).


Subtribe AEPINA

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

Genus *Kenodactylus* Broun, 1909

*Kenodactylus Broun, 1909*  
*Kenodactylus capito* Broun, 1909b, by monotypy.  

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


*Kenodactylus audouini* (Guérin-Méneville, 1830)  

*Trechus 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


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

**References.** Brookes, 1932: 27–28 (taxonomy); Jeannel, 1938a: 255–256 (taxonomy, distribution); 1940b: 78–82 and 1964: 411 (taxonomy); Casale & Laneyrie, 1982: 51 (list).

**Notes.** *Maoritrechus* was incorrectly synonymised with *Temnostega* Enderlein, 1905, by Jeannel (1938a: 255), but was used again as a valid genus by Watt (1983a: 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.

**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.

**References.** Brookes, 1932: 28 (distribution, ecology); Casale & Laneyrie, 1982: 51 (list); Watt, 1983b: 35 (distribution, ecology); Voisin & Dreux, 1987: 463 (biogeography).

**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


**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.

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

**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.


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

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


**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 scoriae.

**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

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

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


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


“Duvaliomimus” walkeri (Broun, 1903)

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

*Trechus maori* Jeannel, 1920: 111. Type locality: Greymouth, BR.

Synonymised by Jeannel, 1938a: 256.

*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).

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

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


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Genus Erebotrechus Britton, 1964


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

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

**References.** Britton, 1964a: 625–627 (taxonomy); Casale & Laneyrie, 1982: 67 (list).

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Erebotrechus infernus Britton, 1964

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

**Stygiotrechus** [sic] *infernus* Britton, 1964a: 626, Figure 1.

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


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

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


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Genus Neanops Britton, 1962


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

**References.** Britton, 1962: 672 (taxonomy); Casale & Laneyrie, 1982: 67 (list); Valentine, 1987: 79–81 (taxonomy).

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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.


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

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


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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.


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

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


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Genus Scototrechus Britton, 1962


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

**References.** Britton, 1962: 670–672 (taxonomy); Casale & Laneyrie, 1982: 117 (list).

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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.


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

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

Tribe ZOLINI

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.

Oöpterus: Broun, 1880: 54 (historical alternative spelling).


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 basalis Broun, 1915

Oöpterus basalis Broun, 1915: 273. Type locality: Ben Lomond, OL.

Pseudoopterus basalis: Csiki, 1928: 225.


Geographic distribution (Map p. 260). South Island: MK, OL.


Dispersal power. Subapterous. Moderate runner.

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

Oöpterus 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

*Oopterus frontalis* Broun, 1908: 342. Type locality: Wadestown, WN and Palmerston North, WI.


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

**Geographic distribution** (Map p. 260). North Island: WN.

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

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

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


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**Oopterus fulvipes** Broun, 1886

*Oöpterus fulvipes* Broun, 1886: 936. Type locality: Midhirst, base of Mt Egmont, TK.


*Oopterus fulvipes*: Hudson, 1934: 177.

**Geographic distribution** (Map p. 260). North Island: TK.

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

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

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


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**Oopterus laevicollis** Bates, 1871


*Oopterus laevicollis*: Hudson, 1934: 177.

**Geographic distribution** (Map p. 260). North Island: WN. South Island: MC.

**Ecology.** Epigean, silvicolous. Lowland. Both wet and dry forests (broadleaf, podocarp, beech) and scrublands. Nocturnal; shelters during the day.


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


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**Oopterus laevigatus** Broun, 1903

*Oöpterus laevigatus* Broun, 1903: 609. Type locality: Westport, NN.


*Oopterus laevigatus*: Hudson, 1934: 177.

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

**Ecology.** Stenotopic, epigean, silvicolous, very hygrophilous. Lowland. Habitat unknown; probably silvicolous.

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

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

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

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**Oopterus laeviventris** Sharp, 1883

*Tarastethus laeviventris* Sharp, 1883: 24. Type locality: Greymouth, BR.


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

**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.


---

**Oopterus latifossus** Broun, 1917

*Oopterus latifossus* Broun, 1917: 364. Type locality: Moa and Mistake Basins, near Mt Algidus, MC.


*Oopterus latifossus*: Hudson, 1934: 177.

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

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

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

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

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


**Oopterus lewisi** (Broun, 1912)

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

*Molopsida lewisi* Britton, 1940: 477.

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

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


**Oopterus marrineri** Broun, 1909

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


**Pseudoopterus marrineri** Csiki, 1928: 225.

**Pseudoopterus elongellus** Csiki, 1928: 225.

**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 swards, 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.


**Oopterus minor** Broun, 1917

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

**Pseudoopterus minor** Csiki, 1928: 225.

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

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

**Ecology.** Montane. 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.

**Pseudoopterus nigritulus** Csiki, 1928: 225.

**Zolus nigritulus** Hudson, 1934: 38.

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

**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.


**Oopterus pallidipes** Broun, 1893

*Oopterus 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.


**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


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

**Ecology.** Eurytopic, epigean, very hygrophilous. Lowland, montane, subalpine, alpine. Supralittoral zone, peaty wet forests (*Olearia, Metrosideros*), 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.


**Oopterus puncticeps** Broun, 1893


**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 latipennis*.

**Oopterus pygmeatus** Broun, 1907

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: New Zealand.

Geographic distribution. “New Zealand”.

Ecology. Habitat unknown; probably silvicolous.

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

Dispersal power. Subapterous. Moderate runner.

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 sculpturalis: 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.

Oopterus sobrinus Broun, 1886

Oöpterus sobrinus Broun, 1886: 936. Type locality: Near Mt Egmont [=Taranaki], TK.


Geographic distribution (Map p. 262). 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).

Ecology. Stenotopic, epigean, silviculous, 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.


Dispersal power. Subapterous. Moderate runner.


Genus Zolus Sharp, 1886

Figure 14


Geographic distribution. New Zealand (endemic).


Notes. The genus Zolus Sharp, 1886 was incorrectly synonymised with Oopterus Guérin-Méneville, 1841a by Jeannel (1940b: 92). This genus is in need of revision and a new species awaits description. At night, Zolus species climb regularly on trees. They hide in colonies during the day in fallen branches (e.g., beech, kamahi). Death feigning has been observed by Hudson (1934: 38).

Zolus atratus Broun, 1893

Zolus atratus Broun, 1893a: 1002. Type locality: Mt Egmont [=Taranaki], TK.

Oopterus atratus: Jeannel, 1940b: 92.


Geographic distribution (Map p. 270). North Island: TK, TO. South Island: BR, NN, SD.

Ecology. Arboreal-epigean, mostly silviculous, 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.


Note. This taxon could be conspecific with Zolus carinatus.

Zolus carinatus (Broun, 1882)


Geographic distribution (Map p. 270). North Island: TO, WN.

Ecology. Stenotopic, epigean, silviculous, very hygrophilous. Lowland, montane. Wet forests (beech, broadleaf). Nocturnal; hides during the day in logs.

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

Dispersal power. Subapterous. Moderate runner.


Zolus femoralis Broun, 1894

Figure 14


Geographic distribution (Map p. 270). North Island: TO, WN. South Island: BR, MK, NN, WD.


Dispersal power. Subapterous. Moderate runner.


Note. This taxon could be conspecific with Zolus carinatus.

Zolus helmsi Sharp, 1886


Geographic distribution (Map p. 270). North Island: WN. South Island: BR, MC, NC, NN, SD, WD.

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.

**Geographic distribution** (Map p. 270). South Island: BR, NN.

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


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


**Zolus ocularius** Broun, 1917

*Zolus ocularius* Broun, 1917: 365. Type locality: Routeburn, Hollyford and Mt Earnslaw, OL.

**Geographic distribution** (Map p. 270). South Island: OL.

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

**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.

**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, CL.


**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 burrows, in soil crevices, at the base of plants, and under plant debris and logs. Gregarious.


**Dispersal power.** Either macropterous, or brachypterous (incapable of flight). Moderate runner.

**References.** Lindroth, 1976: 197 (distribution, ecology); Townsend, 1997: 10 (distribution).

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**Bembidion (Ananotaphus) rotundicolle rotundicolle**

**Bates, 1874**


**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, very 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 at the base of plants and in soil crevices. Gregarious.

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

**Dispersal power.** Macropterous. Moderate runner.


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**Subgenus Notaphus Stephens, 1827**


**Geographic distribution.** Holarctic and Neotropical Regions; Australia and New Zealand (adventive).

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**Bembidion (Notaphus) brullei** Gemminger & Harold, 1868

*Bembidion variegatum* Brullé, 1838: 44. Type locality: Montevideo, Uruguay. Primary homonym of *Bembidium variegatum* Say, 1823.

*Bembidium brullei* Gemminger & Harold, 1868: 409. Replacement name for *Bembidion variegatum* Brullé, 1838.


*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 (redescribed in 1883: 225 and 1886: 755). Type locality: Mt Arthur, NN.


Ecology. Stenotopic, epigean, riparian, halophilous. Lowland, montane. Bare banks of rivers and big brooks, with fine sand. At a good distance from water. Both diurnal and nocturnal; active in the sunshine; shelters in cloudy weather.


Dispersal power. Macropterous, capable of flight. Moderate runner.


Subgenus Zelectedina Lindroth, 1976

Geographic distribution. New Zealand (endemic).

Bembidion (Zelectedina) anchonoderus Bates, 1878
Bembidion (Zelectedina) anchonoderus [sic]: 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 (Zometallina) chalceipes Bates, 1878
Bembidium chalceipes Bates, 1878c: 24. Type locality: West Coast, South Island.
Bembidion (Peryphus) chalceipes: Csiki, 1928: 89.
Bembidion (Zeactedium) tintillum: Csiki, 1928: 163.
Bembidion (Zeactedium) chalceipes: Netolitzky, 1931: 182.


**Ecology.** Stenotopic, epigean, riparian, very hygrophilous. Lowland, montane, subalpine, wet, bare banks of rivers and brooks. Nocturnal; hides during the day among gravel and under pebbles. Gregarious.

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

**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 (Peryphus) hokitikense** Csiki, 1928: 88.

**Bembidion (Zeactedium) hokitikense** Netolitzky, 1931: 182.

**Bembidion (Zeactedium) attenuatum** Netolitzky, 1931: 182.

**Bembidion (Zemetallina) hokitikense** Lindroth, 1976: 191.


**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.

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

**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).

**Bembidion (Peryphus) parviceps** Csiki, 1928: 107.

**Bembidion (Zeactedium) parviceps** Netolitzky, 1931: 182.

**Bembidion (Zemetallina) parviceps** Lindroth, 1976: 193.

**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.

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

**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.

**Ecology.** Epigean, mostly riparian, very hygrophilous. Lowland. Wet, bare river banks and sea beaches. Nocturnal; hides during the day under stones and plant debris.

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

**Dispersal power.** Macropterous. Moderate runner. Occasional flier.


**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.


Dispersal power. Macropterous. Moderate runner.


Subgenus Zeperyphodes Lindroth, 1976


Geographic distribution. New Zealand (endemic).

Bembidion (Zeperyphodes) 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.


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

Dispersal power. Macropterous. Moderate runner.


Subgenus Zeperyphus 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.


**Geographic distribution** (Map p. 226). North Island: AK, BP, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO.

**Ecology.** Stenotopic, epigean, riparian, very hygrophilous. Lowland. Wet, bare banks of streams. Nocturnal; hides during the day under stones and among gravel. Gregarious.


**Dispersal power.** Brachypterus, incapable of flight. Moderate runner.


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**Subgenus Zeplataphus** Lindroth, 1976


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

**Bembidion (Zeplataphus) charile** Bates, 1867

*Bembidium (Peryphus) 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).

*Bembidicum charile* Gemminger & Harold, 1868: 409.

*Bembidion (Peryphus) charile* Csiki, 1928: 89.

*Bembidion (Zeactedium) charile* Netolitzky, 1931: 182.

*Bembidion (Zeplataphus) charile* Lindroth, 1976: 175.

**Geographic distribution** (Map p. 226). North Island: BP, GB, HB, RI, TO, WA, WI, WN, WO. South Island: BR, KA, MK, NC, NN, WD.


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

**Dispersal power.** Macropterous. Moderate runner.


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**Bembidion (Zeplataphus) dehiscens** Broun, 1893


*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, KA, MK, 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.

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

**Dispersal power.** Macropterous. Moderate runner.


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**Bembidion (Zeplataphus) granuliferum** Lindroth, 1976

*Bembidion (Zeplataphus) granuliferum* Lindroth, 1976: 175. Type locality: Motueka River, NN.

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

**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) tairuense** Bates, 1878

*Bembidium tairuense* Bates, 1878b: 193. Type locality: Tairua, near Auckland, Cl. (Bates, 1878b: 193); Auckland, AK (Lindroth, 1976: 176, lectotype designated).

*Bembidion (Peryphus) tairuense* Csiki, 1928: 114.

*Bembidion (Zeactedium) tairuense* Netolitzky, 1931: 182.


Geographic distribution (Map p. 228). North Island: WA, WN. South Island: CO, DN, FD, MC, MK, NC, NN, OL, SC, SD, WD.


Biology. Seasonality: Throughout the year. Tenerals: 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 Tairua, 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.

**Bembidion (Zeplataphus) townsendi** Lindroth, 1976

*Zecillenus* 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 alabescens (Bates, 1878)
Cillenum [sic] alabescens Bates, 1878b: 193. Type locality: Tainua, near Auckland, CL.
Bembidion (Cillenum) alabescens: Csiki, 1928: 130.

Geographic distribution (Map p. 269). North Island: AK, CL, ND. Offshore Islands: CH.


Dispersal power. Subapterous. Moderate runner.

References. Broun, 1880: 59–60 (as Cillenum, distribution, ecology); Alken, 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.
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
Zecillenus embersoni Lindroth, 1980: 185. Type locality: Mason Bay, Stewart Island.

Geographic distribution (Map p. 269). Stewart Island.
Ecology. Arenicolous. Coastal lowland. An area of extensive sand dunes. The true habitat is probably estuary streams.


Dispersal power. Subapterous. Moderate runner.


Zecillenus tilliyardi (Brookes, 1927)

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 amphibious amphipods.


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.


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.


Dispersal power. Macropterous. Moderate runner.


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. Habitat unknown; probably silvicolous.


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, silvicolous, very hygrophilous. Lowland. Wet forests (beech). 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*.

**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).

**Genus *Hygranillus* Moore, 1980**


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


*Hygranillus kuscheli* Moore, 1980

*Hygranillus kuscheli* Moore, 1980b: 404. Type locality: Livingstons Well, Brightwater, NN.

Geographic distribution (Map p. 241). South Island: NN.


Dispersal power. Subapterous. Slow runner.


Note. The true habitat of this species could be deep soil crevices along streams.

**Genus *Nesamblyops* Jeannel, 1937**

*Nesamblyops Jeannel, 1937: 279. Type species: *Cillenum (?) subcaecum* Sharp, 1886, by original designation.*

Geographic distribution. New Zealand (endemic).


*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, silvicolous, 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.


*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, FD, MB, NC, NN, SD, SL.

Ecology. Stenotopic, endogean, mostly silvicolous, 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, silvicolous, 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: *Anillus phyllobius* Broun, 1893b, by original designation.

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


**Zeanillus pallidus** (Broun, 1884)


*Zeanillus pallidus* Jeannel, 1937: 279.

Geographic distribution (Map p. 269). South Island: BR, CO, DN, SL.

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 phyllolobius** (Broun, 1893)

*Anillus phyllolobius* Broun, 1893b: 164. Type locality: Riccarton Bush, MC.

*Zeanillus phyllolobius* Jeannel, 1937: 279.

**Geographic distribution** (Map p. 269). South Island: CO/DN, MC.

**Ecology.** Stenotopic, epigean, silvicold, xerophilous. Lowland. Dry forests (broadleaf, podocarp). Nocturnal; hides during the day under stones.

**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).

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**Subfamily HARPALINAE**

**Supertribe PTEROSTICHITAE**

**Tribe PTEROSTICHINI**

*Figures 19–20*

**Geographic distribution.** Worldwide.

**References.** Britton, 1940: 478 (taxonomy, distribution); Butcher & Emberson, 1981: 63–64 (distribution, ecology); Johns, 1986: 3, 30 (taxonomy, distribution, conservation); Emberson, 1993b: 20 (taxonomy).

**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 *Omaeaeus* [sic] [=*Omasaeus* Dejean]”, nor is it, in the authors’ opinion, closely related to the genus *Argutor*. 

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**Notes.** The Pterostichini and the Omaeaeinae are the largest tribes of Carabidae in New Zealand. A new revision is needed. Numerous species await description.

**Subtribe PTEROSTICHINA**

**Geographic distribution.** Worldwide.

**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.

*Omaeaeus sylvaticus* Blanchard, 1843: Plate 2, Figure 5 (redescribed in 1853: 29). Type locality: Akaroa, MC. Synonymised by Tschitschérine, 1901: 47.

**Geographic distribution** (Map p. 225). South Island: MC.

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

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

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


**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 *Omaeaeus* [sic] [=*Omasaeus* Dejean]”, nor is it, in the authors’ opinion, closely related to the genus *Argutor*. 

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**Notes.** The Pterostichini and the Omaeaeinae 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*) *brouni* 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 silviculous, 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.

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

**Dispersal power.** Brachypterous, incapable of flight. Moderate runner.

**References.** Britton, 1940: 492 (distribution); Pilgrim, 1963: 840 (taxonomy, distribution); Harris, 1970a: 48, 53, 55 (ecology); Townsend, 1994: 9–10, 13 (as *Aulacopodus puella*, taxonomy, distribution).

**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: Whanganura, near Tuakau, AK and near Ngargawahia, WO.

*Trichosternus* (*Megadromus*) *calathoides*: Csiki, 1930: 545.

*Augtor calathoides*: Hudson, 1934: 176.

*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, silviculous, 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 (redescribed 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, silviculous, 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, silviculous, 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).


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**Gourlayia regia** Britton, 1964

*Gourlayia regia* Britton, 1964b: 522. Type locality: Great Island, TH.

**Geographic distribution.** 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.


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**Genus Holcaspis Chaudoir, 1865**

*Holcaspis* Chaudoir, 1865: 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.

*Omases* (*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.

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**angustula group, angustula complex**

**Holcaspis algida** Britton, 1940

*Holcaspis algida* Britton, 1940: 496. Type locality: Mt Algidus, MC.

**Geographic distribution.** (Map p. 238). South Island: MC.

**Ecology.** Epigean, mostly silvicicolous, xerophilous. Lowland, montane, subalpine, alpine. Dry forests (beech) and scrublands, tussock grasslands, modified grasslands, farm-lands, screes. Nocturnal; hides during the day under logs, stones, in leaf litter, and under loose bark.


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


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**Holcaspis brevicula** Butcher, 1984

*Holcaspis brevicula* Butcher, 1984: 61. Type locality: Eyrewell, NC.

**Geographic distribution.** (Map p. 238). South Island: NC.

**Ecology.** Epigean, mostly silvicicolous. Lowland. Forests (beech); a tussock grassland; probably mostly silvicicolous. Nocturnal; shelters during the day.

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

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


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**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 silvicicolous. Lowland. Forests (beech); a tussock grassland; probably mostly silvicicolous. Nocturnal; hides during the day under logs.

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

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


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**angustula group, angustula complex**

**Holcaspis angustula** (Chaudoir, 1865)

*Omases elongatus* Blanchard, 1843: Plate 2, Figure 4 (redescribed in 1853: 28). Type locality: Akaroa, MC. Secondary homonym of *Pterostichus elongatus* (Duftschmid, 1812).

*Feronia (Omases) elongata* Lacordaire, 1854: 326.

*Feronia (Holcaspis) angustula* Chaudoir, 1865b: 101. Type locality: Akarva (=Akaroa), MC (Chaudoir, 1865b: 102); New Zealand (Butcher, 1984: 64, lectotype designated). Replacement name for *Omases 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. Type locality: Moeraki, DN. Synonymised with Holcaspis disparalis (Broun, 1893a) by Britton, 1940: 497.

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.


Dispersal power. Subapterous. Moderate runner.


Holcaspis bathana Butcher, 1984

Holcaspis bathana Butcher, 1984: 67. Type locality: Mt St. Bathans, CO.

Geographic distribution (Map p. 238). South Island: CO.


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); Molloy et al., 1994: 60 (distribution, conservation).

Holcaspis implica Butcher, 1984

Holcaspis implica Butcher, 1984: 65. Type locality: Bobs Cove, Lake Wakatipu, OL.

Geographic distribution (Map p. 240). South Island: CO, KA, MC, OL, SC, SL.

Ecology. Eurytopic, epigean. Lowland, montane, subalpine, alpine. Forests (beech, broadleaf, podocarp), tussock grasslands, fellfields. Nocturnal; hides during the day under logs, stones, and in leaf litter.


Dispersal power. Subapterous. Moderate runner.


Holcaspis placida Broun, 1881

Holcaspis placida Broun, 1881: 658. Type locality: Near Dunedin (Broun, 1881: 659); Otago (Butcher, 1984: 65, holotype examined).


Pierostichus placidulus [sic]: Broun, 1893a: 991.


Pierostichus thoracicus: Hudson, 1923: 357.

Trichosternus (Megadromus) chalmeri: Csiki, 1930: 545.

Geographic distribution (Map p. 240). South Island: CO, DN, FD, OL, SL.

Ecology. Eurytopic, epigean. Lowland, upland, subalpine, alpine. Tussock grasslands, pastures, herbfields, shrublands, forests (beech). Nocturnal; hides during the day under 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.

angusta 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); Maungataua, 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.

Trichosternus (Megadromus) sculpturalis: Csiki, 1930: 546.
Trichosternus (Megadromus) fenwicki: Csiki, 1930: 546.

Geographic distribution (Map p. 239). South Island: CO, DN, FD, OL, SL, WD.

Ecology. Epigean, mostly silvicolarious, very hypogaeous. 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 silvicolarious, very hypogaeous. 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: 306. Type locality: Picton, SD.
Holcaspis brouniana [sic]: Hutton, 1904: 146.

Geographic distribution (Map p. 238). North Island: WN. South Island: KA, MB, SD.

Ecology. Epigean, mostly silvicolarious, very hypogaeous. 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.
Omaeus elongellus: Gemminger & Harold, 1868: 312.
Holcaspis elongella: Bates, 1874: 244.
Trichosternus (Nesopterostichus) constrictellus: Tschitschérine, 1902: 521.
Holcaspis detractus: 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. Dry forests (beech, broadleaf, podocarp) and shrublands; farmlands, tussock grasslands, modified grasslands, pastures, gardens. Nocturnal; hides during the day under logs and stones.


Dispersal power. Subapterous. Moderate runner.


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.

catenulata group

Holcaspis catenulata: Broun, 1882

Pterostichus inconstans: Broun, 1893a: 999. Type locality: Invercargill, SL. Synonymised by Britton, 1940: 497.
Holcaspis insidiosus: Hutton, 1904: 147.
Trichosternus (Megadromus) philpotti: Csiki, 1930: 546.

Geographic distribution (Map p. 239). South Island: CO, DN, FD, SL.
Ecology. Epigean, mostly silvicolous, very hygrophilous. Lowland, montane, alpine. Wet forests (beech, podocarp, broadleaf), shrublands, and scrublands; tussock grasslands. Nocturnal; hides during the day under stones.


Dispersal power. Subapterous. Moderate runner.

References. Britton, 1940: 497 (distribution); Butcher, 1984: 69 (distribution).

egregialis group

Holcaspis egregialis (Broun, 1917)
Pterostichus egregialis: Broun, 1917: 362. Type locality: Staircase [= Devil’s Staircase], south end of the Remarkables, CO.
Trichosternus (Megadromus) egregialis: Csiki, 1930: 546.
Holcaspis egregialis: Britton, 1940: 498.

Geographic distribution (Map p. 239). South Island: CO, DN, OL, SL.

Ecology. Eurytopic, epigean. Lowland, montane, subalpine. Mostly tussock grasslands, tussock herbfields; also shrublands, forests (beech). Nocturnal; hides during the day under stones and logs.


References. Britton, 1940: 498 (distribution); Butcher, 1984: 75 (distribution).

hudsoni group

Holcaspis hudsoni: Britton, 1940
Holcaspis hudsoni: Britton, 1940: 499. Type locality: Canterbury, South Island.

Geographic distribution (Map p. 239). South Island: KA, MB, MC, NC, 7NN.
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.


**Holcaspis suteri** (Broun, 1893)

_Holcaspis suteri_ Broun, 1893: 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, beech) and shrublands; tussock grasslands, pastures. Nocturnal; hides during the day under logs, stones, and leaf litter.

**Biology.** Seasonality: Throughout the year. Teneral: 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).

**Holcaspis delator** (Broun, 1893)

_Pterostichus delata_ Broun, 1893a: 1397. Type locality: Ashburton, MC (Broun, 1893a: 1397), Canterbury (Butcher, 1984: 86, holotype examined).

**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 by Tschitschérine, 1891: 166; resurrected from synonymy by Butcher, 1984: 87.

**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).

**Note.** Broun (1908: 410) believed the type specimen was taken near Mount Egmont.
**Holcaspis hispida** (Broun, 1877)

_Biology_. Nocturnal; hides during the day under stones and logs. 

_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.

**Geographic distribution** (Map p. 239). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO.


**Dispersal power_. Subapterous. Moderate runner.

**References_. Britton, 1940: 501 (distribution); Reid _et al_., 1982: 84 (biology); Butcher, 1984: 83 (distribution).

**Holcaspis vexata** (Broun, 1908)


**Dispersal power_. Subapterous. Moderate runner.

**References_. Britton, 1940: 501 (distribution); Reid _et al_., 1982: 84 (biology); Butcher, 1984: 83 (distribution).

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**Oedicnema group, _mucronata complex_**

**Holcaspis mucronata** Broun, 1886

_Holcaspis mucronata_ Broun, 1886: 826. Type locality: Waitakere (=Waitakere) Ranges, Auckland, AK. (Broun, 1886: 826), Waitakere, AK (Butcher, 1984: 83, lectotype designated).

_Pterostichus mucronatus_. Broun, 1893a: 991.


**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.

**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 (distribution); Reid _et al_., 1982: 84 (biology); Butcher, 1984: 83 (distribution).

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**Holcaspis oedicnema** (Broun, 1880)


**Dispersal power_. Subapterous. Moderate runner.


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**Oedicnema group, _oedicnema complex_**

**Holcaspis dentifera** (Broun, 1880)

_Biology_. Nocturnal; hides during the day under logs and stones.

_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.

**Holcaspis oecioclinae Bates, 1874**  
Type locality: New Zealand.


**Pterostichus myrmydon** Sharp, 1886: 368. Type locality: Picton, SD (Sharp, 1886: 368), Christchurch, MC (Butcher, 1984: 80, lectotype designated). Synonymised by Britton, 1940: 500.

**Pterostichus rugifrons** Sharp, 1886: 451. Type locality: Grey mouth, BR. Secondary homonym of *Holcaspis (Rhytisternus) rugifrons* Broun, 1880 (=*Rhytisternus miser* Chaudoir, 1865b), Synonymised by Britton, 1940: 500.

**Pterostichus oecioclinae** Broun, 1893a: 991.

**Pterostichus cribralis** Broun, 1893a: 991.

**Pterostichus pastoricus** Broun, 1893a: 994. Type locality: Waipake 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.

**Pterostichus sculptipes** Broun, 1893a: 1325. Type locality: “Hastwell [WA], Napier [HB]” (Broun, 1893a: 1326), Napier (Butcher, 1984: 80, holotype examined). Synonymised by Britton, 1940: 500.

**Pterostichus lewisi** Broun, 1894: 310. Type locality: Wellington, WN. Synonymised by Britton, 1940: 500.

**Trichosternus (Neopterostichus) rugifrons** Tschitscherine, 1902: 521.

**Pterostichus setiventris** Broun, 1903: 606. Type locality: Westport, NN. Synonymised by Britton, 1940: 500.

**Holcaspis myrmydon** Walker, 1904: 126.

**Holcaspis pastoricus** Hutton, 1904: 146.

**Holcaspis egmontensis** Hutton, 1904: 147.

**Holcaspis irregularis** Hutton, 1904: 147.

**Holcaspis lewisi** Hutton, 1904: 147.

**Pterostichus antennalis** Broun, 1908: 412. Type locality: “Takurahali [=Pakurahali] and Mt Holdsworth”, WN (Broun, 1908: 413); “Mt Holdsworth, Pakurahali”, WN (Butcher, 1984: 80, lectotype designated). Synonymised by Britton, 1940: 500.

**Trichosternus (Megadromus) nigrifrons** [sic]: Csiki, 1930: 545.

**Trichosternus (Megadromus) antennalis**: Csiki, 1930: 545.

**Trichosternus (Megadromus) lewisi**: Csiki, 1930: 546.

**Trichosternus (Megadromus) setiventris**: 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 silvicolous, 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 oecioclinae* could represent a species complex.

**Holcaspis subaenea** (Guérin-Méneville, 1841)

*Feronia (Platysma?)* subaenea Guérin-Méneville, 1841a: 122.

Type locality: New Zealand.

*Feronia (Platysma?)* subaenea Lacordaire, 1854: 326.


*Feronia subaenea* Hutton, 1874: 159.


**Pterostichus subaeneum** [sic]: Sharp, 1886: 369.

*Feronia* (Holcaspis) subaenea Tschitscherine, 1891: 166.

**Geographic distribution** (Map p. 241). South Island: DN.

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

**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)

*Pterostichus sinuiventris* Broun, 1908: 416. Type locality: Manawatu Flats, nine miles below the Gorge, WI/WN (Broun, 1908: 417). Manawatu Gorge, RU/WN (Butcher, 1984: 90, lectotype designated).

*Trichosternus* (*Megadromus*) *sinuiventris*: Csiki, 1930: 546.

**Holcaspis sinuiventris**: Britton, 1940: 502.

**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. 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.

*Omasus vagepunctatus*: Gemminger & Harold, 1868: 313.


*Pterostichus praecox*: Broun, 1893a: 991.

**Holcaspis vagepunctata**: Britton, 1940: 502.

**Geographic distribution** (Map p. 241). North Island: AK, GB, HB, RI, WA, WN, WO.

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


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

**References**. Britton, 1940: 495 (distribution); Butcher, 1984: 54 (distribution); Patrick et al., 1993: 11 (distribution, ecology).

**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).

*Pterostichus mordax*: Broun, 1893a: 1396. Type locality: Mt Pirongia, WO. Synonymised by Britton, 1940: 496.

**Holcaspis humensis**: Hutton, 1904: 146.

**Geographic distribution** (Map p. 240). South Island: CO, RN, OL, SC, SL.

**Ecology**. Eurytopic, epigean. Lowland, upland, subalpine, alpine. Tussock grasslands, herbfields, cushion fields, fellfields, forests (beech). Nocturnal; hides during the day under stones.


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

**References**. Broun, 1908: 418. Type locality: Westport, NN ("almost certainly incorrect" (Butcher, 1984: 54)). Synonymised by Butcher, 1984: 53.

**Holcaspis ovatella** (Chaudoir, 1865)

*Feronia* (*Holcaspis*) *ovatella* Chaudoir, 1865b: 105. Type locality: New Zealand.

*Omasus ovatellus*: Gemminger & Harold, 1868: 313.

*Feronia ovatella* Hutton, 1874: 159.

**Holcaspis ovatella**: Bates, 1874: 244.

*Pterostichus ovatellus*: Sharp, 1886: 370.

**Pterostichus perbonus** Broun, 1908: 418. Type locality: Westport, NN ("almost certainly incorrect" (Butcher, 1984: 54)).

**Holcaspis ovatella** (Chaudoir, 1865b) Synonymised under *H. subaenea* (Guérin-Méneville, 1841a: 122) by Bates, 1874: 243; resurrected from synonymy by Britton, 1940: 502.

**Holcaspis ovatellus**: Bates, 1874: 244.

**Holcaspis ovatella ovatellus**: Csiki, 1930: 546.

**Holcaspis ovatella ovatella**: Britton, 1940: 495.

**Holcaspis ovatella**: Broun, 1908: 418. Type locality: Westport, NN ("almost certainly incorrect" (Butcher, 1984: 54)). Synonymised by Butcher, 1984: 53.

**Holcaspis ovatella perbonus**: Csiki, 1930: 546.

**Holcaspis ovatella ovatella**: Britton, 1940: 495.

**Holcaspis ovatella perbonus**: Britton, 1940: 495.

**Holcaspis ovatella ovatella**: Britton, 1940: 495.

**Geographic distribution** (Map p. 240). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WI, WN, WO.

**Note**. This species is difficult to distinguish from *H. sinuiventris*.
Ecology. Stenotopic, epigean, silvicolois, 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


Pterostichus sternalis: Broun, 1893a: 991. Pterostichus perfidiosus Broun, 1893a: 995. Type locality: Dunedin (Flagstaff Hill), DN (Broun, 1893a: 996); Dunedin, DN (Butcher, 1984: 55, holotype examined). Synonymised by Britton, 1940: 495.


Geographic distribution. New Zealand (mostly) and Australia (mainland).


Notes. The authors agree with Britton (1940: 495) and his examination of the Broun Collection that the type locality “Whangarei Harbour” published by Broun (1881: 658) is incorrect and should be “Maungatua”, DN. Still following Britton (1940: 495) and, to the contrary of Butcher (1984: 94), the authors retain H. punctigera 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 H. sternalis was made from a specimen of H. punctigera. We disagree with Butcher, and consider that the type of H. sternalis was simply mislabelled, as explained above.

Genus Megadromus Motschulsky, 1866

Figures 19–20


Geographic distribution. New Zealand (endemic).


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 nonomotypical subgenus.
Trichosternus *Trichosternus* synanthropic. Lowland, montane. Dry shrublands, scrublands, open or light forests (broadleaf, beech, podocarp), tree plantations (pine), and tree hedges; tussock grasslands, pastures, cultivated fields (potato, carrot), non-arable farmlands, hillsides, urban and suburban gardens. Mostly nocturnal; hides during the day under logs, stones, boards, and in deep burrows (down to 0.5m).


Predators: Hedgehogs (major enemies), starlings; kingfishers (R.M. Emberson, personal communication). Defense mechanism: Either emits a strong nasty smell or gives a painful nip when disturbed; parental care exhibited by the female who protects her eggs against enemies.

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


**Megadromus (Megadromus) alternus** (Broun, 1886)

&Megadromus alternus&Megadromus 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* Tschitschérine, 1902: 521.

*Trichosternus (Nesopterostichus) urquharti* Tschitschérine, 1902: 521.

*Trichosternus (Megadromus) alternus* Csíki, 1930: 544.


**Geographic distribution** (Map p. 252). South Island: CO, MC, MK, SC.

**Ecology.** Eurytopic, epigean, xerophilous. Montane, subalpine, alpine. Dry forests (beech), screes, lakeshores. Mostly nocturnal; hides during the day under logs and stones.

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

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

**Reference.** Britton, 1940: 486 (distribution).

**Megadromus (Megadromus)antarcticus** (Chaudoir, 1865)

&Figure 19

*Feronia (Trichosternus)antarcticus* Chaudoir, 1865b: 73. Type locality: New Zealand.


*Feronia antarctica* Broun, 1876: 264.

*Trichosternus crassalis* Broun, 1893a: 1395. Type locality: Albury, SC. Synonymised by Britton, 1940: 484.

*Trichosternus (Nesopterostichus)antarcticus* Tschitschérine, 1902: 521.

*Trichosternus (Nesopterostichus) crassalis* Tschitschérine, 1902: 521.

*Trichosternus coelocephalus* Broun, 1908: 405. Type locality: Ashburton, MC. Synonymised by Britton, 1940: 484.


**Geographic distribution** (Map p. 252). South Island: CO, SC, SC. Offshore Islands: CH (adventive; not established).

**Ecology.** Eurytopic, epigean-fossorial, mostly xerophilous, synanthropic. Lowland, montane. Dry shrublands, scrublands, open or light forests (broadleaf, beech, podocarp), tree plantations (pine), and tree hedges; tussock grasslands, pastures, cultivated fields (potato, carrot), non-arable farmlands, hillsides, urban and suburban gardens. Mostly nocturnal; hides during the day under logs, stones, boards, and in deep burrows (down to 0.5m).


Predators: Hedgehogs (major enemies), starlings; kingfishers (R.M. Emberson, personal communication). Defense mechanism: Either emits a strong nasty smell or gives a painful nip when disturbed; parental care exhibited by the female who protects her eggs against enemies.

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


**Megadromus (Megadromus)asperatus** (Broun, 1886), new combination

&Megadromus asperatus&Megadromus asperatus &Broun, 1886&822. Type locality: Mt Maungatua, DN.


**Geographic distribution** (Map p. 252). South Island: DN.

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

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

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

**Note.** This species, described in *Trichosternus* by Broun, has the elytral pubescence of characteristic of *Megadromus* and could be conspecific with *Megadromus meritus*.

**Megadromus (Megadromus)bucolicus** (Broun, 1903)


*Trichosternus (Megadromus) bucolicus* Csíki, 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) bucolicus (Broun, 1915)

Pterostichus bullatus Broun, 1915: 275. Type locality: Greenstone Flat, near Queenstown, Otago.

Megadromus bullatus: Britton, 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)

Feronia (Platysma) capito White, 1846: 4. Type locality: New Zealand.

Feronia capito: Lacordaire, 1854: 326.

Feronia (Trichosternus) capito: Chaudoir, 1865b: 74.


Trichosternus aucklandicus Broun, 1880: 33. Type locality: Auckland, AK. Secondary homonym of Pterostichus (Trichosternus) aucklandicus Bates, 1878c.

Trichosternus humeralis Broun, 1882: 220 (redescribed in 1883: 220 and 1886: 750). Type locality: Hicks Bay, BOP.

Synonymised by Britton, 1940: 485.

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 humeralis Broun, 1880: 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) humeralis: Csiki, 1930: 544.

Trichosternus (Megadromus) ordinarius: Csiki, 1930: 544.


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.


Note. The type locality of Trichosternus cephalotes could be the Tararua Ranges as implied by Broun’s description (“taken on the range near Wellington”).
**Megadromus (Megadromus) compressus** (Sharp, 1886)

*Pterostichus (Trichosternus) compressus* Sharp, 1886: 366. Type locality: Picton, SD.

*Trichosternus compressus* Broun, 1893a: 986.

*Trichosternus (Nesopterostichus) compressus* Tschitschérine, 1902: 521.

*Trichosternus (Megadromus) compressus* Csákí, 1930: 544.

*Megadromus compressus* Britton, 1940: 486.

**Geographic distribution** (Map p. 252). South Island: MB, SD.

**Ecology.** Eurytopic, epigean. Lowland, montane, subalpine, alpine. Forests (beech, broadleaf), tussock grasslands, pastures. Nocturnal; hides during the day under stones, logs, and boards.

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

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

**References.** Britton, 1940: 486 (distribution); Watt, 1981: 13 (distribution, conservation); Molloy *et al.*, 1994: 60 (distribution, conservation); Townsend, 1997: 13 (distribution).

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**Megadromus (Megadromus) 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* Csákí, 1930: 545.

*Trichosternus (Megadromus) suspicax* Csákí, 1930: 546.

*Megadromus optabilis* Britton, 1940: 488.


**Geographic distribution** (Map p. 253). South Island: CO, DN.

**Ecology.** Epigean. Lowland, montane, subalpine. Tussock grasslands, pastures, fellfields. Nocturnal; shelters during the day.

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

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

**References.** Britton, 1940: 488 (distribution); Patrick, 1991: 20 (distribution).

**Note.** Britton (1940: 488) synonymised *Trichosternus curtulus* Broun, 1884 and *Pterostichus optabilis* Broun, 1893, overlooking the fact that the former name was the oldest available one that should have been applied to this species.

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**Megadromus (Megadromus) ensyi** (Broun, 1882)

*Trichosternus ensyi* Broun, 1882: 221 (redescribed in 1883: 221 and 1886: 752). Type locality: Canterbury, South Island.

*Trichosternus (Nesopterostichus) ensyi* Tschitschérine, 1902: 521.


*Trichosternus halli* Broun, 1914b: 149. Type locality: Mt Hutt, near Methven, MC. Synonymised by Britton, 1940: 484.

*Trichosternus (Megadromus) ensyi* Csákí, 1930: 544.

*Trichosternus (Megadromus) walkeri* Csákí, 1930: 545

*Megadromus ensyi* Britton, 1940: 484.

**Geographic distribution** (Map p. 253). North Island: WN. South Island: MC, WD.

**Ecology.** Eurytopic, epigean-fossorial. Lowland, montane, subalpine, alpine. Forests (beech, podocarp, broadleaf), swamp forests, scrublands, shrublands, tussock grasslands, modified grasslands, farmlands, flaxlands, gardens, Nocturnal; hides during the day under logs, within cracks in logs, under stones, and in soil burrows (down to 10 cm).

**Biology.** Seasonality: September–April. Predacious (based on mouthpart morphology). Occasionally infested with mites. Defense mechanism: Parental care exhibited by the female who protects her eggs against enemies (R.M. Emberson and P.M. Johns, personal communications).

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


**Note.** The type locality of *T. ensyi* could be Broken River, MC, as noted by Broun in his personal copy of his *Manual*.

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**Megadromus (Megadromus) fultoni** (Broun, 1882)

*Trichosternus fultoni* Broun, 1882: 221 (redescribed in 1883: 221 and 1886: 751). Type locality: Outram, DN (Broun, 1882: 221).

**Trichosternus amplicollis** Broun, 1884: 227 (redescribed in 1884: 918). Type locality: Taieri, DN. Synonymised by Britton, 1940: 488.

**Trichosternus curvipes** Broun, 1886: 878. Type locality: Taieri, DN. Synonymised by Britton, 1940: 488.

**Pterostichus flectipes** Broun, 1908: 413. Type locality: South Island, probably Westport, NN. Synonymised by Britton, 1940: 488.

**Trichosternus (Megadromus) amplicollis** Csiki, 1930: 545. **Trichosternus (Megadromus) curvipes** Csiki, 1930: 545. **Trichosternus (Megadromus) polychaetus** Csiki, 1930: 546. **Trichosternus (Megadromus) fultoni** Csiki, 1930: 546. **Trichosternus (Megadromus) haplopus** Britton, 1940: 488.

**Geographic distribution** (Map p. 253). South Island: DN.

**Ecology.** Lowland. Habitat unknown.

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

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

**References.** Britton, 1940: 483 (distribution); Johns, 1986: 30 (distribution, ecology, biology); Emberson, 1993b: 20 (taxonomy).

**Note.** This species is difficult to distinguish from *M. meritus*.

**Megadromus (Megadromus) guerinii** (Chaudoir, 1865)


**Geographic distribution.** South Island: DN, SC.

**Ecology.** Epigean, mostly silvicicolous, xerophilous. Lowland. Dry forests (podocarp, broadleaf) and shrublands, pastures, gardens. Nocturnal; hides during the day under logs and stones.


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

**References.** Britton, 1940: 483 (distribution); Johns, 1986: 30 (distribution, ecology, biology); Emberson, 1993b: 20 (taxonomy).

**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.

**Biology.** Seasonality: October, February, May, July. Predacious (based on mouthpart morphology).

**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: Otira River, WD.


**Trichosternus (Megadromus) lobipes** Csiki, 1930: 544. **Megadromus lobipes** Britton, 1940: 482.

**Geographic distribution** (Map p. 253). South Island: BR, MC, NC, NN, WD.
Trichosternus agriotes Broun, 1886: 823. Type locality: Waihola, Otago, DN. Synonymised by Britton, 1940: 489.


Trichosternus patruelis Broun, 1886: 824. Type locality: Mt Maungatua, DN. Synonymised by Britton, 1940: 489.

Trichosternus waihouensis Broun, 1886: 916 (replacement name for Pterostichus riparius (Broun, 1884)). Synonymised by Britton, 1940: 489.

Trichosternus riparius Broun, 1886: 823. Type locality: Waihola, Otago, DN. Synonymised by Britton, 1940: 489.

Trichosternus fusulus Broun, 1886: 824. Type locality: Mt Maungatua, DN. Synonymised by Britton, 1940: 489.

Trichosternus angulatus Broun, 1893a: 986 (replacement name for Pterostichus patruelis (Broun, 1884)). Synonymised by Britton, 1940: 489.

Trichosternus meliusculus Broun, 1893a: 986 (replacement name for Pterostichus convexus (Broun, 1884)). Synonymised by Britton, 1940: 489.

Trichosternus chloris Broun, 1893a: 986.

Trichosternus amicus Broun, 1893a: 986.

Trichosternus grassator Broun, 1886: 914. Type locality: Stewart Island. Synonymised by Britton, 1940: 489.

Trichosternus patruelis (Broun, 1886)). Synonymised by Britton, 1940: 489.


Trichosternus waihouensis sic Broun, 1893a: 986.


Trichosternus (Megadromus) agriotes sic 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) grasser Csiki, 1930: 546.

Trichosternus (Megadromus) kirkianus Csiki, 1930: 546.

Trichosternus (Megadromus) maiei Csiki, 1930: 546.

Trichosternus (Megadromus) meliusculus Csiki, 1930: 546.

Trichosternus (Megadromus) meritus Csiki, 1930: 546.

Trichosternus (Megadromus) waihouensis Csiki, 1930: 547.


Trichosternus meritus Broun, 1884: 227 (redescribed in 1886: 914). Type locality: Invercargill, SL.


Trichosternus monticolus Broun, 1886: 821. Type locality: Mt Maungatua, Taieri, DN. Synonymised by Britton, 1940: 489.

Trichosternus chloris Broun, 1886: 823. Type locality: Milford Sound, SV. Synonymised by Britton, 1940: 489.

Trichosternus grassator Broun, 1886: 823. Type locality: Waihola, Otago, DN. Synonymised by Britton, 1940: 489.


Trichosternus fusulus Broun, 1886: 824. Type locality: Mt Maungatua, DN. Synonymised by Britton, 1940: 489.

Trichosternus angulatus Broun, 1886: 822. Type locality: Milford Sound, SV. Synonymised by Britton, 1940: 489.


Trichosternus (Megadromus) auruginosus Csiki, 1930: 545.

Trichosternus (Megadromus) agriotes 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) grasser Csiki, 1930: 546.

Trichosternus (Megadromus) kirkianus Csiki, 1930: 546.

Trichosternus (Megadromus) maiei Csiki, 1930: 546.

Trichosternus (Megadromus) meliusculus Csiki, 1930: 546.

Trichosternus (Megadromus) meritus Csiki, 1930: 546.

Trichosternus (Megadromus) waihouensis Csiki, 1930: 547.


Trichosternus meritus Broun, 1886: 823. Type locality: Waihola, Otago, DN. Synonymised by Britton, 1940: 489.

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 rectalis* Broun, 1881: 656. Type locality: Near Nelson, NN (Broun, 1881: 656); Nelson, NN (Britton, 1940: 486).


*Trichosternus (Megadromus) hammerensis*: Csiki, 1930: 544.

*Trichosternus (Megadromus) rectalis*: Csiki, 1930: 545.

*Megadromus rectalis*: Britton, 1940: 486.

**Geographic distribution** (Map p. 253). South Island: KA, MB, MC, NC, NN.


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

**References.** Britton, 1940: 486 (distribution); Johns et al., 1980: 26 (distribution, ecology); Watt, 1981: 13 (conservation); Johns, 1995: 261–262 (distribution, ecology); Townsend, 1997: 13 (distribution, ecology).

**Megadromus (Megadromus) sandageri** (Broun, 1893)

*Pterostichus sandageri* Broun, 1893a: 988. Type locality: Puysegur Point, FD.

*Pterostichus oneroaensis* 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, Wakatipu, 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) oneroaënsis*: Csiki, 1930: 546.

*Trichosternus (Megadromus) sandageri*: Csiki, 1930: 546.

*Megadromus sandageri*: Britton, 1940: 487.

**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 *Aciphylla*-roots. Biology. Seasonality: September–October. Teralens: October. 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.
**Trichosternus** (Trichosternus) temukensis Bates, 1878c: 26. Type locality: Temuka, SC.


**Trichosternus** (Trichosternus) smittii Broun, 1893a: 35.

**Trichosternus** (Trichosternus) sylvius Sharp, 1886: 366.

**Trichosternus** (Trichosternus) temukensis Broun, 1893a: 986.

**Trichosternus** (Trichosternus) temukensis: Tschitschérine, 1902: 521.

**Trichosternus** (Trichosternus) sylvius: Broun, 1880: 41.

**Trichosternus** (Trichosternus) sylvius: Csiki, 1930: 544.

**Trichosternus** (Trichosternus) temukensis: Csiki, 1930: 545.

**Megadromus** (Megadromus) temukensis Broun, 1886: 825. Type locality: Mt Maungatua, DN.


**Trichosternus** (Trichosternus) vigil: Broun, 1893a: 986.

**Trichosternus** (Trichosternus) vigil: Csiki, 1930: 544.

**Megadromus** (Megadromus) vigil: Britton, 1940: 487.

**Geographic distribution** (Map p. 254). South Island: CO, DN.

**Ecology.** Stenotopic, epigean, steppicolous. Lowland, upland. Tussock grasslands. Nocturnal; shelters during the day.

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

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

**References.** Britton, 1940: 487 (distribution); Barratt & Patrick, 1987: 82 (distribution, ecology, biology).

**Note.** This taxon could be conspecific with *M. fultoni*.

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**Megadromus** (Megadromus) temukensis Broun, 1893a: 1322. Type locality: Temuka, SC.


**Trichosternus** (Trichosternus) sylvius: Broun, 1880: 35.

**Trichosternus** (Trichosternus) sylvius: Sharp, 1886: 366.

**Trichosternus** (Trichosternus) temukensis: Tschitschérine, 1902: 521.

**Trichosternus** (Trichosternus) sylvius: Broun, 1893a: 986.


**Trichosternus** (Nesopterostichus) temukensis: Tschitschérine, 1902: 521.

**Trichosternus** (Nesopterostichus) sylvius: Tschitschérine, 1902: 521.

**Trichosternus** (Nesopterostichus) smithi: Tschitschérine, 1902: 521.

**Trichosternus** (Nesopterostichus) smithi: Csiki, 1930: 545.

**Trichosternus** (Nesopterostichus) temukensis: Csiki, 1930: 545.

**Megadromus** (Megadromus) temukensis: Britton, 1940: 485.

**Geographic distribution** (Map p. 254). South Island: HB, RI, TK, WA, WN.

**Ecology.** Eurytopic, epigean. Lowland, montane, subalpine, alpine. Tussock grasslands, fellfields, screes, flaxlands, gardens, scrublands, forests (broadleaf). Nocturnal; hides during the day under stones.


**Note.** *Megadromus turgidiceps* could represent a species complex belonging to an undescribed genus.

**Megadromus** (Megadromus) turgidiceps (Broun, 1908)

**Pterostichus** (Pterostichus) turgidiceps Broun, 1908: 409. Type locality: Manawatu Gorge, RI/WN.

**Trichosternus** (Trichosternus) turgidiceps: Csiki, 1930: 547.

**Megadromus** (Megadromus) turgidiceps: Britton, 1940: 482.

**Geographic distribution** (Map p. 254). North Island: HB, RI, TK, WA, 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.
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.


**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).

**Megadromus (Megadromus) wallacei** (Broun, 1912)

*Trichosternus wallacei* Broun, 1912: 390. Type locality: Wairiri, Seaward Kaikouras, KA.


**Geographic distribution** (Map p. 254). South Island: KA.

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


**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 Britton, 1940**

*Neoferonia* Britton, 1940: 504. Type species: *Pterostichus procerulus* Broun, 1886, by original designation.

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

**Reference.** Britton, 1940: 504–506 (revision).

**Notes.** About 20 species await description. Peter M. Johns (Christchurch, New Zealand) is currently revising this genus. *Neoferonia* species live in wet forests. In two yet undetermined species, parental care is exhibited by the female who protects her eggs against enemies (J.I. Townsend, personal communication).

**Neoferonia** Britton, 1893

*Neoferonia ardua* (Broun, 1893)

*Pterostichus arduus* Broun, 1893a: 1395. Type locality: Mt Arthur, NN (Broun, 1893a: 1396), Flora River, Mt Arthur (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.


**Geographic distribution** (Map p. 258). South Island: CO.
Ecology. Montane. A tussock grassland area; probably silvicolous. Nocturnal; shelters during the day.

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

Dispersal power. Subapterous. Moderate runner.

References. Britton, 1940: 478 (taxonomy); Butcher, 1984: 94 (taxonomy).

Neoferonia fossalis (Broun, 1914)


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


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.

**Reference.** Britton, 1940: 504 (distribution).

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**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

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

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

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


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**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). North Island: BP, CL, HB, RI, TK, TO, WA, WI, WN, WO. 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


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: Feronia (Psegmatopterus) anchomenoides Chaudoir, 1878b, by monotypy.

Geographic distribution. New Zealand (endemic).


Note. This taxon could be congeneric with Platycoelus Blanchard, 1853 (Moore, 1965b: 24).

Psegmatopterus politissimus (White, 1846)

Feronia (Platysma) politissima White, 1846: 4. Type locality: Port Nicholson, WN.


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
Rhytisternus Chaudoir, 1865b: 106 (originally proposed with subgeneric rank in Feronia Latreille, 1817; first used with generic rank by Sharp, 1886: 365). Type species: Amastus (Rhytisternus) liopleura Chaudoir, 1865b, designated by Moore, 1965b: 23.


Geographic distribution. Australia (including Tasmania); New Zealand (adventive).

Rhytisternus liopleurus (Chaudoir, 1865)
Feronia (Rhytisternus) liopleura 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 liopleurus Gemminger & Harold, 1868: 328.
Feronia liopleura: Chaudoir, 1874b: 598.

Ecology. Epigean, mostly campicolous, mesophilous, synanthropic. Lowland. Pastures, cultivated fields (potato, maize, strawberry, turnip), gardens, sand dunes, river banks, open native forests, tree plantations (pine); caves (occasionally). Nocturnal; hides during the day under stones, pieces of wood, logs, dry cow dung, and in soil burrows.
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) calcatus Sharp, 1886, designated by Britton, 1940: 489.

Geographic distribution. New Zealand (endemic; South Island and WI, 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 (Map p. 269). North Island: WI. South Island: MB, NN, SD.

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


Dispersal power. Subapterous. Moderate runner.

References. Hudson, 1892: 21 (as Pterostichus opulentus, larval description, distribution, ecology, biology); Martin, 1929: 118 (biology); Hudson, 1934: 36 (distribution, ecology); Britton, 1940: 491 (distribution); Valentine, 1967: 1102 (biology); Townsend, 1997: 14 (distribution).

Supertribe CALLISTITAE

Tribe LICINININI

Figure 21

Geographic distribution. Worldwide.

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.

Subtribe DICROCHILINA

Geographic distribution. Australian Region.


Genus Dicrochile Guérin-Méneville, 1846


Pedalopila Laporte de Castelnau, 1867: 68. Type species: Pedalopila novaezelandiae Laporte de Castelnau, 1867, by monotypy. Synonymised by Britton, 1941: 191 (synonym of Pedalopila (monotypic genus) with Dicrochile through the synonymy of Dicrochile cinctiger with Pedalopila 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).
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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 anthracina* Broun, 1893

*Dicrochile anthracina* Broun, 1893b: 161. Type locality: Ligar’s Bush, Papakura, AK.

Geographic distribution (Map p. 234). North Island: AK.


Biology. Seasonality unknown. 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.


Dispersal power. Brachypterous, incapable of flight. Moderate runner.


*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.


Dispersal power. Brachypterous, incapable of flight. Moderate runner.


*Dicrochile cordicollis* Broun, 1903

Figure 21

*Dicrochile cordicollis* [sic] Broun, 1903: 455. Type locality: Te Aroha, WO.

Geographic distribution (Map p. 235). North Island: BP, CL, GB, ND, TO, WI, WN, WO.


Dispersal power. Brachypterous, incapable of flight. Good swimmer.


Dicrochile flavipes Broun, 1917
Dicrochile flavipes Broun, 1917: 360. Type locality: Gordon’s Knob [= Mt Arthur], near Belgrove, NN.

Geographic distribution. “New Zealand.”

Ecology. 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 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.


Dispersal power. Brachypterous, incapable of flight. Moderate runner.

Dicrochile maura Broun, 1880
Dicrochile maura Broun, 1880: 18. Type locality: Parua, 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.

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.


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

Dispersal power. Brachypterous, incapable of flight. Moderate runner.

Dicrochile novaezelandiae (Laporte de Castelnau, 1867)

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.

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 (Dufschmidt, 1812).


Platynus atratus: Gemminger & Harold, 1868: 368.

Anchomenus (Platynus) deplanatus: Bates, 1874: 239.


Agonum (Platynus) whitei Csiki, 1931: 854 (replacement name for A. deplanatus White, 1846 as a secondary homonym of Agonum deplanatum Ménétriers, 1843).


Geographic distribution (Map p. 236). South Island: KA, MB, MC, NC.

Ecology. Epigean, very hygrophilous. Lowland. Edges of scrubland streams; vegetated roadsides. Nocturnal; hides during the day under stones.


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 Ménétriés, 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

Physolaesthus Chaudoir, 1850: 411. Type species: Physolaesthus australis Chaudoir, 1850, by monotypy.
Physolaesthus: Lacordaire, 1854: 235 (incorrect subsequent spelling).
Physolaesthus: Sloane, 1898: 488 (incorrect subsequent spelling).
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.

Dispersal power. Macropterous, capable of flight. Moderate runner.

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

Lecanomerus Chaudoir, 1850: 446. Type species: Lecanomerus insidiosus Chaudoir, 1850, by monotypy.
Geographic distribution. New Guinea, New Caledonia, Australia (including Tasmania), New Zealand.
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.


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.


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.


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.


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, 1878: 23. Type locality: West Coast, South Island.

*Nemaglossa obesusula* Sloane, 1920a: 137.


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 vestigialis** (Erichson, 1842)

*Harpalus vestigialis* Erichson, 1842: 127. Type locality: Tasmania, Australia.


*Lecanomerus labralis* Broun, 1914b: 151. Type locality: Epsom, AK.

*Nemaglossa mastersii*: Sloane, 1920a: 137.

*Nemaglossa stenopus*: Sloane, 1920a: 137.

*Nemaglossa labralis*: Sloane, 1920a: 137.

*Acupalpus (Egadroma) vestigialis*: Csiki, 1932a: 1242.


Geographic distribution (Map p. 243). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO. South Island: NN.


**Genus Syllectus** Bates, 1878


Geographic distribution. New Zealand (endemic).


**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

Figure 22
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, silvicolous, 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.


Note. This taxon could represent a species complex.

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, silvicolous, 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.


Note. This taxon could represent a species complex.

Genus Anisodactylus Dejean, 1829


Geographic distribution. North America, Europe, Asia, northern Africa; New Zealand (adventive).


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).


Genus Gaioxenus Broun, 1910

Gaioxenus Broun, 1910b: 7. Type species: Gaioxenus pilipalpis Broun, 1910b, by monotypy.

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


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 antarcticus* (Laporte de Castelnau, 1867)


*Hypharpax antarcticus* Bates, 1874: 272.

*Diaphoromerus antarcticus*: Chaudoir, 1878a: 485.

*Hypharpax antarcticus*: Hudson, 1934: 37, 177.


Ecology. Epigean, mostly campicolous, heliophilous. Lowland, montane, subalpine, alpine. Tussock grasslands, pastures, gardens, river banks. Mostly diurnal; active in the sunshine; hides on cloudy days under stones and at the base of tussock clumps.


*Hypharpax australasiae* (Dejean, 1829)

*Harpalus australasiae* Dejean, 1829: 368. Type locality: Australia.


*Diaphoromerus australasiae*: Chaudoir, 1878a: 480.


*Hypharpax australasiae*: Moore, in Moore et al., 1987: 237.

Geographic distribution (Map p. 242). North Island: BP, GB, HB, WI, WN. South Island: MB, MC, NC.

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: 222.

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.


Dispersal power. Subapterous. Moderate runner.


Genus Parabaris Broun, 1881

Parabaris Broun, 1881: 654. Type species: Parabaris australis Broun, 1881, by monotypy.

Geographic distribution. New Zealand (endemic; Three Kings Islands and North Island).

Parabaris atratus Broun, 1881

Parabaris atratus 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, silvicolous, very hygrophilous. Lowland, montane. Wet forests (broadleaf, podocarp). Nocturnal; hides during the day under logs (mostly) and stones.


Dispersal power. Subapterous. Moderate runner.

Parabaris gourlayi Britton, 1964

Parabaris gourlayi Britton, 1964b: 523. Type locality: Great Island, TH.

Geographic distribution (Map p. 263). Offshore Islands: TH.

Ecology. Stenotopic, epigean, silvicolous, 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)


Type locality: “Auckland (?) [AK] and Christchurch”, MC. Synonymised by Townsend, 1997: 16.
Triplosarbus novae-elandiae [sic]: Broun, 1881: 659 (misspelling).

Geographic distribution (Map p. 268). North Island: AK, CL, ND, WI, WN. South Island: DN, MC, NN, SD, WD. Stewart Island.

Ecology. Stenotopic, fossorial, arenicolous. Coastal lowland. Sand dunes, sand beaches. Nocturnal; hides during the day in burrows, and also under marram grass (Ammophila) and wrack. Gregarious.

Biological Notes. Seasonality: November–February. Omnivorous, mostly phytophagous (based on mouthpart morphology).

Dispersal power. Macropterous, probably capable of flight. Excellent burrower.

References. Wakefield, 1873: 298 (distribution, ecology); Hudson, 1934: 176 (list); Pilgrim, 1969: 364 (ecology); Harris, 1970a: 48, 55 (distribution, ecology, biology); Noonan, 1976: 27–28 (taxonomy); Moore, 1985: 673 (misspelling).

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 & Gallián (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.

Egadroma picea (Guérin-Méneville, 1830)

Acupalpus piceus Guérin-Méneville, 1830: Plate 1, Figure 12. Type locality: Port Jakson [=Port Jackson], New South Wales, Australia.


Stenolophus dingo: Chaudoir, 1878a: 514.


Egadroma piceus [sic]: Serrano et al., 1994: 56.


Ecology. Epigean, arenicolous. Lowland. Sandy pastures, sand dunes. Nocturnal; hides during the day in soil burrows dug at the base of plants and under logs.


Note. Like Apodroma (Lepidoptera) which is a feminine noun (Brown, 1985: 673), the generic name Egadroma requires a specific epithet of feminine gender.

Genus Euthenarus Bates, 1874


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

Geographic distribution. Australia (including Tasmania), Norfolk Island, New Zealand.


Notes. A few species await description. An exotic species could have been introduced.
**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.


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


**Euthenarus puncticollis** Bates, 1874

*Euthenarus puncticollis* Bates, 1874: 273 (redescribed in 1875: 311). Type locality: Auckland, AK.

**Geographic distribution** (Map p. 237). North Island: AK, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO. South Island: BR, CO, MC, NN, SD, SL, WD.

**Ecology.** Eurytopic, epigean-fossorial, very hygrophilous. Lowland, montane, subalpine. Flaxlands, mud flats, edges of lakes and streams, pastures, tussock grasslands. Nocturnal; hides during the day in soil burrows and cracks, under soil clods, logs, at the base of plants, in moss and other debris.


**Dispersal power.** Macropterous. Frequent flier. Regular in drift material, which indicates previous flight. Moderate runner. Good climber (on plants and logs). Occasional burrower.

**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

*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.

**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 Pholeodytes** Britton, 1962


**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.** (Map p. 264). 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.


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### Subtribe HARPALINA

**Geographic distribution.** Worldwide.


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### 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. Emerson, personal communication).

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### Subgenus Harpalus Latreille, 1802

*Harpalus Latreille 1802: 92 (see above).

*Amblytus* Motschulsky, 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 (moist) 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.

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### Subtribe SPOHODRINA

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


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### 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).

*Laemostenus:* Winkler, 1924: 187 (incorrect subsequent spelling).
**Geographic distribution.** Worldwide; New Zealand (adventive).

**References:** Britton, 1940: 508 (taxonomy); Casale, 1988: 448–892 (world revision).

**Subgenus Laemostenus Bonelli, 1810**

**Geographic distribution.** Palearctic and Oriental Regions, Middle East, North Africa; North America, Australia (including Tasmania), and New Zealand (adventive).

**Laemostenus (Laemostenus) complanatus** (Dejean, 1828)

*Pristonychus complanatus* Dejean, 1828: 58. Type locality: Southern France.

*Laemostenes complanatus* Schauffuss, 1865: 54.


*Laemostenus complanatus*: Moore et al., 1987: 222.


*Pristonychus australis* Fairmaire, 1859. Primary homonym of *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 flier to artificial lights at night. Occasionally found in drift material, which indicates previous flight. Moderate runner. Occasional climber (on trees).


**Subtribe PLATYNINA**

**Geographic distribution.** Worldwide.


**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 (revision 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: 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.

Reference. White, 1846.

“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.

Reference. White, 1846.

“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” intermedius Broun, 1908
Anchomenus intermedius Broun, 1908: 347. Type locality: Broken River, BR.
Agonum (Anchomenus) intermedius: Csiki, 1931: 865.

Geographic distribution (Map p. 224). North Island: WI/WN. South Island: BR, MC, MK.

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” integratus Broun, 1908
Anchomenus integratus Broun, 1908: 348. Type locality: Broken River, MC.
Agonum (Anchomenus) integratus: 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: Greymouth, BR.
Agonum (Anchomenus) intermedius: 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.
Anchomenus otagoensis: Broun, 1880: 25.
Agonum (Platynus) otagoensis: Csiki, 1931: 853.
Agonum otagoensis: 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
Agonum (Platynus) sandageri: Csiki, 1931: 853.

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.
Dispersal power. Subapterous. Moderate runner.

“Anchomenus” sulcitarsis Broun, 1880
Anchomenus (Platynus) sulcitarsis Broun, 1880: 27. Type locality: Parua, near Whangarei Harbour, ND.
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.
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: Parua, near Whangarei Harbour, ND.
Agonum (Anchomenus) xanthomelas: Csiki, 1931: 865.
Geographic distribution (Map p. 225). North Island: RI/WN.
Dispersal power. Subapterous. Moderate runner.

Genus Cerabilia Laporte de Castelnau, 1867
Geographic distribution. New Zealand (endemic; southern North Island and South Island).
Notes. M.R. Butcher (Lincoln, New Zealand) apparently started revising this genus around 1985. About fifteen species await description. These beetles are forest dwellers.

Cerabilia aphela (Broun, 1912)
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.

Cerabilia major (Broun, 1912)
Zabronothus major Broun, 1912: 393. Type locality: Broken River, MC.
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.
**Cerabilia maori** Laporte de Castelnau, 1867  
*Cerabilia maori* Laporte de Castelnau, 1867: 116 (redescribed in 1868: 202). Type locality: Dunedin, DN.  
*Feronia (Cerabilia) moori* [sic]: Tschitschérine, 1891: 161.  
*Cerabilia 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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**Feronia** (*Cerabilia*) *moori* [sic]: Tschitschérine, 1891: 161.  

**Cerabilia 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**  
*Ctenognathus* Fairmaire, 1843  

**Cenognathus** Fairmaire, 1843: 13. Type species: *Anchomenus novae-zelandiae* Fairmaire, 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 actochares** Broun, 1894  
*Ctenognathus actochares* Broun, 1894: 307. Type locality: Wellington, WN.  
*Ctenognathus (Anchomenus) actochares*: Walker, 1904: 76.  
*Ctenognathus actochares*: Hudson, 1923: 356.  

**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 Waitakerei (=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. Tenebrars: 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)  
*Colpodes bidens* Chaudoir, 1878c: 303. Type locality: New Zealand.  
*Ctenognathus bidens*: Broun, 1893a: 986.  
*Ctenognathus batesi*: 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, GB, ND, TK, 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, 1904: 144.

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 crenatus.


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.
*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. Frequent climber (on trees).


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**Ctenognathus montivagus** (Broun, 1880), new combination
Anchomenus montivagus Broun, 1880: 22. Type locality: Near Whangarei Heads, ND.
*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).

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**Ctenognathus munroi** Broun, 1893
Ctenognathus munroi Broun, 1893a: 984. Type locality: South of Clevedon and Wairoa, AK.
*Geographic distribution* (Map p. 232). North Island: AK, BP.

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

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


**References.** Dohrn, 1884: 319–320 (taxonomy); Sharp, 1884: 297 (taxonomy); Hudson, 1934: 34 (distribution, ecology); Helmore, 1982: 40 (distribution, ecology, biol-

Ctenognathus parabilis (Broun, 1880)
Anchomenus parabilis Broun, 1880: 20. Type locality: Whangarei Heads, ND.
Ctenognathus parabilis: Broun, 1893a: 986.
Geographic distribution (Map p. 233). 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 perrugithorax (Broun, 1880)
Anchomenus perrugithorax Broun, 1880: 24. Type locality: near Whangarei Heads, ND.
Ctenognathus perrugithorax: Broun, 1893a: 986.
Geographic distribution (Map p. 233). North Island: ND.
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.
Ctenognathus politulus: Broun, 1893a: 986.
Geographic distribution (Map p. 233). North Island: ND.
Biology. Seasonality unknown. Predacious (based on mouthpart morphology).
Dispersal power. Subapterous. Moderate runner.
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; boggy pastures, stream banks; bird nests (occasionally). Nocturnal; hides during the day under logs and stones. Gregarious.


*Notagonum feredayi* (Bates, 1874)


**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.


**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)

*Anchomenus marginellus* Erichson, 1842: 130. Type locality: Tasmania, Australia.

**Geographic distribution** (Map p. 260). North Island: AK. Extralimital range: Australia (including Tasmania), Lord Howe Island, Norfolk Island. Adventive. First New Zea-
land record: Auckland, AK (not seen in NZAC; Redtenbacher, 1868: 18). Presumably not established.

Ecology. Habitat unknown; probably wet areas.


Dispersal power. Macropterous, capable of flight. Moderate runner.

References. Moore, 1985: 247 (distribution); Moore et al., 1987: 221 (distribution, ecology, biology, dispersal power); Moore, 1992: 167 (distribution).

**Notagonum submetallicum** (White, 1846)

*Colpodes submetallicus* White, 1846: 2. Type locality: New Zealand.


Ecology. Eurytopic, epigeanic-arboreal, very hygrophilous. Lowland, montane, subalpine. Edges of marshes, slow streams, dried up ponds, and seepages; swamps, flaxlands, wet scrublands, wet pastures, moist cultivated fields (strawberry, turnip, swede), tussock grasslands. Preferably wet, grassy muddy places. Nocturnal; hides during the day in burrows, at the base of plants, in mat plants, in leaf litter, under logs and stones. Gregarious.


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.


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 silvo-cultural, 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 gullies 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, W, WO.

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, silviculous, xerophilous. Lowland. Dry forests (broadleaf, beech) and scrublands. Nocturnal; hides during the day under stones and logs.


Dispersal power. Subapterous. Moderate runner.


Supertribe LEBIITAE

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 vittata* 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 "vittipennis" 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 hoopsi* Erichson, 1842, by monotypy.


Geographic distribution. New Guinea, Java, New Caledonia, Australia (including Tasmania), Lord Howe Island, New Zealand.


Notes. A new revision is needed. A few species, especially those found at higher altitude, are difficult to separate taxonomically (R.M. Emberson, personal communication). *Scopodes* could comprise two genera.

*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 Maungatau, DN (Broun, 1886: 882); Maungatau, Otago, DN (Britton, 1941: 195).

**Geographic distribution** (Map p. 265). South Island: BR, CO, DN, NN.

**Ecology.** Stenotopic, epigean, musicolous, 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 antennalis Broun, 1886: 883. Type locality: Lake Tekapo region, MK. Synonymised by Britton, 1941: 196.


**Ecology.** Eurytopic, epigean-planticolous-arboreal, 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.

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

**Dispersal power.** Wing condition unknown. Fast runner. Occasional climber (on plants).

**References.** Britton, 1941: 196 (distribution); Johns, 1977: 320 (distribution, ecology); Barratt & Patrick, 1987: 82 (distribution, ecology, biology); Patrick et al., 1993: 11 (distribution, ecology); Patrick, 1994: 12 (distribution); Townsend, 1997: 18 (distribution); Emberson, 1998: 30 (distribution, ecology, biology).

**Scopodes fossulatus** (Blanchard, 1843)

Dromius fossulatus Blanchard, 1843: Plate 3, Figure 16 (redescribed in 1853: 9, as D. fossulatus). Type locality: Akaroa, MC.

Helaetraechus elaphroides White, 1846: 5. Type locality: New Zealand. Synonymised by Britton, 1941: 194 (as a valid species, with D. fossulatus as its junior synonym).

Helaetraechus elaphroides: Chena, 1851: 187 (incorrect subsequent spelling).

Scopodes elaphroides: Lacordaire, 1854: 149.


Scopodes fossulatus: Bates, 1874: 275 (incorrect subsequent spelling).

**Geographic distribution** (Map p. 266). North Island: AK, BP, CL, GB, HB, ND, RI, TK, TO, WA, WI, WN, WO. South Island: BR, CO, DN, KA, MB, MC, MK, NN, OL, SC, SD, SL.

**Ecology.** Eurytopic, epigean-planticolous-arboreal, heliophilous. Lowland, montane, subalpine, alpine. Wet or moist places such as edges of marshes and streams, mud flats, swamps, open swamp forests, open wet forests (beech, podocarp) and scrublands, cushion bogs, wet pastures, moist cultivated fields (potato, maize), gardens, herbfields, tussock grasslands; paved areas. Larval habitat: Pasture (collected in soil samples). Diurnal; active in the sunshine on moss, stones, and snow; hides on cloudy days in leaf litter, compost heaps, under logs, and the loose bark of logs, trees and shrubs. Gregarious.


**Dispersal power.** Wing condition unknown. Fast runner. Regular climber (on plants, shrubs, and trees).


**Notes.** The name of this species reads “fossilatus” in Blanchard’s separata of 1843, but the incorrect subsequent spelling “fossulatus” is in prevailing usage and is attrib-
uted to the publication of the original spelling, it is to be
preserved according to the 1999 edition of the Interna-
tional 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.
Scopodes instabilis Broun, 1917: 371. Type locality: Moa Basin,
West of Mt Algidus, MC. Synonymised by Britton, 1941: 195.

**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; scree, moraines, tus-
sock grasslands, forests (beech). Diurnal; active in the
sunshine on moss and mat plants; hides on cloudy days
under stones.

**Biology.** Seasonality: September–May. Tenerals: Febru-
ary. Predacious (based on mouthpart morphology).

**Dispersal power.** Wing condition unknown. Fast runner.

**References.** Britton, 1941: 195 (distribution); Johns,
1980: 63 (distribution, ecology); Townsend, 1997: 18 (dis-
tribution).

**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); Johns,
1980: 63 (distribution, ecology); Townsend, 1997: 18 (dis-
tribution).

**Scopodes multipunctatus** Bates, 1878
Scopodes multipunctatus Bates, 1878c: 58. Type locality: Auck-
land, 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.

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

**Dispersal power.** Wing condition unknown. Fast runner.

**References.** Britton, 1941: 195 (distribution); Johns,
1980: 63 (distribution); Townsend, 1997: 18 (dis-
tribution).

**Scopodes pustulatus** Broun, 1882
Scopodes pustulatus Broun, 1882: 227 (redescribed in 1883: 227
and 1886: 757). Type locality: Wellington, WN.

**Geographic distribution** (Map p. 266). North Island: RI,
TK, TO, WA, WN. South Island: MB, NN, SD, WD.
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); Moeed & Meads, 1985: 36 (distribution); Townsend, 1997: 18 (distribution).

**Scopodes versicolor** Bates, 1878

Scopodes versicolor Bates, 1878c: 57. Type locality: Otira Pass, WD.


Ecology. Eurytopic, epigean-planticolous, heliophilous. Lowland, montane, subalpine, alpine. River banks, cushion bogs, tussock grasslands, herfields, open forests. Diurnal; active in the sunshine on cushion plants, moss, grass, and flowers; hides on cloudy days under stones. Gregarious.


**Tribe LEBIINI**

Geographic distribution. Worldwide.


Notes. A new revision is needed. A few exotic species have been introduced since Britton’s revision.

Subtribe PERICALINA

Geographic distribution. Worldwide.

Reference. Ball et al., 1995: 297 (phylogeny).

**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.
Philophloeus
Philophloeus
Philophloeus

Idius
Gomelina

Dispersal power. Macrotropical. Regular flier to artificial lights at night. Moderate runner. Excellent climber (on trees).

References. Thomson, 1922: 284 (distribution); Hudson, 1934: 40, (distribution, ecology); Britton, 1941: 188 (distribution); Pilgrim, 1963: 839 (distribution); Moore et al., 1987: 289 (distribution, ecology, biology, dispersal power); Emberson, 1993b: 20–21 (taxonomy).


Genus Philophlaeus Chaudoir, 1844

Philophlaeus Chaudoir, 1844: 472. Type species: Cymindis australis Dejean, 1826, by original designation.


Philophlaeus Lacordaire, 1854: 139 (incorrect subsequent spelling).

Geographic distribution. Australia (including Tasmania); New Zealand (endemic).


Philophlaeus luculentus (Newman, 1842)

Lebia luculenta Newman, 1842a: 368. Type locality: Port Phillip, South Australia (in error for Victoria), Australia.

Philophlaeus [sic] luculentus: Chaudoir, 1869: 221.


Type locality: Dorrigo, New South Wales, Australia. Synonymised by Moore, in Moore et al., 1987: 158.


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.


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 illawarac Chaudoir, 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 Demetria White, 1846

Demetria White, 1846: 2. Type species: Demetria (Demetria) lineella White, 1846, designated by Chen, 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 synonym).


*Xanthophaea* (Demetrida) *dieffenbachii*: Csiki, 1932b: 1459 (as a valid species with *Demetrida* *picea* Chaudoir, 1848 and *Cymindis australis* Blanchard, 1853 [1842] as its junior synonym).

*Demetrida* (Demetrida) *dieffenbachii*: Britton, 1941: 190.

*Demetrida* *dieffenbachii*: Johns, 1977: 325.

**Geographic distribution** (Map p. 233). South Island: BR, KA, MB, MC, MK, NC, SC, WD.

**Ecology.** Stenotopic, arboreal (corticolous)-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.

*Xanthophaea* (Demetrida) *lateralis*: Csiki, 1932b: 1460.


**Geographic distribution** (Map p. 234). South Island: MC, MK, OL.

**Ecology.** Epigean, mostly steppicolous. Montane, subalpine. Tussock grasslands, herbfields, and scrubs (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).

**Dispersal power.** Brachypterous, incapable of flight. Fast runner.

**Reference.** Britton, 1941: 191 (distribution).

*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.

*Demetrida* *lineella*: Gemminger & Harold, 1868: 127.

*Xanthophaea* (Demetrida) *lineella*: Chaudoir, 1872: 196.

*Demetrida* (Demetrida) *lineella*: Britton, 1941: 190.

**Geographic distribution** (Map p. 234). North Island: TK, WI, WN. South Island: BR, MB, NN, SD.

**Ecology.** Eurytopic, arboreal-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.

*Xanthophaea* (Demetrida) *atra*: Csiki, 1932b: 1459.


**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.


Ecology. Eurytopic, arboreal-planticolous-epigean. Lowland, montane, subalpine, alpine. Forests (beech), tree plantations (pine), shrublands, scrublands, orchards, tussock grasslands, pastures, gardens, scree, 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. Scree (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.
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.
demic — restricted to a geographic area.
diogenes — 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.
granivorous — 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.
heliofious — 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.
mesophilous — living in moderately humid environments.
molluscopephalous — 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.
night — active during the night.
omnivorous — feeding on both animal and vegetable matter.
parental care — protection of eggs and larvae by the female.
planteous — 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.
scre — 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.
silvicicolous — living in forests, tree plantations, shrublands, or scrublands.
stenotopic — tolerant of narrow variation in environmental conditions.
steppicolicous — 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.
tener — 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.
themoregulation — maintenance of a constant body temperature.
troglobitic — living exclusively in caves.
troglophalous — living usually, but not exclusively in caves.
trogloxenous — living occasionally in caves.
vertical distribution — distribution related to the horizon, i.e., cavernicolous, endogeal, epigeal, 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.

**Heloetrechus** by Chenu (1851: 187) for **Helaeotrechus** White, 1846.

**Laemosthenes** by Agassiz (1847: 199) for **Laemostenus** Bonelli, 1810.

**Laemosthenes** by Winkler (1924: 187) for **Laemostenus** Bonelli, 1810.

**Philophloeus** by Lacordaire (1854: 139) for **Philophlaeus** Chaudoir, 1844.

**Physolesthus** by Sloane (1898: 488) for **Physolaesthus** Chaudoir, 1850.

**Physolyesthus** by Lacordaire (1854: 235) for **Physolaesthus** Chaudoir, 1850.

**Stomatocolus** by Chaudoir (1871: 283) for **Stomatocoelus** Macleay, 1864.

**Xanthophoea** by Lacordaire (1854: 106) for **Xanthophaea** 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). Confused by Pilgrim (1963) with *A. illawarrae* (Macleay, 1873) which occurs in New Zealand.

**Calathus glabricollis** Dejean, 1828: 68
Described from Auckland, New Zealand as *Calathus zealandicus* 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 cayanea** (Laporte de Castelnau, 1840: 113)

**Castelnaudia marginifera** (Chaudoir, 1865b: 68)

**Castelnaudia septemcostata** (Chaudoir, 1874b: 572)

**Castelnaudia superba** (Laporte de Castelnau, 1867: 119)

**Castelnaudia wilsoni** (Laporte de Castelnau, 1867: 119)

**Cicindela klugii** Dejean, 1831: 45
Described from New Zealand as *Cicindela dawal* 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
Clivina impressefrons LeConte, 1844: 50

Crossonychus viridis (Dejean, 1831: 356)
Recorded from New Zealand as Lebia bembidioiides 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 punctatostrata Laporte de Castelnau, 1867: 67
Recorded from New Zealand by Gemminger & Harold (1868: 366). Restricted to Australia (Moore et al., 1987: 264).

Dicrochile punctipennis Laporte de Castelnau, 1867: 67
Recorded from New Zealand by Gemminger & Harold (1868: 366). Restricted to Australia (Moore et al., 1987: 264).

Dicrochile quadricollis Laporte de Castelnau, 1867: 67
Recorded from New Zealand by Gemminger & Harold (1868: 366). Restricted to Australia (Moore et al., 1987: 265).

Diplocheila zeelandica (Redtenbacher, 1868: 10)
Described from Auckland, 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).

Distipsidera flavicans (Chaudoir, 1854: 125)
Described from New Zealand as Distipsidera fasciata by Motschulsky (1864: 174). Subsequently recorded from this area by Hutton (1874: 158). Restricted to Australia (Horn, 1893: 331; Moore et al., 1987: 40; McCairns et al., 1997: 652). The type of D. fasciata was obviously mislabelled.

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)

**Notonomus 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

**Oceanella vitiensis vitiensis** (Blanchard, 1842: Plate 1, Figure 5)
Described from Greytown, 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; Bruerius van Nidek, 1965: 353).

**Percosoma carenoides** (White, 1846: 4)
Described from New Zealand as *Broscus 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: 80; 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 (1874: 159; 1904: 147), and Hudson (1923: 357; 1934: 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)

**Sphodrosomus saisseti** Perroud & Montrouzier, 1864: 59

**Trichosternus renardi** (Chaudoir, 1865b: 71)

**Appendix E. Alphabetical synopsis of species deliberately introduced into New Zealand**

**Barypus clivinoides** Curtis, 1839: 185
Introduced from Argentina against grass grub, *Costelytra zelandica* (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.

**Cnemalobus gayi** Putzeys, 1868: 366
Introduced from Argentina against grass grub, *Costelytra zelandica* (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 zelandica* (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.

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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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Hypharpax antarcticus
Hypharpax australasiae
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Lecanomerus atriceps
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<td>Molopsida robusta</td>
<td>Oopterus suavis</td>
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<td>Molopsida seriatoporus</td>
<td>Oregus aereus</td>
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<td>Molopsida simplex</td>
<td>Oregus inaequalis</td>
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<td>Molopsida simulans</td>
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<td>Molopsida sulcicollis</td>
<td>Pelodiaetodes prominens</td>
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<td>Neanops caecus</td>
<td>Pelodiaetus sulcatipennis</td>
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<td>Neanops pritchardi</td>
<td>Pentagonica vittipennis</td>
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<td>Neoferonia ardua</td>
<td>Periconpus australis</td>
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<td>Neoferonia fossalis</td>
<td>Perigona nigricns</td>
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<td>Neoferonia praserula</td>
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<td>Neoferonia straneoi</td>
<td>Physolaesthus insularis</td>
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<td>Neferonia truncatula</td>
<td>Physolaesthus limbatus</td>
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<td>Platynus macropterus</td>
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<td>Plocamostethus planiscalus</td>
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<td>Notagonum chathamense</td>
<td>Prosopogmus oodiformis</td>
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<td>Notagonum feredayi</td>
<td>Prosphodrus oculatus</td>
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<td>Prosphodrus waltini</td>
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<td>Notagonum marginellum</td>
<td>Psegmatopterus politissimus</td>
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<td>Notagonum submetallicum</td>
<td>Rhytisternus iopoleurus</td>
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<td>Oopterus basalis</td>
<td>Rhytisternus miser</td>
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<td>Oopterus frontalis</td>
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<tr>
<td>Oopterus fulvipes</td>
<td>Scopodes edwardsii</td>
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Additional species not listed above include:
- Zabronothus rufigenes
- Zabronothus straitius
- Zeanillus pallidus
- Zeanillus phyllobius
- Zeanillus punctiger
- Zecillenus alacris
- Zecillenus albescens
- Zecillenus chalmeri
- Zecillenus embersoni
- Zecillenus tillyardi
- Zeopoecilus calcaratus
- Zeopoecilus putus
- Zolus atratus
- Zolus carinatus
- Zolus femoralis
- Zolus helmsi
- Zolus labralis
- 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
95 taxa
E, 68; N, 4; A, 23; R, 7.

Actenonyx bembidioides
Agonocheila antipodum N
Allocinopus castaneus
Allocinopus smithi
Amarotypus edwardsii
Anchomenus punctatus R
Anchomenus sulcatus
Anomotarus illawarrae a
Anomotarus variegatus A
Aulacopodus calathoides
Aulacopodus sharpianus
Bembidion actuarium
Bembidion anchonoderus
Bembidion brullei
Bembidion callipeplum
Bembidion charlie
Bembidion dehiscens
Bembidion granuliferum
Bembidion mairum levatum
Bembidion parviceps
Bembidion taitense
Brullea antarctica
Carabus nemoralis a
Clivina australasiae a
Clivina basalis a
Clivina heterogena a
Clivina vagenas A
Ctenognathus adamsi
Ctenognathus bidens
Ctenognathus cardiophorus
Ctenognathus cheesemani R
Ctenognathus crenicolle
Ctenognathus montivagus
Ctenognathus munroi
Ctenognathus novaezelandiae
Demetrida nasuta
Dicrochile anthracina a
Duvaliomimus watti
Eudromia picea A
Euthenarus puncticolor
Haplanister crypticus A
Holcaspis hispida
Holcaspis mordax
Holcaspis mucronata
Holcaspis sinuiventris
Holcaspis vagepunctata
Hypharpax abstrusus
Hypharpaxantarcticus
Hypharpax australis A
Laemostenus complanatus A
Lecanomus roticipes a
Lecanomus sharp
Lecanomus verticalis A
Lecanomus vestigialis A
Maoripamborus fairbourni
Maorireclus rangitoenensis R
Mecodema crenaticolle
Mecodema crenicolle
Mecodema simplex
Mecodema spiniferum
Mecyclothorax ambiguus A
Mecyclothorax rotundicolle
Megastrum capito
Nesamblyops subcaecus
Notagonum lawsoni
Notagonum margarellus A
Notagonum submetallicum N
Notagonum submarginellus
Parabasis atratus
Patathychus crypticus A
Penagona vittipennis N
Pericompus australis A
Perigona nigricaps A
Pholoplaeus luculentus A
Physolaesthus insularis A
Physolaesthus limbatus R
Platynus macropterus
Phyphardmus waltoni
Psegnatopterus polittissimus
Rhysiternus miser A
Scopodes edwardsii
Scopodes fossulatus
Scopodes multipunctatus
Selenochilus oculator R
Syllectus anomalus
Tachys antarccticus
Tachys capitatus A
Triposaritus novaezelandiae
Zecillenus alacris R
Zecillenus albecens

BP
82 taxa
E, 66; N, 4; A, 14; R, 2.

Actenonyx bembidioides
Agonocheila antipodum N
Allocinopus sculpticolli
Allocinopus smithi
Amarotypus edwardsii
Aulacopodus calathoides
Bembidion actuarium
Bembidion anchonoderus
Bembidion brullei A
Bembidion callipeplum
Bembidion charlie
Bembidion dehiscens
Bembidion granuliferum
Bembidion mairum levatum
Bembidion parviceps
Bembidion rotundicolle
eustictum
Bembidion taitense
Bembidion tekapoense
Bembidion urenerense
Cicindela feredayi
Cicindela parryi
Cicindela spilleri
Cicindela tuberculata
Clivinabasalis a
Clivina vagenas A
Ctenognathus bidens
Ctenognathus cardiophorus
Ctenognathus crenicolle
Ctenognathus novaezelandiae
Demetrida nasuta
Dicrochile cephalotes
Dicrochile cordicollis
Dicrochile maura
Duvaliomimus styx
Duvaliomimus watti
Haplanister crypticus A
Holcaspis dentifera
Holcaspis hispida
Holcaspis mordax
Holcaspis mucronata
Holcaspis sinuiventris
Hypharpaxantarcticus
Hypharpax australis A
Lecanomus roticipes A
Lecanomus sharp
Lecanomus verticalis A
Lecanomus vestigialis A
Mecocodema arox A
Mecodema crenaticolle
Mecodema crenicolle
Mecodema curvidens A
Mecodema occiputata
Mecodema pluto
Mecodema spiniferum
Mecodema validum
Mecyclothorax ambiguus A
Mecyclothorax placens
Mecyclothorax rotundicolle
Megastrum capito
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<td>Notagomon submetallicum h</td>
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<td>Parachys cryptica A</td>
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<tr>
<td>Pentagonica vittipennis h</td>
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<td>Pericompus australis h</td>
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<tr>
<td>Philochlaeus luculentus h</td>
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<tr>
<td>Physolaesthus insularis h</td>
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<tr>
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<td>Prophorbus occulatus</td>
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<td>Tachysantarcticus</td>
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**CL**

64 taxa

E, 47; N, 3; A, 14; R, 0.

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<td>Bembidion anchonoderus</td>
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<td>Bembidion callipeplum</td>
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<td>Bembidion parviceps</td>
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<td>Bembidion rotundicolle eustictum</td>
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<td>Bembidion tairuense</td>
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<td>Cidindesa spilleri</td>
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<td>Cidindesa tuberculata</td>
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<td>Clivina vagans A</td>
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<td>Clenognathus lucifugus</td>
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<td>Holcaspis mordax</td>
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<td>Pentagonica vittipennis h</td>
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<td>Philochlaeus luculentus h</td>
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<td>Plocosmolothus planiusculus</td>
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<td>Rhytisternus miser A</td>
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<td>Scopodes edwardsii</td>
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<td>Scopodes fossulatus</td>
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<td>Scopodes multipunctatus</td>
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<tr>
<td>Syllectus anomalus</td>
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**GB**

63 taxa

E, 48; N, 3; A, 12; R, 0.

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<td>Bembidion tairuense</td>
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<tr>
<td>Bembidion urewerense</td>
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<td>Cidindesa parryl</td>
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**CH**

70 taxa

E, 57; N, 3; A, 10; R, 0.

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<td>Bembidion charile</td>
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<tr>
<td>Clivina basalis A</td>
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<td>Clivina vagans A</td>
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</table>
Fauna of New Zealand 43

Bembidion dehiscens
Bembidion granuliferum
Bembidion maorinum levatum
Bembidion musae
Bembidion parviceps
Bembidion rotundicolle eustictum
Bembidion tauroense
Bembidion tekapoense
Clivina vagans
Ctenognathus adamsi
Ctenognathus cardiophorus
Demetrida nasuta
Dicrochile cephalotes
Dicrochile maura
Euthenarus puncticollis
Holcaspis dentifera
Holcaspis hispida
Holcaspis mordax
Holcaspis mucronata
Hypharpax abstrusus
Hypharpax australasiae
Hypharpax australis
Lecanomerus atriceps
Lecanomerus fallax
Lecanomerus insignitus
Lecanomerus sharpi
Lecanomerus verticalis
Lecanomerus vestigialis
Maoripamborus fairburni
Mecodema spiniferum
Mecodema validum
Mecyclothorax rotundicollis
Nesamblyops subcaecus
Notagonum lawsoni
Notagonum submetallicum
Parabaris atratus
Paratychys crypticola
Pelodietaeodes prominers
Peragonica vitipennis
Periconopsus australis
Platynus macropterus
Rhytisternus illecebris
Rhytisternus miser
Scacodes edwardsdi
Scopodes fossulatus
Scopodes multipunctatus
Syllectus anomalus
Tachys antarcticus
Tachys captus
Triplosarax novaezelandiae
Zecillenus albescens

Scopodes fossulatus
Syllectus anomalus

ND
85 taxa
E, 64; N, 3; A, 18; R, 8.

Actenonyx bembidioides
Agonocheila antipodum
Amarotyris edwardsii
Anchomenus colensonis
Anchomenus edwardsii
Anchomenus sulcitaris
Anomoturus illawarrae
Anomoturus variegatus
Aulacopus calathoides
Aulacopus sharpianus
Bembidion actuariun
Bembidion anchonodorus
Bembidion brullei
Bembidion cailipeplum
Bembidion parviceps
Bembidion rotundicolle eustictum
Bembidion tauroense
Brullea antarctica
Cicindela brevilunata
Cicindela parryi
Cicindela perhispida giveni
Cicindela perhispida perhispida
Cicindela spilleri
Cicindela tuberculata
Clivina basalis
Clivina heterogena
Clivina vagans
Ctenognathus bidens
Ctenognathus cardiophorus
Ctenognathus crenatus
Ctenognathus deformedis
Ctenognathus lucifugas
Ctenognathus montivagus
Ctenognathus neozelandicus
Ctenognathus novaezelandiae
Ctenognathus parabilis
Ctenognathus perruggiatorum
Ctenognathus politus
Ctenognathus suborbithorax
Demetrida nasuta
Dicrochile anchomemoides
Dicrochile cordicollis
Dicrochile fabri
Dicrochile mauro
Eugadroma picea
Euthenarus puncoticolls
Holcaipsis dentifera
Holcaspis hispida
Holcaspis mordax
Holcaspis mucronata
Hypharpax australis
Hypharpax australasiae
Hypharpax australis
Hypharpax parryi
Hypharpax perhispida giveni
Hypharpax perhispida perhispida
Hypharpax spilleri
Hypharpax tuberculata
Clivina basalis
Clivina heterogena
Clivina vagans
Holcaspis dentifera
Holcaspis hispida
Holcaspis mordax
Holcaspis mucronata
Hypharpax australis

85 taxa
E, 64; N, 3; A, 18; R, 8.

Actenonyx bembidioides
Agonocheila antipodum
Amarotyris edwardsii
Anchomenus colensonis
Anchomenus edwardsii
Anchomenus sulcitaris
Anomoturus illawarrae
Anomoturus variegatus
Aulacopus calathoides
Aulacopus sharpianus
Bembidion anchonodorus
Bembidion brullei
Bembidion cailipeplum
Bembidion parviceps
Bembidion rotundicolle eustictum
Bembidion tauroense
Brullea antarctica
Cicindela brevilunata
Cicindela parryi
Cicindela perhispida giveni
Cicindela perhispida perhispida
Cicindela spilleri
Cicindela tuberculata
Clivina basalis
Clivina heterogena
Clivina vagans
Ctenognathus bidens
Ctenognathus cardiophorus
Ctenognathus crenatus
Ctenognathus deformedis
Ctenognathus lucifugas
Ctenognathus montivagus
Ctenognathus neozelandicus
Ctenognathus novaezelandiae
Ctenognathus parabilis
Ctenognathus perruggiatorum
Ctenognathus politus
Ctenognathus suborbithorax
Demetrida nasuta
Dicrochile anchomemoides
Dicrochile cordicollis
Dicrochile fabri
Dicrochile mauro
Eugadroma picea
Euthenarus puncoticolls
Holcaipsis dentifera
Holcaspis hispida
Holcaspis mordax
Holcaspis mucronata
Hypharpax australis
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Hypharpax parryi
Hypharpax perhispida giveni
Hypharpax perhispida perhispida
Hypharpax spilleri
Hypharpax tuberculata
Clivina basalis
Clivina heterogena
Clivina vagans
Holcaspis dentifera
Holcaspis hispida
Holcaspis mordax
Holcaspis mucronata
Hypharpax australis

57 taxa
E, 50; N, 1; A, 6; R, 0.

Actenonyx bembidioides
Allilocinus sculpcticollis
Amarotyris edwardsii
Anchomenus xanthomelas
Anomoturus variegatus
Aulacopus brouni
Aulacopus calathoides
Bembidion actuariun
Bembidion anchonodorus
Bembidion maorinum levatum
Bembidion musae
Bembidion solitarium
Clivina feredayi
Clivina parryi
Clivina tuberculata
Ctenognathus adamsi
Dicrochile cephalotes

RI
57 taxa
E, 50; N, 1; A, 6; R, 0.

Actenonyx bembidioides
Allilocinus sculpcticollis
Amarotyris edwardsii
Anchomenus xanthomelas
Anomoturus variegatus
Aulacopus brouni
Aulacopus calathoides
Bembidion actuariun
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Bembidion maorinum levatum
Bembidion musae
Bembidion solitarium
Clivina feredayi
Clivina parryi
Clivina tuberculata
Ctenognathus adamsi
Dicrochile cephalotes
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Pentagonica vittipennis
Pericompsus australis
Platynus macropeterus
Plocamostethus planiusculus
Prosopogmus ooidiformis
Scopodes edwardsii
Scopodes fossulatus
Scopodes multipunctatus
Scopodes pustulatus
Selenochilus ruficornis
 Sylvectus anomalus
Tachys antarcticus
Zolus atratus
Zolus carinatus
Zolus femoralis

WA 61 taxa
E, 58; N, 1; A, 2; R, 2.

Actenonyx bembidioides
Allocinopus angustulus
Allocinopus sculpticollis
Anomotarus variegatus
Aulacopodus brunni
Bembidion actuarium
Bembidion anchoronatus
Bembidion callipeplum
Bembidion charile
Bembidion dehiscens
Bembidion granuliferum
Bembidion maorinum levatum
Bembidion maorinum maorinum
Bembidion parviceps
Bembidion rotundicolle eustictum
Bembidion solitarius
Bembidion tairuense
Bembidion tekapoense
Bembidion urewerense
Brullea antarctica
Cicindela tuberculata
Clivina vagans
Duvaliimimus styx
Duvaliimimus watti
Euthenarus puncticollis
Holcaspis mucronata
Holcaspis odontella
Holcaspis oedicnema
Holcaspis sinuiventi
Holcaspis vagepunctata
Laemostenus complanatus
Mecodema longicolle
Mecodema oblongum
Mecodema oconnori
Mecodema simplex
Mecodema spiniferum

Mecodema sulcatum
Mecyclotheta axillicollis
Mecyclotheta brunii
Mecyclotheta rotundicolle
Megadromus capito
Megadromus turgidiceps
Megadromus vigil
Molopsida cordipennis
Molopsida seriatoporus
Molopsida strenua
Molopsida sulcicolis
Scopodes fossulatus
Scopodes multipunctatus
Scopodes pustulatus
Sylyctis anomalus
Tachys antarcticus
Zabronothus rufipes

WI 70 taxa
E, 54; N, 3; A, 13; R, 0.

Actenonyx bembidioides
Allocinopus ocularius
Allocinopus sculpticollis
Anomotarus intermedius
Anomotarus illawarrae
Anomotarus variegatus
Aulacopodus brunni
Bembidion actuarium
Bembidion anchoronatus
Bembidion callipeplum
Bembidion charile
Bembidion granuliferum
Bembidion maorinum levatum
Bembidion maorinum maorinum
Bembidion parviceps
Bembidion rotundicolle eustictum
Bembidion solitarius
Bembidion tairuense
Brullea antarctica
Cicindela tuberculata
Clivina vagans
Duvaliimimus styx
Duvaliimimus watti
Euthenarus puncticollis
Haplanister crypticus
Harpalus affinis
Holcaspis dentifera
Holcaspis mordax
Holcaspis mucronata
Holcaspis oedicnema
Holcaspis sinuiventi
Hypharpax australasiae
Laemostenus complanatus
Lecanomerus atriceps
Lecanomerus sharpi
Lecanomerus verticalis
Lecanomerus vestigialis
Mecodema crenaticolle
Mecodema crenicolle
Mecodema occiputale
Mecyclotheta axillicollis
Mecyclotheta brunii
Mecyclotheta rotundicolle
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Molopsida seriatoporus
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Oopterus laevigatus
Platynus macropeterus
Plocamostethus planiusculus
Prosphodrus occultus
Psegmatopterus politissimus
Scopodes fossulatus
Scopodes multipunctatus
Scopodes pustulatus
Sylyctis anomalus
Tachys antarcticus
Zabronothus rufipes

WN 121 taxa
E, 101; N, 4; A, 16; R, 5.

Actenonyx bembidioides
Agonocheila antipodum
Allocinopus sculpticollis
Allocinopus ocellatus
Anamorthysius edwardsii
Anochomenus helmsi
Anochomenus intermedius
Anochomenus sandageri
Anochomenus xanthomelas
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<td>Zolus helmsi</td>
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WO 73 taxa
E, 60; N, 2; A, 11; R, 3.

Anomotarus illawarrae
Anomotarus variegatus
Aulacopodus bruni
Bembidion actuarium
Bembidion anchonoderus
Bembidion callipeplum
Bembidion charile
Bembidion dehiscens
Bembidion granuliferum
Bembidion maorinum levatum
Bembidion maorinum maorinum
Bembidion musae
Bembidion parviceps
Bembidion rotundicolle eustictum
Bembidion rotundicolle rotundicolle
Bembidion solitarium
Bembidion tekapoense
Bembidion tekapoense
Brullea antarctica
Cicindela feredayi
Cicindela parryi
Cicindela tuberculata
Clivina vagans
Cliturgus actocharis
Cliturgus adamsi
Cliturgus novaezelandiae
Cliturgus pictonensis
Cliturgus simmondii
Demetrika lineella
Demetrika nasuta
Dicrochiote aterrima
Dicrochiote cordicollis
Diplymma clivinoides
Duvaliomimus waitei
Euthenurus puncticollis
Gaioxenus pilipalpis
Halpinastir crepitosus
Harpalus affinis
Holcaspi brouni
Holcaspi hispida
Holcaspi intermittens
Holcaspi mordax
Holcaspi mucronata
Holcaspi oecidenma
Holcaspi sinuventriss
Holcaspi vagnpunctata
Holcaspi vexata
Hypharpax absbrusus
Hypharpax australasiae
Hypharpax australis
Laemostenus complanatus
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Notagonum feredayi
Notagonum lawsoni
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Oopterus frontalis
Oopterus laevicollis
Oopterus nigrilatus
Oopterus sobrinus
Oregus aerius
Parachly stigmaticeps
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Philoplaes luculentus
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Plomastosthenus planiusculus
Proshprudus occultus
Pseudometoprus politissimus
Rhytisternus miser
Scopodes edwardsii
Scopodes fossulatus
Scopodes multipunctatus
Scopodes prasinus
Scopodes postulatus
Selenochilus ruficornis
Sylectus anomalous
Tachys antarcticus
Triplosaron novaezelandiae
Zabronothus rufipes
Zolus carinatus
Zolus femoralis
Zolus helmsi
Fauna of New Zealand 43

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Molopsida seriatoporus
Molopsida strenua
Neanops caecus
Neanops pritchardi
Nesamblyops oreobius
Notagonum lawsoni
Notagonum submetallicum
Parabantis atratus
Paratachys crypticola
Pericompsus australis
Plocamostethus planiusculus
Prosopogmus ooidiformis
Prosphodrus waltoni
Psegmopterus polliissimus
Rhytisternus miser
Scolides edwardsi
Scolides fossilis
Scolides multipunctatus
Syllectus anomalus
Tachys antarcticus

South Island

BR

88 taxa

E, 84; N, 4; A, 0; R, 4.

Actenonyx bembidioides
Agonocheila antipodum
Allocinopus sculpticollis
Amarotypus edwardsii
Anchomenus australis
Anchomenus helmsi
Bembidion anchonoderus
Bembidion chalicepis
Bembidion charile
Bembidion dehiscens
Bembidion graniferum
Bembidion hokitikense
Bembidion orbiferum
Bembidion parviceps
Bembidion rotundicolle eustinctum
Bembidion solitareum
Bembidion tairuense
Bembidion tekapoense
Bembidion wanakense
Brullea antarctica
Cicindela ardua
Cicindela integrata
Cicindela prasignis
Cicindela submetallicum
Cicindela submarginalis
Cicindela versicolor
Dicrochile flavipes
Dimicythorax rotundicollis
Megadromus australis
Mecodema lucidum
Mecodyma laeviceps
Megiodromus alternus

CO

83 taxa

E, 78; N, 3; A, 2; R, 4.

Actenonyx bembidioides
Agonocheila antipodum
Amarotypus edwardsii
Anchomenus integratus
Anchomenus otagoensis
Bembidion anchonoderus
Bembidion chalicepis
Bembidion charile
Bembidion tairuense
Bembidion tekapoense
Bembidion razorensis
Bembidion maculatum
Bembidion celer
Bembidion laeviceps
Bembidion rectolineatum
Bembidion polita
Bembidion otagoensis
Bembidion australis
Bembidion alpinalis
Bembidion puncticollis
Molopsida robusta
Molopsida seriatoporus
Molopsida simulans
Neoferonia ardua
Neoferonia prasignis
Neoferonia submetallicum
Oopterus laeviventris
Oopterus latipennis
Oopterus lewisi
Oopterus puncticollis
Oopterus lewisi
Oopterus tarda
Oopterus versicolor
Scopodiscus anomalus
Scopodes australis
Scopodes laeviceps
Scopodes versicolor
Scopodes laeviceps
Scopodes multipunctatus
Scopodiscus anomalus
Syllectus anomalus
Syllectus magnus
Syllectus neglectus
Tachys cavelli
Tachys latipennis
Zeopoeclis paludus
Zeolobius flavipes
Zeolobius paludus
Zeolobius praetextatus
Zeolobius perplexus
Zeolobius rusticus
Zolus atratus
Zolus femorale
Zolus helmsi
Zolus labralis

Acrocinus longimanus
Acrocinus nevadensis
Acrocinus ornatus
Acrocinus submetallicus
Acrocinus submarginalis
Acrocinus versicolor
Dicrochile flavipes
Dimicythorax rotundicollis
Megadromus alternus
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<th>79 taxa</th>
<th>FD: 59 taxa</th>
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**Notagomum submetallicum**: 79 taxa, E: 74; N: 3; A: 2; R: 8.
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<th>Fauna of New Zealand 43</th>
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</table>

**MB**  
74 taxa

E, 68; N, 3; A, 3; R, 0.

- Actenonyx bembidioides
- Agonocheila antipodum
- Anomochilus fimbriatus
- Bembidion chalceipes
- Bembidion dehiscens
- Bembidion hokitikense
- Bembidion maorinum maorinum
- Bembidion musae
- Bembidion rotundicolle rotundicolle
- Cerabilla aphela
- Cerabilla major
- Cerabilla oblonga
- Cicindela austromontana
- Cicindela dunedensis
- Cicindela feredayi
- Cicindela helmsi
- Cicindela latecincta
- Cicindela parryi
- Cicindela waiouraensis
- Clivina vagans
- Demetrida abietina
- Demetrida dieffenbachii
- Demetrida lateralis
- Demetrida nasuta
- Hypharpax australis
- Hypharpax flavigula
- Hypharpax thoracica
- Hypharpax whitei
- Laemostenus complanatus
- Lecanomerus fuliginosus
- Metacyclops burneyi
- Mecodema crenicolle
- Mecodema fulgidum
- Mecodema kirkii
- Mecodema marginata
- Mecodema tripunctata
- Mecodema obscurum
- Nesamblyops orebius
- Nesamblyops subcaecus
- Notagaron kerrugineus
- Notagaron otagoensis
- Notagaron submetallicum
- Oregus aereus
- Pentagona vittipennis
- Platynus macropterus
- Plocamostethus planiusculus
- Scopodes fossulatus
- Scopodes prasinus
- Scopodes versicolor
- Selenochilus synthetica
- Syllectus anomalus
- Tachys antarcticus
- Zoepoecilus calcaratus
- Zoepoecilus putus

**KA**  
44 taxa

E, 40; N, 1; A, 3; R, 1.

- Actenonyx bembidioides
- Bembidion anahae
- Bembidion brullei
- Bembidion chalceipes
- Bembidion granuliferum
- Bembidion hokitikense
- Bembidion maorinum maorinum
- Bembidion musae
- Bembidion rotundicolle rotundicolle
- Cerabilla aphela
- Cerabilla major
- Cerabilla oblonga
- Cicindela austromontana
- Cicindela dunedensis
- Cicindela feredayi
- Cicindela helmsi
- Cicindela latecincta
- Cicindela parryi
- Cicindela waiouraensis
- Ctenognathus adamsi
- Ctenognathus bicinctus
- Ctenognathus pictorius
- Demetrida abietina
- Demetrida dieffenbachii
- Demetrida lateralis
- Demetrida nasuta
- Demetrida sinuata
- Dicrochile flavipes
- Dicrochile thoracica
- Dicrochile whitei
- Holcaspis angustula
- Holcaspis bronniana
- Holcaspis hudsoni
- Holcaspis implica
- Holcaspis oedicnema
- Holcaspis tripunctata
- Hypharpax australis
- Laemostenus complanatus
- Lecanomerus fuliginosus
- Mecodema costellum lewisi
- Mecodema fulgidum
- Mecodema sulcatum
- Megadromus rectalis
- Megadromus wallacei
- Metacyclops burneyi
- Molopsida antarctica
- Molopsida fuliginosa
- Molopsida sulcicollis
- Nesamblyops orebius
- Nesamblyops subcaecus
- Notagaron kerrugineus
- Notagaron otagoensis
- Notagaron submetallicum
- Oregus aereus
- Pentagona vittipennis
- Platynus macropterus
- Plocamostethus planiusculus
- Scopodes fossulatus
- Scopodes prasinus
- Scopodes versicolor
- Selenochilus synthetica
- Syllectus anomalus
- Tachys antarcticus
- Zoepoecilus calcaratus
- Zoepoecilus putus

**MC**  
117 taxa

E, 106; N, 3; A, 8; R, 17.

- Actenonyx bembidioides
- Agonocheila antipodum
- Anomochilus fimbriatus
- Bembidion chalceipes
- Bembidion dehiscens
- Bembidion hokitikense
- Bembidion maorinum maorinum
- Bembidion musae
- Bembidion rotundicolle rotundicolle
- Bembidion tekapoense
- Bembidion wanakense
- Brullea antarctica
- Cerabilla major
- Cerabilla oblonga
- Cicindela austromontana
- Cicindela dunedensis
- Cicindela feredayi
- Cicindela helmsi
- Cicindela latecincta
- Cicindela parryi
- Cicindela waiouraensis
- Ctenognathus adamsi
- Ctenognathus bicinctus
- Ctenognathus pictorius
- Demetrida abietina
- Demetrida dieffenbachii
- Demetrida lateralis
- Demetrida nasuta
- Dicrochile flavipes
- Dicrochile thoracica
- Dicrochile whitei
- Holcaspis angustula
- Holcaspis bronniana
- Holcaspis hudsoni
- Holcaspis implica
- Holcaspis oedicnema
- Holcaspis tripunctata
- Hypharpax australis
- Laemostenus complanatus
- Lecanomerus fuliginosus
- Mecodema costellum lewisi
- Mecodema fulgidum
- Mecodema sulcatum
- Megadromus rectalis
- Megadromus wallacei
- Metacyclops burneyi
- Molopsida antarctica
- Molopsida fuliginosa
- Molopsida sulcicollis
- Nesamblyops orebius
- Nesamblyops subcaecus
- Notagaron kerrugineus
- Notagaron otagoensis
- Notagaron submetallicum
- Oregus aereus
- Pentagona vittipennis
- Platynus macropterus
- Plocamostethus planiusculus
- Scopodes fossulatus
- Scopodes prasinus
- Scopodes versicolor
- Selenochilus synthetica
- Syllectus anomalus
- Tachys antarcticus
- Zoepoecilus calcaratus
- Zoepoecilus putus
Dicrochile aterrima
Dicrochile flavipes
Dicrochile rugicollis
Dicrochile subopaca
Dicrochile thoracica
Dicrochile whitei
Diglymma clivinoides
Euthenarus brevicollis
Euthenarus puncticollis
Haplanister crypticus
Holcaspis algida
Holcaspis angustula
Holcaspis delator
Holcaspis elongella
Holcaspis falcis
Holcaspis hudsoni
Holcaspis implica
Holcaspis intermittens
Holcaspis odontella
Holcaspis sternalis
Holcaspis suteri
Hypharpax abstrusus
Hypharpax antarcticus
Hypharpax australasiae
Hypharpax australis
Laemostenus complanatus
Lecanomerus atriceps
Lecanomerus fuliginosus
Lecanomerus incertus
Lecanomerus latimanus
Lecanomerus obesus
Lecanomerus pallipes
Lecanomerus sharpri
Mecodema allani
Mecodema costellum lewisi
Mecodema fulgidum
Mecodema howitti
Mecodema huttense
Mecodema oregoides
Mecodema rugicollis
Megadromus alternus
Megadromus bullatus
Megadromus enysi
Megadromus guernii
Megadromus lobipes
Megadromus rectalis
Megadromus rectangularis
Megadromus temukensis
Metaglymma aberrans
Metaglymma moniliferum
Molopsida debilis
Molopsida diversa
Molopsida halli
Molopsida puncticollis
Molopsida salicollis
Neoferonia procera
Notagonum feredayi
Notagonum submetallicum
Oopterus laevicollis
Oopterus laeviventris
Oopterus latifossus
Oopterus latipennis
Oopterus puncticeps
Oregus aereus
Pentagonica vitipennis
Platynus macropterus
Scopodes edwardsii
Scopodes fossulatus
Scopodes laevigatus
Scopodes lehmanni
Scopodes versicolor
Selenochilus fallax
Selenochilus frontalis
Selenochilus piceus
Selenochilus syntheticus
Sylectus anomalus
Triplosurus novaezelandiae
Zabronothus striatulus
Zeanillus phyllobius
Zeanillus punctiger
Zolus helmsi
Holcaspis delator
Holcaspis falcis
Holcaspis ohauensis
Holcaspis sternalis
Hypharpax antarcticus
Hypharpax australis
Mecodema lucidum
Mecodema pollianum
Mecodema rectolineatum
Mecyclothorax rotundicollis
Megadromus alternus
Megadromus bullatus
Megadromus temukensis
Metaglymma aberrans
Molopsida cinca
Notagonum feredayi
Notagonum submetallicum
Oopterus basalii
Oregus aereus
Scopodes edwardsii
Scopodes fossulatus
Scopodes laevigatus
Scopodes prasinus
Scopodes versicolor
Zolus femoralis
NC
69 taxa
E, 66; N, 2; A, 1; R, 1.

MK
52 taxa
E, 50; N, 1; A, 1; R, 1.

Actenonyx bembidioides
Agenocera antipodum
Amarotypus edwardsi
Bembidion anchonoderus
Bembidion chalceipes
Bembidion charile
Bembidion dehiscens
Bembidion granuliferum
Bembidion macrimum marinux
Bembidion musae
Bembidion parviceps
Bembidion rotundicolle rotundicolle
Bembidion tairunese
Bembidion tekapoense
Bembidion wanakense
Cerabilia major
Cerabilia oblonga
Cicindela austromontana
Cicindela dunedensis
Cicindela feredayi
Cicindela helmsi
Cicindela latecincta
Cicindela parryi
Demetrida dieffenbachii
Demetrida lateralis
Demetrida sinuata
Dicrochile aterrima
Dicrochile flavipes
Dicrochile rugicollis
Dicrochile whitei
Duvaliomimus halli
Holcaspis algida
Holcaspis angustula
Fauna of New Zealand 43

Diglymma clivinoides  
Duvaliomimus walkerii  
Holcaspis brevicula  
Holcaspis elongella  
Holcaspis falcis  
Holcaspis hudsoni  
Holcaspis intermedius  
Hypharpax abstrusus  
Hypharpax antarcticus  
Laemostenus complanatus  
Mecodema brittoni  
Mecodema fulgidum  
Mecodema rugiceps rugiceps  
Mecodema sulcatum  
Mecyclothorax rotundicollis  
Megadromus antarcticus  
Megadromus lobipes  
Megadromus rectalis  
Megadromus rectangulus  
Metaglymma moniliferum  
Molopsida debilis  
Molopsida diversa  
Molopsida fuscipes  
Molopsida robusta  
Molopsida semirupicola  
Molopsida sulcata  
Mecodema angustulum  
Mecodema crenaticolle  
Mecodema crenicolle  
Mecodema dunense  
Mecodema erectum  
Mecodema fulgidus  
Mecodema integratum  
Mecodema金属um  
Mecodema metallicum  
Mecodema nitidum  
Mecodema pavidum  
Mecodema proximum  
Mecodema pulchellum  
Mecodema punctatum  
Mecodema rugiceps  
Mecodema rugiceps anomalum  
Mecodema strictum  
Mecodema sulcatum  
Mecyclothorax rotundicollis  
Megadromus lobipes  
Megadromus rectalis  
Molopsida alpinales  
Molopsida antarctica  
Molopsida fuscipes  
Molopsida pretiosa  
Molopsida puncticollis  
Mecodema rugiceps  
Mecodema rugiceps rugiceps  
Mecodema angustulum  
Mecodema crenaticolle  
Mecodema crenicolle  
Mecodema dunense  
Mecodema erectum  
Mecodema fulgidus  
Mecodema integratum  
Mecodema金属um  
Mecodema metallicum  
Mecodema nitidum  
Mecodema pavidum  
Mecodema proximum  
Mecodema pulchellum  
Mecodema punctatum  
Mecodema rugiceps  
Mecodema rugiceps anomalum  
Mecodema strictum  
Mecodema sulcatum  
Mecyclothorax rotundicollis  
Megadromus lobipes  
Megadromus rectalis  
Molopsida alpinales  
Molopsida antarctica  
Molopsida fuscipes  
Molopsida pretiosa  
Molopsida puncticollis  
Molopsida robusta  
Molopsida seriatoporus  
Neoferonia ardua  
Neoferonia prasignis  
Neoferonia truncatula  
Nesamblyops oceobius  
Nesamblyops subcaecus  
Notagomum feredayi  
Notagomum submetallicum  
Oopterus collaris  
Oopterus latipennis  
Oopterus pallidipes  
Oopterus parvulus  
Oopterus probus  
Oregus aereus  
Peloridactus lewisi  
Pentagonica vittipennis  
Pericampsus australis  
Pholeodytes cerberus  
Pholeodytes townsendii  
Platynus macropterus  
Plocarnostethus planiusculus  
Psegmoptopterus politissimus  
Scopodes cognatus  
Scopodes edwardsi  
Scopodes fossulatus  
Scopodes laevigatus  
Scopodes levistriatus  
Scopodes multipunctatus  
Scopodes prasinus  
Scopodes pustulatus  
Scopodes versicolor  
Scolotrechus orbiculatus  
Sylectus anomalus  
Sylectus magnus  
Sylectus speleaeus  
Tachys antarcticus  
Tachys latipennis  
Triplosaroma novaezelandiae  
Tribolium tillyardi  
Zeopoecilus calcaratus  
Zeopoecilus putus  
Zolus annulatus  
Zolus femoralis  
Zolus helmsi  
Zolus labralis  

NN  
126 taxa  
E, 115; N, 3; A, 11; R, 19.

**Actenonyx bembidioides**  
**Agonocheila antipodum**  
**Allocinopus sculpticollis**  
**Anomalopodus abellani**  
**Anchomenus helmsi**  
**Anchomenus macrocoelis**  
**Anchomenus sandageri**  
**Anomotarus variiguttatus**  
**Bembidion anochonederus**  
**Bembidion brullei**  
**Bembidion dehiscens**  
**Bembidion graniferum**  
**Bembidion hokitikense**  
**Bembidion maorinum maorinum**  
**Bembidion musae**  
**Bembidion orbiferum**  
**Bembidion parviceps**  
**Bembidion tauriense**  
**Bembidion tekapoense**  
**Bembidion wanakense**  
**Bruitia antarctica**  
**Cicindela latecincta**  
**Cicindela panyi**  
**Cicindela tuberculata**  
**Clivina basalis**  
**Clivina vagans**  
**Ctenognathus actochares**  
**Ctenognathus pictonensis**  
**Demetrida lineella**  
**Demetrida nasuta**  
**Dicrochile flavipes**  
**Duvaliomimus lamberti**  
**Duvaliomimus orpheus**  
**Duvaliomimus pluto**  
**Duvaliomimus walkerii**  
**Euthenarus brevicollis**  
**Euthenanus puncticollis**  
**Haplanister crypticus**  
**Holcaspis hudsoni**  
**Holcaspis oedicnema**  
**Hygranillus kuscheli**  
**Hypharpax australis**  
**Laemostenus complanatus**  
**Lecanomerus atriceps**  
**Lecanomerus obesulus**  
**Lecanomerus verticalis**  
**Lecanomerus vestigialis**  
**Mecodema angustulum**  
**Mecodema costellum gordonense**  
**Mecodema costellum obesum**  
**Mecodema crenaticolle**  
**Mecodema crenicolle**  
**Mecodema ducale**  
**Mecodema dunense**  
**Mecodema flava**  
**Mecodema fulgidum**  
**Mecodema integratum**  
**Mecodema longicolle**  
**Mecodema metallicum**  
**Mecodema nitidum**  
**Mecodema pavidum**  
**Mecodema proximum**  
**Mecodema pulchellum**  
**Mecodema punctatum**  
**Mecodema rugiceps rugiceps**  
**Mecodema strictum**  
**Mecodema sulcatum**  
**Mecyclothorax rotundicollis**  
**Megadromus lobipes**  
**Megadromus rectalis**  
**Molopsida alpinales**  
**Molopsida antarctica**  
**Molopsida fuscipes**  
**Molopsida pretiosa**  
**Molopsida puncticollis**  
**Molopsida robusta**  
**Molopsida seriateroporus**  
**Neoferonia ardua**  
**Neoferonia prasignis**  
**Neoferonia truncatula**  
**Nesamblyops oceobius**  
**Nesamblyops subcaecus**  
**Notagomum feredayi**  
**Notagomum submetallicum**  
**Oopterus collaris**  
**Oopterus latipennis**  
**Oopterus pallidipes**  
**Oopterus parvulus**  
**Oopterus probus**  
**Oregus aereus**  
**Pelodactylus lewisi**  
**Pentagonica vittipennis**  
**Pericampsus australis**  
**Pholeodytes cerberus**  
**Pholeodytes townsendii**  
**Platynus macropterus**  
**Plocarnostethus planiusculus**  
**Psegmoptopterus politissimus**  
**Scopodes cognatus**  
**Scopodes edwardsi**  
**Scopodes fossulatus**  
**Scopodes laevigatus**  
**Scopodes levistriatus**  
**Scopodes multipunctatus**  
**Scopodes prasinus**  
**Scopodes pustulatus**  
**Scopodes versicolor**  
**Scolotrechus orbiculatus**  
**Sylectus anomalus**  
**Sylectus magnus**  
**Sylectus speleaeus**  
**Tachys antarcticus**  
**Tachys latipennis**  
**Triplosarum novaezelandiae**  
**Zecillenus tillyardi**  
**Zeopoecilus calcaratus**  
**Zeopoecilus putus**  
**Zolus annulatus**  
**Zolus femoralis**  
**Zolus helmsi**  
**Zolus labralis**
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<tr>
<td>73 taxa</td>
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<td>62 taxa</td>
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<td>E, 68; N, 3; A, 2; R, 11.</td>
<td>E, 39; N, 2; A, 3; R, 0.</td>
<td>E, 53; N, 3; A, 6; R, 3.</td>
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<table>
<thead>
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<th>Actenonyx bembidioides</th>
<th>62 taxa</th>
<th>Actenonyx bembidioides</th>
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<tr>
<td>Agonocheila antipodum</td>
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<td>Laemostenus complanatus</td>
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Molopsida sulcicollis
Nesamblyops oreobius
Nesamblyops subcaecus
Notagonum feredayi
Notagonum lawsoni
Notagonum submetallicum
Pentagonica vittipennis
Platynus macropterus
Plocamostethus planiusculus
Scopodes fossulatus
Scopodes pustulatus
Sylectus anomalus
Tachys antarcticus
Tachys latipennis
Triposaurus novaestlandiae
Zeopoecculus calcaratus
Zeopoecculus 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 soforthnitis
Bembidion rotundicolle rotundicolle
Cicindela latecincta
Cicindela parryi
Clivina basalis
Ctenognathus littorellus
Demetrida nasuta
Dicrochile novaestlandiae
Diglymma obtusum
Euthenarus puncticolli
Holcaspis catenulata
Holcaspis egregialis
Holcaspis impigra
Holcaspis implica
Holcaspis ovatella
Holcaspis placida
Holcaspis sternalis
Laemostenus complanatus
Lecanomerus fuliginosus
Mecodema altermans alternans
Mecodema bullatum
Mecodema costipenne
Mecodema elongatum
Mecodema impressum
Mecodema intimae
Mecodema litoreum
Mecodema lucidum
Mecodema minax
Mecodema morio
Mecodema punctatum
Mecodema rex
Mecodema sculpturatum puncticolli
Mecodema sculpturatum sculpturatum
Mecyclothorax rotundicollii
Megadromus bullatus
Megadromus haplopus
Megadromus meritus
Megadromus sandageri
Metaglymma bibale
Molopsida cincta
Molopsida oxygona
Nesamblyops subcaecus
Notagonum feredayi
Notagonum submetallicum
Oopterus pygmeatus
Oregus aereus
Oregus inaequalis
Platynus macropterus
Scopodes edwardsii
Scopodes fossulatus
Scopodes prasinus
Scopodes versicolor
Zeanolius pallidus
Zolus subopacus

WD
67 taxa
E, 63; N, 3; A, 1; R, 0.

Actenonyx bembidioides
Agonocheila antipodum
Allocaicus cinctus
Anchomenus otagoensis
Anchomenus soforthnitis
Bembidion rotundicolle rotundicolle
Cicindela latecincta
Cicindela parryi
Demetrida nasuta
Dicrochile insignis
Dicrochile novaeestlandiae
Duvaliomythus walkeri
Euthenurus puncticollii
Holcaspis impigra
Holcaspis oedicnema
Laemostenus complanatus
Lecanomerus fuliginosus
Mecodema altermans alternans
Mecodema bullatum
Mecodema laterale
Mecodema lucidum
Mecodema metallicum
Mecodema rugiceps
Mecodema sculpturatum puncticollii
Mecodema sculpturatum sculpturatum
Mecyclothorax rotundicollii
Megadromus enysi
Megadromus lobicus
Molopsida alpinalis
Molopsida diversa
Molopsida puncticollii
Molopsida seriatopus
Neoferonia ardua
Neoferonia integrata
Nesamblyops oreobius
Notagonum feredayi
Oopterus laeviventris
Oopterus lewisi
Oregus aereus
Oregus inaequalis
Platynus macropterus
Scopodes edwardsii
Scopodes fusiulatus
Scopodes prasinus
Scopodes versicolor
Sylectus anomalus
Tachys latipennis
Triposaurus novaestlandiae
Zolus femoralis
Zolus helmsi

Stewart Island
17 taxa
E, 16; N, 1; A, 0; R, 3.

Amarotypus edwardsii
Bembidion musae
Bembidion stewartense
Bembidion tekapense
Cicindela parryi
Dicrochile flavipes
Dicrochile insignis
Diglymma obtusum
Holcaspis sternalis
Hocasipis stewartensis
Kenodactylus audouini
Mecodema altermans alternans
Mecodema femorale
Mecodema infimale
Mecodema littoreum
Megadromus bullatus
Megadromus menitus
Triplosurus novaezelandiae
Zecillenus embersoni

**Offshore Islands**

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Kenodactylus audouini
Oopterus clivinoides

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<tbody>
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Bembidion brullei
Calathosoma rubromarginatum
Kenodactylus audouini
Loxomerus brevis
Loxomerus huttoni
Loxomerus nebroioides
Oopterus clivinoides
Oopterus plicaticollis

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Bountya insularis
Diglymma castigatum

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Kenodactylus audouini
Laemostenus complanatus
Oopterus clivinoides
Oopterus marrineri

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<thead>
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Allocinopus latitarsis
Bembidion rotundicolle rotundicolle
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
Rhytisternus miser

<table>
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<th>1 taxon</th>
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<tbody>
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<td></td>
<td>E, 1; N, 0; A, 0; R, 0.</td>
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</table>

Mecyclothorax rotundicollis

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Diglymma castigatum
Kenodactylus audouini
Mecodema alternans hudsoni
Oopterus clivinoides
Oopterus strenuus
Synteratus ovalis

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Gourlayia regia
Mecodema regulus
Mecyclothorax rotundicollis
Notagonum submetallicum
Parabaris gourlayi
Rhytisternus miser

Zecillenus albescens
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 puncticollis
Holcaspis rugifrons
Hypharpax abstrusus
Lecanomerus marginatus
Mecodema crenicolle
Mecodema simplex
Pterostichus aucklandicus
Scopodes multipunctatus
Syllectus anomalus
Trichosternus aucklandicus

**AK** Auckland
Tachys antarcticus
Epsom
Lecanomerus labralis
Howick
Rhytisternus erythrognathus
Howick, Paparoa District
Lecanomerus stenopus
Hunua
Pterostichus hunuensis
Hunua Ranges
Symplectus 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
Allocinopus castaneus
Moumoukai Valley
Duvaliomimus watti
Near Cleveldon, Southern Wairoa
Bembidium clevedonense
Near the Waitakerei (= Waitakere) Rail-

way-station
Anchomenus lucifugus
Northern Wairoa
Mecodema scitulum
Rangioto Island
Maoritechreus rangitotoensis
Remuera, Auckland
Anchomenus cheesemani
South of Cleveldon and Wairoa
Ctenognathus munroi
Swanson
Neocicindela spilleri
Tuakau
Holcaspis hybrida
Waitakerei (= Waitakere) Ranges, Auck-
land
Holcaspis mucronata
Mecodema spinifer
AK Whangarata, near Tuakau and
Ngaruawahia, WO
Haptoderus calathoides
AK Auckland and Christchurch, MC
Scopodes aterrimus
Triposarus 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 guerini
Oopterus laticollis
Oopterus plicaticollis
Pristonychus brevis
Pristonychus castaneus
Camley Harbour, Auckland Islands
Euthenarus ciicollis
Loxomerus fossulatus
Oopterus tripunctatus
Mt Raynald (Flat Topped Mountain),
Auckland Islands
Oopterus aucklandicus
Port Ross, Auckland Islands
Loxomerus ambiguus

**BO** Bounty Island
Bounty Island
Bountya insularis

**BP** Bay of Plenty
Hicks Bay
Trichosternus humeralis
Opotiki
*Metaglymma curvidens*
Pterostichus fieldi
Robruna
Mecodema variolosum
Tauranga
Mecodema atrox
Te Aroha Trig Station
Mecodema pluto
BP/WO Te Aroha
Tarastethus laevicollis

**BR** Buller
Ahoura (= Ahaura), near Greymouth
Mecodema ducale
Boatman’s, Near Reefton
Pterostichus cavedi
Pterostichus irregularis
Capleston
Tachys cavedi
Tarastethus simulans
Fox River Cave, Near Charleston
*Erebotrechus infernus*
Greymouth
Anchomenus helmsi
Cicindela helmsi
Cillenum subcaecum
Diglymma ovipenne
Mecodema metallicum
Pterostichus rugifrons
Scopodes nigrinus
Tarastethus laeviventris
Tarastethus lewisi
Tarastethus penticollis
Trehus maori
Zolus helmsi

[Lake] Rotoli
Anchomenus hallianus
Mt Robert
Tarastethus robustus
Zolus labralis
Near Greymouth
Pterostichus helmsi
Nile River Cave, Charleston
*Sylectus speleaeus*
Proffanity Cave, Buller River, near
Inangahua
*Sylectus magnus*
BR, Greymouth and Kumara, WD
Tachys latipennis
BR/MB Mt St Arnaud
Anchomenus armaudensis
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
Bembidium tairuense
Cillenuma labescens
Holcaspis hispidulus

CO Central Otago
Ida Valley
Mecodema laevipes
Scopodes viridis
Maniototo (= Upper Taieri)
Metaqyllyma calcaraatum
Pterostichus menes
Mt St Bathans
Holcaspis bathera
Near Obelisk Peak, [Old Man Range]
Ooapterus pygmeatus
Rock and Pillar Mountains
Trichosternus curtulus
Trichosternus susipicax
Staircase [= Devil’s Staircase]
Mecodema politum
Pterostichus egregialis
Strath–Taieri
Metaqyllyma junctum
Trichosternus erythropus

DN Dunedin
Dunedin
Cerabilia maori
Cicindela dunedensis
Maoria punctata
Mecodema inaequale
Pterostichus chaletleri
Dunedin (Flagstaff Hill)
Pterostichus perdidus

Flagstaff Mountain, near Dunedin and
Maungatua
Holcaspis impiger [sic]
Hampden, near Moeraki
Trichosternus haplopus
Trichosternus hampdenensis
Lee Stream, Taieri
Trichosternus riparius
Maungatua
Trichosternus fusulus
Moeraki
Metaqyllyma thoracicum
Pterostichus disparalis
Mt Maungatua
Anchomenus oreobius
Metaqyllyma obtusum
Pterostichus procerulus
Scopodes basalis
Scopodes bryophilus
Scopodes cognatus
Trichosternus aequiguousus
Trichosternus asperatus
Trichosternus chortis
Trichosternus monticola
Trichosternus patruelis
Trichosternus vagans
Troophterus oxygonus
Mt Table Top, near Milton
Mecodema minax
Near Dunedin
Holcaspis placidus
Mecodema impressum
Mecodema rectolineatum
Metaqyllyma punctifer
Near Outram
Metaqyllyma rufipes
Oamaru
Trichosternus vires
Outram
Dicrochile cinctiger
Dicrochile nitida
Holcaspis catenulata
Trichosternus fultoni
Port Chalmers
Cillenuma chameri
Tarastethus simplex
Taieri
Anillus pallidus
Holcaspis thoracicus
Trichosternus amplicollos
Trichosternus curvipes
Trichosternus erraticus
Trichosternus polychaetus
Taieri Beach
Mecodema litoreum
Metaqyllyma asperum
Totara
Mecodema puncicolle

Waihola
Trichosternus grassator
Waikouati
Cicindela latecincta
Melopsida 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
Hakapoua
Anchomenus l bulbus
Hump Ridge
Diglymma marginale
Mecodema dissonum
Mecodema femorale
Pterostichus fenwicki
Pterostichus fossalis
Taenarthrus philopit
Hunter Mountains
Mecodema veratrum
Martin’s Bay, west coast of Otago
Trichosternus prolixus
Preservation Inlet
Diglymma tarsalis
Puysegur Point
Diglymma nigripes
Diglymma punctipenne
Mecodema bulbatum
Mecodema striatum
Pterostichus sandageri
Te Oneora
Mecodema intricatum
FD, Te Oneora and Invercargill, SL
Pterostichus oneroaensis

GB Gisborne
Lake Walkaremoana, Urewera National Park
Bembidion urewerense
Mangakinkin Stream, Urewera National Park
Bembidion maorinum levatum
Simpson’s Cave, Wairoa
Prosphrodrus occultus

HB Hawke’s Bay
Hastings
Haplanister crypticus Napier, Hastwell [WA] Pterostichus sculptipes Tarastethus strenuus

KA Kaikoura
Mouat’s Lookout, Awatere River Basin Cicindela hamiltoni Warin, Kaikoura Trichosternus wallacei Zabronothus aphelus

MB Marlborough
Hammer Mecodema brittoni Trichosternus hammerensis

MC Mid Canterbury
Akaroa Argutor erythropus Argutor pantomelas Argutor piceus Dromius fossalatus Peronia angustula Lebia binota Mecodema walkeri Omaso elongatus Omaso Sylvaticus Trichosternus akaroensis Ashburton Metaglymma rugipenne Pterostichus delator Trichosternus coelocephalus Trichosternus dissentaneus Trichosternus smithii Broken River Anchomenus integratus Dicrochile thoracica Mecodema lewisi Zabronothus major Zabronothus oblongus Cass Mecodema cassense Castle Hill Cicindela australomontana Mecodema constricta Pterostichus detractus Sympiestus fallax Castle Hill and Broken River Mecodema cognatum Christchurch Anchomenus feredayi Haptopterus maorinus Metaglymma oregoide Pterostichus longifrons Tropopterus sulcicollis Dyers Pass Lecanomerus pallipes


NC North Canterbury
Bealey Diglymma dubium Sympiestus syntheticus Tarastethus delibilis Eyrewell Holcaspsis brevicula Near Bealey Mecodema rugiceps

ND Northland
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<td>Pelodiaetodes prominens</td>
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<td>Limestone Creek, Teal Valley, near Nelson</td>
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<td>Bembidion townsendi</td>
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Otago, South Island
- Anchomenus otagoensis
- Cillenum 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
- Sphallax peryphoides

Waihoura, Bruce Co, Otago
- Trichosternus waihourensis

West Coast, South Island
- Bembidium chalceipes
- Bembidium hokitikense
- Bembidium orbiferum
- Lecanomerus obesulus
- Scopodes laevigatus

OL Otago Lakes
- Ben Lomond
  - Demetrida sinuata maculata
  - Diglymma basale
  - Mecodema ambiguum
  - Mecodema latulum
  - Oopterus basalis
  - Pterostichus pascoi
  - Tarastethus fovealis
  - Tarastethus propinquus
  - Zolus subopacus
- Bobs Cove, Lake Wakatipu
  - Holcaspis implica
  - Bold Peak
  - Mecodema laevicollle
  - Pterostichus hamiltonii

Clipping’s Bush, near Kingston and Staircase, CO
- Demetrida sinuata

Clipping’s Bush, near Kingston
- Mecodema erraticum
- Pterostichus aciphyllae
- Tarastethus longulus

Earnslaw
- Duvaliominimus brittoni
- Greenstone Flat, near Queenstown
- Pterostichus bullatus
- Hollyford
- Mecodema laterale

Kinloch, Lake Wakatipu
- Mecodema seriatum
- Lake Mackenzie
- Mecodema persculptum
- Lake Wakatipu [= Wakatipu]
- Loxomerus capito
- Matukituki River, West Branch, North-west 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 Dick, Lake Wakatipu
  - Mecodema chiltni
  - Pterostichus sculpturalis
- Mt Dick, near Kingston
  - Opterus minor
- Mt Earnslaw
  - Mecodema indiscreatum
- Queenstown
  - Demetrida ater
  - Routburn
  - Mecodema costipenne
  - Tarastethus convexus
  - Routburn and Hollyford
  - Dicrochile insignis
  - Oopterus suavis
  - Zolus ocularius

RI Rangitikei
- Rangitikei River Flats
- Bembidion solitariun

RI/WN Manawatu Gorge
- Anchomenus xanthomelus
- 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
  - Plocamostethus planiusculus durvillei
- Picton
  - Ctenognathus pictonensis
  - Metaglymma sulcatum
  - Pterostichus achilles
  - Pterostichus brunianus
  - Pterostichus calcaratus
  - Pterostichus compressus
  - Pterostichus myrmidon

Rarangi
- Holcaspis tripunctata

Stephens Island
- Mecodema costellum
- Mecodema insulare
- Mecodema punctellum
- Trichosternus bucoicus
- The Brothers
- Metaglymma oblonga

SI Stewart Island
- Christmas Village, Stewart Island
- Holcaspis stewartensis
- Mason Bay, Stewart Island
- Zecilleninus embersoni
- Stewart Island
- Bembidion anchonoderum stewartense
- Diglymma thoracicum
- Mecodema rubipes
- Mecodema trailli
- Pterostichus kirkiannus

SL Southland
- Bluff
  - Mecodema philpotti
- Invercargill
  - Anillus marginatus
  - Cerabilla punctigera
  - Ctenognathus littorellius
  - Pterostichus inconstans
  - Pterostichus insidiosus
- Tarastethus southlandicus
- Trichosternus agrotes
- Trichosternus angustulus
- Trichosternus convexus
- Trichosternus meritus

Kuriwai Bush, near Wyndham
- Anchomenus sophronitis
- Mecodema infimate
- Pterostichus lepidulus
- Pterostichus philpotti

Near Molyneux River (= Puerua River)
- Maoria tibialis
- Otara
- Snofru aemulator
- Tuatapere
- Mecodema rex

West Plains, Invercargill
- Anchomenus sophronitis
- Mecodema infimate
- Pterostichus lepidulus
- Pterostichus philpotti

Anchomenus otagoensis
SN  The Snares
Station Point
Ooopterus strenuus
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
Ooopterus fulvipes
Mt Egmont
Mecodema longicolle
Pterostichus egmontensis
Zolus atratus
Near Mt Egmont [= Taranaki]
Ooopterus sobrinus
Near Taranaki
Mecodema rugicolle
Ratapihipihi Forest
Allocinopus smithii
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
Gaioxenus pilipalpis
Tarastethus a. labralis
Tarastethus pretiosus
Tokaanu
Mecodema occiputale
Wairarapa
Tarastethus phyllocharis
Scopodes nigripes
Wairere Falls
Cicindela waiouraensis
WA  Wairarapa
Forty-mile Bush
Allocinopus angustulus
Hastwells
Ooopterus laevigatus
Hastwell, Napier, HB
Pterostichus sculptipes
Martinborough
Mecodema subaeuneum
Napier [HB] (Hastwells)
Tarastethus strenuus
Near Martinborough
Mecodema arcuratum
Otaia, near Martinborough
Metaglymma ovicolle
WD  Westland
Otra Gorge
Tachys coriaceus
Otra Pass
Scopodes versicolor
Otra River
Pterostichus lobipes
WD Hokitika and Lake Paroa [= Lake Poerua], BR
Pterostichus integratus
WI  Wellington
Lake Horowhenua
Trichosternus ordinarius
Levin
Mecodema o’connori
Mt Hector
Mecodema hector
Mt Holdsworth, Tararua Range
Mecodema acuductum
Mt Quoin
Ctenognathus simmondsi
Mecodema quoinense
Tarastethus cordipennis
Near Wellington
Anchomenus haastii
Holcaspis praecox
Maoia clivinoides
Ooopterus carinatus
Trichosternus cephalotes
Pakuratahi Stream, Rimutaka Range
Bembidium dehiscens
Port Nicholson
Anchomenus elevatus
Broscus aereus
Cicindela parryi
Demetrias lineella
Feronia intermitens
Feronia politissima
Feronia vagepunctata
Feronia vigil
Silverstream
Mecodema bryobium
Takurahia [= Pakuratahi] and Mt Holdsworth
Pterostichus antennalis
Wellington
Bembidium callipeplum
Cerabilia ruficorne
Ctenognathus actocharis
Drimostoma antarctica
Feronia planiuscula
Metaglymma modicum
Pterostichus ddiffimipes
Pterostichus lewisi
Pterostichus vexatus
Scopodes pustulatus
Tarastethus dubius
Trichostemus hudsoni
Tropopterus marginalis
Zolus femoralis
WN, Wadestown and Palmerston North, WI
Ooopterus frontalis
WO  Waikato
Fred Cave, Te Kuiti
Duvaliomimus caecus
Mt Pirongia
Anillus monticola
Bembidium waikatoense
Pterostichus scitipennis
Tachys ocreibus
Ngatira
Dicrochile cephalotes
Ohaupo and Hunua Ranges, AK
Pterostichus sharpianus
Okauia, near Matamata
Mecodema exitiosus
Puriri Cave, Port Waikato
Duvaliomimus styx
Eotachys crypticus
Te Aroha
Dicrochile cordicolle
Waipuna Caves, Te Kuiti
Duvaliomimus mayae
Prophrodrus waltoni
Wairere Falls Cave, near Te Kuiti
Neanops pritchardi
ILLUSTRATIONS

Fig. 1 Locality and biology labels.

Fig. 2 Data sheet.

Species name: ________________________________

GEOGRAPHIC DISTRIBUTION
North Island: AK BP CI GHB ND RI TK TO WA WI WN WO
South Island: BR CO DN FD KA MB MCM MK NC NNO LS SD SI SI SL WD
Offshore Islands: AN AU BO CA CH KE SN TH
Extralimital distribution: ____________________________
First N.Z. record: ____________________________

ECOLOGY
Altitudinal distribution: Lowland Mountain Subalpine Alpine
Vertical distribution: ArboREAL Planticolas Epigean Fossorial
Macrophabitat:_________________________

Microhabitat/Host plant: ____________________________

Soil moisture: Dry Moist Wet
Light intensity: Open ground Shaded ground
Diel activity: Nocturnal Diurnal Heliothous Arhythmic
Gregariousness: Gregarious Solitary

BIOLOGY
Adult seasonality: IX X XI XII I II III IV V VI VII VIII
Breeding type: ____________________________

Fertility: ____________________________

Overwintering type: ____________________________

Feeding type: Omnivorous, mostly predacious Predacious Omnivorous, mostly phytophagous Predacious, molluscophagous

Enemies: ____________________________

Parasites: ____________________________

Defense mechanisms: ____________________________

DISPERSL POWER

Wing condition: Macropterus Macropterus, probably capable of flight Brachypterus, incapable of flight
Flight power: Occasional flyer Regular flyer Frequent flyer
Locomotion: Slow runner Moderate runner Fast runner
Climbing: Occasional climber On trees Regular climber shrubs Frequent climber plants logs

Favoured by human activities: Yes No

NEW ZEALAND N.D.
Montaguettes
1100m: 39135 / 7333E
Lake Wakatipu, Te Anau

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 nebricoides*

(8) Clivinini: *Clivina basalis*

(9) Broscini: *Mecodema fulgidum*

(10) Mecyclothoracini: *Mecyclothorax rotundicollis*
(11) Meonini: *Selenochilus syntheticus*

(12) Tropopterini: *Molopsida seriatoporus*

(13) Trechini: *Duvaliomimus styx*

(14) Zolini: *Zolus femoralis*
(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*
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(23) Platynini: *Ctenognathus novaezelandiae*

(24) Perigonini: *Perigona nigriceps*

(25) Pentagonalini: *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.
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

Cicindela dunedensis

Cicindela feredayi

Cicindela hamiltoni

Cicindela helmsi

Cicindela latecincta

Cicindela parryi

Cicindela perhispida campbelli

Cicindela perhispida giveni

Cicindela perhispida perhispida
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

**Demetrida lateralis**

**Demetrida lineella**

**Demetrida moesta atra**

**Demetrida moesta moesta**

**Demetrida nasuta**

**Demetrida sinuata maculata**

**Demetrida sinuata sinuata**

**Dicrochile anthracina**

**Dicrochile aterrina**
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<th>Species 1</th>
<th>Species 2</th>
<th>Species 3</th>
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<td>Larochelle &amp; Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue</td>
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- *Gaioxenus pilopalpis*
- *Gourlaya regia*
- *Haplanister crypticus*
- *Harpalus affinis*
- *Holcaspis algida*
- *Holcaspis angustula*
- *Holcaspis bathana*
- *Holcaspis brevicula*
- *Holcaspis brounianna*
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- Bounty
- Antipodes
- Auckland
- Campbell

Holcaspis sinuiventris

Holcaspis sternalis

Holcaspis stewartensis

Holcaspis subaenea

Holcaspis suteri

Holcaspis tripectata

Holcaspis vagopunctata

Holcaspis vexata

Hygraniillus kuscheli
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<td>Laemostenus complanatus</td>
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<td>Lecanomerus atriceps</td>
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<td>Lecanomerus fuliginosus</td>
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Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

- Loxomerus huttoni
- Loxomerus nebrioides
- Maoripamborus fairburni
- Maoritrechus rangitotoensis
- Mecodema allani
- Mecodema alternans alternans
- Mecodema alternans hudsoni
- Mecodema angustulum
- Mecodema atrox
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

- **Mecodema crenicolle**
- **Mecodema curvidens**
- **Mecodema ducale**
- **Mecodema dunense**
- **Mecodema dux**
- **Mecodema elongatum**
- **Mecodema femorale**
- **Mecodema florae**
- **Mecodema fulgidum**
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<td><em>Molopsida debilis</em></td>
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Larochelle & Larivière (2001): *Carabidae (Insecta: Coleoptera)* catalogue
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

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Molopsida southlandica
Molopsida strenua
Molopsida sulcicollis

Neanops caecus
Neanops pritchardi
Neferonia ardua

Neferonia edax
Neferonia fossalis
Neferonia integrata
Larochelle & Larivière (2001): Carabidae (Insecta: Coleoptera) catalogue

Notagonum marginellum
Notagonum submetallicum
Oopterus basalis
Oopterus clivinoides
Oopterus collaris
Oopterus frontalis
Oopterus fulvipes
Oopterus laevicollis
Oopterus laevigatus
Larochelle & Lariviére (2001): Carabidae (Insecta: Coleoptera) catalogue
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<th>Offshore Islands</th>
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This index covers the nominal taxa mentioned in the text, regardless of their current status in taxonomy. In the case of synonyms, the combinations of generic and specific names listed are those originally published by authors, and may differ from combinations implicit in current usage. Taxa in **bold** indicate valid taxa. The letter “†” after a page indicates a **figure**. The letter “m” indicates a **distribution map**. The Figures and Distributional maps are on the following pages: **Figures**, pages 209–215; **Distribution maps**, pages 216–270.
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NGĀ PĀNUI

Kua whakatūria ōnei huanga pukapuka hei whakahauhau i ngā tohunga whai mātāuranga kia whakaputa i ngā kōrero poto, engari he whaihoko tonu, e pā ana ki ngā aitanga pepeke o Aotearoa. He tōtika tonu te āhua o ngā tuhituhu, 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 tēna, mō tēna.

He titiro whāiti tā ōnei 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 tuhinga pukapuka Marine Fauna of N.Z.

Ka āhei te tangata ki te whakarurunui tuhituhinga 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 kaituhi i ōna whakaaro ki tētahi o te Kāhui Ārahi Whakarōpūtanga Tuarā-Kore, ki te ātai rānei i mua i te ātairanga, ā, mā rātou a ia e ārahi mō te wāhi kei tana tuhituhinga.

Ko te hunga pīrangī hoko pukapuka, me tuhi ki Fauna of N.Z., Manaaki Whenua Press, Manaaki Whenua, Pouaka Pouāpeta 40, Lincoln 8152, Aotearoa.

E rua ngā ti̍momo kaihoko: “A” – kaihoko ūmahau, ka tukua ia pukapuka, ia pukapuka, me te nama, i muri tonu i te tāngia; “B” – ka tukua ngā pānui whakatairanga me ngā puka tono i ōna wā anō.

Te utu (tirohia “Titles in print”, whārangi 282). Ko te kōpakī me te pane kuini kei roto i te utu. Me utu te hunga e noho ana i Aotearoa me Ahiterereira ki ngā tāra o Aotearoa. Ko ētahi atu me utu te moni kua tohua, ki ngā tāra Merikana, ki te nui o te moni rānei e rite ana.

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, tona mai kia whakahereka te utu. Tekau ārau te heke iho o te utu ki ngā toa hoko pukapuka.