Annotated Catalogue of New Zealand Hymenoptera

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INTRODUCTION

New Zealand Hymenoptera have received scant attention in the past, and this catalogue is the first comprehensive list published since that of Hutton (1904). Other early checklists (Hutton, 1874; Kirby, 1881, 1884; Alfken, 1903; Cameron, 1903) were brief guides to what appeared to be a meagre fauna. The "Catalogus Hymenopterorum" (world list) of Dalla Torre (1893–1902) and the revised editions of this work at present being published by Junk also mention the New Zealand fauna. However, despite the early attention paid to biological control by Tillyard (1921–1927) and others, little effort was directed towards studying the local fauna, with only Gourlay (1926–1964) and Parrott (1951–1964) publishing sporadic notes and descriptions. On the other hand Gourlay (1930a) and Valentine (1967b) have published comprehensive lists of hosts of Hymenoptera, and Cameron et al. (1987) give a full list of all introductions of Hymenoptera to New Zealand up until 1985. Cameron et al. (1989) give a comprehensive review of biological control in New Zealand between 1874 and 1987. Monographic revisions have been published on a few families including Formicidae (Brown, 1958), Pompilidae (Harris, 1987) Encyrtidae (Noyes, 1988; Noyes and Valentine, 1989a) and Mymaridae (Noyes and Valentine 1989b), and partial revisions of the families Ichneumonidae (Bain, 1970; Gauld, 1980), Braconidae (Huddleston, 1986; Walker & Huddleston, 1987), Chalcidoidea (Bouček, 1988), Gasteruptiidae (Pasteels, 1957), Diapriidae (Early & Horning, 1978; Early,1978, 1980), Scelionidae (Masner, 1968) and Sphecidae (Vardy, 1987; Callen, 1979). However, most groups are still in need of extensive taxonomic study, especially the Ichneumonoidea in which many species described are still only known from the type specimens of early workers such as Cameron and Ashmead and countless numbers remain undescribed. Only 549 species of the Order are recorded here from New Zealand, an extremely low number when one compares it with the total of 6,641 species recorded from Great Britain (Fitton et al., 1978).

The Hymenoptera, like many other components of New Zealand's flora and fauna, reflect a unique and distinctively rich nature which will undoubtedly become more evident as our knowledge of the group increases. Even with our present knowledge certain anomalies are evident. For instance, the Symphyta are very poorly represented with a mere nine species recorded and of these only one species of Orussidae and two Xiphydriidae are endemic. Likewise, aculeates are sparse: few chrysidoids and no scoliids or tiphiids are known. Vespids are represented by four introduced species. One Australian mutillid and a European eumenid have established in the Auckland region. The ant fauna is restricted to 12 endemic species. These anomalies are not a reflection of poor collecting in New Zealand but a real picture of the paucity of some groups. Interestingly a number of introduced aculeates have recently become established. The Ichneumonoidea, Proctotrupoidea and Chalcidoidea, on the other hand, are well represented but even in these groups some curious features are already apparent: within the Chalcidoidea the Mymaridae are more diverse in New Zealand than anywhere else in the world (J.S. Noyes pers. comm.); recently the endemic family Rotoitidae has been described (Bouček & Noyes, 1987) and another new family still undescribed lies between the Ichneumonoidea and Proctotrupoidea.

Over the past few years more intensive collecting using malaise and pan traps has expanded the collections of New Zealand Hymenoptera considerably. The New Zealand Arthropod Collection (Auckland) holds the largest collections but other extensive collections are at Lincoln College (Canterbury), Canterbury University (Christchurch), Otago Museum (Dunedin) and Forest Research Institute (Rotorua). Visits to New Zealand by the hymenopterists J. S. Noyes (BMNH) and L. Masner (CNC) have resulted in a notable expansion of the New Zealand collections in these institutions.

This list is an account of New Zealand Hymenoptera recorded and known to be established in New Zealand up until 1988. Since the general cut-off date a number of new species have been added, in particular the major revision of Naumann (1988). These are referenced in the text, and Naumann's species are listed in Appendix VII (pages 63 and 64). Hopefully the list will not only draw attention to the fauna but also stimulate enquiry into areas where work is needed. The list is also designed with the general biologist in mind, who is concerned not so much with the taxonomic detail as with what is the correct name to use and to which biological entity a name in the literature actually refers. References to generic names alone have been omitted. Because of the economic importance of Hymenoptera, especially in biological control, we have attempted to annotate the list with useful information of relevance to field workers. This includes hosts in New Zealand, dates when species were introduced, a summary of world distribution and other important references and notes on biology and taxonomy. To avoid cluttering this list with repetitive citations and sources of alternative names, a complete bibliography of New Zealand Hymenoptera is available from the DSIR VAX network under each valid species name. Enquiries for this information should be addressed to "The Curator of Hymenoptera", DSIR Plant Protection, Private Bag, Auckland.

TEXT CONVENTIONS

The sequence of taxa in general follows the "Catalogue of Hymenoptera in America North of Mexico" (Krombein et al., 1979) down to family level and thereafter (i.e. subfamily, genus, species) alphabetical. The valid name is in bold-face type followed by an indented list of firstly the original name and any New Zealand synonymy with its type data and deposition; subspecies are not recognised. Following this is a list of all invalid or alternative names pertaining to the New Zealand fauna including subspecies. Slight misspellings have been omitted but any which could be misunderstood are mentioned and indicated by an exclamation mark in parentheses, and misidentifications are indicated by square brackets. New records are not annotated in the text. Host data have been compiled from an updated version of Valentine (1967) and many unpublished observations by E.W.V. Some host data recorded from the literature need verification. The geographical area covered includes the New Zealand subregion which extends from the Kermadec Islands 965 kilometres north of New Zealand to the Chatham Islands east of Christchurch and the Subantarctic Islands including Macquarie Island. Area codes follow Crosby et al. (1976) with a slash separating North Island and South Island areas. Distribution records are from the literature as well as from collections which have been examined at the BMNH and some New Zealand institutions, but large gaps remain which will not be filled until more revisionary work is carried out on the fauna. Common names were taken from Ferro et al. (1977). A number of appendices are tabled. These are names, listed under various categories, which have been mentioned in New Zealand literature but are not considered to be part of the New Zealand fauna.

ABBREVIATIONS OF TYPE DEPOSITIONS

AMNZ Auckland Institute and Museum, Private Bag, Auckland, New Zealand.

AMSA Australian Museum, College St., Sydney, NSW 2000, Australia.

BMNH British Museum (Nat. Hist.), Cromwell Road, London, SW7 5BD, England.

CMNZ Canterbury Museum, Rolleston Ave., Christchurch, New Zealand.

CNC Canadian National Collection of Insects, Biosystematics Research Institute, Research Branch Agriculture Canada, Ottawa, Ontario.

CUIC Cornell University Insect Collection, Department of Entomology, Cornell University, Ithaca, NY 14850, U.S.A.

LM Rijksmuseum van Natuurlijke Historie, Postbus 9517, Leiden, 2300 RA, Netherlands.

MCSN Museo Civico di Storia Naturale, Via Brigita Liguria 9, 16121 Genova, Italy.

MHN Museum d'Histoire Naturelle, Route de Malagnou, Geneva 6, CH-12111, Switzerland.

MNHN Museum National d'Histoire Naturelle, 45 bis Rue de Buffon, Paris Ve, France.

NHMW Naturhistorisches Museum, Burgring 7, Wien 1, Austria.

NMNZ National Museum of New Zealand, Private Bag, Wellington, New Zealand.

NZAC New Zealand Athropod Collection, DSIR Plant Protection, Private Bag, Auckland, New Zealand.

TC Townes Collection, American Entomological Institute, 3005 SW 56th Avenue, Gainesville, Florida 32608, U.S.A.

ÜM Übersee Museum, Dienstgebäude, Bahnhofsplatz 13, 2800 Bremen 1, W. Germany.

USNM United States National Museum of Natural History, Smithsonian Institution, Washington DC 20560, U.S.A.

ZMHU Zoologische Museum, Humboldt University, Invalidenstrasse 43, Berlin, East Germany.

ZMUS Zoologisches Museum der Universität, Winterthurerstr, 190, CH-8057, Zürich, Switzerland.

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ANNOTATED CATALOGUE OF NEW ZEALAND HYMENOPTERA

SYMPHYTA suborder

In general Symphyta are characterised by lacking a characteristic "wasp waist" and the possession of cenchri on the metanotum (except the Cephidae which do not occur in New Zealand). Larvae are phytophagous with the exception of the family Orussidae whose larval habits are in question (Quinlin & Gauld, 1981; Gauld & Bolton, 1988). The small number of symphytans in New Zealand is not a reflection of poor collecting but a very real picture of the depauperate fauna. Moreover, only three of the nine species are endemic. Taxonomy: Smith, 1978, 1988; Benson, 1951, 1952, 1958.

TENTHREDINOIDEA (sawflies) superfamily

Larvae are phytophagous.

PERGIDAE family

Found mostly in Australia and South America. Larvae feed mainly on *Eucalyptus*.

PHYLACTEOPHAGINAE subfamily

PHYLACTEOPHAGA Froggatt genus

- **Phylacteophaga froggatti** Riek

Phylacteophaga froggatti Riek, 1955: 97

DISTRIBUTION. Australia, New Zealand: AK, WO, ND, CL, BP.

HOSTS. Myrtaceae: *Agonis flexuosa, Eucalyptus botryoides, E. camaldulensis, E. citriodora, E. cinerea, E. delagatensis, E. eugenioides, E. ficifolia, E. globulus, E. grandis, E. leucoxylon, E. longifolia, E. macarthurii, E. microcorys, E. muelleriana, E. nicholii, E. obliqua, E. ovata, E. perriniana, E. polyanthemos, E. propinqua, E. regnans, E. robusta, E. rudderi, E. saligna, E. sideroxylon, E. smithii, E. viminalis.* Fagaceae: *Quercus robur, Q. palustris, Lophostemon coniferatus.* This list was compiled by New Zealand Forest Research Institute from extensive surveys throughout 1985 and 1986.

ANNOTATION. First discovered in Auckland near Mangere airport, March 1985. Presumed to have been accidentally introduced. Causes blotch mines on *Eucalyptus* leaves, usually on the lower sheltered area of the tree. Biology: Farrell & New, 1980.

TENTHREDINIDAE family

The largest family of sawflies with more than 4000 species world-wide. The larvae are usually polypodous and free-living but some mine leaves, stems and fruit whilst others cause galls.

NEMATINAE subfamily

Taxonomy: Benson, 1958.

PONTANIA Costa genus

- **Pontania proxima** (Lepeletier) (willow gall sawfly)

Nematus proxima Lepeletier, 1823: 67

DISTRIBUTION. Europe, Canada, New Zealand: ND / NN, BR, MC, SC, MK, CO.

HOSTS. Salicaceae; *Salix fragilis, S. alba vitelliana.*

ANNOTATION. Larvae cause leaf-galls on willows which are oval and protrude equally from both surfaces, often pinkish above. Biology: Muggeridge, 1931; Carleton, 1939.

PRIOPHORUS Dahlbom genus

- **Priophorus morio** (Lepeletier) (raspberry sawfly)

Cladius morio Lepeletier, 1823: 58
Priophorus brullei Dahlbom
Priophorus tener Hartig

DISTRIBUTION. Europe, Japan, N. America, Australia, New Zealand: AK, WI / WD, NC, MC.

HOST. Rosaceae: *Rubus idaeus.*

ANNOTATION. Larvae chew holes in raspberry and blackberry leaves. First recorded by Jeffreys (1939) in 1936 from South Canterbury but not known from the North Island until Gurr (1954) recorded it from Masterton in 1953. Rarely seen now but present in Auckland city. Biology: Callan, 1978; Scott, 1984.

BLENNOCAMPINAE subfamily

Taxonomy: Benson, 1952.

CALIROA Costa genus

- **Caliroa cerasi** (Linnaeus) (cherry slug)

Tenthredo cerasi Linnaeus, 1758: 10
Monostegia antipoda Kirby, 1881: 50. Holotype: New Zealand; BMNH
Blennocampa adumbrata (Klug)
Caliroa limacina (Retzius)
Eriocampa adumbrata (Klug)
Eriocampoides cerasi (Linnaeus)
Eriocampa limacina (Retzius)
Eriocampoides limacina (Retzius)
Selandria cerasi (Linnaeus)

DISTRIBUTION. Eurasia, China, N. America, Chile, Uruguay, Argentina, S. Africa, Australia, New Zealand: ND, AK, TO, HB, WN / NN, MC, SL.

HOSTS. Corylaceae: *Betula alba.* Rosaceae: *Pyrus communis, Prunus* species, *Crataegus monogyna* (early usage *C. oxycantha*), *?C. crusgalli.*

ANNOTATION. Slug-like larvae chew the upper surface of leaves, leaving a network of veins. A widespread pest of cherries, pears, plums and hawthorn in New Zealand. Biology: Penman, 1984.

SIRICOIDEA (wood wasps) superfamily

Taxonomy: Quinlan & Gauld, 1981.

SIRICIDAE family

A relatively small family of about 70 species world-wide, mostly Holarctic. Several species have been introduced into other regions and become serious forest pests, boring into standing timber.

SIREX Linnaeus genus

- **Sirex noctilio** Fabricius (sirex wood wasp)

Sirex noctilio Fabricius, 1793: 130
[*Sirex gigas* (Linnaeus)]
[*Sirex juvencus* (Linnaeus)]

DISTRIBUTION. Europe, N. America, Australia, New Zealand: ND, AK, WO, TK, TO, BP, WA, WN / NN, BR, NC, MC, SC.

HOSTS. Pinaceae: *Pinus radiata, Picea, Larix.*

ANNOTATION. Important pest species in commercial pine plantations as the larvae bore into standing or freshly cut timber. Ovipositing females are attracted to unhealthy or damaged trees. During oviposition females introduce mucus and arthrospores of the fungus *Amylostereum areolatum* which further debilitates the trees. First recorded in New Zealand as *juvencus* (Miller, 1919) but later noted by Chrystal & Myers (1928) as a form of *noctilio*. Biology: Miller & Clark, 1935; Hanson, 1939; Rawlings, 1949; Rawlings & Wilson, 1949; Morgan & Stewart, 1966; Zondag, 1971, 1979; Zondag & Nuttall, 1977.

XIPHYDRIIDAE family

Two endemic species are known from New Zealand, both of which bore into native trees.

MOAXIPHIA Maa genus

- **Moaxiphia deceptus** (Smith)
  Derecyrta decepta Smith, 1876a: 474. Holotype: Canterbury; BMNH
  Xiphydria flavopicta Smith, 1878: 1. Holotype: Otago; BMNH
  Brachixiphus deceptus (Smith)
  Xiphidria decepta (Smith)

  DISTRIBUTION. New Zealand: ND, AK, BP, WN / SD, NN, BR, WD, MC, FD.

  HOST. Rubiaceae: *Coprosma robusta.*

  ANNOTATION. Larvae bore in twigs (? in decaying wood).

- **Moaxiphia duniana** (Gourlay)
  Xiphydria duniana Gourlay, 1927b: 72. Holotype: NN, Dun Mtn; NZAC

  DISTRIBUTION. New Zealand: BP / BR, NN, OL, FD.

  HOSTS. Fagaceae: *Nothofagus fusca, N. menziesii.*

  ANNOTATION. Larvae bore into twigs.

ORUSSOIDEA superfamily

ORUSSIDAE family

A small family of about 70 species world-wide, most of which occur in the tropics. There is still some question as to what orussid larvae feed on; whether they are parasitoids of wood borers or fungal feeders. Evidence from New Zealand authors (Gourlay,1951; Rawlings,1957; Nuttall, 1980) suggests they are parasitic. Taxonomy: Benson, 1938.

GUIGLIA Benson genus

- **Guiglia schauinslandi** (Ashmead)
  Ophrynopus schauinslandi Ashmead, 1903: 73. Holotype: Chatham Islands; ÜM

  DISTRIBUTION. New Zealand: ND, AK, CL, TK, TO / SD, NN, MC, Chatham Islands.

  HOSTS. Siricidae: *Sirex noctilio.* Ichneumonidae: *Rhyssa persuasoria persuasoria.* Cerambycidae: *Stenopotes pallidus.* Curculionidae: *Strongylopterus hylobioides, ?Psepholax barbifrons, P. coronatus, ?P. sulcatus* .

  ANNOTATION. Gourlay (1951) recorded two instances of *G. schauinslandi* parasitising *Sirex noctilio* and Rawlings (1957) also noted parasitism on the same host. Biology: Gourlay, 1927a; Nuttall,1980.

APOCRITA (PARASITICA) suborder

The Apocrita may be recognised by the marked constriction or "waist" between the propodeum and the first tergite of the abdomen. The suborder is traditionally divided into the "Parasitica" and "Aculeata" but these two groups can only be considered informally as some "Parasitica" are suggested to be closely related to "Aculeata" (Gauld & Bolton, 1988).

ICHNEUMONOIDEA superfamily

BRACONIDAE family

Solitary or gregarious parasitoids, mainly of Lepidoptera with many species used in integrated pest management systems. The Shenefelt catalogues are available for information on world taxa.There is also an index and host list to these catalogues (Shenefelt, 1980), and a list of world literature (Shenefelt, 1965). The higher classificaton has recently been treated by van Achterberg (1984). There is a world key to subfamilies by van Achterberg (1976) and a key to genera of the Nearctic region by Marsh, Shaw & Wharton (1987).

ALYSIINAE subfamily

Mostly solitary endoparasitoids of Diptera larvae, emerging from the pupa. Taxonomy: Wharton, 1980, 1986; Nixon, 1943a, 1944, 1945, 1946, 1948, 1949, 1954.

ALYSIA Latreille genus

Taxonomy: Wharton, 1986.

- **Alysia manducator** (Panzer)
  Ichneumon manducator Panzer, 1799: 72

  DISTRIBUTION. Europe, Alaska, Greenland, Uruguay, South Africa, Australia, New Zealand.

  HOSTS. Calliphoridae: *Calliphora vicina, Xenocalliphora hortona, Calliphora stygia, C. quadrimaculata, Chrysomya rufifacies, Lucilia sericata.*

  ANNOTATION. Introduced into New Zealand from England in 1926 for the control of blowflies (Miller, 1927a). Biology: Early, 1984.

- **Alysia stramineipes** Cameron
  Alysia stramineipes Cameron, 1898: 39. Holotype: BR, nr. Greymouth; BMNH

  DISTRIBUTION. New Zealand: / BR.

  HOSTS. Blowflies (Calliphoridae).

APHAERETA Foerster genus

- **Aphaereta aotea** Hughes & Woolcock
  Aphaereta aotea Hughes & Woolcock, 1976: 191. Holotype: AK, nr Auckland; NZAC

  DISTRIBUTION. New Zealand: AK.

  HOST. Sarcophagidae: *Hybopygia varia.*

  ANNOTATION. Introduced from New Zealand to Australia in 1975 to control dung-breeding flies.

DACNUSA Haliday genus

- **Dacnusa areolaris** (Nees)
  Bracon areolaris Nees, 1812: 20

  DISTRIBUTION. Europe, New Zealand.

  HOST. Agromyzidae: *Phytomyza syngenesiae.*

  ANNOTATION. Biology: Kelsey, 1937.

PHAENOCARPA Foerster genus

- **Phaenocarpa antipoda** (Ashmead)
  Asobara antipoda Ashmead, 1900c: 625. Holotype: Chatham Islands; ? deposition

  DISTRIBUTION. New Zealand (Chatham Islands).

  HOST. Calliphoridae: *Calliphora stygia.*

APHIDIINAE subfamily

Solitary endoparasitoids of aphids. North American catalogue (Krombein et al., 1979) places Aphidiinae as a family, but recent phylogenetic analysis (van Achterberg, 1984) has shown it to be of subfamily level. Taxonomy & Biology: Carver & Stary, 1974. Taxonomy: Shenefelt & Mackauer, 1968.

APHIDIUS Nees genus

Taxonomy: Pungerl, 1983, 1986.

- **Aphidius eadyi** Stary, Gonzales & Hall
  Aphidius eadyi Stary, Gonzales & Hall, 1980: 474
  [*Aphidius urticae* Haliday]

  DISTRIBUTION. Holarctic, New Zealand: North Island and South Island.

  HOST. Aphididae: *Acyrthosiphon pisum.*

  ANNOTATION. Introduced into New Zealand from California in 1977 (Cameron et al., 1979) for the control of pea aphid. Taxonomy: Stary et al., 1980. Biology: Cameron et al., 1981.

- **Aphidius ervi** Haliday
  Aphidius ervi Haliday, 1834: 100

  DISTRIBUTION. Palaearctic, North Africa, western U.S.A, Tasmania, New Zealand: AK, WO, BP, TO, GB, WI / MC, CO, DN.

  HOSTS. Aphididae: *Acyrthosiphon kondoi, A. pisum, Rhopalosiphum padi, ?Macrosiphum solani.*

  ANNOTATION. Introduced into New Zealand from California (1977), Tasmania (1979) and England (1981) (Cameron et al., 1979) for the control of bluegreen lucerne aphid.

- **Aphidius pelargonii** Stary & Carver
  Aphidius pelargonii Stary & Carver, 1979: 337

  DISTRIBUTION. Australia, New Zealand.

  HOSTS. Aphididae: *Acyrthosiphon malvae, A. pisum.*

  ANNOTATION. Taxonomy: Pungerl, 1986.

- **Aphidius rhopalosiphi** De Stefani Perez
  Aphidius rhopalosiphi De Stefani Perez, 1902: 633
  [*Aphidius uzbekistanicus* Luzhetski]

  DISTRIBUTION. Europe, New Zealand.

  HOSTS. Aphididae: *Metopolophium dirhodum.*

  ANNOTATION. Introduced into New Zealand from England and France in 1985 for the control of rose grain aphid (Cameron et al., 1987; Stufkens & Farrell, 1987). *Aphidius uzbekistanicus* has also been used in the literature, but, as Pungerl (1983) noted, the morphological basis upon which these two species are distinguished is unsatisfactory at present.

- **Aphidius salicis** Haliday
  Aphidius salicis Haliday, 1834: 102

  DISTRIBUTION. Palaearctic, North America, Australia, New Zealand.

  HOST. Aphididae: *Cavariella aegopodii.*

- **Aphidius similis** Stary & Carver
  Aphidius similis Stary & Carver, 1979: 339

  DISTRIBUTION. Australia, New Zealand.

  HOSTS. Aphididae: *Aphis craccivora, A. gossypii, Rhopalosiphum padi, Sitobion* sp., *Toxoptera aurantii.*

  ANNOTATION. Biology: Cameron et al. 1989.

DIAERETIELLA Stary genus

- **Diaeretiella rapae** (M'Intosh, 1855)
  Aphidius rapae M'Intosh, 1855: 194
  Diaeretus rapae (M'Intosh)
  Trioxys (Aphidius) rapae (M'Intosh)

  DISTRIBUTION. Cosmopolitan, New Zealand.

  HOSTS. Aphididae: *Brevicoryne brassicae, ?Lipaphis* sp., *Myzus (Nectarosiphon) persicae .*

  ANNOTATION. Biology: Todd, 1957, 1958; Lowe, 1968; Early, 1984.

TRIOXYS Haliday genus

- **Trioxys complanatus** Quilis
  Trioxys complanatus Quilis, 1931: 78

  DISTRIBUTION. Palaearctic, North America, Mexico, Australia, New Zealand.

  HOST. Aphididae: *Therioaphis trifolii f. maculata .*

  ANNOTATION. Introduced into New Zealand from Australia in 1982 for the control of spotted alfalfa aphid.

BRACONINAE subfamily

Ectoparasitoids (often gregarious) of concealed Coleoptera or Lepidoptera larvae. A very large subfamily worldwide but very poorly studied. Taxonomy: Quicke, 1987.

BRACON Fabricius genus

- **Bracon hebetor** Say
  Bracon hebetor Say, 1836: 252

  DISTRIBUTION. Cosmopolitan, New Zealand: AK, WO, GB / NN, MC.

  HOSTS. Pyralidae: *Ephestia kuehniella, Plodia interpunctella.*

  ANNOTATION. Biology: Parrott, 1954b.

- **Bracon variegator** Spinola
  Bracon variegator Spinola, 1808: 115

  DISTRIBUTION. Europe, New Zealand.

  HOSTS. Coleophoridae: *Coleophora spissicornis.*

  ANNOTATION. Introduced into New Zealand from France in 1961 and 1968 for the control of clover casebearer species (Thomas,1969). Biology: Early, 1984.

CHELONINAE subfamily

Solitary endoparasitoids of Lepidoptera larvae, ovipositing in eggs.

ASCOGASTER Wesmael genus

Taxonomy: Walker & Huddleston, 1986.

- **Ascogaster bicolorata** Walker & Huddleston
  Ascogaster bicolorata Walker & Huddleston, 1986: 346. Holotype: SD, Okiwi Bay; NZAC

  DISTRIBUTION. New Zealand: AK, CL, WO, TK, WI / SD, NN, BR, OL.

  HOSTS. Not known.

- **Ascogaster crenulata** Cameron
  Ascogaster crenulatus Cameron, 1898: 37. Holotype: BR, nr. Greymouth; BMNH
  Ascogaster obscurator Lyle, 1923: 339. Holotype: SL, Tisbury; BMNH

  DISTRIBUTION. New Zealand: ND, AK, RI, WN / NN, BR, MC, SL.

  HOSTS. Not known.

- **Ascogaster elongata** Lyle
  Ascogaster elongator Lyle, 1923: 339. Holotype: OL, Lake Luna; BMNH

  DISTRIBUTION. New Zealand: AK, TK, TO, WN / NN, SD, BR, MB, WD, MC, MK, OL, CO, DN, FD, SL.

  HOSTS. Not known.

- **Ascogaster erroli** Walker & Huddleston
  Ascogaster erroli Walker & Huddleston, 1986: 358. Holotype: WN, Tararua Ra; NZAC

  DISTRIBUTION. New Zealand: AK, WN / WD.

  HOSTS. Not known.

- **Ascogaster gourlayi** Walker & Huddleston
  Ascogaster gourlayi Walker & Huddleston, 1986: 353. Holotype: NN, Nelson; NZAC

  DISTRIBUTION. New Zealand: AK / NN.

  HOSTS. Not known.

- **Ascogaster iti** Walker & Huddleston
  Ascogaster iti Walker & Huddleston, 1986: 351. Holotype: MC, Banks Peninsula; NZAC

  DISTRIBUTION. Three Kings Islands, ND, AK, BP / NN, MC, OL, SI.

  HOSTS. Not known.

- **Ascogaster mayae** Walker & Huddleston
  Ascogaster mayae Walker & Huddleston, 1986: 348. Holotype: AK, Huia; NZAC

  DISTRIBUTION. New Zealand: AK.

  HOSTS. Not known.

- **Ascogaster parrotti** Walker & Huddleston
  Ascogaster parrotti Walker & Huddleston, 1986: 354. Holotype: MC, Banks Peninsula; NZAC

  DISTRIBUTION. New Zealand: ND, AK, RI / NN, BR, MC, MK, OL, DN, SI.

  HOSTS. Not known.

- **Ascogaster quadridentata** Wesmael
  Ascogaster quadridentatus Wesmael, 1835: 237

  DISTRIBUTION. Europe, Pakistan, North America, South Africa, New Zealand: AK, HB / NN, MC.

  HOST. Tortricidae: *Cydia pomonella.*

  ANNOTATION. Introduced into New Zealand from U.S.A. in 1931 for the control of codling moth (Dumbleton, 1936).

- **Ascogaster strigosa** Walker & Huddleston
  Ascogaster strigosa Walker & Huddleston, 1986: 356. Holotype: MC, Banks Peninsula; NZAC

  DISTRIBUTION. New Zealand: / NN, SD, NC, MC, SI.

  HOSTS. Not known.

- **Ascogaster tekapoense** Walker & Huddleston
  Ascogaster tekapoense Walker & Huddleston, 1986: 359. Holotype: MK, Lake Tekapo; NZAC

  DISTRIBUTION. New Zealand: / MK, OL, SL.

  HOSTS. Not known.

- **Ascogaster vexator** Walker & Huddleston
  Ascogaster vexator Walker & Huddleston, 1986: 349. Holotype: BR, Mt Robert; NZAC

  DISTRIBUTION. New Zealand: WN / NN, BR, MK.

  HOSTS. Not known.

DORYCTINAE subfamily

Ectoparasitoids of concealed wood- and bark-boring Coleoptera larvae. Possibly many undescribed species in New Zealand fauna. Taxonomy: Nixon, 1943b.

DORYCTES Haliday genus

Taxonomy: Parrott, 1955.

- **Doryctes ambeodonti** Muesebeck
  Doryctes ambeodonti Muesebeck, 1941: 149. Holotype: AK, Papakura; USNM

  DISTRIBUTION. New Zealand: AK.

  HOSTS. Cerambycidae: *Ambeodontus tristis, Pseudocalliprason marginatum.*

- **Doryctes gourlayi** Parrott
  Doryctes gourlayi Parrott, 1955: 1161. Holotype: NN, Nelson; NZAC

  DISTRIBUTION. New Zealand: / NN.

  HOSTS. Cerambycidae: *Eburilla sericea, Hexatricha pulverulenta.* Curculionidae: *Crisius* sp.

- **Doryctes pallida** Gourlay
  Doryctes pallida Gourlay, 1928: 369. Holotype: WN, Karori, Wellington; NZAC

  DISTRIBUTION. New Zealand: TO, WN.

  HOSTS. Buprestidae: *Nascioides enysi.* Colydiidae: *Bothrideres obsoletus.*

  ANNOTATION. Biology: Morgan, 1966a,b.

DORYCTOMORPHA Ashmead genus

- **Doryctomorpha antipoda** Ashmead
  Doryctomorpha antipoda Ashmead, 1900c: 630. Holotype: Chatham Islands; ÜM

  DISTRIBUTION. New Zealand: Chatham Islands.

  HOSTS. Curculionidae: *Psepholax barbifrons, P. coronatus, P. simplex, P. sulcatus.*

METASPATHIUS Brues genus

- **Metaspathius apterus** Brues
  Metaspathius apterus Brues, 1922: 217. Holotype: NN, Nelson; NZAC

  DISTRIBUTION. New Zealand: / NN.

  HOSTS. Not known.

SPATHIUS Nees genus

- **Spathius exarator** (Linnaeus)
  Ichneumon exarator Linnaeus, 1758: 564.

  DISTRIBUTION. Europe, North America, New Zealand.

  HOST. Anobiidae: *Anobium punctatum.*

  ANNOTATION. Biology: Parrott, 1954b.

EUPHORINAE subfamily

Solitary or gregarious endoparasitoids, mostly of adult Coleoptera, but also of Psocoptera, Hemiptera, Hymenoptera and larvae of Lepidoptera and Coleoptera.

DINOCAMPUS Foerster genus

- **Dinocampus coccinellae** (Schrank)
  Ichneumon coccinellae Schrank, 1802: 310
  Perilitus coccinellae (Schrank)

  DISTRIBUTION. Cosmopolitan, New Zealand: ND, AK, WO, HB / NN, MB, OL, MC.

  HOSTS. Coccinellidae: *Coccinella undecimpunctata, Harmonia dimidiata, H. conformis.* Curculionidae: *Sitona discoideus.*

  ANNOTATION. Biology: Gourlay, 1930b.

METEORUS Haliday genus

Taxonomy: Huddleston, 1986.

- **Meteorus annettae** Huddleston
  Meteorus annettae Huddleston, 1986: 256. Holotype: MC, Banks Peninsula; NZAC

  DISTRIBUTION. New Zealand: / NN, MC, ?DN.

  HOSTS. Not known.

- **Meteorus cespitator** (Thunberg)
  Ichneumon cespitator Thunberg, 1822 : 269
  Meteorus atrator (Curtis)

  DISTRIBUTION. Europe, New Zealand: AK / NN, CO.

  HOST. Tineidae: *Trichophaga tapetzella.*

  ANNOTATION. Biology: Parrott, 1954b.

- **Meteorus cinctellus** (Spinola)
  Bracon cinctellus Spinola, 1808: 135

  DISTRIBUTION. Europe, New Zealand: AK, CL, BP, WI / NN, BR, WD, MC, MK, OL, CO, FD, SL.

  HOSTS. Tortricidae: *Epiphyas postvittana, Catamacta alopecana.*

- **Meteorus cobbus** Huddleston
  Meteorus cobbus Huddleston, 1986: 259. Holotype, NN, Cobb Reservoir; NZAC

  DISTRIBUTION. New Zealand: / NN, BR, CO, FD.

  HOSTS. Not known.

- **Meteorus luteus** (Cameron)
  Protelus luteus Cameron, 1911: 341

  DISTRIBUTION. Australia, New Zealand: TO / NN, MB, BR, MC, MK, DN, SL.

  HOSTS. Oecophoridae: *Stathmopoda aposema.*

- **Meteorus novazealandicus** Cameron
  Meteorus novazealandicus Cameron, 1898: 38. Holotype: BR, nr. Greymouth; BMNH

  DISTRIBUTION. New Zealand: ND, AK, CL, TO, TK, WN / NN, SD, BR, WD, MC, MK, CO, FD, SL.

  HOSTS. Not known.

- **Meteorus quinlani** Huddleston
  Meteorus quinlani Huddleston, 1986: 262. Holotype: NN, Cobb Reservoir; NZAC

  DISTRIBUTION. New Zealand: ND, AK, CL, BP, TK, TO, WI, WN / NN, MB, BR, NC, WD, MC, MK, OL, CO, DN, FD, SL, SI.

  HOSTS. Not known.

MICROCTONUS Wesmael genus

- **Microctonus aethiopoides** Loan
  Microctonus aethiopoides Loan, 1975: 33

  DISTRIBUTION. Europe, North America, Australia, New Zealand: Canterbury.

  HOST. Curculionidae: *Sitona discoideus.*

  ANNOTATION. Introduced into New Zealand from Australia in 1982 for the control of sitona weevil. Biology: Goldson & Proffitt, 1986; Proffitt & Goldson, 1987; Stufkens et al., 1987.

HELCONINAE subfamily

Endoparasitoids, usually of concealed Coleoptera larvae.

ASPICOLPUS Wesmael genus

- **Aspicolpus hudsoni** Turner
  Aspicolpus hudsoni Turner, 1922: 279. Holotype: OL, Lake Wakatipu; BMNH
  Aspicolpus hudsoni castanea Gourlay, 1928: 369. Holotype: New Zealand; ?deposition

  DISTRIBUTION. New Zealand: / OL.

  HOSTS. Cerambycidae: *Astetholea pauper, Brounopsis hudsoni, Navomorpha sulcata, Oemona* sp. *(?hirta).* Tortricidae: *Gelophaula siraea.*

- **Aspicolpus penetrator** (Smith)
  Rhogas penetrator Smith, 1878: 5. Holotype: Otago; BMNH
  Aspidocolpus (!) *penetrator* (Smith)

  DISTRIBUTION. New Zealand: / 'Otago.

  HOSTS. Not known.

DIOSPILUS Haliday genus

- **Diospilus antipodum** Turner
  Diospilus antipodum Turner, 1922: 280. Lectotype: WN, Wiltons Bush; BMNH

  DISTRIBUTION. New Zealand: WN.

  HOSTS. Not known.

SCHAUINSLANDIA Ashmead genus

At present this genus is known only from the Chatham Islands. Taxonomy: Fischer, 1979.

- **Schauinslandia alfkenii** Ashmead
  Schauinslandia alfkenii Ashmead, 1900c: 628. Holotype: Chatham Islands; ÜM

  DISTRIBUTION. New Zealand: Chatham Islands.

  HOSTS. Not known.

- **Schauinslandia femorata** Ashmead
  Schauinslandia femorata Ashmead 1900a: 120. Holotype: Chatham Islands; USNM

  DISTRIBUTION. New Zealand: Chatham Islands.

  HOSTS. Not known.

  ANNOTATION. Ashmead obviously intended the first description to be in Ent. News (1900: 627) but it is preceeded by an earlier briefer description in Proc. U.S. Nat. Mus.: 120.

- **Schauinslandia pallidipes** Ashmead
  Schauinslandia pallidipes Ashmead, 1900c: 628. Lectotype: Chatham Islands; ÜM

  DISTRIBUTION. New Zealand: Chatham Islands.

  HOSTS. Not known.

MACROCENTRINAE subfamily

Solitary or gregarious (sometimes polyembryonic) endoparasitoids of Lepidoptera larvae.

MACROCENTRUS Curtis genus

- **Macrocentrus rubromaculatus** (Cameron)
  Fhogra rubromaculata Cameron, 1901: 105. Holotype: WN, Wellington; BMNH

  DISTRIBUTION. Australia, New Zealand: WN / MC.

  HOSTS. Noctuidae: *Agrotis ipsilon aneituma, Graphania* (sp.), *Persectania aversa, Tmetolophota steropastis, Mythimna separata.*

  ANNOTATION. A polyembryonic species. Biology: Parrott, 1954b.

MICROGASTRINAE subfamily

Endoparasitoids, often gregarious, of Lepidoptera larvae. Taxonomy: Nixon, 1965; Mason, 1981.

APANTELES Foerster genus

Taxonomy: Wilkinson, 1928; Parrot, 1964. Biology: Parrott, 1954b.

- **Apanteles arisba** Nixon
  Apanteles arisba Nixon, 1973: 210

  DISTRIBUTION. Europe, New Zealand.

  HOSTS. Not known.

- **Apanteles aucklandensis** Cameron
  Apanteles aucklandensis Cameron, 1909: 77. Holotype: Auckland Is; BMNH

  DISTRIBUTION. New Zealand: Auckland Islands.

  HOSTS. Not known.

- **Apanteles bicolor** (Nees)
  Microgaster bicolor Nees, 1834: 181
  Apanteles pedias Nixon, 1973

  DISTRIBUTION. Europe, Canada, New Zealand.

  HOST. Gracillariidae: *Phyllonorycter messaniella.*

  ANNOTATION. Introduced into New Zealand from Italy in 1957 (to control oak leaf miner) as *circumscriptus* (Given, 1959). When Laing & Heraty (1981) introduced "*circumscriptus*" from New Zealand to Canada in 1978 the consignments were identified as *pedias* and *arisba*, described by Nixon from Europe in 1973, and very similar in structure to *circumscriptus*. Until New Zealand *Apanteles* are examined in more detail, the presence of *circumscriptus* in New Zealand is open to question. Biology: Swan, 1973.

- **Apanteles carpatus** (Say)
  Microgaster carpatus Say, 1836: 263

  DISTRIBUTION. Cosmopolitan, New Zealand.

  HOST. Tineidae: *Tinea pellionella.*

  ANNOTATION. Biology: Lamb, 1952.

- **Apanteles carposinae** Wilkinson
  Apanteles carposinae Wilkinson, 1938: 247. Holotype: NN, Nelson; BMNH

  DISTRIBUTION. New Zealand: / NN.

HOSTS. Carposinidae: *Heterocrossa adreptella* (non Walker), sensu Meyrick.

- **Apanteles circumscriptus** (Nees)
  Microgaster circumscriptus Nees, 1834: 181
  Pholetesor circumscriptus (Nees)

  DISTRIBUTION. Europe, New Zealand.

  HOST. Gracillariidae: *Phyllonorycter messaniella.*

  ANNOTATION. See above under *A. bicolor*. Biology: Early, 1984.

- **Apanteles demeter** Wilkinson
  Apanteles demeter Wilkinson, 1934: 154. Holotype: WI, Bainesse; BMNH
  Glyptapanteles demeter (Wilkinson)

  DISTRIBUTION. New Zealand: WI.

  HOSTS. Geometridae: *?Pseudocoremia suavis.* Tortricidae: *?Epiphyas postvittana.*

  ANNOTATION. Familiarly known in New Zealand under the name *Adelius* (but not published). Biology: Early, 1984.

- **Apanteles galleriae** Wilkinson
  Apanteles galleriae Wilkinson, 1932: 139

  DISTRIBUTION. Europe, Mauritius, India, North America, Argentina, New Zealand.

  HOST. Pyralidae: *Galleria mellonella.*

  ANNOTATION. Parasitises wax moth caterpillars in unhealthy honey bee hives.

- **Apanteles glomeratus** (Linnaeus)
  Ichneumon glomeratus Linnaeus, 1758: 568
  Cotesia glomerata (Linnaeus)

  DISTRIBUTION. Europe, North America, Barbados, South America, India, Pacific, Australia, New Zealand: North Island and South Island.

  HOST. Pieridae: *Pieris rapae.*

  ANNOTATION. Introduced into New Zealand from England in 1932 and from North America in 1938 (Todd, 1962) for the control of white butterfly. Biology: Muggeridge, 1932, 1943; Laing & Levin, 1982; Early, 1984.

- **Apanteles kazak** Telenga
  Apanteles kazak Telenga, 1949: 385
  Cotesia kazak (Telenga)

  DISTRIBUTION. Europe, New Zealand: North Island / MB.

  HOST. Noctuidae: *Helicoverpa armigera conferta.*

  ANNOTATION. Introduced into New Zealand from Europe in 1977 for the control of tomato fruitworm (Hill et al., 1985). Biology: Singh et al., 1982; Early, 1984.

- **Apanteles ruficrus** (Haliday)
  Microgaster ruficrus Haliday, 1834: 253
  Cotesia ruficrus (Haliday)

  DISTRIBUTION. Palaearctic, Africa, Indo-Malaya, Pacific, Australia, New Zealand.

  HOSTS. Noctuidae: *Mythimna separata, Chrysodeixis eriosoma, Helicoverpa armigera conferta, Graphania ustistriga, Agrotis ipsilon aneituma, Thysanoplusia orichalcea.*

  ANNOTATION. Present in New Zealand prior to the introduction of a different strain from Pakistan (Cumber et al., 1977) for the control of cutworms. Biology: Early, 1984.

- **Apanteles subandinus** Blanchard
  Apanteles subandinus Blanchard, 1947: 20

  DISTRIBUTION. California, South America, India, New Zealand.

  HOST. Gelechiidae: *Phthorimaea operculella.*

  ANNOTATION. A South American species introduced into New Zealand from India in 1966 and 1970 for the control of potato tuber moth (Foote, 1979).

- **Apanteles tasmanicus** Cameron
  Apanteles tasmanica Cameron, 1912: 196

  DISTRIBUTION. Tasmania, New Zealand.

  HOSTS. Tortricidae: *Epiphyas postvittana, Ctenopseustis obliquana.*

  ANNOTATION. Introduced into New Zealand in 1967 from Australia for the control of light brown apple moth. Already established prior to the 1967 introduction (Dumbleton, 1932). Taxonomy & Biology: Dumbleton, 1935.

OPIINAE subfamily

Endoparasitoids of larval Diptera. Taxonomy: Fischer, 1971.

OPIUS Wesmael genus

- **Opius carpocapsae** (Ashmead)
  Diachasma carpocapsae Ashmead, 1900b: 357. Holotype: New Zealand; USNM

  DISTRIBUTION. New Zealand.

  HOSTS. Ashmead (in his description) notes the host-data label as "On *Carpocapsa pomonella*??" and correctly doubts the information as opiines are dipterous parasitoids. He further comments that he has been told "that the species will be found to be parasitic on *Dacus tryoni...*" . This is also doubtful as fruit flies do not occur in New Zealand.

ROGADINAE subfamily

Principally parasitoids of Lepidoptera larvae. The subfamily Exothecinae is now generally regarded as a tribe of Rogadinae.

CHREMYLUS Haliday genus

- **Chremylus elaphus** Haliday
  Chremylus elaphus Haliday, 1833: 266
  Chremylus rubiginosus (Nees)

  DISTRIBUTION. Europe, Japan, North America, South Africa, Argentina, Australia, New Zealand.

  HOST. Tineidae: *Tinea pellionella.*

  ANNOTATION. Biology: Lamb, 1952.

ROGAS Nees genus

- **Rogas gressitti** Muesebeck
  Rogas gressitti Muesebeck, 1964: 494. Holotype: Campbell Island; NZAC

  DISTRIBUTION. New Zealand: Campbell Island.

  HOSTS. Not known.

ICHNEUMONIDAE family

The largest family of Hymenoptera with over 60,000 recognisable species. Principally parasitoids of immature stages of endopterygotes, with a few species parasitising spider cocoons. The order of subfamilies follows Gauld, 1984c. Taxonomy: Townes, Townes & Gupta, 1961; Gupta, 1987.

ANOMALONINAE subfamily

Endoparasitoids principally of Lepidoptera. Oviposit into very young larvae and emerge from host pupa.

APHANISTES Foerster genus

- **Aphanistes kayi** Gauld
  Aphanistes kayi Gauld, 1980: 130. Holotype: TO / BP, Kaingaroa State Forest; NZAC

  DISTRIBUTION. New Zealand: TO / BP.

  HOSTS. Geometridae: *Pseudocoremia suavis.* Tortricidae: *Ctenopseustis obliquana.*

BANCHINAE subfamily

Solitary endoparasitoids of Lepidoptera ovipositing into the larva, emerging from fully grown host larva.

LISSONOTA Gravenhorst genus

Taxonomy: Bain, 1970.

- **Lissonota albopicta** Smith
  Lissonota albopicta Smith, 1878: 4. Holotype: Otago; BMNH
  Lissonota tinctipennis Cameron, 1898: 28. Holotype: BR, Greymouth; ?deposition
  Mesoleptus comparatus Cameron, 1898: 33. Holotype: BR, Greymouth; BMNH
  Pimplopterus albopictus (Smith)

  DISTRIBUTION. New Zealand: / BR, NN, WD, MC, 'Otago', FD.

  HOSTS. Not known.

- **Lissonota aspera** Bain
  Lissonota aspera Bain, 1970: 83. Holotype: BP, Whakarewarewa; NZAC

  DISTRIBUTION. New Zealand: BP, TO, GB / NN, MC.

  HOSTS. Not known.

- **Lissonota atra** Bain
  Lissonota atra Bain, 1970: 82. Holotype: MC, Oxford State Forest; NZAC

  DISTRIBUTION. New Zealand: / MC.

  HOSTS. Not known.

- **Lissonota flavopicta** Smith
  Lissonota flavopicta Smith, 1878: 4. Holotype: Otago; BMNH
  Mesoleptus sybarita Cameron, 1898: 32. Holotype: BR, Greymouth; BMNH
  Lissonota rubriplagiata Cameron, 1901: 106. Holotype: WN, Wellington; BMNH
  Pimplopterus flavopictus (Smith)

  DISTRIBUTION. New Zealand: TK, WN / NN, BR, WD, 'Otago', DN, SI.

  HOSTS. Not known.

- **Lissonota fulva** Bain
  Lissonota fulva Bain 1970: 84. Holotype: TO, State Forest 90, nr. Lake Taupo; NZAC

  DISTRIBUTION. New Zealand: ND, TO, BP, WN / NN.

  HOSTS. Not known.

- **Lissonota multicolor** Colenso
  Lissonota multicolor Colenso, 1885: 159. Holotype: HB, Norsewood; ?deposition (probably lost)
  Pimplopterus multicolor (Colenso)

  DISTRIBUTION. New Zealand: HB.

  HOSTS. Not known.

CAMPOPLEGINAE subfamily

A large subfamily important for biological control. Principally parasitoids of Lepidoptera.

CAMPOLETIS Foerster genus

- **Campoletis obstructor** (Smith)
  Tryphon obstructor Smith, 1878: 4. Holotype: Otago; BMNH
  Meloborus? obstructor (Smith)

  DISTRIBUTION. New Zealand: / 'Otago', DN.

  HOSTS. Not known.

CAMPOPLEX Gravenhorst genus

- **Campoplex disjunctus** Townes
  Campoplex disjunctus Townes, 1964: 498. Holotype: Tucker Cove, Campbell Island.; NZAC

  DISTRIBUTION. New Zealand: Campbell Island.

  HOSTS. Not known.

- **Campoplex hudsoni** (Cameron)
  Limneria hudsoni Cameron, 1901: 105. Holotype: WN, nr. Wellington; BMNH
  Eulimneria hudsoni (Cameron)
  [*Ichneumon richardi* Cameron]

  DISTRIBUTION. New Zealand: WN.

  HOST. Oecophoridae: *Izatha attactella.*

DIADEGMA Foerster genus

- **Diadegma agens** Townes
  Diadegma agens Townes, 1964: 499. Holotype: Tucker Cove, Campbell Island.; NZAC

  DISTRIBUTION. New Zealand: Campbell Island.

  HOSTS. Not known.

- **Diadegma semiclausum** (Hellén)
  Angitia semiclausa Hellén, 1949: 20
  Diadegma eucerophaga Horstmann
  [*Angitia cerophaga* (Gravenhorst)]
  [*Diadegma cerophagus* (Gravenhorst)]

  DISTRIBUTION. Europe, New Zealand.

  HOST. Hyponomeutidae: *Plutella xylostella.*

  ANNOTATION. Introduced into New Zealand from England in 1936 for the control of diamondback moth (Morrison, 1957). Biology: Robertson, 1948; Early, 1984.

- **Diadegma muelleri** (White)
  Mesoleptus mülleri White, 1874: 27. Holotype: MC, Christchurch; BMNH
  Limneria zealandica Cameron, 1898: 36. Holotype: BR, Greymouth; BMNH
  Limnerium muelleri (White)
  Eulimneria muelleri (White)

  DISTRIBUTION. New Zealand: / BR, MC.

  HOST. Thyrididae: *Morova subfasciata.*

  ANNOTATION. Biology: Gourlay, 1928.

DUSONA Cameron genus

- **Dusona stramineipes** Cameron
  Dusona stramineipes Cameron, 1901: 107. Holotype: WN, Wellington; BMNH
  Degithina strammeipes(!) (Cameron)

  DISTRIBUTION. New Zealand: WN / MC.

  HOSTS. Geometridae: (*Epirrhanthis*) *Xyridacma veronicae,* (*E.*) *X. alectoraria.*

VENTURIA Schrottky genus

- **Venturia canescens** (Gravenhorst)
  Campoplex canescens Gravenhorst, 1829c: 555
  Nemeritis canescens (Gravenhorst)

  DISTRIBUTION. Europe, North America, Hawaii, Society Islands, Australia, New Zealand: / MC.

  HOSTS. Pyralidae: *Ephestia kuehniella.*

  ANNOTATION. Used extensively for experimental work. Thelytokously parthenogenetic. Biology: Waller, 1982.

- **Venturia intrudens** (Smith)
  Scolobates intrudens Smith, 1878: 3. Holotype: Otago; BMNH
  Devorgilla intrudens (Smith)

  DISTRIBUTION. New Zealand: 'Otago'.

  HOSTS. Not known.

CREMASTINAE subfamily

Principally endoparasitoids of Lepidoptera, mostly found associated with dry habitats, searching for partially concealed host larvae.

TRATHALA Cameron genus

TRATHALA Cameron subgenus

- **Trathala (Trathala) agnina** (Kerrich)
  Cremastus (Trathala) agninus Kerrich, 1959: 59. Holotype: AK, Auckland; BMNH
  Cremastus aginus(!) (Kerrich)
  Trathala agnita (!) (Kerrich)

DISTRIBUTION. New Zealand: AK, TK, RI, WN / MC.

HOSTS. Not known.

CTENOPELMATINAE subfamily

Endoparasitoids, almost always of sawflies but a small number parasitise Lepidoptera.

LATHROLESTES Foerster genus

- **Lathrolestes luteolator** (Gravenhorst)
  Mesoleptus luteolator Gravenhorst, 1829b: 42
  Perilissus luteolator (Gravenhorst)

DISTRIBUTION. Europe, North America, New Zealand.

HOSTS. Tenthredinidae: *Caliroa cerasi.*

ANNOTATION. Introduced into New Zealand from England in 1923 for the control of cherry slug (Dumbleton, 1936; Gourlay, 1930a). First confirmed recovery in 1923.

DIPLAZONTINAE subfamily

Endoparasitoids of aphidophagous hoverflies.

DIPLAZON Nees genus

- **Diplazon laetatorius** (Fabricius)
  Ichneumon laetatorius Fabricius, 1781: 424
  Scolobates varipes Smith, 1878: 3. Holotype: New Zealand; BMNH
  Bassus generosus Cameron, 1898: 31. Holotype: BR, Greymouth; BMNH
  Bassus laetatorius (Fabricius)

DISTRIBUTION. Cosmopolitan, New Zealand: ND, AK, TO, BP, WI / MB, NN, BR, MC, SL, Chatham Islands.

HOSTS. Syrphidae: *Melangyna novaezelandiae, M. ortas , M. viridiceps , Melanostoma fasciatum.*

EUCEROTINAE subfamily

Stalked eggs are laid on plants near the carrier host (Lepidoptera larvae). The first- instar planidium attaches itself to a carrier host and feeds on its haemolymph. If a primary parasitoid emerges from the carrier host, the planidium develops on this. If the carrier host is not parasitised it cannot develop.

EUCEROS Gravenhorst genus

- **Euceros coxalis** Barron
  Euceros coxalis Barron, 1978: 361. Holotype: NN, Tawhai State Forest; NZAC

DISTRIBUTION. New Zealand: BP, TO / NN.

HOSTS. Tortricidae: *Ctenopseustis obliquana, Planotortrix notophaea.*

ICHNEUMONINAE subfamily

All species are internal parasitoids of Lepidoptera; some oviposit into caterpillars, some into fresh pupae, but all emerge from pupae of hosts.

AUCKLANDELLA Cameron genus

Endemic genus.

- **Aucklandella conspirata** (Smith)
  Ichneumon conspiratus Smith, 1876a: 475. Holotype: Canterbury Prov.; BMNH
  Ichneumon ixia Cameron, 1898: 13. Holotype: BR, Greymouth; BMNH
  Ichneumon falsus Cameron, 1898: 18. Holotype: BR, Greymouth; BMNH
  Ichneumon frederici Cameron, 1901: 116. Holotype: WN, Wellington; BMNH

DISTRIBUTION. New Zealand: WN / BR, MC.

HOST. Geometridae: *Pseudocoremia suavis.*

- **Aucklandella flavomaculata** Cameron
  Aucklandella flavomaculata Cameron, 1909: 76. Holotype: Auckland Islands; BMNH
  Aucklandella nigromaculata Cameron, 1909: 76. Holotype: Auckland Islands; BMNH
  Aucklandella(?) flavolineata Cameron, 1909: 77. Holotype: Auckland Islands; BMNH
  Auclandia(!) flavolineata (Cameron)
  Auclandia(!) flavomaculata (Cameron)
  Auclandia(!) nigromaculata (Cameron)

DISTRIBUTION. New Zealand: Auckland Islands.

HOSTS. Not known.

- **Aucklandella geiri** (Dalla Torre)
  Cryptus penetrator Smith, 1878: 2 (name preoccupied by Smith, 1874). Holotype: New Zealand; BMNH
  Cryptus geiri Dalla Torre, 1902: 573 (replacement name for *penetrator* Smith, 1878)

DISTRIBUTION. New Zealand: / DN.

HOSTS. Not known.

- **Aucklandella hudsoni** (Cameron)
  Amblyteles hudsoni Cameron, 1901: 109. Holotype: WN, Wellington; BMNH
  Amblytetes(!) hudsoni (Cameron)

DISTRIBUTION. New Zealand: WN.

HOSTS. Not known.

- **Aucklandella machimia** (Cameron)
  Ichneumon machimia Cameron, 1898: 20. Holotype: BR, Greymouth; BMNH

DISTRIBUTION. New Zealand: / BR.

HOSTS. Not known.

- **Aucklandella minuta** (Ashmead)
  Eristicus minutus Ashmead, 1890: 388. Holotype: "Wisconsin", correct locality N.Z. (Ashmead, 1900b); USNM

DISTRIBUTION. New Zealand.

HOSTS. Not known.

- **Aucklandella novazealandica** (Cameron)
  Ichneumon novazealandicus Cameron, 1898: 23. Holotype: BR, Greymouth; type lost.

DISTRIBUTION. New Zealand: / BR.

HOSTS. Not known.

- **Aucklandella pyrastis** (Cameron)
  Ichneumon placidus Smith, 1876a: 476. Holotype: Canterbury Prov.; BMNH (homonym)
  Ichneumon pyrastis Cameron, 1901: 115. Holotype: WN, Wellington; BMNH
  Ichneumon placidulus Dalla Torre, 1902: 970
  Cratichneumon placidus (Smith)

DISTRIBUTION. New Zealand: WN / MC, Chatham Islands.

HOST. Geometridae: *Pseudocoremia suavis.*

- **Aucklandella thyellma** (Cameron)
  Ichneumon thyellma Cameron, 1898: 22. Holotype: BR, Greymouth; BMNH

DISTRIBUTION. New Zealand: / BR.

HOSTS. Not known.

- **Aucklandella ursula** (Cameron)
  Ichneumon ursula Cameron, 1898: 16. Holotype: BR, Greymouth; BMNH
  Ichneumon colensii Cameron, 1898: 15. Holotype: BR, Greymouth; BMNH

Ichneumon brouni Cameron, 1898: 17. Holotype: BR, Greymouth; BMNH
Dicoelotus striatifrons Cameron, 1898: 24. Holotype: BR, Greymouth; BMNH
Ichneumon richardi Cameron, 1901: 117. Holotype: WN, Wellington; BMNH
Aoplus browni(!) (Cameron)
Melanichneumon ursula (Cameron)
Cratichneumon richardi (Cameron)

DISTRIBUTION. New Zealand: WN / BR.

HOST. Oecophoridae: *Izatha attactella.*

- **Aucklandella utetes** (Cameron)
  Ichneumon utetes Cameron, 1898: 21. Holotype: BR, Greymouth; BMNH

  DISTRIBUTION. New Zealand: / BR.

  HOSTS. Not known.

- **Aucklandella wellingtoni** (Cameron)
  Ichneumon wellingtoni Cameron, 1901: 117. Holotype: WN, Wellington; BMNH

  DISTRIBUTION. New Zealand: WN.

  HOSTS. Not known.

CTENOCHARES Foerster genus

- **Ctenochares bicolorus** (Linnaeus)
  Ichneumon bicolorus Linnaeus, 1767: 938

  DISTRIBUTION. Mediterranean Basin, Africa, Australia, New Zealand: AK.

  HOST. Noctuidae: *Chrysodeixis eriosoma.*

  ANNOTATION. Taxonomy & Biology: Fitton et al., 1983.

DEGITHINA Cameron genus

Endemic genus.

- **Degithina actista** (Cameron)
  Ichneumon actista Cameron, 1898: 8. Holotype: BR, Greymouth; BMNH
  Degithina hectori Cameron, 1901: 114. Holotype: WN, Wellington; BMNH
  Cestocormus hector(!) (Cameron)

  DISTRIBUTION. New Zealand: WN / BR.

  HOSTS. Not known.

- **Degithina apicalis** (Ashmead)
  Eristicus apicalis Ashmead, 1890: 388. Holotype: "Wisconsin", correct locality N.Z. (Ashmead, 1900b); USNM
  Eristicus basilaris Ashmead, 1890: 389. Holotype: "Wisconsin", correct locality N.Z. (Ashmead, 1900b); USNM
  Probolus invectus (Smith)
  Probolus sollicitorius (Fabricius)
  Probolus apicalis (Ashmead)
  Probolus basilaris (Ashmead)
  Ichneumon invectus (Cameron)

  DISTRIBUTION. New Zealand.

  HOSTS. Not known.

- **Degithina davidi** Cameron
  Degithina davidi Cameron, 1901: 114. Holotype: WN, Wellington; BMNH

  DISTRIBUTION. New Zealand: WN / MC.

  HOSTS. Not known.

- **Degithina decepta** (Smith)
  Ichneumon deceptus Smith, 1876a: 477. Holotype: Canterbury Prov.; BMNH
  Ichneumon perfidiosus Smith, 1876a: 475. Holotype: Canterbury Prov.; BMNH
  Eristicus erythrogaster Ashmead, 1890: 388. Holotype: "Wisconsin", correct locality N.Z. (Ashmead, 1900b); USNM
  Degithina buchanani Cameron, 1901: 112. Holotype: WN, Wellington; BMNH
  Degithina caroli Cameron, 1901: 113. Holotype: WN, Wellington; BMNH
  Proboloides maculatus Morley, 1903: 161. Lectotype: "British", correct locality N.Z. (Morley, 1909); BMNH
  Proboloides deceptus (Smith)
  [*Ichneumon sollicitorius* Fabricius]
  [*Ichneumon huttoni* Kirby]

  DISTRIBUTION. New Zealand: WN / BR, MC, Chatham Islands.

  HOSTS. Hepialidae: *Wiseana cervinata, W. umbraculata.*

- **Degithina exhilarata** (Smith)
  Ichneumon exhilaratus Smith, 1876a: 477. Holotype: Canterbury Prov.; BMNH

  DISTRIBUTION. New Zealand: / 'Canterbury'.

  HOSTS. Not known.

- **Degithina hersilia** (Cameron)
  Ichneumon hersilia Cameron 1898: 7. Holotype: BR, Greymouth; BMNH

  DISTRIBUTION. New Zealand: / BR, MC.

  HOSTS. Not known.

- **Degithina huttonii** (Kirby)
  Ichneumon huttonii Kirby, 1881: 44. Holotype: DN, Dunedin; BMNH

  DISTRIBUTION. New Zealand: / DN.

  HOSTS. Not known.

- **Degithina melanopus** (Cameron)
  Zestocormus melanopus Cameron, 1901: 119. Holotype: WN, Wellington; BMNH

  DISTRIBUTION. New Zealand: WN.

  HOSTS. Not known.

- **Degithina sollicitoria** (Fabricius)
  Ichneumon sollicitorius Fabricius, 1775: 332. Holotype: New Zealand; BMNH
  Ichneumon invectus Smith, 1876a: 475. Holotype: Canterbury; BMNH
  Proboloides glabratus Morley, 1903: 161. Holotype: "British origin", correct locality N.Z. (Morley, 1909a); BMNH
  Probolus invectus (Smith)
  Probolus sollicitorius (Fabricius)
  Proboloides sollicitorius (Fabricius)

  DISTRIBUTION. New Zealand: / BR, MC.

  HOSTS. Noctuidae: *Graphania ustistriga, Persectania aversa.*

DIADROMUS Wesmael genus

- **Diadromus collaris** (Gravenhorst)
  Ischnus collaris Gravenhorst, 1829a: 653
  Diadromus (Thyraeella) collaris (Gravenhorst)
  Thyraeella collaris (Gravenhorst)

  DISTRIBUTION. Europe, India, Pakistan, Fiji, Tonga, Australia, New Zealand.

  HOST. Yponomeutidae: *Plutella xylostella.*

  ANNOTATION. Introduced into New Zealand from England in 1937 for the control of diamondback moth (Miller, 1938). Biology: Given, 1944a,c,d; Early, 1984.

EUTANYACRA Cameron genus

- **Eutanyacra licitatorius** (Erichson)
  Ichneumon licitatorius Erichson, 1842: 256

  DISTRIBUTION. Australia, New Zealand: AK, TK, RI.

  HOSTS. Not known.

  ANNOTATION. Taxonomy: Chambers, 1987.

ICHNEUMON Linnaeus genus

- **Ichneumon lotatorius** Fabricius
  Ichneumon lotatorius Fabricius, 1775: 330. Holotype: New Zealand; BMNH
  Ichneumon consanguineus Smith, 1876a: 476. Holotype: Canterbury Prov.; BMNH
  Ichneumon insidiator Smith, 1876a: 476. Holotype: Canterbury Prov.; BMNH
  Priocnemis pascoei Kirby, 1883: 200. Holotype: New Zealand; BMNH
  Ichneumon helmsii Cameron, 1898: 9. Holotype: BR, Greymouth; BMNH
  Amblyteles zealandicus Cameron, 1901: 108. Holotype: WN, Wellington; BMNH
  Colobacis forticornis Cameron, 1901: 110. Holotype: WN, Wellington; BMNH
  Echthromorpha insidiator (Smith)
  Probolus lotatorius (Fabricius)
  Ichneumon forticornis (Cameron)
  Ichneumon pascoei (Kirby)
  Pterocormus lotatorius (Fabricius)
  [*Ichneumon sollicitorius* Fabricius]

  DISTRIBUTION. New Zealand: WN / BR, MC, Chatham Islands.

  HOST. Hepialidae: *Wiseana cervinata.*

- **Ichneumon promissorius** Erichson
  Ichneumon promissorius Erichson, 1842: 256
  Ichneumon albocinctus Cameron, 1906: 181
  Ichneumon varilineata Cameron, 1912: 174
  Ichneumon albopictus(!) (Cameron) (lapsus for *albocinctus*)
  Pterocormus promissorius (Erichson)

  DISTRIBUTION. New Caledonia, Fiji, Cook Islands, Australia, New Zealand: North Island and South Island.

  HOSTS. Noctuidae: *Mythimna separata, Helicoverpa armigera conferta.*

  ANNOTATION. Taxonomy & Biology: Parrott, 1953; Early, 1984.

LEVANSA Townes genus

Endemic genus.

- **Levansa artaxidia** (Cameron)
  Ichneumon artaxidia Cameron, 1898: 13. Holotype: BR, Greymouth; BMNH
  Platylabus artaxidia (Cameron)

  DISTRIBUTION. New Zealand: / BR.

  HOSTS. Not known.

- **Levansa decoratoria** (Fabricius)
  Ichneumon decoratorius Fabricius, 1775: 333. Holotype: New Zealand; BMNH
  Cryptus decoratorius (Fabricius)
  Platylabus decoratorius (Fabricius)

  DISTRIBUTION. New Zealand: CL, TK.

  HOSTS. Not known.

- **Levansa leodacus** (Cameron)
  Ichneumon leodacus Cameron, 1898: 19. Holotype: BR, Greymouth; BMNH

  DISTRIBUTION. New Zealand: / BR.

  HOSTS. Not known.

PTEROCORMUS Foerster genus

- **Pterocormus? cinctus** (Ashmead)
  Eristicus cinctus Ashmead, 1890: 389. Holotype: "Wisconsin", correct locality N.Z. (Ashmead, 1900b); USNM
  Eristicus binotatus Ashmead, 1890: 389. Holotype: "Wisconsin", correct locality N.Z. (Ashmead, 1900b); USNM
  Probolus cinctus (Ashmead)

  DISTRIBUTION. New Zealand.

  HOSTS. Not known.

  ANNOTATION. Species only provisionally transferred to this genus by Townes et al. (1961). As *Pterocormus* is a junior synonym of *Ichneumon,* a formal transfer would create problems of homonymy.

LABENINAE subfamily

Principally ectoparasitoids of concealed Coleoptera larvae.

CERTONOTUS Kriechbaumer genus

- **Certonotus fractinervis** (Vollenhoven)
  Rhyssa fractinervis Vollenhoven, 1873: 67. Holotype: AK, Auckland; LM
  Rhyssa antipodum Smith, 1876a: 479. Holotype: MC, Oxford; BMNH
  Rhyssa clavula Colenso, 1885: 158. Holotype: HB, Norsewood; CMNZ
  Megarhyssus fractinervis (Vollenhoven)

  DISTRIBUTION. New Zealand: AK, BP, TK, HB, WI, WN / NN, BR, NC, MC, FD, SI.

  HOST. Curculionidae: *Rhynchodes ursus.*

  ANNOTATION. Biology: Lindsay, 1925; Hudson, 1927.

METOPIINAE subfamily

Endoparasitoids of Lepidoptera emerging from host pupa.

CARRIA Schmiedeknecht genus

- **Carria fortipes** (Cameron)
  Chorinaeus? fortipes Cameron, 1898: 29. Holotype: BR, nr. Greymouth; BMNH
  Chorinacus(!) forticeps(!) Cameron

  DISTRIBUTION. New Zealand: / BR.

  HOSTS. Not known.

- **Carria? nigripes** (Cameron)
  Chorinaeus nigripes Cameron, 1898: 30. Holotype: BR, Greymouth: BMNH (destroyed)

  DISTRIBUTION. New Zealand.

  HOSTS. Not known.

HYPSICERA Latreille genus

- **Hypsicera femoralis** (Geoffroy)
  Ichneumon femoralis Geoffroy, 1785: 396

  DISTRIBUTION. Eurasia, South Africa, Madagascar, North and South America, Hawaii, Australia, New Zealand: AK.

  HOSTS. Not known, but often collected from windows in buildings; presumably a parasitoid of Lepidoptera which feed upon stored products.

OPHIONINAE subfamily

Usually active at night. Endoparasitoids of Lepidoptera larvae. Taxonomy: Parrott, 1954a; Gauld, 1977, 1984a.

ENICOSPILUS Stephens genus

- **Enicospilus insularis** (Kirby)
  Ophion insularis Kirby, 1881: 46. Holotype: New Zealand; BMNH
  Henicospilus insularis (Kirby)

  DISTRIBUTION. Fiji, Norfolk Island, Kermadec Islands, Australia, New Zealand: AK.

  HOST. Noctuidae: *Agrotis ipsilon aneituma.*

- **Enicospilus skeltonii** (Kirby)
  Ophion skeltonii Kirby, 1881: 46. Holotype: MB, Blenheim; BMNH
  Henicospilus skeltoni (Kirby)

  DISTRIBUTION. Australia, New Zealand: / MB, NN, BR, MC.

  HOSTS. Not known.

OPHION Fabricius genus

- **Ophion inutilis** Smith
  Ophion inutilis Smith, 1876a: 478. Holotype: Canterbury; BMNH
  Ophion inutilis distinctus Parrott, 1954a: 644. Holotype: New Zealand; NMNZ
  Ophion inutilis intermedius Parrott, 1954a: 643. Holotype: Otago; ?deposition
  Ophion inutilis nigrafoveatus Parrott, 1954a: 643. Holotype: FD, Cleughearn; NZAC
  Ophion inutilis nigravarius Parrott, 1954a: 643. Holotype: SL, The Hump; CMNZ
  Ophion inutilis vittatus Parrott, 1954a: 643. Holotype: New Zealand; ?AMNZ

  DISTRIBUTION. New Zealand: WN / MC, 'Otago', FD, SL, Chatham Islands.

  HOSTS. Not known.

- **Ophion oculatus** Parrott
  Ophion oculatus oculatus Parrott, 1954a: 644. No holotype designated in Parrott, 1954a; 3 syntypes NZAC
  Ophion oculatus rugosa Parrott, 1954a: 644. Holotype: NC-WD Arthurs Pass; NMNZ
  Ophion oculatus rugosatus Townes, Townes & Gupta(1961) (replacement name for *rugosa* Parrott)

  DISTRIBUTION. New Zealand: TK / NC, MC, SC, DN, CO, MK.

  HOSTS. Not known.

- **Ophion peregrinus** Smith
  Ophion peregrinus Smith, 1876a: 478. Holotype: Canterbury; BMNH
  Ophion ferrugineus Smith, 1878: 2. Holotype: New Zealand; BMNH
  Ophion maoricum Kirkaldy, 1909: 131 (replacement name for *ferrugineus* Smith, 1878)
  Australophion inflatus Cushman, 1947: 440. Holotype: TK, Egmont; USNM
  Australophion peregrinus (Smith)

  DISTRIBUTION. New Zealand: TO / NC, WD, MC, Auckland Islands .

  HOSTS. Not known.

  ANNOTATION. Biology: Johns, 1964.

- **Ophion punctatus** Cameron
  Ophion inutilis Smith, 1878: 2. Holotype: New Zealand; BMNH (homonym)
  Ophion punctatus Cameron, 1898: 34. Holotype: BR, nr. Greymouth; BMNH
  Ophion insulicola Dalla Torre, 1901: 192 (new name)
  Ophion inutilis punctatus Parrott, 1954a: 641

  DISTRIBUTION. New Zealand: TK, WN / NN, BR, MC, Canterbury, Otago, DN.

  HOSTS. Not known.

PHYGADEUONTINAE subfamily

Very large subfamily, wide host range. Most species ectoparasitic on hosts in cocoons or in similar protected situations.

GELIS Thunberg genus

- **Gelis campbellensis** Townes
  Gelis campbellensis Townes, 1964: 496. Holotype: Campbell Island; NZAC

  DISTRIBUTION. New Zealand: Campbell Island.

  HOSTS. Not known.

  ANNOTATION. Not a true *Gelis*. Only described in *Gelis* as a convenience (Townes, 1964).

- **Gelis cinctus** (Linnaeus)
  Ichneumon cinctus Linnaeus, 1758: 566
  Hemiteles cinctus (Linnaeus)

  DISTRIBUTION. Europe, New Zealand: AK / MC.

  HOSTS. Tortricidae: *Grapholita molesta*. Ichneumonidae: *Glabridorsum stokesii*.

  ANNOTATION. The "*cinctus*" mentioned by Gauld, 1984c, said to be imported from New Zealand to Australia, is not *G. cinctus* (M.G. Fitton, pers. comm.). Taxonomy & Biology: Parrott, 1956. Biology: Russell, 1987b.

- **Gelis philpottii** (Brues)
  Pezomachus (Gelis) philpottii Brues, 1922: 218. Holotype: NN, Aniseed Valley; NZAC

  DISTRIBUTION. New Zealand: / NN.

  HOSTS. Not known.

  ANNOTATION. Not a true *Gelis* (M.G. Fitton, pers. comm.).

- **Gelis tenellus** (Say)
  Cryptus tenellus Say, 1836 : 233
  Hemiteles sp. (Thomas, 1965)

  DISTRIBUTION. North America, Argentina, Hawaii, New Zealand: AK / MC.

  HOSTS. Tortricidae: *Grapholita molesta*. Gracillariidae: *Caloptilia azaleella*. Braconidae: *Apanteles tasmanicus, Rogas* sp. Ichneumonidae: *Glabridorsum stokesii*.

  ANNOTATION. Taxonomy & Biology: Russell, 1987b.

GLABRIDORSUM Townes genus

- **Glabridorsum stokesii** (Cameron)
  Gambrus stokesii Cameron, 1912: 180

  DISTRIBUTION. Australia, New Zealand: ND, AK, WO, BP, TO, GB, HB.

  HOSTS. Tortricidae: *Ctenopseustis obliquana, Epiphyas postvittana, Grapholita molesta, Planotortrix excessana.*

  ANNOTATION. Introduced into New Zealand from Australia in 1967 for the control of lightbrown apple moth (Thomas, 1975). Taxonomy: Green, 1984. Biology: Early, 1984. Taxonomy & Biology: Russell, 1987a.

XANTHOCRYPTUS Cameron genus

- **Xanthocryptus novozealandicus** (Dalla Torre)
  Mesostenus albopictus Smith, 1876a: 477. Holotype: North Island; BMNH (name preoccupied by Smith, 1858)
  Mesostenus novozealandicus Dalla Torre, 1902: 545 (replacement name for *albopictus* Smith, 1876a)
  Mesostenus albipectus(!) Smith
  Xanthrocryptus albopictus (Smith)

  DISTRIBUTION. New Guinea, Australia, New Zealand: North Island and South Island.

  HOSTS. Cerambycidae: *Brounopsis hudsoni, Brounopsis* sp., *Didymocantha* sp., *Eburilla sericea, Hexatricha pulverulenta, Liogramma zealandica, Navomorpha sulcata, Oemona hirta, Xylotoles griseus.*

  ANNOTATION. Taxonomy & Biology: Parrott, 1953. Taxonomy: Green, 1984. Biology: Harris, 1978; Early, 1984.

XENOLYTUS Foerster genus

- **Xenolytus bitinctus** (Gmelin)
  Ichneumon bitinctus Gmelin, 1790: 2719
  Hemiteles destructivus Cameron, 1898: 26. Holotype: BR, Greymouth; BMNH
  Bathymetis antipoda Ashmead, 1900c: 624. Holotype: Chatham Islands; USNM

  DISTRIBUTION. Eurasia, Africa, Australia, New Zealand: BR, Chatham Islands .

  HOSTS. Not known in New Zealand, but elsewhere it parasitises Lepidoptera infesting stored food products (Townes, 1983).

PIMPLINAE subfamily

The Pimplinae have a wider range of biology than any other subfamily and are parasitoids of many important pest species. Taxonomy: Parrott, 1962; Gauld, 1984b; Fitton, Shaw & Gauld, 1988.

ECHTHROMORPHA Holmgren genus

- **Echthromorpha intricatoria** (Fabricius)
  Cryptus intricatorius Fabricius, 1804: 77
  Allotheronia 12-guttata Ashmead, 1900a (Oct): 55
  Allotheronia duodecimguttata Ashmead, 1900b (Nov): 351

DISTRIBUTION. New Guinea, Australia, New Zealand: North Island and South Island.

HOSTS. Arctiidae: *Metacrias huttoni, Nyctemera annulata, Tyria jacobaeae.* Noctuidae: *Chrysodeixis eriosoma, Helicoverpa armigera conferta, Thysanoplusia orichalcea.* Psychidae: *Liothula omnivora.* Nymphalidae: *Bassaris gonerilla, B. itea.* Tortricidae: *Epiphyas postvittana.* Pyralidae: *Uresiphita polygonalis maorialis.* Saturniidae: *Antheraea eucalypti.*

ANNOTATION. Taxonomy: Parrott, 1952. Biology: Gourlay, 1926; Early, 1984.

LIOTRYPHON Ashmead genus

- **Liotryphon caudatus** (Ratzeburg)
  Pimpla caudata Ratzeburg, 1848: 92
  Ephialtes caudatus (Ratzeburg)
  Apistephialtes caudatus (Ratzeburg)
  [*Calliephialtes messer*(!) (Gravenhorst)]
  [*Ichneumon (Calliephaltes) messer*(!) (Gravenhorst)]
  [*Ephialtes messor* Gravenhorst]

DISTRIBUTION. Europe, New Zealand: AK.

HOSTS. Tortricidae: *Cydia pomonella, Grapholita molesta.*

ANNOTATION. Introduced into New Zealand from North America in 1906 for the control of codling moth (Dumbleton, 1936). This species was introduced into California in 1904 and 1905 but did not establish; presumably the New Zealand material was from stock of European origin.

LISSOPIMPLA Kriechbaumer genus

- **Lissopimpla excelsa** (Costa)
  Pimpla excelsa Costa, 1864: 69
  Rhyssa semipunctata Kirby, 1883: 202. Holotype: New Zealand; BMNH
  Lissopimpla semipunctata (Kirby)

DISTRIBUTION. Fiji, Kermadec Islands, Australia, New Zealand.

HOSTS. Geometridae: *Orthoclydon praefactata, Pseudocoremia suavis.* Hepialidae: *Wiseana cervinata, W. umbraculata.* Noctuidae: *Mythimna separata.*

ANNOTATION. Males effect pollination of *Cryptostylis subulata* (Australian tongue orchid) by attempting copulation with flowers (Graham, 1983). Taxonomy: Parrott, 1952. Biology: Early, 1984.

MEGARHYSSA Ashmead genus

- **Megarhyssa nortoni** (Cresson)
  Rhyssa nortoni Cresson, 1864: 317
  Megarhyssa nortoni nortoni (Cresson)

DISTRIBUTION. North America, Australia, New Zealand.

HOST. Siricidae: *Sirex noctilio.*

ANNOTATION. Introduced into New Zealand from California in 1964 for the control of sirex wood wasp (Nuttall, 1980). Biology: Nuttall, 1973a,b.

RHYSSA Gravenhorst genus

Biology: Nuttall, 1980.

- **Rhyssa lineolata** (Kirby)
  Cryptocentrum lineolatum Kirby, 1837: 260

DISTRIBUTION. North America, Australia, New Zealand: BP, HB, WI, WA.

HOST. Siricidae: *Sirex noctilio.*

ANNOTATION. Accidentally introduced (Zondag & Nuttall, 1961). Taxonomy & Biology: Zondag & Nuttall, 1961; Nuttall, 1974.

- **Rhyssa persuasoria** (Linnaeus)
  Ichneumon persuasorius Linnaeus, 1758: 562
  Rhyssa persuasoria persuasoria (Linnaeus)
  Megarhyssa persuasoria (Linnaeus)

DISTRIBUTION. Eurasia, North America, Australia, New Zealand: BP / NN, MC.

HOST. Siricidae: *Sirex noctilio.*

ANNOTATION. Introduced into New Zealand from England in 1928-1931 for the control of sirex wood wasp (Miller & Clark, 1937). Biology: Myers, 1928; Nuttall, 1980.

XANTHOPIMPLA Saussure genus

- **Xanthopimpla rhopaloceros** Krieger
  Xanthopimpla rhopaloceros Krieger, 1914: 23

DISTRIBUTION. Australia, New Zealand: AK, BP, TK, HB, WN.

HOST. Tortricidae: *Epiphyas postvittana.* Oecophoridae: *Hierodorus atychioides.*

ANNOTATION. Introduced into New Zealand from Australia in 1967 and 1969 for the control of lightbrown apple moth (Thomas, 1975). Biology: Early, 1984.

TRYPHONINAE subfamily

New Zealand representatives of this subfamily are ectoparasitoids of Lepidoptera.

NETELIA Gray genus

Taxonomy: Parrott, 1951.

NETELIA Gray subgenus

- **Netelia (Netelia) ephippiata** (Smith)
  Paniscus ephippiatus Smith, 1876a: 478. Holotype: Canterbury Prov.; BMNH
  Paniscus ephippiatus Smith, 1878: 3. Holotype: New Zealand; BMNH
  Paniscus smithii Dalla Torre, 1901: 80 (replacement name [unnecessary]).
  Netelia ephippiatus (Smith)
  [*Paniscus productus* Brullé]

DISTRIBUTION. New Zealand: ND, AK, WN / NN, BR, MC, DN, Chatham Islands.

HOST. Geometridae: *Orthoclydon praefactata.*

- **Netelia (Netelia) producta** (Brullé)
  Paniscus productus Brullé, 1846: 156
  Paniscus foveatus Cameron, 1898: 36. Holotype: BR, Greymouth; BMNH
  Paniscus productus (Brullé)
  Netelia productus (Brullé)

DISTRIBUTION. Java, Australia, New Zealand: ND, TO / MB, NN, BR, WD, MC.

HOSTS. Noctuidae: *Mythimna separata, Persectania aversa.*

PHYTODIETUS Gravenhorst genus

EUCTENOPUS Ashmead subgenus

- **Phytodietus (Euctenopus) zealandicus** (Ashmead)
  Euctenopus zealandicus Ashmead, 1900a: 50. Holotype: New Zealand; USNM
  Euctenopus novazealandicus Ashmead, 1900b: 351. Holotype: New Zealand; USNM
  Phytodietus novazealandicus (Ashmead)
  Phytodietus zealandicus (Ashmead)

DISTRIBUTION. New Zealand.

HOSTS. Not known.

CHALCIDOIDEA superfamily

It is estimated that there could be well over 100,000 species world-wide. Usually minute insects with reduced wing venation. Various classifications of the Chalcidoidea have been presented, e.g. by Ashmead (1904), Nikolskaya (1952), Richards (1977), Peck, Bouček & Hoffer (1964), Graham (1969), Riek (1970), Krombein et al. (1979), Prinsloo (1980), Yoshimoto (1984). Because of differences in the recognition of the status of families and in suprageneric classifications, the species of the superfamily in New Zealand are here listed in alphabetical order of the family groups which appear to be most widely accepted. Bouček (1988) has presented the most up- to-date account of the families in the Australasian region excluding the Encyrtidae, Aphelinidae, Mymaridae, Trichogrammatidae, Signiphoridae and Elasmidae. Noyes and Valentine (1989b) present an introduction and review of genera in the smaller families of Chalcidoidea in New Zealand.

AGAONIDAE family

Larvae develop inside the fruits of figs. Biology: Wiebes, 1982. Taxonomy : Noyes & Valentine, 1989b.

HERODOTIA Girault genus

- **Herodotia subatriventris** (Girault)
  Meselatus subatriventris Girault, 1923a : 7

  DISTRIBUTION. Australia, New Zealand: AK.

  HOST. Moraceae: *Ficus rubiginosa.*

PLEISTODONTES Saunders genus

- **Pleistodontes imperialis** Saunders
  Pleistodontes imperialis Saunders, 1883: 10

  DISTRIBUTION. Hawaii, Australia, New Zealand: AK, HB.

  HOST. Moraceae: *Ficus rubiginosa.*

  ANNOTATION. Taxonomy & Biology: Valentine & Walker, 1983.

APHELINIDAE family

About 900 species world-wide; most frequently encountered as primary parasitoids of homopterous insects such as Coccoidae, Aleyrodidae and Aphididae. Taxonomy: Graham, 1976; Hayat, 1983; Noyes & Valentine, 1989b.

APHELINUS Dalman genus

- **Aphelinus abdominalis** (Dalman)
  [*Entedon (Aphelinus)*] *abdominalis* Dalman, 1820: 181

  DISTRIBUTION. Europe, New Zealand.

  HOSTS. Aphididae: *Acyrthosiphon kondoi, Macrosiphum euphorbiae.*

- **Aphelinus asychis** Walker
  Aphelinus asychis Walker, 1839: 2

  DISTRIBUTION. Iran, North America, New Zealand.

  HOST. Aphididae: *Macrosiphum euphorbiae.*

- **Aphelinus gossypii** Timberlake
  Aphelinus gossypii Timberlake, 1924: 408

  DISTRIBUTION. Europe, India, Hawaii, Australia, New Zealand.

  HOSTS. Aphididae : *Aphis nerii, Capitophorus elaeagni, Toxoptera aurantii, T. citricidus.* Aleyrodidae:*Trialeurodes vaporariorum.*

- **Aphelinus humilis** Mercet
  Aphelinus humilis Mercet, 1928: 240

  DISTRIBUTION. Europe, New Zealand.

  HOSTS. Not known.

- **Aphelinus mali** (Haldeman)
  Eriophilus mali Haldeman, 1851: 130
  [*Aphelinus gossypii* Timberlake]

  DISTRIBUTION. Cosmopolitan, New Zealand.

  HOSTS. Aleyrodidae: *Trialeurodes vaporariorum.* Aphididae: *Aphis nerii, Capitophorus elaeagni, Eriosoma lanigerum, Toxoptera aurantii, T. citricidus.*

  ANNOTATION. Introduced into New Zealand from North America in 1921 for the control of woolly apple aphid (Tillyard,1921). Biology: Dumbleton & Jeffreys, 1938; Tillyard, 1926; Early, 1984.

MESIDIOPSIS Bouček & Graham subgenus

- **Aphelinus (Mesidiopsis) subflavescens** (Westwood)
  Agonioneurus subflavescens Westwood, 1837: 442
  [*Aphelinus flavus* (Nees)]

  DISTRIBUTION. Europe, New Zealand.

  HOST. Aphididae: *Tuberculoides annulata.*

  ANNOTATION. Introduced into New Zealand from Europe in 1939 (under the name *Aphelinus flavus* (E.S. Gourlay, pers. comm.) for the control of oak aphid. Already established prior to the 1939 introduction (Valentine, 1963).

APHYTIS Howard genus

Taxonomy: Rosen & DeBach, 1979.

- **Aphytis albidus** (Westwood)
  Agonioneurus albidus Westwood, 1837: 442
  Aphelinus mytilaspidis Le Baron
  Aphytis mytilaspidis (Le Baron)

  DISTRIBUTION. Europe, North Africa, Middle East, Russia, U.S.A., New Zealand.

  HOSTS. Diaspididae: *Lepidosaphes ulmi, Quadraspidiotus ostreaeformis, Q. perniciosus.*

- **Aphytis chilensis** Howard
  Aphytis chilensis Howard, 1900: 168

  DISTRIBUTION. Cosmopolitan, New Zealand.

  HOSTS. Diaspididae: *Aonidiella aurantii, Aspidiotus nerii, Hemiberlesia rapax, Leucaspis* spp., *Parlatoria pittospori.*

- **Aphytis chrysomphali** (Mercet)
  Aphelinus chrysomphali Mercet, 1912: 135

  DISTRIBUTION. North America, New Zealand.

  HOST. Diaspididae: *Aonidiella aurantii.*

- **Aphytis diaspidis** (Howard)
  Aphelinus diaspidis Howard, 1881: 355
  [*Aphelinus fuscipennis* Howard]

  DISTRIBUTION. Europe, North America, New Zealand.

  HOST. Diaspididae: *Quadraspidiotus perniciosus.*

  ANNOTATION. Introduced into New Zealand from Europe in 1960 for the control of San José scale, but was established naturally before the 1960 introduction.

- **Aphytis ignotus** Compere
  Aphytis ignotus Compere, 1955: 300

  DISTRIBUTION. Australia, New Zealand: TK / NN.

  HOST. Diaspididae: *Lindingaspis rossi.*

  ANNOTATION. Up to six larvae develop in a single host (other species in N.Z. are all solitary).

CENTRODORA Foerster genus

Parasitises host eggs.

- **Centrodora scolypopae** Valentine
  Centrodora scolypopae Valentine, 1966: 332. Holotype: ND, Paihia; NZAC

  DISTRIBUTION. Australia, New Zealand: ND.

HOST. Ricaniidae: *Scolypopa australis*.

ANNOTATION. An Australian species established naturally in N.Z. Biology: Early, 1984.

- **Centrodora xiphidii** (Perkins)
  Paraphelinus xiphidii Perkins, 1906: 264

DISTRIBUTION. Hawaii, New Zealand.

HOST. Tettigoniidae: *Conocephalus semivittatum*.

COCCOPHAGUS Westwood genus

- **Coccophagus gurneyi** Compere
  Coccophagus gurneyi Compere, 1929: 1

DISTRIBUTION. Australia, U.S.A. (California), New Zealand.

HOST. Pseudococcidae: *Pseudococcus longispinus*.

ANNOTATION. Introduced into New Zealand from California in 1933 for the control of mealybugs (Dumbleton, 1936).

- **Coccophagus ochraceus** Howard
  Coccophagus ochraceus Howard, 1895: 38

DISTRIBUTION. U.S.A. (California), New Zealand.

HOSTS. Coccidae: *Ceroplastes sinensis, Saissetia coffeae, S. oleae*.

Coccophagus scutellaris (Dalman)
Entedon scutellaris Dalman, 1825: 365

DISTRIBUTION. North America, New Zealand.

HOSTS. Coccidae: *Coccus hesperidum, Pulvinaria hydrangeae*.

ENCARSIA Foerster genus

- **Encarsia citrina** (Craw)
  Coccophagus citrina Craw, 1891: 4
  Aspidiotiphagus citrinus (Craw)

DISTRIBUTION. Europe, North America, New Zealand.

HOSTS. Diaspididae: *Aonidiella aurantii, Aspidiotus nerii, Aulacaspis rosae, Lepidosaphes ulmi, Leucaspis stricta, Leucaspis* spp., *Lindingaspis rossi, Parlatoria fulleri, P. pittospori, Phenacaspis eugeniae, Quadraspidiotus ostreaeformis, Q. perniciosus*. Coccidae: *Ceroplastes sinensis, Coccus hesperidum*.

ANNOTATION. Introduced into New Zealand from an unknown source in 1923 for the control of diaspid scales, but already established naturally before the 1923 introduction (Dumbleton, 1936).

- **Encarsia formosa** Gahan
  Encarsia formosa Gahan, 1924b: 14

DISTRIBUTION. Cosmopolitan, New Zealand.

HOSTS. Aleyrodidae: *Pealius azaleae, Trialeurodes vaporariorum*.

ANNOTATION. Introduced into New Zealand from England in 1933 for the control of greenhouse whitefly (Muggeridge, 1934). Biology: Early, 1984.

- **Encarsia koebelei** (Howard)
  Prospaltella koebelei Howard, 1908: 281

DISTRIBUTION. Hawaii, New Zealand.

HOST. Diaspididae: *Lindingaspis rossi*.

- **Encarsia pergandiella** Howard
  Encarsia pergandiella Howard, 1907: 78

DISTRIBUTION. North America, New Zealand.

HOST. Aleyrodidae: *Trialeurodes vaporariorum*.

- **Encarsia perniciosi** (Tower)
  Prospaltella perniciosi Tower, 1913: 125

DISTRIBUTION. Europe, North and South America, New Zealand.

HOSTS. Diaspididae: *Aonidiella aurantii, Quadraspidiotus perniciosus*.

ANNOTATION. Introduced into New Zealand from Europe in 1960 for the control of armoured scales, but established naturally before the 1960 introduction (Valentine, 1963). Two biological forms present; one parasitising *Quadraspidiotus*, the other *Aonidiella*.

EUXANTHELLUS Silvestri genus

- **Euxanthellus philippiae** Silvestri
  Euxanthellus philippiae Silvestri, 1915: 322

DISTRIBUTION. Africa, New Zealand.

ANNOTATION. Female larvae develop as primary endoparasitoids in coccoid hosts; male larvae develop as secondary ectoparasitoids in coccids on primary endoparasitic hymenopterous larvae, including the female larvae of their own species. This "divergent ontogeny" occurs in some other genera of Aphelinidae, e.g. *Coccophagus, Encarsia* and *Pteroptrix*.

HOSTS OF FEMALES. Coccidae: *Ceroplastes sinensis, Coccus hesperidum, C. longulus, Ctenochiton perforatus, Parthenolecanium persicae, Pulvinaria* sp. *(?hydrangeae), Saissetia coffeae, S. oleae*.

HOSTS OF MALES. Aphelinidae: *Encarsia* sp. (in "Aleyrodidae"); *Euxanthellus philippiae* female larvae; *Pteroptrix* sp. (in *Ctenochiton perforatus* [Coccidae]). Encyrtidae: *Metaphycus timberlakei* (in *Parthenolecanium persicae* [Coccidae]); *Tetracnemoidea* sp. (in *Nipaecoccus aurilanatus* [Pseudococcidae]).

ANNOTATION. Biology: Cumber, 1972.

CHALCIDIDAE family

Mainly solitary, primary endoparasitoids of mature larvae or young pupae of Diptera or Lepidoptera.

BRACHYMERIA Westwood genus

- **Brachymeria phya** (Walker)
  Chalcis phya Walker, 1838c: 471

DISTRIBUTION. Australia, New Zealand.

HOSTS. ?Tortricidae.

- **Brachymeria rubrifemur** (Girault)
  Pseudepitelia rubrifemur Girault, 1913b [136] : 105

DISTRIBUTION. Australia, New Zealand: ND / NN.

HOSTS. Not known.

- **Brachymeria teuta** (Walker)
  Chalcis teuta Walker, 1841: 218
  Brachymeria rubripes (Girault)

DISTRIBUTION. Australia, New Zealand: / NN.

HOST. Tortricidae: *Epiphyas postvittana*.

ENCYRTIDAE family

One of the largest families of Chalcidoidea, with over 3,000 species. They are mostly found attacking the homopterous family Coccidae but also parasitise Pentatomidae, Lepidoptera, Coleoptera, Diptera and Neuroptera. Taxonomy: Noyes, 1988.

ADELENCYRTOIDES Tachikawa & Valentine genus

- **Adelencyrtoides acutus** Noyes
  Adelencyrtoides acutus Noyes, 1988: 31. Holotype: AK, Waitakere Range; NZAC

DISTRIBUTION. New Zealand: ND, AK.

HOSTS. Not known.

- **Adelencyrtoides blastothrichus** Noyes
  Adelencyrtoides blastothrichus Noyes, 1988: 32. Holotype: BR, Lake Rotoroa: NZAC

  DISTRIBUTION. New Zealand: ND, AK, CL, GB, TO, WI, WN / SD, NN, MB, BR, WD, MC, MK, OL, DN, FD.

  HOSTS. Coccidae: *Ctenochiton* sp.; *C. ?piperis; Inglisia* sp.

- **Adelencyrtoides inconstans** Noyes
  Adelencyrtoides inconstans Noyes, 1988: 34. Holotype: BR, Lake Rotoroa; NZAC

  DISTRIBUTION. New Zealand: ND, AK, CL, WO, RI / NN, MB, KA, BR, WD, MC, OL, SL, SI.

  HOSTS. Coccidae: *Ctenochiton viridis*. Eriococcidae: *Eriococcus elaeocarpi.*

- **Adelencyrtoides mucro** Noyes
  Adelencyrtoides mucro Noyes, 1988: 37. Holotype: SI, Rakeahua; NZAC

  DISTRIBUTION. New Zealand: OL, FD, SI.

  HOSTS. ?Coccidae: *Ctenochiton* spp.

- **Adelencyrtoides novaezealandiae** Tachikawa & Valentine
  Adelencyrtoides novaezealandiae Tachikawa & Valentine, 1969b: 548. Holotype: NN, Richmond; NZAC

  DISTRIBUTION. New Zealand: ND, AK, CL, BP, TO, WN / SD, MB, NN, BR, WD, MC, MK, OL, CO, FD, SL, SI, Chatham Islands.

  HOSTS. Diaspididae: *Eulepidosaphes pyriformis, Leucaspis podocarpi.*

- **Adelencyrtoides otago** Noyes
  Adelencyrtoides otago Noyes, 1988: 39. Holotype: NN, Upper Takaka River; NZAC

  DISTRIBUTION. New Zealand: ND, AK, CL, BP, TK, TO, WN/ NN, MB, KA, BR, WD, MC, SC, MK, OL, CO, FD, SL, SI.

  HOSTS. Diaspididae: *Poliaspis media, P. argentosus, ?Leucaspis* sp.

- **Adelencyrtoides palustris** Noyes
  Adelencyrtoides palustris Noyes, 1988: 42. Holotype: BR, St Arnaud; NZAC

  DISTRIBUTION. New Zealand: / BR.

  HOSTS. Not known.

- **Adelencyrtoides pilosus** Noyes
  Adelencyrtoides pilosus Noyes, 1988: 43. Holotype: OL, Kidd's Bush; NZAC

  DISTRIBUTION. New Zealand: MB, BR, MK, OL.

  HOSTS. Not known.

- **Adelencyrtoides proximus** Noyes
  Adelencyrtoides proximus Noyes, 1988: 44. Holotype: OL, Kidd's Bush; NZAC

  DISTRIBUTION. New Zealand: TO / NN, BR, NC, MC, OL, FD.

  HOSTS. Not known.

- **Adelencyrtoides similis** Noyes
  Adelencyrtoides similis Noyes, 1988: 45. Holotype: WN, Tararua Forest Park; NZAC

  DISTRIBUTION. New Zealand: AK, CL, TO, WI, WN / MB, NN, BR, WD, MC, SC, OL, CO, SI.

  HOSTS. Eriococcidae: ?sp.

- **Adelencyrtoides suavis** Noyes
  Adelencyrtoides suavis Noyes, 1988: 46. Holotype: NN, Kaihoka Lakes; NZAC

  DISTRIBUTION. New Zealand: / NN, BR, WD, SL.

  HOST. Coccidae: ?*Ctenochiton* sp.

- **Adelencyrtoides tridens** Noyes
  Adelencyrtoides tridens Noyes, 1988: 47. Holotype: SL, Owaka; NZAC

  DISTRIBUTION. New Zealand: CO, SL.

  HOSTS. Not known.

- **Adelencyrtoides unicolor** Noyes
  Adelencyrtoides unicolor Noyes, 1988: 48. Holotype: OL, Makarora West; NZAC

  DISTRIBUTION. New Zealand: ND, AK, CL, TO, WN / NN, MB, BR, WD, MC, SC, OL, CO, FD, SL, SI.

  HOSTS. Eriococcidae: *Madarococcus* sp. Coccidae: *Lecanochiton* sp. Pseudococcidae: *Paracoccus glaucus.*

- **Adelencyrtoides variabilis** Noyes
  Adelencyrtoides variabilis Noyes, 1988: 51. Holotype: OL, Kidd's Bush; NZAC

  DISTRIBUTION. New Zealand: ND, AK, CL, TO, WN / MB, NN, BR, WD, MC, MK, OL, FD, SL, SI.

  HOSTS. Coccidae: *Ctenochiton viridis, C. perforatus, C.* sp., *Inglisia* sp. Psyllidae: *?Trioza irregularis.*

ADELENCYRTUS Ashmead genus

- **Adelencyrtus aulacaspidis** (Brethes)
  Prionomitus aulacaspidis Brethes, 1914: 29

  DISTRIBUTION. Europe, Africa, North and South America, New Zealand: HB / MB, NN.

  HOST. Diaspididae: *Aulacaspis rosae.*

ALAMELLA Agarwal genus

- **Alamella mira** Noyes
  Alamella mira Noyes, 1988: 55. Holotype: AK, St Heliers; NZAC

  DISTRIBUTION. New Zealand: AK.

  HOST. Pseudococcidae: *Pseudococcus longispinus.*

ARRHENOPHAGOIDEA Girault genus

- **Arrhenophagoidea coloripes** Girault
  Arrhenophagoidea coloripes Girault, 1915b: 73

  DISTRIBUTION. Australia, New Zealand: AK.

  HOSTS. Diaspididae: *Chionaspis* sp. Diaspididae (male): *?Aulacaspis* scale.

ARRHENOPHAGUS Aurivillius genus

- **Arrhenophagus chionaspidis** Aurivillius
  Arrhenophagus chionaspidis Aurivillius, 1888: 146

  DISTRIBUTION. Cosmopolitan, New Zealand: HB / NN.

  HOST. Diaspididae (male): *Aulacaspis rosae.*

AUSTROCHOREIA Girault genus

- **Austrochoreia antipodis** Noyes
  Austrochoreia antipodis Noyes, 1988: 59. Holotype: BR, Mt Robert; NZAC

  DISTRIBUTION. New Zealand: AK, TK, TO, RI, WN / SD, NN, MB, BR, MC, OL, CO, DN, FD, SL, SI, Chatham Islands.

  HOSTS. Eriococcidae: *Eriococcus ?danthoniae, E.* sp.

CHEILONEURUS Westwood genus

- **Cheiloneurus antipodis** Noyes
  Cheiloneurus antipodis Noyes, 1988: 62. Holotype: BR, Lake Rotoiti; NZAC

  DISTRIBUTION. New Zealand: / NN, BR.

  HOSTS. Not known.

- **Cheiloneurus gonatopodis** Perkins
  Cheiloneurus gonatopodis Perkins, 1906: 261

  DISTRIBUTION. Mauritius, Madagascar, Australia, New Zealand: ND, AK, CL, WN / NN.

HOST. Dryinidae: *Dicondylus bicolor* in *Nilaparvata myersi* (Delphacidae).

COCCIDOCTONUS Crawford genus

- **Coccidoctonus dubius** (Girault)
  Rhopalencyrtoidea dubi a Girault, 1915b : 102
  Coccidoctonus whittieri (Girault)
  Cerchysius whittieri Girault
  Quaylea whittieri (Girault)

DISTRIBUTION. North America, Australia, New Zealand: ND / NN.

HOSTS. Aphelinidae: *Euxanthellus philippiae* (in Coccidae). Encyrtidae: "encyrtid" in *Saissetia oleae* (Coccidae); "encyrtid" in *Eriococcus* sp. (Eriococcidae). Pteromalidae: *Moranila californica* in *Saissetia oleae* (Coccidae).

ANNOTATION. Introduced into New Zealand from Australia in 1921 for the control of black scale (in the belief that it was a primary parasitoid of black scale, *Saissetia oleae*).

COELOPENCYRTUS Timberlake genus

- **Coelopencyrtus australis** Noyes
  Coelopencyrtus australis Noyes, 1988: 65. Holotype: TO, Kaingaroa; NZAC

DISTRIBUTION. New Zealand: Three Kings Islands, ND, AK, TO, HB, WI, WN / NN, OL, SL. Chatham Islands.

HOST. ?Solitary bee.

- **Coelopencyrtus maori** Noyes
  Coelopencyrtus maori Noyes, 1988: 67. Holotype: OL, Makarora West; NZAC

DISTRIBUTION. New Zealand: GB / NN, OL.

HOSTS. Not known.

COPIDOSOMA Ratzeburg genus

- **Copidosoma exvallis** Noyes
  Copidosoma exvallis Noyes, 1988: 69. Holotype: CL, Kauaeranga Valley; NZAC

DISTRIBUTION. New Zealand: CL.

HOSTS. Not known.

- **Copidosoma floridanum** (Ashmead)
  Berecyntus floridanum Ashmead, 1900d: 365
  Litomastix maculatum Ishii

DISTRIBUTION. Japan, Australia, New Zealand: ND, AK, CL, BP / NN, MB, BR, MC.

HOSTS. Noctuidae: *Chrysodeixis eriosoma, Thysanoplusia orichalcea.*

ANNOTATION. A polyembryonic species with up to 2000 adults emerging from a single host (Roberts, 1982). Introduced into New Zealand from Australia in 1969 for the control of green looper (Roberts, 1979). Taxonomy: Noyes & Hayat, 1984. Biology: Early, 1984.

ENCYRTUS Latreille genus

- **Encyrtus infelix** (Embleton)
  Comys infelix Embleton, 1902: 223

DISTRIBUTION. Cosmopolitan, New Zealand: AK / MC.

HOST. Coccidae: *Saissetia coffeae.*

ANNOTATION. Biology: Embleton, 1904.

- **Encyrtus lecaniorum** (Mayr)
  Comys lecaniorum Mayr, 1876c: 74

DISTRIBUTION. Cosmopolitan, New Zealand: AK.

HOSTS. Not known in New Zealand (Noyes 1988) but reared from *Coccus hesperidum* on citrus in Texas, U.S.A.

ANNOTATION. Biology: Embleton, 1904.

EPIBLATTICIDA Girault genus

- **Epiblatticida minutissima** Girault
  Epiblatticida minutissima Girault, 1923b: 147

DISTRIBUTION. Australia, New Zealand: AK.

HOSTS. Psyllidae: *Acizzia acaciaebaileyanae* on *Psyllaephagus acaciae* (Encyrtidae).

EPITETRACNEMUS Girault genus

- **Epitetracnemus zetterstedtii** (Westwood)
  Encyrtus zetterstedtii Westwood, 1837: 440
  Anabrolepis zetterstedtii (Westwood)

DISTRIBUTION. Europe, New Zealand: / MB.

HOSTS. Diaspididae: *Lepidosaphes ulmi, ?Quadraspidiotus perniciosus.*

EUSEMION Dahlbom genus

- **Eusemion cornigerum** (Walker)
  Encyrtus cornigerum Walker, 1838a: 114

DISTRIBUTION. Europe, New Zealand: BP / NN, BR, OL, CO.

HOST. Coccidae: *Coccus hesperidum* . Unconfirmed host association in New Zealand.

GYRANUSOIDEA Compere genus

- **Gyranusoidea advena** Beardsley
  Gyranusoidea advena Beardsley, 1969: 303–306

DISTRIBUTION. Hawaii, New Zealand: BP.

HOST. Pseudococcidae: *Pseudococcus* sp.

HABROLEPIS Foerster genus

- **Habrolepis dalmanni** (Westwood)
  Encyrtus dalmanni Westwood, 1837: 440

DISTRIBUTION. Europe, North America, New Zealand: AK, TK, HB / NN, NC, MC, DN.

HOST. Asterolecaniidae: *Asterolecanium quercicola* .

ANNOTATION. Introduced into New Zealand from U.S.A. between 1923 and 1928 for the control of golden oak scale (Gourlay, 1935).

LAMENNAISIA Girault genus

- **Lamennaisia ambigua** (Nees)
  Encyrtus ambiguus Nees, 1834: 239

DISTRIBUTION. Europe, New Zealand: ND, AK, WO, BP, RI, HB, WI / NN.

HOST. Lathridiidae: *Melanophthalma* sp. nr. *distinguenda.*

METANOTALIA Mercet genus

- **Metanotalia maderensis** (Walker)
  Ectroma maderensis Walker, 1872: 116

DISTRIBUTION. Mediterranean, New Zealand: / NN.

HOSTS. Not known.

METAPHYCUS Mercet genus

- **Metaphycus aurantiacus** Annecke & Mynhardt
  Metaphycus aurantiacus Annecke & Mynhardt, 1981: 60

DISTRIBUTION. California, New Zealand: AK, WN / NN, MC.

HOST. Coccidae: *Coccus hesperidum.*

- **Metaphycus claviger** (Timberlake)
  Aphycus claviger Timberlake, 1916: 620. Holotype: AK, Auckland; USNM

DISTRIBUTION. New Zealand: AK.

HOSTS. Not known.

- **Metaphycus lounsburyi** (Howard)
  Aphycus lounsburyi Howard, 1898: 244

DISTRIBUTION. South Africa, North America, Australia, New Zealand: AK / ?NN.

HOST. Coccidae: *Saissetia oleae.*

ANNOTATION. Introduced into New Zealand from California in 1922 for the control of black scale (Dumbleton, 1936), but not recovered until 1982.

• **Metaphycus reductor** Noyes
Metaphycus reductor Noyes, 1988: 89. Holotype: AK, Huia; NZAC

DISTRIBUTION. New Zealand: AK.

HOSTS. Not known.

• **Metaphycus timberlakei** (Ishii)
Aphycus timberlakei Ishii, 1923: 108

DISTRIBUTION. Japan, Australia, New Zealand: AK, WI / NN.

HOST. Coccidae: *Parthenolecanium* persicae .

MICROTERYS Thomson genus

• **Microterys flavus** (Howard)
Encyrtus flavus Howard, 1881: 367

DISTRIBUTION. Cosmopolitan, New Zealand: ND, AK, WO, BP, TO, WN / SD, NN, MB, BR, WD, MC, OL.

HOSTS. Coccidae: *Coccus hesperidum, Saissetia oleae.*

ANNOTATION. Introduced into New Zealand from Australia in 1921 for the control of brown soft scale (Dumbleton, 1936) but already present in New Zealand prior to the 1921 introduction .

NOTODUSMETIA Noyes genus

• **Notodusmetia coroneti** Noyes
Notodusmetia coroneti Noyes, 1988: 93. Holotype: CO, Watts Rock; NZAC

DISTRIBUTION. New Zealand: MB, MC, OL, CO.

HOSTS. Not known.

ODIAGLYPTUS Noyes genus

• **Odiaglyptus biformis** Noyes
Odiaglyptus biformis Noyes, 1988: 95. Holotype: BR, St Arnaud; NZAC

DISTRIBUTION. New Zealand: ND, AK, WO, TO, TK, RI / SD, NN, MB, KA, BR, MC, SC, MK, OL, CO, FD, SL, SI.

HOST. Pseudococcidae: *Balanococcus poae.*

PARECTROMOIDES Girault genus

• **Parectromoides varipes** (Girault)
Parastenoterys varipes Girault, 1915b: 166

DISTRIBUTION. Australia, New Zealand: ND, AK.

HOSTS. Not known.

PROTYNDARICHOIDES Noyes genus

• **Protyndarichoides cinctiventris** (Girault)
Echthrogonatopus cinctiventris Girault, 1934: 1

DISTRIBUTION. Australia, New Zealand: WI / NN, BR.

HOSTS. Not known.

PSEUDOCOCCOBIUS Timberlake genus

• **Pseudococcobius annulipes** Noyes
Pseudococcobius annulipes Noyes, 1988: 102. Holotype: AK, Lynfield; NZAC

DISTRIBUTION. New Zealand: AK, WO / MC.

HOSTS. Not known.

PSYLLAEPHAGUS Ashmead genus

• **Psyllaephagus acaciae** Noyes
Psyllaephagus acaciae Noyes, 1988: 103. Holotype: AK, Mt Albert; NZAC

DISTRIBUTION. New Zealand: AK / NN.

HOSTS. Psyllidae: *Acizzia acaciaebaileyanae, A. exquisita.*

• **Psyllaephagus pilosus** Noyes
Psyllaephagus pilosus Noyes, 1988: 105. Holotype: OL, Lake Wakatipu; NZAC

DISTRIBUTION. New Zealand: AK / NN, OL.

HOST. Psyllidae: *Ctenarytaina eucalypti.*

RHOPUS Foerster genus

• **Rhopus anceps** Noyes
Rhopus anceps Noyes, 1988: 107. Holotype: CO, Rocklands; NZAC

DISTRIBUTION. New Zealand: / NN, MB, BR, OL, CO, FD.

HOST. Pseudococcidae: *Pseudantonina* sp.

• **Rhopus garibaldius** (Girault)
Xanthoencyrtus garibaldius Girault, 1933: 4.

DISTRIBUTION. Australia, New Zealand: HB.

HOSTS. Not known.

SUBPRIONOMITUS Mercet genus

• **Subprionomitus ferus** Girault
Kakaoburra fera Girault, 1922a: 44

DISTRIBUTION. Australia, New Zealand: / NN, MB, BR, MC, MK, OL, CO, FD.

HOSTS. Pseudococcidae: ?species.

TACHINAEPHAGUS Ashmead genus

• **Tachinaephagus zealandicus** Ashmead
Tachinaephagus zealandicus Ashmead, 1904: 304
[*Tachinaephagus australiensis* Girault]

DISTRIBUTION. California, Australia, New Zealand: ND, AK, CL, WO, BP, TK, TO, GB, HB, WI / SD, NN, MB, Campbell Island.

HOSTS. Calliphoridae: *Lucilia sericata, Calliphora quadrimaculata, C. vicina, C. stygia.* Sarcophagidae: *Hybopygia varia.* Muscidae: *Musca domestica, Stomoxys calcitrans.* Fanniidae: *Fannia canicularis.*

TETRACNEMOIDEA Howard genus

Taxonomy: Trjapitzin & Gordh, 1980.

• **Tetracnemoidea bicolor** (Girault)
Ectromella bicolor Girault, 1915b: 142
Antipodencyrtus procellosa Kerrich, 1964: 505. Holotype: Campbell Island; NZAC
Tetracnemoidea procellosa (Kerrich)
Zealandencyrtus yasumatsui Tachikawa & Valentine, 1971: 28. Holotype: NN, Nelson; NZAC

DISTRIBUTION. Australia, New Zealand: AK, TO, TK / SD, NN, MB, BR, WD, MC, SC, OL, CO, DN, FD, SI, Antipodes Islands, Auckland Islands, Campbell Island.

HOST. Pseudococcidae: *Trionymus* sp.

• **Tetracnemoidea brevicornis** (Girault)
Arhopoideus brevicornis Girault, 1915b: 174
Tetracnemus pretiosus Timberlake
Hungariella pretiosus (Timberlake)

DISTRIBUTION. Europe, California, Australia, New Zealand: AK, BP, WI, WN / NN, BR, MC, OL, SL.

HOSTS. Pseudococcidae: *Pseudococcus longispinus, Phenacoccus graminicola.* Margarodidae: *Icerya purchasi.*

ANNOTATION. Introduced into New Zealand from California in 1920 for the control of mealybugs (Dumbleton, 1936).

• **Tetracnemoidea brounii** (Timberlake)
Tetracnemus brounii Timberlake, 1929: 6. Holotype: NN, Nelson; USNM
Hungariella brounii (Timberlake)
Arhopoideus brounii (Timberlake)

DISTRIBUTION. New Zealand: Three Kings Islands, ND, AK, CL, BP, TO, HB, WI, WN / SD, MB, NN, BR, WD, MC, MK, OL, CO, FD, SL, SI, Chatham Islands, The Snares, Auckland Islands.

HOSTS. Pseudoccidae: *Nipaecoccus aurilanatus, Crocydococcus cottieri, Pseudococcus calceolariae, Dysmicoccus ambiguus.*

- **Tetracnemoidea peregrina** (Compere)
  Tetracnemus peregrinus Compere, 1939: 59
  Hungariella peregrina (Compere)
  Arhopoideus peregrinus (Compere)

DISTRIBUTION. Europe, South Africa, California, South America, New Zealand: GB.

HOST. Pseudococcidae: *Pseudococcus longispinus.*

- **Tetracnemoidea sydneyensis** (Timberlake)
  Anarhopus sydneyensis Timberlake, 1929: 18

DISTRIBUTION. California, Australia, New Zealand: AK.

HOST. Pseudococcidae: *Pseudococcus longispinus.*

- **Tetracnemoidea zelandica** Noyes
  Tetracnemoidea zelandica Noyes, 1988: 122. Holotype: BR, Lake Rotoiti; NZAC

DISTRIBUTION. New Zealand: BP / BR, MC, OL, SL.

HOST. Pseudococcidae: *Planococcus mali.*

TONGYUS Noyes & Hayat genus

- **Tongyus costalis** Noyes
  Tongyus costalis Noyes, 1988: 125. Holotype: BR, Mt. Robert; NZAC

DISTRIBUTION. New Zealand: AK, CL, TO, WN / NN, MB, BR, WD, MK, OL, CO, FD, SL, SI.

HOSTS. Pseudococcidae: ?species.

- **Tongyus cyrenis** Noyes
  Tongyus cyrenis Noyes, 1988: 127. Holotype: AK, Huia; NZAC

DISTRIBUTION. New Zealand: AK.

HOSTS. Not known.

- **Tongyus regis** Noyes
  Tongyus regis Noyes, 1988: 128. Holotype: AK, Waitakere Range; NZAC

DISTRIBUTION. New Zealand: ND, AK, CL, TO, WN / NN, MB, WD, OL, DN, SI.

HOSTS. Pseudococcidae: ?species.

ZAOMMA Ashmead genus

- **Zaomma lambinus** (Walker)
  Encyrtus lambinus Walker, 1838a: 422
  Apterencyrtus microphagus Mayr

DISTRIBUTION. Europe, S.E. Asia, North America, New Zealand: / NN.

HOST. Diaspididae: *Lepidosaphes ulmi.*

ZELAPHYCUS Noyes genus

- **Zelaphycus aspidioti** (Tachikawa & Valentine)
  Aphycomorpha aspidioti Tachikawa & Valentine, 1969a: 535. Holotype: MC, Christchurch; NZAC

DISTRIBUTION. New Zealand: WN / KA, MC, SL, Chatham Islands.

HOST. Diaspididae: *Aspidiotus nerii.*

ZELENCYRTUS Noyes genus

- **Zelencyrtus latifrons** Noyes
  Zelencyrtus latifrons Noyes, 1988: 134. Holotype: MK, Lake Tekapo; NZAC

DISTRIBUTION. New Zealand: / MK.

HOSTS. Not known.

EULOPHIDAE family

Contains over 3,000 species worldwide. Majority are primary parasitoids of concealed larvae, especially Lepidoptera and Diptera. Taxonomy: Graham, 1987; Bouček, 1988.

ENTEDONINAE subfamily

ACHRYSOCHAROIDES Girault genus

- **Achrysocharoides latreillii** (Curtis)
  Eulophus latreillii Curtis, 1826: 133

DISTRIBUTION. Europe, New Zealand: AK, WI / NN.

HOST. Gracillariidae: *Phyllonorycter messaniella.*

ANNOTATION. Probably introduced into New Zealand from Switzerland in 1957 under the name *Enaysma splendens* (see Appendix II). It was introduced for the control of oak leaf miners on *Alnus, Corylus,* and *Sorbus* (Given, 1959). However, as *splendens* has not been recovered from New Zealand and no voucher specimens can be found, it is very possible that *splendens* was misidentified (Bouček, 1988). Biology: Swan, 1973; Early, 1984.

CERANISUS Walker genus

- **Ceranisus menes** (Walker)
  Pteroptrix menes Walker, 1839: 17
  [*Ceranisus russelli* Crawford]

DISTRIBUTION. Europe, Australia, New Zealand: / NN.

HOSTS. Internal parasitoids of Thysanoptera.

CHRYSOCHARIS Foerster genus

- **Chrysocharis pubicornis** (Zetterstedt)
  Entedon pubicornis Zetterstedt, 1838: 427

DISTRIBUTION. Europe, North America, Australia, New Zealand: AK.

HOST. Agromyzidae: *Phytomyza syngenesiae.*

CHRYSONOTOMYIA Ashmead genus

- **Chrysonotomyia trifolii** (Erdös)
  Neochrysocharis trifolii , Erdös 1961: 481

DISTRIBUTION. Europe, New Zealand : / MC

HOSTS. Coleophoridae: *Coleophora* spp.

ANNOTATION. Introduced into New Zealand from France in 1961 and 1969 to control clover casebearers (Thomas, 1969).

ENTEDON Dalman genus

- **Entedon methion** Walker
  Entedon methion Walker, 1839: 105

DISTRIBUTION. Europe, Australia, New Zealand: BP / MK.

HOST. Anobiidae: *Ernobius mollis.*

ENTEDONASTICHUS Girault genus

- **Entedonastichus dei** (Girault)
  Pirenoidea dei Girault, 1922b: 107

DISTRIBUTION. Australia, New Zealand: / CO, OL.

HOSTS. Not known.

PEDIOBIUS Walker genus

- **Pediobius acantha** (Walker)
  Entedon acantha Walker, 1839: 107

DISTRIBUTION. Europe, New Zealand: ND, AK, HB.

HOSTS. Parasitic on various dipterous and lepidopterous miners of broadleaved plants (Bouček, 1988).

• **Pediobius bruchicida** (Rondani)
Spartiophilus bruchicida Rondani, 1872: 208

DISTRIBUTION. Mediterranean, East Africa, Southern Asia, New Guinea, New Zealand: AK / CO, OL.

HOSTS. Braconidae: *Apanteles tasmanicus, Rhogas* sp. Eulophidae: ?*Elachertus* sp., on *Epiphyas postvittana* (Tortricidae). Pteromalidae: *Trichomalopsis* sp., on *Apanteles tasmanicus* (Braconidae) *Trichomalopsis* sp. on *Bassaris gonerilla* (Nymphalidae).

• **Pediobius epigonus** (Walker)
Entedon epigonus Walker, 1839: 112
Pleurotropus (Entodon) epigonus (Walker)
Pleurotropus epigonus (Walker)
[*Semiotellus nigripes* Lindeman]
[*Entedon metallicus* Nees]

DISTRIBUTION. Europe, New Zealand: / MC.

HOST. Cecidomyiidae: *Mayetiola destructor.*

ANNOTATION. Introduced into New Zealand from England in 1892 for the control of hessian fly (Miller, 1936; Valentine, 1967b). This species and *Platygaster hiemalis* were the first arthropod parasitoids introduced into New Zealand for applied biological control of a pest insect.

EUDERINAE subfamily
ZEASTICHUS Bouček genus

• **Zeastichus asper** Bouček
Zeastichus asper Bouček, 1988: 663. Holotype: AK, Birkenhead; NZAC

DISTRIBUTION. New Zealand: ND, AK, CL, BP, WN / NN, BR.

HOSTS. Not known.

EULOPHINAE subfamily
DIGLYPHUS Walker genus

• **Diglyphus isaea** (Walker)
Cirrospilus isaea Walker, 1838b: 386

DISTRIBUTION. Europe, Pakistan, New Zealand: ND, AK / MC.

HOSTS. Agromyzidae: ?*Phytomyza* spp.

ANNOTATION. Introduced into New Zealand from Pakistan in 1970 for the control of leafmining flies. Probably established before the 1970 introduction.

EUPRONOTIUS Bouček genus

• **Eupronotius scaposus** Bouček
Eupronotius scaposus Bouček, 1988: 646. Holotype: NN, Cobb Ridge; NZAC

DISTRIBUTION. New Zealand : / NN.

HOSTS. Not known.

HEMIPTARSENUS Westwood genus

• **Hemiptarsenus varicornis** (Girault)
Eriglyptoideus varicornis Girault, 1913c: 70
Hemiptarsenus semialbiclava (Girault)

DISTRIBUTION. Tropical and southern temperate countries of eastern hemisphere, Pacific, Australia, New Zealand: ND, GB / OL.

HOSTS. Agromyzidae: *Liriomyza chenopodii, Cerodontha australis.*

ANNOTATION. Introduced into New Zealand from Pakistan in 1970 for the control of leafmining flies. Probably established before the 1970 introduction.

MAKARORA Bouček genus

• **Makarora obesa** Bouček
Makarora obesa Bouček, 1988: 629. Holotype: OL, Makarora; NZAC

DISTRIBUTION. New Zealand: AK / MB, NN, WD, OL.

HOSTS. Not known.

NESYMPIESIS Bouček genus

• **Nesympiesis venosa** Bouček
Nesympiesis venosa Bouček, 1988: 624. Holotype: NN, Dun Mtn; NZAC

DISTRIBUTION. New Zealand: AK / MB, NN.

HOSTS. Not known.

NOYESIUS Bouček genus

• **Noyesius metallicus** Bouček
Noyesius metallicus Bouček, 1988: 631. Holotype: WN, Terarua [Tararua] Forest Park; NZAC

DISTRIBUTION. New Zealand: CL, WN / NN, OL.

HOSTS. Not known.

• **Noyesius testaceus** Bouček
Noyesius testaceus Bouček, 1988: 632. Holotype: MB, Pelorus Bridge; NZAC

DISTRIBUTION. New Zealand: CL, TO, TK, WN / MB, NN, BR, WD, OL.

HOSTS. Not known.

OPHELIMUS Haliday genus

• **Ophelimus eucalypti** (Gahan)
Rhicnopeltella eucalypti Gahan, 1922: 54. Holotype: WN, Wellington; USNM

DISTRIBUTION. Australia, New Zealand: North Island and South Island.

HOSTS. Myrtaceae: *Eucalyptus alpina, E. ?amplifoli, E.* x *biangularis (E.globulus* x *E. urnigera), E. bicostata, E. cinerea, E. gunnii, E. macarthurii, E. maculosa, E. nicholii, E. orata, E. sideroxylon, E. urnigera, E. viminalis.* Biology: Somerfield, 1976; Bain, 1977b.

• **Ophelimus maskelli** (Ashmead)
Pteroptrix maskelli Ashmead, 1900b: 346. Lectotype: WN, Wellington; USNM
Rhicnopeltella maskelli (Ashmead)

DISTRIBUTION. New Zealand: WN / OL, CO.

HOSTS. Psyllidae: ?species.

SYMPIESIS Forster genus

• **Sympiesis campbellensis** (Kerrich & Yoshimoto)
Ardalus campbellensis Kerrich & Yoshimoto, 1964: 501. Holotype: Campbell Island; NZAC

DISTRIBUTION. New Zealand: ND, AK / MB, NN, WD, OL, FD, Campbell Island.

HOST. Tortricidae: *Epichorista emphanes*

TRIELACHER Bouček genus

• **Trielacher forticornis** Bouček
Trielacher forticornis Bouček, 1988: 647. Holotype: AK, Waitakere Range; NZAC

DISTRIBUTION. AK / NN, BR.

HOSTS. Not known.

ZASYMPIESIS Bouček genus

- **Zasympiesis pilosa** Bouček
  Zasympiesis pilosa Bouček, 1988: 623. Holotype: AK, Lynfield; NZAC

DISTRIBUTION. New Zealand: AK.

HOSTS. Not known.

ZEALACHERTUS Bouček genus

- **Zealachertus nothofagi** Bouček
  Zealachertus nothofagi Bouček, 1978: 117. Holotype: BR, St Arnaud; BMNH

DISTRIBUTION. New Zealand: / NN, BR.

HOST. Oecophoridae: *Proteodes carnifex.*

TETRASTICHINAE subfamily

APROSTOCETUS Westwood genus

- **Aprostocetus bruchophagi** (Gahan)
  Tetrastichus bruchophagi Gahan, 1913: 439

DISTRIBUTION. Probably cosmopolitan, New Zealand.

HOST. Eurytomidae: *Systole geniculata.*

- **Aprostocetus zosimus** (Walker)
  Cirrospilus zosimus Walker, 1839 : 297
  Tetrastichus charoba Walker

DISTRIBUTION. Europe, U.S.A., New Zealand.

HOST. Cecidomyiidae: *Mayetiola destructor.*

ANNOTATION. Probably introduced with the hessian fly.

ARACHNOOBIUS Bouček genus

- **Arachnoobius austini** Bouček
  Arachnoobius austini Bouček, 1988: 689

DISTRIBUTION. Australia, New Zealand: WN / OL, CO.

HOSTS. Egg-sacs of spiders.

MELITTOBIA Westwood genus

Parasitises the larvae within nests of bees and sphecid wasps. Taxonomy: Dahms, 1984a, b.

- **Melittobia acasta** (Walker)
  Cirrospilus acasta Walker, 1839: 328

DISTRIBUTION. Europe, New Zealand: / MC.

HOST. Apidae: *Bombus hortorum.*

- **Melittobia australica** Girault
  Melittobia australica Girault, 1912: 203

DISTRIBUTION. South Africa, Japan, North America, Jamaica, Australia, New Zealand: WN.

HOSTS. Vespidae: *Vespula germanica.* Sphecidae: *Pison spinolae.*

ANNOTATION. Taxonomy & Biology: Macfarlane & Palma, 1987.

- **Melittobia hawaiiensis** Perkins
  Melittobia hawaiiensis Perkins, 1907: 126
  [*Melittobia clavicornis* Cameron]

DISTRIBUTION. South America, Hawaii, New Zealand: AK / Canterbury.

HOSTS. Sphecidae: *Pison spinolae.* Megachilidae: *Megachile pacifica.* Vespidae: *Vespula germanica.*

ANNOTATION. Biology: Cowley 1961; Donovan, 1976.

EUPELMIDAE family

About 750 species worldwide. Majority are parasitic and facultatively hyperparasitic on immature stages of insects. Usually highly metallic in colour. Taxonomy: Bouček, 1988; Noyes & Valentine, 1989b.

CALOSOTINAE subfamily

EUSANDALUM Ratzeburg genus

- **Eusandalum barteli** (Gourlay)
  Polymoria barteli Gourlay, 1928: 371. Holotype: NN, Nelson; NZAC

DISTRIBUTION. New Zealand: WN / NN, MC.

HOST. Cerambycidae: *Poecilippe medialis.*

EUPELMINAE subfamily

EUPELMUS Dalman genus

- **Eupelmus antipoda** Ashmead
  Eupelmus antipoda Ashmead, 1900b: 342

DISTRIBUTION. Australia, New Zealand: / NN.

HOST. Mantidae: *Orthodera novaezealandiae.*

- **Eupelmus cyaneus** (Gourlay)
  Neosolindenia cyanea Gourlay, 1928: 370. Holotype: NN, Nelson; NZAC

DISTRIBUTION. New Zealand: AK / NN, MC.

HOST. Ichneumonidae: *Diadegma muelleri,* on *Morova subfasciata* (Thyrididae).

MACRONEURA Walker genus

- **Macroneura vesicularis** (Ratzius)
  Ichneumon vesicularis Ratzius, 1783: 50
  Eupelmus messene Walker, 1839: 95. Holotype: New Zealand; ?lost
  Macroneura messene (Walker)

DISTRIBUTION. Europe, North America, New Zealand: / MB, NN, BR, MC, CO.

HOSTS. Braconidae: *Bracon variegator* on *Coleophora* spp. (Coleophoridae) Cecidomyiidae: *Mayetiola destructor.*

EURYTOMIDAE family

Either phytophagous or entomophagous, with about 1000 species worldwide.

BRUCHOPHAGUS Ashmead genus

- **Bruchophagus acaciae** (Cameron)
  Eurytoma acaciae Cameron, 1910: 115. Holotype: ?Christchurch; ?lost

DISTRIBUTION. New Zealand: / MC.

HOST. Leguminosae: *Acacia mearnsii.*

- **Bruchophagus gibbus** (Boheman)
  Eurytoma gibba Boheman, 1836: 244
  Bruchophagus funebris Howard

DISTRIBUTION. Europe, New Zealand: North Island and South Island.

HOST. Leguminosae: *Trifolium pratense.*

ANNOTATION. Biology: Chapman, 1984.

- **Bruchophagus roddi** (Gussakovsky)
  Eurytoma roddi Gussakovsky, 1933: 122

DISTRIBUTION. Europe, North and South America, South

Africa, Hawaii, Australia, New Zealand: North Island and South Island.

HOST. Leguminosae; *Medicago sativa.*

ANNOTATION. Biology: Chapman, 1984.

SYSTOLE Walker genus

- **Systole foeniculi** Otten
  Systole foeniculi Otten, 1941: 262
  Systole geniculata Foerster

DISTRIBUTION. Europe, Mediterranean subregion, Afghanistan, New Zealand: / NN.

HOSTS. Apiaceae: *Conium maculatum, Foeniculum officinale.*

TETRAMESA Walker genus

- **Tetramesa linearis** (Walker)
  Isosoma lineare Walker, 1832: 22

DISTRIBUTION. Europe, New Zealand: / CO.

HOST. Galling stems of *Agropyron repens* (Gramineae).

MYMARIDAE family

Over 1000 species are known worldwide. They are of minute size and parasitise insect eggs, particularly Lepidoptera and Hemiptera. Taxonomy: Noyes & Valentine, 1989a.

ACMOTEMNUS Noyes & Valentine genus

- **Acmotemnus luteiclava** Noyes & Valentine
  Acmotemnus luteiclava Noyes & Valentine, 1989a : 20. Holotype: AK, Birkenhead; NZAC

DISTRIBUTION. New Zealand : ND, AK, WI / BR.

HOSTS. Not known.

ALLANAGRUS Noyes & Valentine genus

- **Allanagrus magniclava** Noyes & Valentine
  Allanagrus magniclava Noyes & Valentine, 1989a: 23. Holotype: AK, Titirangi; NZAC

DISTRIBUTION. New Zealand: ND, AK, HB.

HOSTS. Not known.

ALLARESCON Noyes & Valentine genus

- **Allarescon ochroceras** Noyes & Valentine
  Allarescon ochroceras Noyes & Valentine, 1989a: 24. Holotype: AK, Titirangi; NZAC

DISTRIBUTION. New Zealand: AK, BP, TO / BR, NN, MC, FD, SL.

HOSTS. Not known.

ANAGRUS Haliday genus

- **Anagrus armatus** (Ashmead)
  Litus armatus Ashmead, 1887: 193
  Anagrus armatus var. *nigriventris* Girault

DISTRIBUTION. North America, New Zealand: / MC.

HOST. Cicadellidae: *Typhlocyba froggatti.*

ANNOTATION. Biology: Dumbleton, 1934a.

ANAPHES Haliday genus

- **Anaphes nitens** (Girault)
  Anaphoidea nitens Girault, 1928: 262
  Patasson nitens (Girault)

DISTRIBUTION. Europe, South Africa, Australia, New Zealand: BP / MC.

HOST. Curculionidae: *Gonipterus scutellatus.*

ANNOTATION. Introduced into New Zealand from Australia in 1927 for the control of gum tree weevil (Clark, 1931; Miller, 1927b).

APOXYPTERON Noyes & Valentine genus

- **Apoxypteron grandiscapus** Noyes & Valentine
  Apoxypteron grandiscapus Noyes & Valetine,1989a: 27. Holotype: AK, Lynfield; NZAC

DISTRIBUTION. New Zealand: AK.

HOSTS. Not known.

CERATANAPHES Noyes & Valentine genus

- **Ceratanaphes monticola** Noyes & Valentine
  Ceratanaphes monticola Noyes & Valentine, 1989a: 30. Holotype: OL, Coronet Peak; NZAC

DISTRIBUTION. New Zealand: / OL, CO.

CYBOMYMAR Noyes & Valentine genus

- **Cybomymar fasciifrons** Noyes & Valentine
  Cybomymar fasciifrons Noyes & Valentine, 1989a: 32. Holotype: AK, Lynfield; NZAC

DISTRIBUTION. New Zealand: ND, AK.

HOSTS. Not known.

DORYA Noyes & Valentine genus

- **Dorya pilosa** Noyes & Valentine
  Dorya pilosa Noyes & Valentine, 1989a: 34. Holotype: AK, Huia; NZAC

DISTRIBUTION. New Zealand: ND, CL / MC.

HOSTS. Not known.

HAPLOCHAETA Noyes & Valentine genus

- **Haplochaeta mandibularis** Noyes & Valentine
  Haplochaeta mandibularis Noyes & Valentine, 1989a: 36. Holotype: NN, Whangamoa Saddle; NZAC

DISTRIBUTION. New Zealand: ND, AK, CL, WI / NN, MC.

HOSTS. Not known.

IDIOCENTRUS Gahan genus

- **Idiocentrus mirus** Gahan
  Idiocentrus mirus Gahan, 1927: 36. Holotype: WN, York Bay; USNM

DISTRIBUTION. New Zealand: AK, CL, TK, WN / NN, OL, Chatham Islands.

HOSTS. Cicadidae: *Kikihia muta, Amphipsalta cingulata, Rhodopsalta cruentata.*

ANNOTATION. Biology: Cumber, 1952.

ISCHIODASYS Noyes & Valentine genus

- **Ischiodasys occulta** Noyes & Valentine
  Ischiodasys occulta Noyes &Valentine, 1989a: 38. Holotype: NN, Cobb Ridge; NZAC

DISTRIBUTION. New Zealand: / NN, BR.

HOSTS. Not known.

MIMALAPTUS Noyes & Valentine genus

- **Mimalaptus obscurus** Noyes & Valentine
  Mimalaptus obscurus Noyes & Valentine, 1989a: 39. Holotype: AK, Lynfield; NZAC

DISTRIBUTION. New Zealand: AK.

HOSTS. Not known.

NESERYTHMELUS Noyes & Valentine genus

- **Neserythmelus zelandicus** Noyes & Valentine
  Neserythmelus zelandicus Noyes & Valentine, 1989a: 41. Holotype: AK, Lynfield; NZAC

DISTRIBUTION. New Zealand: ND, AK.

HOSTS. Not known.

NESOMYMAR Valentine genus

- **Nesomymar magniclave** Valentine
  Nesomymar magniclave Valentine, 1971: 329. Holotype: Campbell Island; NZAC

DISTRIBUTION. New Zealand: The Snares, Auckland Islands, Campbell Islands.

HOSTS. Not known.

NESOPATASSON Valentine genus

- **Nesopatasson flavidus** Valentine
  Nesopatasson flavidus Valentine, 1971: 328. Holotype: Auckland Islands; NZAC

DISTRIBUTION. New Zealand: Auckland Islands, The Snares

HOSTS. Not known.

PARACMOTEMNUS Noyes & Valentine genus

Paracmotemnus potanus Noyes & Valentine
Paracmotemnus potanus Noyes & Valentine, 1989a: 43. Holotype: AK, Lynfield; NZAC

DISTRIBUTION. New Zealand: ND, AK, WI / SD, BR, SL.

HOSTS. Not known.

PARANAGROIDEA Noyes &Valentine genus

- **Paranagroidea verrucosa** Noyes &Valentine
  Paranagroidea verrucosa Noyes &Valentine, 1989a: 45. Holotype: SD, Shakespeare Bay; NZAC

DISTRIBUTION. New Zealand: ND / SD.

HOSTS. Not known.

PRIONAPHES Hincks genus

- **Prionaphes depressus** Hincks
  Prionaphes depressus Hincks, 1961: 159. Holotype: BP, Whakarewarewa; BMNH

DISTRIBUTION. New Zealand: BP / MC.

HOST. Cerambycidae: *Prionoplus reticularis*.

PSEUDANAPHES Noyes & Valentine genus

- **Pseudanaphes hirtus** Noyes & Valentine
  Pseudanaphes hirtus Noyes &Valentine, 1989a: 48. Holotype: AK, Titirangi; NZAC

DISTRIBUTION. New Zealand: ND, AK / NN.

HOSTS. ?Curculionidae eggs in moss.

SCLEROMYMAR Noyes & Valentine genus

- **Scleromymar breve** Noyes & Valentine
  Scleromymar breve Noyes & Valentine, 1989a: 50. Holotype: AK, Lynfield; NZAC

DISTRIBUTION. New Zealand: ND, AK / NN, BR.

HOSTS. Not known.

STEGANOGASTER Noyes & Valentine genus

- **Steganogaster silvicola** Noyes & Valentine
  Steganogaster silvicola Noyes & Valentine, 1989a: 52. Holotype: MC, Banks Peninsula; NZAC

DISTRIBUTION. New Zealand: / MC.

HOSTS. Not known.

ZELANAPHES Noyes & Valentine genus

- **Zelanaphes lamprogonius** Noyes & Valentine
  Zelanaphes lamprogonius Noyes & Valentine, 1989a: 54. Holotype: BP, Mamaku Plateau; NZAC

DISTRIBUTION. New Zealand: AK, BP.

PERILAMPIDAE family

A small family with about 80-100 species known worldwide. They usually develop as hyperparasitoids, often with complex life histories. Taxonomy: Bouček, 1988.

AUSTROTOXEUMA Girault genus

- **Austrotoxeuma kuscheli** Bouček
  Austrotoxeuma kuscheli Bouček, 1988: 504. Holotype: ND, Poor Knights Islands; NZAC

DISTRIBUTION. New Zealand: ND / MC.

HOSTS. Cerambycidae: ?*Gastrosarus* sp.

PTEROMALIDAE family

One of the largest families of chalcids, with over 3000 species known worldwide. The majority are external gregarious parasitoids of lepidopterous and coleopterous larvae. Taxonomy: Bouček, 1988.

CEROCEPHALINAE subfamily

THEOCOLAX Westwood genus

- **Theocolax formiciformis** Westwood
  Theocolax formiciformis Westwood, 1832: 127
  Cerocephala formiciformis (Westwood)
  Theocolax formicarius(!) (Westwood)

DISTRIBUTION. Europe, Australia, New Zealand.

HOSTS. Anobiidae: *Anobium punctatum*. Lyctidae: *Lyctus brunneus*.

CLEONYMINAE subfamily

PAREPISTENIA Dodd genus

- **Parepistenia resplendens** (Gourlay)
  Thaumasura resplendens Gourlay, 1928: 373. Holotype: WN, Karori, Wellington; NZAC

DISTRIBUTION. New Zealand: AK, WN / NN, BR.

HOSTS. Not known.

ANNOTATION. The largest chalcidoid known from New Zealand.

COELOCYBINAE subfamily

FUSITERGA Bouček genus

- **Fusiterga gallarum** Bouček
  Fusiterga gallarum Bouček, 1988: 319. Holotype: BR, Lake Rotoroa; NZAC

DISTRIBUTION. New Zealand: AK, CL / MB, BR, CO.

HOSTS. Reared from cecidomyiid galls on *Carpodetus serratus*, *Hebe salicifolia*.

- **Fusiterga lativentris** Bouček
  Fusiterga lativentris Bouček, 1988: 320. Holotype: BR, St Arnaud; NZAC

DISTRIBUTION. New Zealand: AK / NN, BR, WD, FD, OL, SI.

HOSTS. Reared from dipterous gall on *Hebe elliptica*.

COLOTRECHNINAE subfamily

ERROLIA Bouček genus

- **Errolia cyanea** Bouček
  Errolia cyanea Bouček, 1988: 278. Holotype: ?NN, Rosedale; NZAC

DISTRIBUTION. New Zealand: AK, CL / NN.

HOSTS. ?Anthribidae.

ZEALA Bouček genus

- **Zeala walkerae** Bouček

Zeala walkerae Bouček, 1988: 274. Holotype: BR, Lake Rotoiti; NZAC

DISTRIBUTION. New Zealand: TO, WN / MB, BR, OL, FD.

HOSTS. Not known.

EUNOTINAE subfamily

APHOBETUS Howard genus

- **Aphobetus maskelli** Howard

Aphobetus maskelli Howard, 1896: 166. Holotype: New Zealand; ?deposition

DISTRIBUTION. New Zealand: / OL.

HOSTS. Encyrtidae: in *Ctenochiton perforatus*: (Coccidae), in *Ctenochiton viridis* (Coccidae), in *Trioza* sp. (Psyllidae). Platygastridae: in *Inglisia* sp. (Coccidae). Braconidae: ?*Aphidius* sp. in Aphididae. Hymenoptera: ?sp. in *Pseudococcus* sp. (Pseudococcidae). Coccidae: *Ctenochiton* sp. Eriococcidae: *Eriococcus* sp.

ANNOTATION. Appears to be an obligate parasitoid of the larvae of other chalcidoids in coccid hosts, but occasionally a parasite of coccid male pupae.

MODRONILA Bouček genus

- **Modronila cyanea** Bouček

Modronila cyanea Bouček, 1988: 364. Holotype: NC, Lewis Pass; NZAC

DISTRIBUTION. New Zealand: TK / BR, NC, OL, FD.

HOST. Eriococcidae: *Eriococcus nitidus*.

MORANILA Cameron genus

- **Moranila californica** (Howard)

Tomocera californica Howard, 1881: 368

DISTRIBUTION. Eurasia, Africa, Pacific, California, Mexico, Australia, New Zealand.

HOST. Coccidae: *Saissetia oleae*.

- **Moranila comperei** (Ashmead)

Aphobetoideus comperei Ashmead, 1904: 328

DISTRIBUTION. Australia, New Zealand: AK.

HOSTS. Coccidae: *Saissetia coffeae*. Aphididae: *Myzus (Nectarosiphon) persicae* .

PIDINKA Bouček genus

- **Pidinka nana** Bouček

Pidinka nana Bouček, 1988: 362. Holotype: NN, Stoke; NZAC

DISTRIBUTION. New Zealand: ND, AK, CL, WN / SD, MB, NN, SL, MC, OL, SI.

HOST. Coccidae: *Ctenochiton perforatus*.

PTEROMALINAE subfamily

ANISOPTEROMALUS Ruschka genus

- **Anisopteromalus calandrae** (Howard)

Pteromalus calandrae Howard, 1881: 273

DISTRIBUTION. Cosmopolitan, New Zealand.

HOSTS. Coleoptera associated with stored grain.

CALLITULA Spinola genus

- **Callitula viridicoxa** (Girault)

Eurydinotella viridicoxa Girault, 1913a: 319

DISTRIBUTION. Australia, New Zealand.

HOST. Cecidomyiidae: *Ophiomyia phaseoli* (in Australia).

HOMOPORUS Thomson genus

- **Homoporus chalcidiphagus** (Walsh & Riley)

Semiotellus chalcidiphagus Walsh & Riley, 1869: 152

DISTRIBUTION. Holarctic, New Zealand: / CO.

HOSTS. Eurytomidae: *Tetramesa* spp. (in Holarctic region).

INKAKA Girault genus

- **Inkaka quadridentata** Girault

Inkaka quadridentata Girault, 1939: 2

DISTRIBUTION. Australia, New Zealand: AK / MK, OL, CO.

HOST. Coccinellidae: *Cryptolaemus montrouzieri* (in Australia).

LARIOPHAGUS Crawford genus

- **Lariophagus distinguendus** (Foerster)

Pteromalus distinguendus Foerster, 1840: 17
Lariophagus utibilis (Tucker)

DISTRIBUTION. Cosmopolitan, New Zealand: WI.

HOSTS. Curculionidae: *Sitophilus granarius*. Anobiidae: *Stegobium paniceum*. Usually collected from Coleoptera in stored products.

MAORITA Bouček genus

- **Maorita reticulata** Bouček

Maorita reticulata Bouček, 1988: 464. Holotype: NN, Cobb Reservoir; NZAC

DISTRIBUTION. New Zealand: / NN.

HOSTS. Not known.

MESOPOLOBUS Westwood genus

- **Mesopolobus incultus** (Walker)

Platyterma incultum Walker, 1834: 340

DISTRIBUTION. Europe, New Zealand: AK.

HOSTS. Associated with weevils, especially *Apion* (in Europe).

- **Mesopolobus nobilis** (Walker)

Platyterma nobile Walker, 1834: 304

DISTRIBUTION. Europe, New Zealand: / CO.

HOSTS. In seeds of grasses (in Europe).

MUSCIDIFURAX Girault & Sanders genus

- **Muscidifurax raptor** Girault & Sanders

Muscidifurax raptor Girault & Sanders, 1910: 149

DISTRIBUTION. Australia, New Zealand: HB.

HOSTS. Fanniidae: *Fannia canicularis, F. albitarsis*.

ANNOTATION. Three sibling species of *Muscidifurax* from cultures in Trinidad were released against house flies and stable flies in New Zealand in 1986 (see Appendix II). Bouček (1988) suggests that *raptor* may be their progeny, as the species are virtually indistinguishable on morphological characters.

NASONIA Ashmead genus

- **Nasonia vitripennis** (Walker)

Pteromalus vitripennis Walker, 1836: 492
Nasonia brevicornis Ashmead
Mormoniella (Nasonia) brevicornis (Ashmead)
Mormoniella vitripennis (Walker)

DISTRIBUTION. Europe, India, North America, Chile, Australia, New Zealand.

HOSTS. Calliphoridae: *Calliphora vicina, Calliphora stygia, C. quadrimaculata, Chrysomya rufifacies, Lucilia sericata*. Muscidae: *Musca domestica*. Alysiidae: *Alysia manducator, Phaenocarpa antipoda*.

ANNOTATION. Introduced into New Zealand from Australia in 1922 for the control of calliphorid flies (Miller, 1922). Biology: Early, 1984.

NOTOGLYPTUS Masi genus

- **Notoglyptus scutellaris** (Dodd & Girault)
  Merismus scutellaris Dodd & Girault, 1915: 328
  Notoglyptus virescens Masi

DISTRIBUTION. Central Europe to South Africa, southern Asia to Japan, Australia, New Zealand: / CO, OL.

HOSTS. Not known.

PACHYNEURON Walker genus

- **Pachyneuron aphidis** (Bouché)
  Dipolepis aphidis Bouché, 1834: 170
  [*Pachyneuron siphonophorae* Ashmead]

DISTRIBUTION. Cosmopolitan, New Zealand: / MB.

HOSTS. Braconidae: *Aphidius* spp. in aphid spp. (Aphididae), *Diaeretiella rapae*, in *Brevicoryne brassicae* (Aphididae), *Trioxys* sp., in aphid sp. (Aphididae). Megaspilidae: *Dendrocerus* spp., in aphid sp. (Aphididae). Alloxystinae: *Alloxysta* spp. in aphid spp. (Aphididae).

ANNOTATION. Biology: Valentine, 1975a.

PSEUDANOGMUS Dodd & Girault genus

- **Pseudanogmus silanus** (Walker)
  Micromelus silanus Walker, 1843: 46

DISTRIBUTION. Australia, New Zealand: ND, AK.

HOSTS. Not known.

PTEROMALUS Swederus genus

- **Pteromalus sequester** Walker
  Pteromalus sequester Walker, 1835a: 495
  Pteromalus medicaginis (Gahan)

DISTRIBUTION. Europe, California, Australia, New Zealand: WN.

HOSTS. Associated with seeds in legume pods. ?Curculionidae. Eurytomidae: ?*Bruchophagus* spp.

- **Pteromalus puparum** (Linnacus)
  Ichneumon puparum Linnaeus, 1758: 567

DISTRIBUTION. Almost cosmopolitan, New Zealand.

HOSTS. Pieridae: *Pieris rapae*. Nymphalidae: *Danaus plexippus*, *Bassaris gonerilla*.

ANNOTATION. Introduced into New Zealand from England in 1932 for the control of white butterfly (Muggeridge, 1933). Biology: Muggeridge, 1943; Early, 1984.

RHAPHITELUS Walker genus

- **Rhaphitelus maculatus** Walker
  Rhaphitelus maculatus Walker, 1834: 179

DISTRIBUTION. Europe, North America, Argentina, New Zealand: AK.

HOST. Scolytidae: *Phloeosinus cupressi*.

STINOPLUS Thomson genus

- **Stinoplus etearchus** (Walker)
  Pteromalus etearchus Walker, 1848: 126
  [*Stinoplus ?pervasus* (Walker)]

DISTRIBUTION. Europe, Australia, New Zealand: / CO.

HOST. Cynipidae: *Phanacis hypochoeridis*.

SYSTASIS Walker genus

- **Systasis lelex** (Walker)
  Pteromalus lelex Walker, 1839: 95. Lectotype: New Zealand; BMNH

DISTRIBUTION. New Zealand.

HOSTS. Not known.

TRICHOMALOPSIS Crawford genus

- **Trichomalopsis iambe** (Walker)
  Pteromalus iambe Walker, 1839: 95. Lectotype: New Zealand; BMNH

DISTRIBUTION. New Zealand: ?ND.

HOSTS. Not known.

ANNOTATION. The first chalcidoid to be described from New Zealand.

SPALANGIINAE subfamily

SPALANGIA Latreille genus

- **Spalangia cameroni** Perkins
  Spalangia cameroni Perkins, 1910: 656
  [*Spalangia nigra* Latreille]

DISTRIBUTION. Cosmopolitan, New Zealand: AK, HB / MB.

HOSTS. Muscidae: *Musca domestica, Stomoxys calcitrans.*

- **Spalangia endius** Walker
  Spalangia endius Walker, 1839: 96
  [*Spalangia nigra* Latreille]

DISTRIBUTION. Cosmopolitan, New Zealand: AK, HB / MB.

HOSTS. Muscidae: *Musca domestica, Stomoxys calcitrans.* Fanniidae: *Fannia albitarsis, F. canicularis.* Coelopidae: *Chaetocoelopa littoralis.*

ANNOTATION. Reintroduced into New Zealand from Trinidad in 1969 (as *Spalangia nigra*) for the control of muscid flies (Markwick, 1974). Established before the 1969 introduction. Biology: Legner & Olton, 1968.

- **Spalangia nigroaenea** Curtis
  Spalangia nigroaenea Curtis, 1839: 740
  [*Spalangia nigra* Latreille]

DISTRIBUTION. Cosmopolitan, New Zealand.

HOSTS. Muscidae: *Musca domestica, Stomoxys calcitrans.*

ANNOTATION. Biology: Legner & Olton, 1968.

ROTOITIDAE family

First described from New Zealand, now found in South America. Taxonomy: Bouček & Noyes, 1987.

ROTOITA Bouček & Noyes genus

- **Rotoita basalis** Bouček & Noyes
  Rotoita basalis Bouček & Noyes, 1987: Holotype: TK, Mt Messenger; NZAC

DISTRIBUTION. New Zealand: TK / NN, BR.

HOSTS. Not known.

SIGNIPHORIDAE family

A small family with about 75 species worldwide. Parasitoids of scale insects, whitefly and Diptera puparia. Taxonomy: Rozanov, 1965; Noyes & Valentine, 1989b.

SIGNIPHORA Ashmead genus

- **Signiphora flavella** Girault
  Signiphora flavella Girault, 1913d: 214
  [*Signiphora flavopalliatus* Ashmead]
  [*Thysanus flavopalliatus* (Ashmead)]

DISTRIBUTION. North America, New Zealand.

HOSTS. Diaspididae: *Aonidiella aurantii, Hemiberlesia rapax.*

ANNOTATION. Biology: Hill, 1989.

- **Signiphora merceti** Malenotti
  Signiphora merceti Malenotti, 1916: 181
  Thysanus merceti (Malenotti)

DISTRIBUTION. More or less cosmopolitan, New Zealand.

HOSTS. Diaspididae: *Aonidiella aurantii, Hemiberlesia rapax.*

TORYMIDAE family

About 1,500 species worldwide. Mostly associated with plant galls or seeds, usually parasitoids of gall–forming insects, but can also be phytophagous. Taxonomy: Bouček, 1988; Noyes & Valentine, 1989b.

MEGASTIGMINAE subfamily

MEGASTIGMUS Dalman genus

Larvae feed in host seeds.

- **Megastigmus aculeatus** (Swederus)
  Pteromalus aculeatus Swederus, 1795: 221

  DISTRIBUTION. Holarctic, New Zealand: / MC.

  HOST. Rosaceae: *Rosa rugosa.*

- **Megastigmus spermotrophus** Wachtl
  Megastigmus spermotrophus Wachtl, 1893: 25

  DISTRIBUTION. Europe, North America, New Zealand: North and South Islands.

  HOST. Pinaceae: *Pseudotsuga menziesii.*

  ANNOTATION. Biology: Bain, 1977a.

MONODONTOMERINAE subfamily

LIODONTOMERUS Gahan genus

- **Liodontomerus longfellowi** (Girault)
  Idiomacromerus longfellowi Girault, 1917: 8
  Liodontomerus secundus Gahan

  DISTRIBUTION. Holarctic, New Zealand: / NN, MK.

  HOST. Eurytomidae: *Eurytoma gibba*, on *Trifolium repens* (Leguminosae).

TORYMOIDES Walker genus

- **Torymoides antipoda** (Kirby)
  Callimome antipoda Kirby, 1883: 202. Holotype: CO, Lindus; BMNH
  Torymus callimome antipoda (Kirby)
  Dimeromicrus antipoda (Kirby)

  DISTRIBUTION. New Zealand: / CO.

  HOST. Cecidomyiid gall in *Carmichaelia* sp.

TORYMINAE subfamily

TORYMUS Dalman genus

- **Torymus varians** (Walker)
  Callimome varians Walker, 1833: 122
  Syntomaspis varians (Walker)
  Torymus (Syntomaspis) varians (Walker)
  [*Syntomapsis*(!) *druparum*]

  DISTRIBUTION. Australia, New Zealand: / NN.

  HOSTS. Rosaceae: *Crataegus monogyna, C. crusgalli.*

  ANNOTATION. Biology: Gourlay, 1930c.

TRICHOGRAMMATIDAE family

Usually minute insects, with over 500 species worldwide. Parasitoids of insect eggs. Taxonomy: Noyes & Valentine, 1989b.

TRICHOGRAMMA Westwood genus

TRICHOGRAMMANZA Carver subgenus

- **Trichogramma (Trichogrammanza) funiculatum** Carver
  Trichogramma (Trichogrammanza) funiculatum Carver, 1978: 109

  DISTRIBUTION. Australia, New Zealand.

  HOSTS. Tortricidae: *Epiphyas postvittana, Ctenopseustis obliquana.*

  ANNOTATION. Biology: Danthanarayana, 1980.

TRICHOGRAMMATOIDEA Girault genus

- **Trichogrammatoidea bactrae** Nagaraja
  Trichogrammatoidea bactrae Nagaraja, 1978 : 501

  DISTRIBUTION. India, Pakistan, Java, W. Malaysia, Taiwan, New Zealand : AK.

  HOSTS. Tortricidae: *Epiphyas postvittana, ?Graphania* sp.

ZELOGRAMMA Noyes & Valentine genus

- **Zelogramma maculatum** Noyes and Valentine
  Zelogramma maculatum Noyes & Valentine, 1989: 47. Holotype: AK, Birkenhead; NZAC

  DISTRIBUTION. New Zealand: ND, AK / MC.

  HOSTS. Not known.

MYMAROMMATOIDEA superfamily

A rare superfamily found throughout the world but little is known about them. Taxonomy: Noyes & Valentine, 1989b.

MYMAROMMATIDAE family

PALAEOMYMAR Meunier genus

- **Palaeomymar insulare** (Valentine)
  Mymaromma insulare Valentine, 1971: 331. Holotype: Auckland Islands; NZAC

  DISTRIBUTION. New Zealand: Auckland Islands.

  HOSTS. Not known.

CYNIPOIDEA superfamily

A rather depauperate fauna in New Zealand represented mainly by introduced species.

IBALIIDAE family

Parasitoids of siricid sawflies.

IBALIINAE subfamily

IBALIA Latreille genus

- **Ibalia leucospoides** (Hockenwarth)
  Ichneumon leucospoides Hockenwarth, 1785: 345
  Ibalia leucospoides ensiger Norton
  Ibalia ensiger Norton

  DISTRIBUTION. Holarctic, Australia, New Zealand.

  HOST. Siricidae: *Sirex noctilio.*

  ANNOTATION. *Ibalia leucospoides* was first imported into New Zealand from Europe in 1931, but only one male emerged from the shipment. In 1950–1951 the subspecies *leucospoides* was reintroduced from Europe and released in 1954 (Nuttall, 1980). In 1963 the subspecies *ensiger* was introduced from North America and released in New Zealand in 1966 (Nuttall, 1980). Both subspecies appear to be established and interbreeding (Nuttall, 1980). Biology: Myers, 1928; Rawlings, 1951; Zondag, 1959; Nuttall, 1972; Early, 1984.

FIGITIDAE family

Parasitoids of Diptera and Neuroptera. Taxonomy: Fergusson, 1986.

ANACHARITINAE subfamily

ANACHARIS Dalman genus

- **Anacharis zealandica** Ashmead
  Anacharis zealandica Ashmead, 1900b: 329. Holotype: New Zealand; USNM
  Anacharis australiensis Ashmead

  DISTRIBUTION. Australia, New Zealand.

HOSTS. Pupae of hemerobiid lacewings. Hemerobiidae: *Drepanacra binocula, Micromus tasmaniae.*

ANNOTATION. Taxonomy: New, 1982.

EUCOILIDAE family

Parasitoids of Diptera. Taxonomy: Quinlan, 1978.

KLEIDOTOMA Westwood genus

PENTAKLEIDOTA subgenus

- **Kleidotoma (Pentakleidota) subantarcticana** Yoshimoto

Kleidotoma (Pentakleidota) subantarcticana Yoshimoto, 1964: 509. Holotype: Campbell Island; NZAC

DISTRIBUTION. New Zealand: Campbell Island.

HOSTS. Larvae and puparia of kelp flies. Coelopidae: ?species.

LEPTOPILINA Foerster genus

- **Leptopilina heterotoma** (Thomson)

Kleidotoma heterotoma Thomson, 1862: 399

DISTRIBUTION. Cosmopolitan species possibly as widespread as its host. New Zealand.

HOST. Drosophilidae: *Drosophila melanogaster.*

CHARIPIDAE family

Parasitoids of Psylloidea and hyperparasitoids of aphids.

ALLOXYSTINAE subfamily

ALLOXYSTA Foerster genus

Taxonomy: Evenhuis, 1972; Fergusson, 1986.

- **Alloxysta victrix** Westwood

Alloxysta victrix Westwood, 1833: 494
Allotria victrix var. *infuscata* Kieffer
Xystus brassicae (Ashmead)
Allotria brassicae (Ashmead)
Charips (Allotria) brassicae (Ashmead)
Charips brassicae (Ashmead)

DISTRIBUTION. Cosmopolitan, New Zealand.

HOSTS. Braconidae: *Diaeretiella rapae* in *Brevicoryne brassicae* (Aphididae), ? sp. in *Cavariella aegopodii* (Aphididae), in *Aulacorthum solani* & *A. pelargonii* (Aphididae), in *Lipaphis erysimi* (Aphididae), in *Neophyllaphis totarae* (Aphididae).

ANNOTATION. Taxonomy & Biology: Valentine, 1975a.

PHAENOGLYPHIS Foerster genus

- **Phaenoglyphis villosa** (Hartig)

Allotria villosa Hartig, 1841: 353
Phaenoglyphis piciceps (Thompson)

DISTRIBUTION. Europe, New Zealand.

HOSTS. Braconidae: in *Myzus ornatus* (Aphididae), in *Rhopalosiphum padi* (Aphididae), in *Aulacorthum pelargonii* (Aphididae).

CYNIPIDAE family

Majority are gall-forming, remainder are inquilines in galls of other Cynipidae. Taxonomy, Eady & Quinlan, 1963.

CYNIPINAE subfamily

PHANACIS Foerster genus

- **Phanacis hypochoeridis** (Kieffer)

Aylax hypochoeridis Kieffer, 1887: 205

DISTRIBUTION. Europe, North America, New Zealand.

HOST. Galls in stems. Compositae: *Hypochoeris radicata.*

ANNOTATION. *Phanacis* is the only plant galling cynipid known from New Zealand.

EVANIOIDEA superfamily

GASTERUPTIIDAE family

Develop principally as secondary cleptoparasitoids on the food stored in the cells of solitary bees. About 500 species worldwide. Taxonomy: Crosskey, 1962.

GASTERUPTION Latreille genus

Utilises the food stores in the nests of Hylaeinae bees.

- **Gasteruption expectatum** Pasteels

Gasteruption expectatum Pasteels, 1957: 174. Holotype: WN, Wellington; CUIC

DISTRIBUTION. New Zealand: WN.

- **Gasteruption flavicuspis** Kieffer

Gasteruption flavicuspis Kieffer, 1911: 208. Holotype: New Zealand; ?MNHN

DISTRIBUTION. New Zealand.

- **Gasteruption scintillans** Pasteels

Gasteruption scintillans Pasteels, 1957: 174. Holotype: NN, Dun Mtn; NZAC

DISTRIBUTION. New Zealand: / NN.

HYPTIOGASTER Kieffer genus

Utilises the food stores in nests of colletine bees.

- **Hyptiogaster crassipes** (Smith) comb. nov

Foenus crassipes Smith, 1876a: 479. Holotype: New Zealand; BMNH
Gasteruption crassipes (Smith)
Aulacofoenus crassipes (Smith)
Pseudofoenus crassipes (Smith)

DISTRIBUTION. New Zealand.

- **Hyptiogaster nocticolor** (Kieffer) comb. nov.

Pseudofoenus nocticolor Kieffer, 1911: 183. Holotype: WN, Wellington; BMNH

DISTRIBUTION. New Zealand: WN.

- **Hyptiogaster pedunculatus** (Schletterer) comb. nov.

Gasteruption pedunculatum Schletterer, 1889: 466. Type: New Zealand; ZMHU or ZMUS
Pseudofoenus pedunculatus (Schletterer)
[*Foenus unguiculatus* Smith]

DISTRIBUTION. New Zealand.

ANNOTATION. Associated with the colletid bee *Leioproctus metallicus.*

- **Hyptiogaster unguicularis** (Smith) comb. nov.

Foenus unguicularis Smith, 1876a: 480. Holotype: New Zealand; BMNH
Gasteruption unguiculare (Smith)
Pseudofoenus unguicularis (Smith)

DISTRIBUTION. New Zealand.

PROCTOTRUPOIDEA superfamily

PROCTOTRUPIDAE family

Mainly parasitoids of beetle larvae. Taxonomy: Masner, 1961; Townes & Townes, 1981.

EXALLONYX Kieffer genus

- **Exallonyx trifoveatus** Kieffer
  Exallonyx trifoveata Kieffer, 1908: 334

  DISTRIBUTION. Europe, South Africa, North America, Hawaii, Australia, New Zealand: AK.

  HOSTS. Townes (1981) suggests that it parasitises staphylinids in compost heaps. Hosts unknown in New Zealand.

  ANNOTATION. Kieffer (1904) listed *trifoveatus* as a new species but gave no description.

FUSTISERPHUS Townes genus

- **Fustiserphus intrudens** (Smith)
  Proctotrupes intrudens Smith, 1878: 5. Holotype: Canterbury; BMNH
  Proctotrypes(!) *obliquus* Ashmead, 1893: 338. Holotype: "Texas"; USNM
  Phaenoserphus intrudens (Smith)
  Phaenoserphus obliquus (Ashmead)

  DISTRIBUTION. New Zealand: CL, HB / SD, NN, BR, WD, 'Canterbury', SI.

  HOSTS. Not known.

  ANNOTATION. Townes & Townes (1981) cites the holotype locality of *obliquus* Ashmead as incorrect, presumably on the grounds that it is a widespread and common species found only in New Zealand.

- **Fustiserphus longiceps** Townes
  Fustiserphus longiceps Townes in Townes & Townes, 1981: 50. Holotype: BP, Rotorua; TC

  DISTRIBUTION. New Zealand: BP, WN.

  HOSTS. Not known.

OXYSERPHUS Masner genus

HOSTS. Curculionidae: *Scolopterus aequus, Oreocharis* sp., *Incentia nubila, Protolobus obscurus.* Anthribidae: *Anthribus* sp.

- **Oxyserphus baini** Townes
  Oxyserphus baini Townes in Townes & Townes, 1981: 42. Holotype: BP, Rotorua; TC

  DISTRIBUTION. New Zealand: BP.

  HOSTS. Not known.

- **Oxyserphus maculipennis** (Cameron)
  Proctotrupes maculipennis Cameron, 1888: 174. Holotype: BR, Greymouth; BMNH
  Serphus maculipennis (Cameron)
  Proctotrypes maculipennis (Cameron)

  DISTRIBUTION. New Zealand: / NN, BR, WD, FD.

  HOST. Curculionidae: *Anagotus helmsi* (in *Nothofagus menziesii*).

- **Oxyserphus pediculatus** Townes
  Oxyserphus pediculatus Townes in Townes & Townes, 1981: 36. Holotype: BP, Rotorua; TC

  DISTRIBUTION. New Zealand: BP.

  HOSTS. Not known.

DIAPRIIDAE family

Mainly endoparasitoids of dipterous pupae. Taxonomy: Early, 1978, 1980.

AMBOSITRINAE subfamily

Taxonomy & Biology : Naumann, 1988. See Appendix VII.

BETYLA Cameron genus

- **Betyla fulva** Cameron
  Betyla fulva Cameron, 1889: 13. Holotype: BR, Greymouth; BMNH
  Tanyzonus bolitophilae Marshall, 1892: 276. Holotype: WN, Botanical Gardens; ?lost

  DISTRIBUTION. New Zealand: WN / NN, BR.

  HOST. Mycetophilidae: *Arachnocampa luminosa.*

  ANNOTATION. Taxonomy: Naumann, 1982. Biology: Hudson, 1892.

PARABETYLA Brues genus

- **Parabetyla spinosa** Brues
  Parabetyla spinosa Brues, 1922: 224. Holotype: NN, Nelson; NZAC

  DISTRIBUTION. New Zealand: / NN, NC.

  HOSTS. Not known.

  ANNOTATION. Taxonomy: Naumann, 1982.

BELYTINAE subfamily

GLADICAUDA Early genus

- **Gladicauda aucklandica** Early
  Gladicauda aucklandica Early, 1980: 168. Holotype: Auckland Islands; NZAC

  DISTRIBUTION. New Zealand: Auckland Island.

  HOSTS. Not known.

STYLACLISTA Dodd genus

- **Stylaclista quasimodo** Early
  Stylaclista quasimodo Early, 1980: 166. Holotype: Snares Island; NZAC

  DISTRIBUTION. New Zealand: The Snares.

  HOST. ?Cecidomyiidae.

DIAPRIINAE subfamily

ANTARCTOPRIA Brues genus

Taxonomy: Early, 1978.

- **Antarctopria campbellana** Yoshimoto
  Antarctopria latigaster campbellana Yoshimoto, 1964a: 507. Holotype: Campbell Island; NZAC

  DISTRIBUTION. New Zealand: Campbell Island.

  HOST. Coelopidae: ?species.

- **Antarctopria coelopae** Early
  Antarctopria coelopae Early, 1978: 210. Holotype: KA, Kaikoura; NZAC

  DISTRIBUTION. New Zealand: / KA, MC, DN, SL, SI, Chatham Islands, The Snares, Auckland Island.

  HOSTS. Coelopidae: *Baeopterus robustus, Chaetocoelopa littoralis, Coelopa debilis, Protocoelopa philpotti.* Calliphoridae: *Xenocalliphora eudyptis, Calliphora vicina.*

- **Antarctopria diomedeae** Early
  Antarctopria diomedeae Early, 1978: 223. Holotype: Bounty Island; NZAC

  DISTRIBUTION. New Zealand: Bounty Island.

  HOSTS. Canaceidae: *Macrocanace littorea.* Sphaeroceridae: *Leptocera* sp.

- **Antarctopria latigaster** Brues
  Antarctopria latigaster Brues, 1920: 28. Holotype: Macquarie Island.; AMSA

  DISTRIBUTION. New Zealand: / DN, SI. Widespread on Subantarctic Islands.

  HOSTS. Coelopidae: *Coelopa debilis*. Canaceidae: *Macrocanace australis*.

- **Antarctopria rekohua** Early
  Antarctopria rekohua Early, 1978: 218. Holotype: Chatham Island; NZAC

  DISTRIBUTION. New Zealand: Chatham Islands.

  HOSTS. Not known.

ENTOMACIS Foerster genus

- **Entomacis subaptera** Early
  Entomacis subaptera Early, 1980: 163. Holotype: The Snares; NZAC

  DISTRIBUTION. New Zealand: The Snares.

  HOSTS. Not known.

HEMILEXOMYIA Dodd genus

- **Hemilexomyia spinosa** Early
  Hemilexomyia spinosa Early, 1980: 160. Holotype: The Snares; NZAC

  DISTRIBUTION. New Zealand: The Snares, Auckland Island.

  HOST. Muscidae: ?*Limnohelina* sp.

MALVINA Cameron genus

- **Malvina helosciomyzae** Early & Horning
  Malvina helosciomyzae Early & Horning, 1978: 235. Holotype: BR, Springs Junction; NZAC

  DISTRIBUTION. New Zealand: / BR.

  HOST. Helosciomyzidae: *Helosciomyza subalpina*.

- **Malvina insulae** Early
  Malvina insulae Early, 1980: 158. Holotype: The Snares; NZAC

  DISTRIBUTION. New Zealand: The Snares.

  HOSTS. Not known.

- **Malvina punctata** Cameron
  Malvina punctata Cameron, 1889: 13. Holotype: BR, Greymouth; BMNH

  DISTRIBUTION. New Zealand: / NN, BR, WD.

  HOSTS. Not known.

- **Malvina quadriceps** (Smith)
  Spilomicrus quadriceps Smith, 1878: 6. Holotype: "Otago"; BMNH

  DISTRIBUTION. New Zealand: "Otago".

  HOSTS. Not known.

PROBETYLA Brues genus

- **Probetyla subaptera** Brues
  Probetyla subaptera Brues, 1922: 223. Holotype: NN, Nelson; NZAC

  DISTRIBUTION. New Zealand: / NN.

  HOSTS. Not known.

SPILOMICRUS Westwood genus

- **Spilomicrus barnesi** Early & Horning
  Spilomicrus barnesi Early & Horning, 1978: 231. Holotype: WN, Rimutaka Forest Park; NZAC

  DISTRIBUTION. New Zealand: WO, WN / BR.

  HOST. Sciomyzidae: *Neolimnia tranquilla*.

- **Spilomicrus carolae** Early
  Spilomicrus carolae Early, 1980: 155. Holotype: The Snares; NZAC

  DISTRIBUTION. New Zealand: The Snares.

  HOSTS. Not known.

- **Spilomicrus pilgrimi** Early
  Spilomicrus pilgrimi Early, 1978: 224. Holotype: The Snares; NZAC

  DISTRIBUTION. New Zealand: The Snares .

  HOST. "Small acalypterate fly".

PLATYGASTRIDAE family

Endoparasitoids, mainly of Diptera.

INOSTEMMATINAE subfamily

APHANOMERUS Perkins genus

- **Aphanomerus pusillus** Perkins
  Aphanomerus pusillus Perkins, 1905: 203

  DISTRIBUTION. Australia, New Zealand.

  HOST. Parasitises host eggs. Flatidae: *Siphanta acuta*.

INOSTEMMA Haliday genus

- **Inostemma boscii** (Jurine)
  Psilus boscii Jurine, 1807: 318

  DISTRIBUTION. Palaearctic, New Zealand: AK.

  HOSTS. Parasitises cecidomyiid larvae, ?species.

  ANNOTATION. Biology: Myers, 1927.

METACLISIS Foerster genus

- **Metaclisis oleariae** (Maskell)
  Eurytoma oleariae Maskell, 1889: 255. Holotype: New Zealand; ?deposition
  Monocrita oleariae (Maskell)

  DISTRIBUTION. New Zealand.

  HOST. "Cecidomyiidae" on *Olearia furfuracea*.

  ANNOTATION. Taxonomy & Biology: Gahan, 1924a.

PLATYGASTRINAE subfamily

PLATYGASTER Latreille genus

- **Platygaster hiemalis** Forbes
  Platygaster hiemalis Forbes, 1888: 39
  Platygaster minutus Lindeman

  DISTRIBUTION. Europe, North Africa, North America, New Zealand.

  HOSTS. Parasitises host larvae. Cecidomyiidae: *Mayetiola destructor*.

  ANNOTATION. Introduced into New Zealand from Europe in 1892 for the control of hessian fly (Miller, 1936; Valentine, 1967b).

- **Platygaster demades** Walker
  Platygaster demades Walker, 1835b: 249
  Misocyclops marchali (Kieffer)
  Misocyclops ornatus (Kieffer)
  Prosactogaster demades (Walker)

  DISTRIBUTION. Europe, New Zealand.

HOSTS. Cecidomyiidae: *Dasyneura mali, D. pyri.*

ANNOTATION. Introduced into New Zealand from France and Europe between 1925 and 1929 for the control of pear and apple leafcurling midge (Miller, 1926a,b; 1928b; Dumbleton, 1936). Biology: Myers, 1927; Dumbleton, 1934b.

SCELIONIDAE family

Parasitoids of insect eggs. Taxonomy: Masner, 1976.

SCELIONINAE subfamily

ARCHAEOTELEIA Masner genus

- **Archaeoteleia novaezealandiae** Masner

  Archaeoteleia novaezealandiae Masner, 1968: 654. Holotype: NN, Roding Valley, Nelson; NZAC

DISTRIBUTION. New Zealand: / NN, BR, WD.

HOSTS. Orthoptera: Raphidophoridae species.

BAEUS Haliday genus

- **Baeus seminulum** Haliday

  Baeus seminulum Haliday, 1883: 270

DISTRIBUTION. ?Cosmopolitan, New Zealand.

HOSTS. Arachnida: Parasitises host eggs, ?species.

CALLISCELIO Ashmead genus

- **Calliscelio teleogrylli** Hill

  Calliscelio teleogrylli Hill, 1983: 57. Holotype: WO, Waitakaruru; NZAC

DISTRIBUTION. New Zealand: ND, AK, WO.

HOSTS. Parasitises host eggs. Gryllidae: *Teleogryllus commodus.*

ANNOTATION. Taxonomy & Biology: Hill, 1983.

HOPLOGRYON Ashmead genus

- **Hoplogryon novaezealandiae** Brues

  Hoplogryon novaezealandiae Brues, 1922: 219. Holotype: NN, Mt Arthur; NZAC

DISTRIBUTION. New Zealand: / NN.

HOSTS. Not known.

NEOBAEUS Austin genus

Endemic genus.

- **Neobaeus novazealandensis** Austin

  Neobaeus novazealandensis Austin, 1988:176. Holotype: FD, nr Homer Tunnel; NZAC

DISTRIBUTION. New Zealand: AK, BP, WA, WN / MB, SD, NN, MC, WD, CO, FD.

HOSTS. ? spider eggs in moss.

PARAGRYON Kieffer genus

- **Paragryon castaneus** Brues

  Paragryon castaneus Brues, 1922: 220. Holotype: NN, Mt Arthur; NZAC

DISTRIBUTION. New Zealand: / NN.

HOSTS. Not known.

PROBARYCONUS Kieffer genus

- **Probaryconus dubius** (Nixon)

  Procacus dubius Nixon, 1931: 365

DISTRIBUTION. South Africa, New Zealand: WO.

HOSTS. Parasitises host eggs. Gryllidae: *Teleogryllus commodus.*

ANNOTATION. Taxonomy & Biology: Hill, 1983.

TELENOMINAE subfamily

TRISSOLCUS Ashmead genus

- **Trissolcus basalis** (Wollaston)

  Telenomus basalis Wollaston, 1858: 25
  Microphanurus basalis (Wollaston)
  Asolcus (Microphanurus) basalis (Wollaston)
  Asolcus basalis (Wollaston)

DISTRIBUTION. Africa, West Indies, Pacific, Australia, New Zealand.

HOSTS. Pentatomidae: *Monteithiella humeralis , Cermatulus nasalis, Cuspicona simplex, Dictyotus caenosus, Glaucias amyoti, Nezara viridula, Oechalia schellembergii.*

ANNOTATION. Introduced into New Zealand from Australia in 1949 for the control of green vegetable bug (Cumber, 1951b). Biology: Cumber, 1953b, 1964; Early, 1984.

CERAPHRONOIDEA superfamily

MEGASPILIDAE family

Parasitoids of a wide range of hosts.

MEGASPILINAE subfamily

DENDROCERUS Ratzeburg genus

All species secondary parasitoids of aphids through Braconidae and Alloxystinae. Taxonomy: Dessart, 1972; Fergusson, 1980.

- **Dendrocerus aphidum** (Rondani)

  Macrostigma aphidum Rondani, 1877: 184

DISTRIBUTION. Europe, Japan, South America, Australia, New Zealand.

HOST. Braconidae in Aphididae: *Aphidius eadyi.*

ANNOTATION. Biology: Dessart & Walker, 1981.

- **Dendrocerus carpenteri** (Curtis)

  Ceraphron carpenteri Curtis, 1829: 249
  Lygocerus niger (Howard)
  Dendrocerus (Macrostigma) carpenteri (Curtis)

DISTRIBUTION. Europe, India, China, Japan, North and South America, Australia, New Zealand.

HOSTS. Braconidae in Aphididae: *Diaeretiella rapae, Aphidius eadyi.*

ANNOTATION. Biology: Valentine, 1975a; Walker & Cameron, 1981.

- **Dendrocerus laticeps** (Hedicke)

  Atritomellus laticeps Hedicke, 1929: 59

DISTRIBUTION. Europe, China, Japan, New Zealand.

HOSTS. Braconidae in Aphididae. Hosts not known in New Zealand.

TRICHOSTERESIS Foerster genus

- **Trichosteresis glaber** (Boheman)

  Ceraphron glaber Boheman, 1832: 328

DISTRIBUTION. Palaearctic, New Zealand.

HOSTS. Not known.

LAGYNODINAE subfamily

LAGYNODES Foerster genus

- **Lagynodes hecaterapterus** Dessart

Lagynodes hecaterapterus Dessart, 1981 : 170. Holotype: SL, Owaka, Table Hill Reserve; NZAC

DISTRIBUTION. New Zealand: ND, AK, WN / SL.

HOSTS. Not known.

- **Lagynodes velutinus** Dessart & Masner

Lagynodes velutinus Dessart & Masner, 1977 (in Dessart, 1977): 318. Holotype: ND, Warrawarra S.F., Hopianga [Hokianga]; NZAC

DISTRIBUTION. New Zealand: ND.

HOSTS. Not known.

APOCRITA (ACULEATA) suborder

The Aculeata are traditionally shown as a division of Hymenoptera, based on their loss of the ovipositor as an egg-placing device and its development into a venom–transmitting function. The higher classification of this group has never been static and is subjected to a great deal of discussion. The system adopted here is according to Gauld & Bolton, 1988.

CHRYSIDOIDEA superfamily

BETHYLIDAE family

CHILEPYRIS Evans genus

- **Chilepyris platythelys** Sorg &Walker

Chilepyris platythelys Sorg & Walker, 1989: 1484. Holotype: AK, Northcote; NZAC

DISTRIBUTION. New Zealand: AK.

HOSTS. Anobiidae: *Hadrobregmus magnus, ?Hadrobregmus australiensis.*

ANNOTATION. Taxonomy & Biology: Sorg & Walker, 1988.

DRYINIDAE family

Taxonomy: Olmi, 1984.

GONATOPODINAE subfamily

DICONDYLUS Haliday genus

- **Dicondylus alpinus** (Gourlay)

Neogonatopus alpinus Gourlay, 1954: 4. Holotype: NN, Beeby's Knob; NZAC

DISTRIBUTION. New Zealand: / NN.

HOST. Cicadellidae: *?Arawa variegata* .

GONATOPUS Ljungh genus

Larvae begin development internally; in later stages body is external but feeding through intersegmental tissue of host abdomen.

- **Gonatopus zealandicus** Olmi

Gonatopus zealandicus Olmi, 1984: 1776. Holotype: CO, Kawarau Gorge; NZAC

Haplogonatopus sp.

DISTRIBUTION. New Zealand: / CO.

HOSTS. Fulgoridae: *Nilaparvata myersi, Sulix tasmanii.*

EMBOLEMIDAE family

Represented in New Zealand, but no species described. Taxonomy: Valentine & Walker, 1983.

VESPOIDEA superfamily

EUMENIDAE family

ANCISTOCERUS Wesmael genus

- **Ancistocerus gazella** (Panzer)

Vespa gazella Panzer, 1798: 10

DISTRIBUTION. Europe, North America, New Zealand: AK.

ANNOTATION. First discovered in the Auckland region in 1988 (Berry, 1989). Provisions nest with lepidopterous larvae.

FORMICIDAE family

Taxonomy & Biology: Forel, 1905; Brown, 1958; Wilson & Taylor, 1967. Biology: Smith, 1896; Cumber, 1959; Taylor, 1961; Don, 1974.

MYRMECIINAE subfamily

MYRMECIA Fabricius genus

- **Myrmecia brevinoda** Forel

Myrmecia forficata var. *brevinoda* Forel, 1910: 2

DISTRIBUTION. Australia, New Zealand: AK.

PONERINAE subfamily

AMBLYOPONE Erichson genus

- **Amblyopone australis** Erichson

Amblypone australis Erichson, 1842: 260

Amblyopone cephalotes Smith, 1876b: 490. Holotype: AK, Auckland; BMNH

Amblyopone cephalotes var. *maculata* Stitz, 1911: 351. Holotype: New Zealand; ?ZMHU

Amblyopone australis var. *cephalotes* (Smith)

DISTRIBUTION. New Guinea, Vanuatu, Australia, New Zealand: North Island.

- **Amblyopone saundersi** Forel

Amblyopone saundersi Forel, 1892: 336. Holotype: New Zealand; MHN

Stigmatomma saundersii (Forel)

Stigmatomma (Fulakora) saundersi (Forel)

DISTRIBUTION. Australia, New Zealand: North Island and South Island, Chatham Islands.

ANNOTATION. Associated with *Chilopoda* (P.M. Johns pers. comm.).

BRACHYPONERA Emery genus

- **Brachyponera luteipes** (Mayr)

Ponera luteipes Mayr, 1862: 722

Brachyponera chinensis (Emery)

DISTRIBUTION. Japan, China, New Zealand: AK, CL.

DISCOTHYREA Roger genus

- **Discothyrea antarctica** Emery

Discothyrea antarctica Emery, 1895a: 266. Holotype: AK, Hunua Range; ?MCSN

DISTRIBUTION. New Zealand: North Island and South Island

ANNOTATION. Also described by Emery (1895b) but 1895a takes precedence.

HETEROPONERA Mayr genus

- **Heteroponera brouni** (Forel)
  Ectatomma (Acanthoponera) brownii Forel, 1892: 335. Holotype: AK, Drury, Auckland; ? NMNZ or MHN
  Acanthoponera (Anacanthoponera) brouni kirki Wheeler, 1923: 184. Holotype: AK, Waitakere Forest; ? MCNZ or BMNH
  Acanthoponera brounii (!) (Forel)
  Acanthoponera brouni (Forel)
  Acanthoponera (Anacanthoponera) brouni (Forel)

  DISTRIBUTION. New Zealand: ND, AK, CL, WO, BP.

HYPOPONERA Santschi genus

- **Hypoponera eduardi** (Forel)
  Ponera eduardi Forel, 1894b: 15
  Ponera antipodum Forel, 1895: 43. Holotype: BP, Rotorua: MHN

  DISTRIBUTION. Mediterranean, New Zealand: North Island. Apparently absent from southern South Island.

  ANNOTATION. Biology: Spiller, 1963.

- **Hypoponera punctatissima** (Roger)
  Ponera punctatissima Roger, 1859: 246
  Ponera gleadowi Forel

  DISTRIBUTION. Nearly cosmopolitan in warmer parts of the world. New Zealand: Kermadec Islands.

MESOPONERA Emery genus

- **Mesoponera castaneicolor** (Dalla Torre)
  Ponera castaneicolor Dalla Torre, 1893: 38.
  Ponera castanea Smith, 1876b: 489 (non *P. castanea* Mayr, 1868). Holotype: BP, Tairua, nr. Mercury Bay; BMNH

  DISTRIBUTION. New Zealand: North Island / SD, NN, BR, WD.

  ANNOTATION. A sibling of *M. castanea* which has winged queens (Wilson & Taylor, 1967).

PACHYCONDYLA Smith genus

- **Pachycondyla castanea** (Mayr)
  Ponera castanea Mayr, 1865: 69. Holotype: AK, Auckland; NHMW
  Euponera (Mesoponera) castanea var. *striata* Stitz, 1911: 356. Holotype: AK, Auckland; ZMHU
  Euponera (Mesoponera) castanea (Mayr)
  Euponera castanea (Mayr)
  Tonera(!) *castanea* (Mayr)
  Ponera (Mesoponera) castanea (Mayr)
  Mesoponera castanea (Mayr)

  DISTRIBUTION. New Zealand: North Island.

PONERA Latreille genus

- **Ponera leae** Forel
  Ponera leae Forel, 1913: 175

  DISTRIBUTION. Australia, New Zealand: ND.

  ANNOTATION. Biology: Taylor, 1959c. Taxonomy: Taylor, 1967.

RHYTIDOPONERA Mayr genus

- **Rhytidoponera chalybaea** Emery
  Rhytidoponera impressa var. *chalybaea* Emery, 1901: 51

  DISTRIBUTION. Australia, New Zealand: AK, HB.

- **Rhytidoponera metallica** (Smith)
  Ponera metallica Smith, 1858: 94

  DISTRIBUTION. Australia, New Zealand: AK.

MYRMICINAE subfamily

HUBERIA Forel genus

- **Huberia brouni** Forel
  Huberia brounii Forel, 1895: 41. Holotype: BP, Rotorua, MHN
  Huberia braumi(!) Forel

  DISTRIBUTION. New Zealand: North Island and South Island.

- **Huberia striata** (Smith)
  Tetramorium striatum Smith, 1876a: 481. Holotype: Kelly's Creek, WD or Peel Forest, SC; BMNH
  Huberia striata var. *rufescens* Forel, 1892: 339. Holotype: New Zealand; MHN
  Hubertia (!) *striata* (Smith)

  DISTRIBUTION. New Zealand: North Island and South Island.

  ANNOTATION. Biology: Moore, 1940.

MAYRIELLA Forel genus

- **Mayriella abstinens** Forel
  Mayriella abstinens Forel, 1902: 452

  DISTRIBUTION. Australia, New Zealand: AK.

MONOMORIUM Mayr genus

- **Monomorium antarcticum** (Smith) (southern ant)
  Atta antarctica F. Smith, 1858: 167. Holotype: New Zealand; BMNH
  Monomorium fulvum Mayr, 1862: 754. Type: New Zealand; NHMW or BMNH
  Tetramorium nitidum Smith, 1876a: 480. Holotype: SC, Peel Forest; BMNH
  Monomorium suteri Forel, 1892: 340. Type: MC, Ashburton; ?MHN or BMNH
  Monomorium integrum Forel, 1894a: 228. Holotype: MC, Ashburton; ?MHN
  Monomorium succineum Stitz, 1911: 367. Holotype: AK, Auckland: ZMHU
  Aphenogaster antarctica (Smith)
  Formica antarctica (Smith)
  Monomorium antarcticum (Smith)
  Monomorium nitidum (Smith)
  Monomorium (Notomyrmex) antarcticum (Smith)
  Monomorium (Notomyrmex) integrum (Forel)
  Monomorium (Notomyrmex) nitidum (Smith)
  Monomorium (Notomyrmex) succineum (Stitz)
  Monomorium (Notomyrmex) suteri (Forel)
  Chelaner antarcticus (Smith)
  Chelaner antarctica (White)

  DISTRIBUTION. New Zealand: North Island and South Island, Chatham Islands, Kermadec Islands.

  ANNOTATION. Biology: Moore, 1940.

- **Monomorium antipodum** Forel (tiny brown ant)
  Monomorium antipodum Forel, 1901a: 377. Holotype: AK, Auckland; MHN
  Monomorium (Notomyrmex) antipodum (Forel)
  Monomorium (Lampromyrmex) antipodum (Forel)

  DISTRIBUTION. New Zealand: ND, AK, CL, GB, BP, HB, WN / NN.

- **Monomorium floricola** (Jerdon)
  Atta floricola Jerdon, 1851: 107

  DISTRIBUTION. Tramp species in tropical regions of the world, and temperate zones in heated buildings (of Indian origin). New Zealand: Kermadec Islands.

• **Monomorium latinode** Mayr
Monomorium latinode Mayr, 1872: 152

DISTRIBUTION. Widespread around Indian Ocean and on some Pacific Islands. New Zealand: AK, WN.

• **Monomorium orientale** Mayr (oriental ant)
Monomorium orientale Mayr, 1878: 670
Chelaner orientale (Mayr)

DISTRIBUTION. India, New Zealand: AK.

ANNOTATION. New Zealand material not confirmed as belonging to this species (B. Bolton, pers. comm.).

• **Monomorium pharaonis** (Linnaeus) (pharaoh's ant)
Formica pharaonis Linnaeus, 1758: 580
Chelaner pharaonis (Linnaeus)

DISTRIBUTION. Cosmopolitan tramp species of Indian origin. New Zealand: AK, WO, BP, WN.

• **Monomorium smithii** Forel
Monomorium smithii Forel, 1892: 342. Type: MC, Ashburton; ?MHN, or BMNH
Monomorium (Notomyrmex) smithi (Forel)

DISTRIBUTION. New Zealand: North Island and South Island.

ANNOTATION. Biology: Taylor, 1959b.

• **Monomorium talpa** Emery
Monomorium talpa Emery, 1911: 252

DISTRIBUTION. Extremely widespread in Indo-Australian region, New Zealand: HB.

ORECTOGNATHUS Smith genus

• **Orectognathus antennatus** Smith
Orectognathus antennatus Smith, 1853: 228. Holotype: AK, Auckland; BMNH

DISTRIBUTION. Australia, New Zealand: ND, AK, CL.

ANNOTATION. Biology: Cumber, 1968. Taxonomy: Taylor, 1977.

PHEIDOLE Westwood genus

• **Pheidole megacephala** (Fabricius) (bigheaded ant)
Formica megacephala Fabricius, 1793: 361

DISTRIBUTION. Pantropical tramp species of African origin. In heated buildings of temperate zones. New Zealand.

• **Pheidole variabilis** Mayr
Pheidole variabilis Mayr, 1876b: 103

DISTRIBUTION. Australia, New Zealand: ND, AK.

• **Pheidole vigilans** (Smith)
Atta vigilans Smith, 1858: 166
[*Pheidole yarrensis* Forel]

DISTRIBUTION. Australia, New Zealand: ND.

ANNOTATION. Taxonomy & Biology: Brown, 1971.

STRUMIGENYS Smith genus

Biology: Taylor, 1968.

• **Strumigenys perplexa** (Smith)
Orectognathus perplexus Smith, 1876b: 491. Holotype: CL, Tairua; BMNH
Strumigenys antarctica Forel, 1892: 338. Holotype: AK, Drury; MHN
Strumigenys (Strumigenys) perplexa (Smith)

DISTRIBUTION. Australia, Lord Howe Island, Norfolk Island, New Zealand: ND, AK, CL, WO, BP, HB.

• **Strumigenys xenos** Brown
Strumigenys xenos Brown, 1955: 182

DISTRIBUTION. Australia, New Zealand: ND.

ANNOTATION. Biology: Taylor, 1968.

TETRAMORIUM Mayr genus

• **Tetramorium bicarinatum** (Nylander)
Myrmica bicarinata Nylander, 1846: 1061
[*Tetramorium guineense* (Fabricius)]

DISTRIBUTION. Pantropical species; of S.E. Asian origin. New Zealand: AK, BP.

• **Tetramorium grassii** Emery
Tetramorium grassii Emery, 1895c: 37

DISTRIBUTION. South Africa, New Zealand: AK, CL, BP.

DOLICHODERINAE subfamily

Biology: Faulds, 1970.

IRIDOMYRMEX Mayr genus

• **Iridomyrmex anceps** (Roger)
Formica anceps Roger, 1863: 164

DISTRIBUTION. Extremely widespread in Oriental and Indo-Australian regions. New Zealand: AK, CL, BP, HB.

• **Iridomyrmex darwinianus** (Forel)
Tapinoma (Doleromyrma) darwinianum Forel, 1907: 28

DISTRIBUTION. Australia, New Zealand: AK / MC.

ANNOTATION. Biology: Taylor, 1959a; Keall, 1979; Keall & Somerfield, 1980 .

• **Iridomyrmex glaber** (Mayr)
Hypoclinea glabra Mayr, 1862: 705

DISTRIBUTION. Oriental, Australia, New Zealand: ND, AK, BP, GB.

TECHNOMYRMEX Mayr genus

• **Technomyrmex albipes** (Smith) (whitefooted house ant)
Formica (Tapinoma) albipes Smith, 1861: 38

DISTRIBUTION. S.E. Asia, Pacific, New Zealand: ND, AK, CL, HB, WN / NN.

FORMICINAE subfamily

CAMPONOTUS Mayr genus

COLOBOPSIS Mayr subgenus

• **Camponotus (Colobopsis) newzealandicus** Donisthorpe
Camponotus (Colobopsis) newzealandicus Donisthorpe, 1940: 47. Holotype: New Zealand; BMNH

ANNOTATION. It is doubtful that this species is endemic to New Zealand or even an established species (Brown, 1958).

PARATRECHINA Motschulsky genus

• **Paratrechina vaga** (Forel)
Prenolepis obscura st. *vaga* Forel, 1901b: 26
[*Prenolepis longicornis* (Latreille)]
[*Paratrechina longicornis* (Latreille)]

DISTRIBUTION. Pacific, Australia, New Zealand: AK, WO, BP.

PLAGIOLEPIS Mayr genus

• **Plagiolepis alluaudi** Emery
Plagiolepis alluaudi Emery, 1894: 71

DISTRIBUTION. E. Africa, Seychelles Islands, New Zealand: Kermadec Islands.

PROLASIUS Forel genus

- **Prolasius advena** (Smith) (small brown bush ant)
  Formica advena Smith, 1862: 53. Holotype: New Zealand; BMNH
  Formica zealandica F. Smith, 1878: 6. Holotype: Otago; BMNH
  Prolasius advena var. *zealandica* Wheeler
  Prenolepis advena (Smith)
  Lasius (Prolasius) advena (Smith)
  Lasius advena (Smith)
  Melophorus advena (Smith)
  Lasius zealandica (Smith)
  Melophorus (Prolasius) advena (Smith)
  Colobopsis zealandica (Smith)
  Prolasius zealandica (Smith)

  DISTRIBUTION. New Zealand: North Island and South Island.

MUTILLIDAE family

MUTILLINAE subfamily

EPHUTOMORPHA André genus

- **Ephutomorpha bivulnerata** (André)
  Mutilla bivulnerata André, 1901: 470

  DISTRIBUTION. Australia, New Zealand: known only from metropolitan Auckland.

  HOSTS. Not known in New Zealand. In Australia assumed to be Colletinae (ground–nesting bees).

  ANNOTATION. Taxonomy & Biology: Valentine & Walker, 1983.

POMPILOIDEA superfamily

POMPILIDAE family

Taxonomy & Biology: Harris, 1987.

PEPSINAE subfamily

CRYPTOCHEILUS Panzer genus

- **Cryptocheilus australis** (Guérin)
  Pompilus australis Guérin, 1830: 260
  [*Salius bicolor* Fabricius]

  DISTRIBUTION. Australia, New Zealand: ND, AK.

  ANNOTATION. Accidentally introduced into New Zealand from Australia in the 1960s. Hunts pisaurid spiders.

PRIOCNEMIS Schidte genus

TRICHOCURGUS Haupt subgenus

- **Priocnemis (Trichocurgus) carbonarius** (Smith)
  Pompilus carbonarius Smith, 1855: 162. Holotype: AK, Auckland; BMNH
  Priocnemis carbonarius (Smith)
  Salius carbonarius (Smith)
  [*Salius nitidiventris* (Smith)]

  DISTRIBUTION. New Zealand: North Island and South Island.

- **Priocnemis (Trichocurgus) conformis** Smith
  Priocnemis conformis Smith, 1876a: 482. Holotype: SC, Peel Forest; BMNH
  Priocnemis marginatus Smith, 1876a: 483. Holotype: West Coast; BMNH
  Priocnemis diligens Smith, 1876a: 483. Holotype: SC, Peel Forest; BMNH
  Salius marginatus (Smith)
  Salius diligens (Smith)
  Salius conformis (Smith)
  [*Salius fugax* (Farbicius)]

  DISTRIBUTION. New Zealand: NorthIsland and South Island.

  ANNOTATION. Hunts immature and small mygalomorph spiders.

- **Priocnemis (Trichocurgus) crawi** Harris
  Priocnemis (Trichocurgus) crawi Harris, 1987: 59. Holotype: WN, Tararua Range; NZAC

  DISTRIBUTION. New Zealand: TO, WN / NN, BR, WD, MC, OL, CO, DN, FD, SL, SI.

  ANNOTATION. Nests in burrows of colletid and halictid bees.

- **Priocnemis (Trichocurgus) monachus** (Smith)
  Pompilus monachus Smith, 1855: 164. Holotype: New Zealand; BMNH
  Salius triangularis Cameron, 1898: 48. Holotype: BR, Greymouth; BMNH
  Priocnemis monachus Smith
  Salius monachus (Smith)
  Trichocurgus monachus (Smith)
  Chirodamus monachus (Smith)

  DISTRIBUTION. New Zealand: North Island and South Island.

  ANNOTATION. Usually hunts funnel-web and trapdoor spiders.

- **Priocnemis (Trichocurgus) nitidiventris** Smith
  Priocnemis nitidiventris Smith, 1878: 6. Holotype: Otago; BMNH
  Agenia huttoni Cameron, 1898: 49. Holotype: BR, Greymouth; BMNH
  Salius nitidiventris (Smith)
  Pseudagenia huttoni (Cameron)
  [*Salius carbonarius* (Smith)]

  DISTRIBUTION. New Zealand: North Island and South Island.

  ANNOTATION. A sand-nesting species hunting diurnal, errant spiders.

- **Priocnemis (Trichocurgus) ordishi** Harris
  Priocnemis (Trichocurgus) ordishi Harris, 1987: 51. Holotype: WN, Akatarawa Saddle; NZAC

  DISTRIBUTION. New Zealand: ND, BP, TO, TK, WN / NN, BR, WD, NC, MC, MK, CO, FD, DN, SL, SI.

  ANNOTATION. Hunts diurnal, errant spiders; nests in clay.

SPHICTOSTETHUS Kohl genus

- **Sphictostethus calvus** Harris
  Sphictostethus calvus Harris, 1987: 76. Holotype: SC, Kelsey's Bush, Waimate; NZAC

  DISTRIBUTION. New Zealand: ND, BP, GB, TO, TK, WN / NN, MB, BR, NC, WD, MC, SC, DN, SL, SI.

  ANNOTATION. Hunts in forest.

- **Sphictostethus fugax** (Fabricius)
  Sphex fugax Fabricius, 1775: 350. Holotype: New Zealand; BMNH

Priocnemis maculipennis Smith, 1876a: 482. Holotype: SC, Peel Forest; BMNH
Ichneumon huttonii Kirby, 1881: 44. Holotype: DN, Dunedin; BMNH
Priocnemis xenos Kirby, 1883: 200. Holotype: New Zealand; BMNH
Agenia brownii Gribodo, 1884: 280. Holotype: AK, Howick, Auckland; MCSN
Pompilus fugax (Fabricius)
Priocnemis fugax (Fabricius)
Prionocnemis xenos (Kirby)
Salius brouni (Gribodo)
Salius huttoni (Kirby)
Salius xenos (Kirby)
Salius fugax (Fabricius)
Cryptocheilus fugax (Fabricius)
Pseudagenia brownii (Gribodo)
Pseudagenia huttoni (Kirby)
Priocnemis huttoni (Kirby)

DISTRIBUTION. New Zealand: North Island and South Island.

- **Sphictostethus nitidus** (Fabricius)

Sphex nitida Fabricius, 1775: 351. Holotype: Nova Hollandia; BMNH, lost
Priocnemis wakefieldii Kirby, 1881: 39. Lectotype: New Zealand, South Island; BMNH
Pompilus nitida (Fabricius)
Salius wakefieldi (Kirby)
Chrysocurgus nitidus (Fabricius)
Chrysocurgus wakefieldi (Kirby)
Chirodamus nitida (Fabricius)
Priocnemis nitida (Fabricius)
[*Pompilus fugax* Fabricius]

DISTRIBUTION. New Zealand: North Island and South Island.

ANNOTATION. Hunts spiders on the ground or in foliage.

POMPILINAE subfamily
EPIPOMPILUS Kohl genus

- **Epipompilus insularis** Kohl

Epipompilus insularis Kohl, 1884: 57. Syntypes: New Zealand; NHMW
Pompilus epipompilus Dalla Torre, 1897: 287 (replacement name for *insularis* Kohl, 1884)
Epipompilus (Epipompiloides) insularis Kohl

DISTRIBUTION. New Zealand: North Island and South Island.

ANNOTATION. Usually hunts in sunshine. Biology: Pollard, 1982.

VESPIDAE family

Taxonomy and Biology: Clapperton et al., 1989a, b.

POLISTINAE subfamily
POLISTES Latreille genus
POLISTES Latreille subgenus

- **Polistes (Polistes) chinensis** Fabricius (Asian paper wasp)

Vespa chinensis Fabricius, 1793: 261
Polistes chinensis antennalis (Perez)

DISTRIBUTION. China, Japan, New Zealand: ND, AK, WO, CL, BP, TO, HB.

ANNOTATION. First discovered at St Heliers Bay, Auckland in 1979. New Zealand specimens have been identified by A. S. Menke as the subspecies *antennalis* (a northern form), known from China and Japan. Biology: Miller, 1984.

POLISTELLA Ashmead subgenus

- **Polistes (Polistela) humilis** (Fabricius) (Australian paper wasp)

Vespa humilis Fabricius, 1781: 461
Polistes tasmaniensis Saussure
Polistes humilis humilis (Fabricius)
[*Polistes variabilis* Fabricius]

DISTRIBUTION. Australia, Tahiti, New Zealand: well established in warmer parts of the North Island.

ANNOTATION. Biology: Cumber, 1951a; Waller, 1984

VESPINAE subfamily
VESPULA Thompson genus
VESPULA Thompson subgenus

- **Vespula (Vespula) germanica** (Fabricius) (German wasp)

Vespa germanica Fabricius, 1793: 256
Paravespula germanica (Fabricius)

DISTRIBUTION. Europe, North America, Australia, New Zealand: North Island and South Island.

ANNOTATION. Isolated records from New Zealand since the 1890s but did not established until the late 1940s. Taxonomy: Donovan, 1984. Biology: Thomas 1953, 1960; Perrott, 1974, 1975; Walton & Reid, 1976; Richards, 1978; Donovan, 1984.

- **Vespula (Vespula) vulgaris** (Linnaeus) (common wasp)

Vespa vulgaris Linnaeus, 1758: 572

DISTRIBUTION. Palaearctic, North America, Australia, New Zealand: AK, WO, BP, TO, TK, RI, WI, WN, HB, WA / NN, SD, BR, MB, KA, NC, MC, SC, CO, DN, SL.

ANNOTATION. Isolated record from Masterton in 1921 (Donovan, 1984); first confirmed establishment in 1983 at Dunedin. Taxonomy & Biology: Donovan, 1984.

APOIDEA superfamily

This superfamily has been altered as proposed by Gauld & Bolton (1988), in the sense that there is taxonomic logic in recognising the sphecoids as a family . This then gives equivalence of level of family-group taxa on a par with the rest of the Aculeata.

SPHECIDAE family

Taxonomy & Biology: Bohart & Menke, 1976; Callan, 1979.

CRABRONINAE subfamily
PODAGRITUS Spinola genus
PARECHUCA Leclerq subgenus

- **Podagritus (Parechuca) albipes** (Smith)

Rhopalum albipes Smith, 1878: 7. Holotype: New Zealand ?Otago; BMNH
Crabro albipes (Smith)
Rhopalum (Rhopalum) albipes Smith
Podagritus albipes (Smith)

DISTRIBUTION. New Zealand: / MC.

- **Podagritus (Parechuca) cora** (Cameron)
  Crabo cora Cameron, 1888: 181. Holotype: BR, Greymouth; ?deposition
  Crabro carbonarius Smith, 1856: 424. Holotype: New Zealand; BMNH
  Crabro carbonicolor Dalla Torre, 1897: 586 (replacement name for *carbonarius* Smith, 1856)
  Crabro (Rhopalum) jocosus Cameron, 1898: 43. Holotype: BR, Greymouth, BMNH
  Rhopalum carbonaria (Smith)
  Rhopalum cora (Cameron)
  Rhopalum jocosum (Cameron)
  Rhopalum (Rhopalum) cora (Cameron)

  DISTRIBUTION. New Zealand: WN / BR, WD, MC.

  ANNOTATION. Nests in sandy soil and hunts Diptera and Ephemeroptera to provision nest. Prey includes: *Eulalia chloris* (Stratiomyidae); *Dasybasis (Protodasyommia) truncata, D. (P.) viridis, Scaptia (Pseudoscione) milleri, S. (P.) montana* (Tabanidae); *Anabarhynchus bilineatus, Ectinorhynchus castaneus* (Therevidae); *Calliphora quadrimaculata* (Calliphoridae); *Pales nyctemeriana* (Tachinidae); *Deleatidium* sp. (Ephemeroptera).

- **Podagritus (Parechuca) parrotti** (Leclercq)
  Rhophalum (Rhophalum) parrotti Leclercq, 1955: 13. Holotype: WN, Wilton[s] Bush; NMNZ

  DISTRIBUTION. New Zealand: WN.

- **Podagritus (Parechuca) swalei** (Leclercq)
  Rhopalum (Rhopalum) swalei Leclercq, 1955: 12. Holotype: WO, Putavuru [Putaruru]; BMNH

  DISTRIBUTION. New Zealand: North Island and South Island.

RHOPALUM Kirby genus

APORHOPALUM Leclercq subgenus

- **Rhopalum (Aporhopalum) perforator** Smith
  Rhopalum perforator Smith, 1876a: 483. Holotype: New Zealand; BMNH
  Crabro perforator (Smith)

  DISTRIBUTION. New Zealand: WN / MC, SC.

  ANNOTATION. Nesting habits are unknown, but wasps have been observed capturing adult Lepidoptera of the families Geometridae (*Gellonia dejectaria*) and Pyralidae (*Orocrambus* sp.). Normal hosts are Diptera.

ZELORHOPALUM Leclercq subgenus

- **Rhopalum (Zelorhopalum) aucklandi** Leclercq
  Rhopalum (Zelorhopalum) aucklandi Leclercq, 1955: 14. Holotype: AK, Auckland; BMNH

  DISTRIBUTION. New Zealand: AK.

- **Rhopalum (Zelorhopalum) zelandum** Leclercq
  Rhopalum (Zelorhopalum) zealandum Leclerq, 1955: 16. Holotype: WD, Kumara, Westland; USNM

  DISTRIBUTION. New Zealand: WD.

LARRINAE subfamily

TACHYSPHEX Kohl genus

- **Tachysphex nigerrimus** (Smith)
  Tachytes nigerrimus Smith, 1856: 302. Holotype: New Zealand; BMNH
  Tachytes sericops Smith
  Tachytes depressus Saussure
  Tachytes helmsii Cameron, 1888: 182. Holotype: BR, Greymouth; ?BMNH
  Astata nigerimma(!) (Smith)
  Tachysphex depressus (Saussure)
  Tachysphex helmsii (Cameron)
  Tachysphex nigerrimus (Smith)

  DISTRIBUTION. New Zealand: North Island and South Island.

  ANNOTATION. Nests in sandy soil and hunts cockroaches to provision nests. Prey include: *Celatoblatta undulivitta, C. peninsularis* (Blattidae).

PISON Jurine genus

- **Pison morosum** Smith
  Pison morosus Smith, 1856: 317. Holotype: New Zealand; BMNH

  DISTRIBUTION. New Zealand: MC.

  ANNOTATION. Stores prey in clay cells in the vacant tunnels of wood-boring beetle larvae. Prey include *Achaearanea veruculata* (Theridiidae), *A. pustulosus* (Araneidae). Biology: Laing, 1988.

- **Pison spinolae** Shuckard (mason wasp)
  Pison spinolae Shuckard, 1837: 76
  Taranga dubia Kirby, 1883: 201. Holotype, New Zealand: BMNH
  Pison pruinosus Cameron, 1898: 44. Holotype: BR, Greymouth; BMNH
  Pison dubium (Kirby)

  DISTRIBUTION. Australia, New Zealand: North Island and South Islands.

  ANNOTATION. Builds mud nests in sheltered, undisturbed sites, particularly in houses. Its presence is announced by loud buzzing around the nest. Hunts spiders to provision nest. Prey includes: *Araneus crassus, A. laevigatus, A. viriditus, Arachnura feredayi, Argiope protensa, Cyclosa tribolata, Cyclosa* sp., *Leucage dromedoria* (Araneidae). Biology: Cowley, 1962.

- **Pison tuberculatum** Smith
  Pison tuberculatus Smith, 1869: 296. Holotype: New Zealand; BMNH

  DISTRIBUTION. New Zealand.

NYSSONINAE subfamily

ARGOGORYTES Ashmead genus

ARGOGORYTES Ashmead subgenus

- **Argogorytes (Argogorytes) carbonarius** (Smith)
  Gorytes carbonarius Smith, 1856: 366. Holotype: New Zealand; BMNH
  Gorytes trichiosoma Cameron, 1888: 180. Holotype: BR, Greymouth; ?deposition
  Argogorytes carbonarius (Smith)
  Arpactus carbonarius (Smith)
  Argogorytes trichiosoma (Cameron)

  DISTRIBUTION. New Zealand.

  ANNOTATION. A ground-nesting species which provisions its nest with late nymphal spittle bugs *Carystoterpa fingens* (Aphrophoridae).

PEMPHREDONINAE subfamily

Nest in abandoned burrows of wood-boring beetles or excavate twigs. Provision nest with thrips or Collembola.

SPILOMENA Shuckard genus

Taxonomy & Biology: Vardy, 1987.

- **Spilomena nozela** Vardy
  Spilomena nozela Vardy, 1987: 250. Holotype: ND, Poor Knights Island; NZAC

  DISTRIBUTION. Australia, New Zealand: ND, AK, WI / NN, BR, MC, DN.

  ANNOTATION. Provisions nest with *Heliothrips haemorrhoidalis* (Thysanoptera).

- **Spilomena elegantula** Turner
  Spilomena elegantula Turner, 1916: 135

  DISTRIBUTION. Australia, New Zealand: AK / NN.

  ANNOTATION. Provisions nest with *Thrips obscuratus* (Thysanoptera).

- **Spilomena emarginata** Vardy
  Spilomena emarginata, 1987: 256. Holotype: NN, Nelson; NZAC

  DISTRIBUTION. New Zealand: ND / NN.

SPHECINAE subfamily

PODALONIA Spinola genus

- **Podalonia tydei** (Le Guillou)
  Ammophila tydei Le Guillou, 1841: 319
  Ammophila tydei suspiciosa Smith
  Podolonia tydei suspiciosa (Smith)
  Podalonia suspiciosa (Smith)

  DISTRIBUTION. Australia, New Zealand: ND, WO, BP.

  ANNOTATION. First collected at Kawhia in 1975. Occurs in sandy areas. Hunts lepidopterous caterpillars to provision nests. Prey includes: *Helicoverpa armigera conferta, Agrotis innominata* (Noctuidae); *Uresiphita polygonalis maorialis* (Geometridae). Taxonomy & Biology: Faulds, 1977.

APIDAE family

Taxonomy & Biology: Michener, 1965; Donovan, 1980, 1983b.

APINAE subfamily

Taxonomy and Biology: Hopkins, 1914.

APIS Linnaeus genus

- **Apis mellifera Linnaeus** (honey bee)
  Apis mellifera Linnaeus, 1758: 576
  Apis ligustica Spinola
  Apis mellis(!) Linnaeus

  DISTRIBUTION. Cosmopolitan, New Zealand: North and South Islands.

  ANNOTATION. Apiculture: Matheson, 1984.

BOMBINAE subfamily

BOMBUS Latreille genus

Taxonomy: Hopkins, 1914; Dumbleton, 1949. Biology: Cumber, 1953a, 1954; Gurr, 1964; Donovan & Wier, 1978.

- **Bombus hortorum** (Linnaeus)(small garden bumble bee)
  Apis hortorum Linnaeus, 1761: 424
  Bombus (Megabombus) hortorum (Linnaeus)
  [*Bombyx* (!) *hortorum* var. *harrisellus* (Kirkby)]
  [*Bombus hortorum* var. *fidens* (Harris)]
  [*Bombus hortorum harrisellus* (Kirkby)]
  [*Bombus lapidarius* (Linnaeus)]

  DISTRIBUTION. Palaearctic, New Zealand: WI, WN / South Island with the exception of West Coast.

- **Bombus ruderatus** (Fabricius) (large garden bumble bee)
  Apis ruderata Fabricius, 1775: 380
  [*Bombus lucorum* (Linnaeus)]
  Bombus (Megabombus) ruderatus (Fabricius)

  DISTRIBUTION. Palaearctic , New Zealand: North Island and South Island.

- **Bombus subterraneus** (Linnaeus)(shorthaired bumble bee)
  Apis subterraneus Linnaeus, 1758: 579
  Bombus hortorum var. *subterraneus* (Linnaeus)
  Bombus subterraneus latreillellus (Kirkby)

  DISTRIBUTION. Palaearctic, New Zealand: / inland Canterbury, Otago, Southland.

- **Bombus terrestris** [of authors, not Linnaeus; application under consideration by ICZN] (large earth bumble bee)
  Apis terrestris Linnaeus, 1758: 578 (see Day 1979)
  Bombus audax (Harris)
  Bombus terrestris var. *audax* (Harris)
  Bombus terrestris var. *virginalis* (Geoffroy)

  DISTRIBUTION. Palaearctic, North Africa, New Zealand: North Island and South Island, Stewart Island.

  ANNOTATION. Biology: Cumber, 1963; Donovan, 1978.

COLLETINAE subfamily

All members of this subfamily nest in the ground.

LEIOPROCTUS Smith genus

LEIOPROCTUS Smith subgenus

- **Leioproctus (Leioproctus) boltoni** Cockerell
  Leioproctus boltoni Cockerell, 1904: 203. Holotype: New Zealand; BMNH
  Paracolletes boltoni (Cockerell)

  DISTRIBUTION. New Zealand: / MC.

- **Leioproctus (Leioproctus) hudsoni** (Cockerell)
  Paracolletes hudsoni Cockerell, 1925: 551. Holotype: TK, Mt Egmont; BMNH

  DISTRIBUTION. New Zealand: TK.

- **Leioproctus (Leioproctus) imitatus** Smith
  Leioproctus imitatus Smith, 1853: 9. Holotype: New Zealand; BMNH
  Paracolletes imitatus (Smith)

  DISTRIBUTION. New Zealand: / MC.

- **Leioproctus (Leioproctus) maorium** (Cockerell)
  Paracolletes maorium Cockerell, 1913: 276. Holotype: New Zealand; BMNH

  DISTRIBUTION. New Zealand.

- **Leioproctus (Leioproctus) maritimus** (Cockerell)
  Paracolletes maritimus Cockerell, 1936: 448. Holotype: KA, Clarence River; BMNH
  Leioproctus maritimus (Cockerell)

  DISTRIBUTION. New Zealand: / KA.

- **Leioproctus (Leioproctus) metallicus** (Smith)
  Dasycolletes metallicus Smith, 1853: 15. Holotype: New Zealand; BMNH
  Andrena trichopus White, 1874: table 7, fig. 2. Holotype: New Zealand; ?deposition
  Paracolletes metallicus (Smith)
  Leioproctus metallicus (Smith)

  DISTRIBUTION. New Zealand: / MC.

• **Leioproctus (Leioproctus) purpureus** (Smith)
Dasycolletes purpureus Smith, 1853b: 15. Holotype: New Zealand; BMNH
Paracolletes purpureus (Smith)
DISTRIBUTION. New Zealand.

• **Leioproctus (Leioproctus) vestitus** (Smith)
Dasycolletes vestitus Smith, 1876a: 485. Holotype: WN, Wellington; BMNH
Paracolletes vestitus (Smith)
Leioproctus vestitus (Smith)
DISTRIBUTION. New Zealand: WN / MC.

• **Leioproctus (Leioproctus) viridibasis** (Cockerell)
Paracolletes viridibasis Cockerell, 1936: 447. Holotype: MB, Wairau River nr Lake Rotoiti; BMNH
DISTRIBUTION. New Zealand: / MB.

NESOCOLLETES Michener subgenus

• **Leioproctus (Nesocolletes) fulvescens** (Smith)
Lamprocolletes fulvescens Smith, 1876a: 486. Holotype: New Zealand; BMNH
Paracolletes fulvescens (Smith)
Leioproctus fulvescens (Smith)
DISTRIBUTION. New Zealand: / MC.

• **Leioproctus (Nesocolletes) hirtipes** (Smith)
Dasycolletes hirtipes Smith, 1878: 7. Holotype: ?Otago; BMNH
Dasycolletes hirticeps(!) (Smith)
Paracolletes hirtipes (Smith)
DISTRIBUTION. New Zealand: ?Otago.

• **Leioproctus (Nesocolletes) monticola** (Cockerell)
Paracolletes monticola Cockerell, 1925: 551. Holotype: TK, Mt Egmont; USNM
DISTRIBUTION. New Zealand: TK.

• **Leioproctus (Nesocolletes) opacior** (Cockerell)
Paracolletes opacior Cockerell, 1936: 446. Holotype: OL, Mt Aurum, Lake Wakatipu; BMNH
DISTRIBUTION. New Zealand: / OL.

• **Leioproctus (Nesocolletes) waterhousei** (Cockerell)
Paracolletes waterhousei Cockerell, 1905a: 347. Holotype: ?New Zealand; BMNH
DISTRIBUTION. New Zealand.
ANNOTATION. Some doubt is expressed by Michener (1965) over the validity of the type locality (which bears the name New Holland). He suggests that "the name *waterhousei* was based on a specimen assumed, presumably in error, to be from Australia". This assumption is presumably based on the fact that all other species of the subgenus are found only in New Zealand.

EURYGLOSSINAE subfamily

EURYGLOSSINA Cockerell genus

EURYGLOSSINA Cockerell subgenus

• **Euryglossina (Euryglossina) proctotrypoides** Cockerell
Euryglossina (Euryglossina) proctotrypoides Cockerell, 1913: 392
DISTRIBUTION. Australia, New Zealand.

HYLAEINAE subfamily

Nest in small holes in plant stems.

HYLAEUS Fabricius genus

PROSOPISTERON Cockerell subgenus

• **Hylaeus (Prosopisteron) agilis** (Smith)
Prosopis agilis Smith, 1876a: 484. Holotype: ?Canterbury; ?BMNH
Hylaeus agilis (Smith)
DISTRIBUTION. New Zealand: ?MC.

• **Hylaeus (Prosopisteron) cameroni** (Cockerell)
Prosopis cameroni Cockerell, 1905b: 403. Holotype: New Zealand; ?deposition
Prosopis sulcifrons Cameron, 1898: 51. Holotype: BR, Greymouth; BMNH
Hylaeus cameroni (Cockerell)
DISTRIBUTION. New Zealand: / BR.

• **Hylaeus (Prosopisteron) capitosus** (Smith)
Prosopis capitosus Smith, 1876a: 485. Holotype: ?Canterbury; BMNH
Hylaeus capitosus (Smith)
DISTRIBUTION. New Zealand: / ?MC.

• **Hylaeus (Prosopisteron) hudsoni** (Cockerell)
Hylaeus hudsoni Cockerell, 1925: 552. Holotype: WN, Lake Horocohenua [Horowhenua]; ?USNM
DISTRIBUTION. New Zealand: WN.

• **Hylaeus (Prosopisteron) innocens** (Cameron)
Prosopis innocens Cameron, 1898: 52. Holotype: WD, Greymouth; ?BMNH
Hylaeus innocens (Cameron)
DISTRIBUTION. New Zealand: / WD.

• **Hylaeus (Prosopisteron) maorianus** (Cockerell)
Prosopis maoriana Cockerell, 1909: 313. Holotype: New Zealand; ?deposition
DISTRIBUTION. New Zealand.

• **Hylaeus (Prosopisteron) maorica** (Kirkaldy)
Prosopis maorica Kirkaldy, 1909: 131. Holotype: New Zealand; BMNH
Prosopis laevigata Smith, 1854: 420. Holotype: New Zealand; ?deposition
Hylaeus laevigatus (Smith)
Hylaeus (Prosopisteron) laevigatulus Michener, 1965: 123 replacement name for *laevigata* Smith, 1854
DISTRIBUTION. New Zealand.

• **Hylaeus (Prosopisteron) relegatus** (Smith)
Prosopis relegatus Smith, 1876a: 485. Holotype: ?Canterbury; BMNH
Hylaeus relegatus (Smith)
DISTRIBUTION. Australia, New Zealand: / ?MC.

HYLEOIDES Smith genus

• **Hyleoides concinna** (Fabricius)
Vespa concinna Fabricius, 1775: 367
DISTRIBUTION. Australia, New Zealand: GB, HB.
ANNOTATION. Taxonomy: Houston, 1975. Taxonomy & Biology: Donovan, 1983a.

HALICTINAE subfamily

All species nest in the ground.

LASIOGLOSSUM Curtis genus

AUSTREVYLAEUS Michener subgenus

- **Lasioglossum (Austrevylaeus) huttoni** (Cameron)
  Halictus huttoni Cameron, 1900: 17. Holotype: MC, Christchurch; BMNH

  DISTRIBUTION. New Zealand: / MC.

- **Lasioglossum (Austrevylaeus) smithii** (Dalla Torre)
  Halictus familiaris Smith, 1876a: 486. Holotype: New Zealand; ?deposition
  Halictus smithii Dalla Torre, 1896: 85. Holotype: ?Canterbury; ?deposition (Replacement name for *familiaris* Smith, 1876)

  DISTRIBUTION. New Zealand: / ?Canterbury.

- **Lasioglossum (Austrevylaeus) sordidum** (Smith)
  Halictus sordidum Smith, 1853: 56. Holotype: New Zealand; BMNH
  Lasioglossum sordidum (Smith)

  DISTRIBUTION. New Zealand: / MC.

NOMIINAE subfamily

NOMIA Latreille genus

ACUNOMIA Cockerell subgenus

- **Nomia (Acunomia) melanderi** Cockerell (alkali bee)
  Nomia melanderi Cockerell, 1906: 279

  DISTRIBUTION. North America, New Zealand: / MC.

  ANNOTATION. Introduced into New Zealand from Utah in 1964 for lucerne pollination. Established in 1969 (Donovan, 1979a). Biology: Donovan, 1975a.

MEGACHILINAE subfamily

MEGACHILE Latreille genus

EUTRICHARAEA Thompson subgenus

- **Megachile (Eutricharaea) rotundata** (Fabricius) (leafcutter bee)
  Apis rotundata Fabricius, 1787: 303
  Megachile rotundata (Fabricius)
  [*Megachile pacifica* (Panzer)]

  DISTRIBUTION. Canada, New Zealand: / MC.

  ANNOTATION. Introduced into New Zealand from Canada in 1971 for lucerne pollination (Donovan, 1974). Biology: Donovan, 1975b.

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APPENDIX I

Species introduced into New Zealand for biological control but not released

BRACONIDAE

Apanteles plutellae Kurdjumov

Introduced into New Zealand from England in 1937 for the control of diamondback moth. Miller (1938) remarked that *A. plutellae* "failed to develop" and was not released. Parrott (1954b, 1964) refers to "three specimens without data in the Cawthron Institute collections" identified as *A. plutellae*. No specimens have been located under that name in NZAC, but it is possible that these three specimens were vouchers.

Phanerotoma fasciata Provancher

Introduced into New Zealand (as *tibialis*) from an unknown source from 1932 to 1934 (Dumbleton, 1936)

ICHNEUMONIDAE

Megarhyssa emarginatoria (Thunberg)

Introduced into New Zealand from Europe in 1963 for the control of sirex wood wasp (Clausen, 1978).

Megarhyssa praecelleus (Tosq.)

Introduced into New Zealand from Japan for the control of sirex wood wasp (Clausen, 1978).

Rhyssa amoena Gravenhorst

Introduced into New Zealand from Europe for the control of sirex wood wasp (Clausen, 1978).

Rhyssa alaskensis Ashmead

Introduced into New Zealand from California for the control of sirex wood wasp (Clausen, 1978).

Scambus brevicornis Gravenhorst

Introduced (under the generic name *Ephialtes*) into New Zealand from France in 1955 for the control of *Coleophora* (Stuart, 1958).

ENCYRTIDAE

Copidosoma desantisi Annecke & Mynhardt

Introduced into New Zealand from Australia in 1949 for the control of ?potato tuber moth (Noyes, 1988).

MYMARIDAE

Anaphes atomarius (Brèthes)

Introduced into New Zealand in 1966 (as *Patasson atomarius*) from Argentina for the control of Argentine stem weevil (Clausen, 1978).

IBALIDAE

Ibalia drewseni Borries

Introduced into New Zealand from Europe in 1963 for the control of sirex wood wasp (Clausen, 1978).

STEPHANIDAE

Schlettererius cinctipes (Cresson)

Introduced into New Zealand from California for the control of sirex wood wasp (Clausen, 1978).

APPENDIX II

Species introduced into New Zealand for biological control, released but not established

TENTHREDINIDAE

Ucona acaenae Smith

Introduced into New Zealand from Chile in 1928 under the name *Antholcus varinervis* Spinola for the control of the native plant piripiri or bidibidi (*Acaena anserinifolia*) (Miller, 1931). Renamed by Smith (1973). Successfully bred in Nelson insectary on piripiri and persisted for a few years after release, but failed to establish (Miller, 1970).

BRACONIDAE

Agathis unicolorata Shenefelt

Introduced into New Zealand from India between 1964 and 1966 for the control of potato tuber moth (Clausen, 1978).

Aphidius smithi Sharma & Subba Rao

Introduced into New Zealand from California in 1977 for the control of pea aphid (Cameron et al., 1979).

Bracon osculator Nees

Introduced into New Zealand from Europe in 1952 for the control of clover case-bearers (Clausen, 1978).

Bracon phylacteophagus Austin in Austin & Faulds

Introduced into New Zealand from Australia in 1986 for the control of the leafmining sawfly, *Phylacteophaga froggatti* (Nuttall, 1985; Austin & Faulds, 1989).

Chelonus curvimaculatus (Cameron)

Introduced into New Zealand from India between 1964 and 1966 for the control of potato tuber moth (Clausen, 1978).

Orgilus lepidus Muesebeck

Introduced into New Zealand from India between 1964 and 1966 for the control of potato tuber moth (Clausen, 1978).

ICHNEUMONIDAE

Campoletis chlorideae Uchida

Introduced into New Zealand from India in 1969 for the control of tomato fruitworm (Hill et al., 1985).

Campoplex haywardi Blanchard

Introduced into New Zealand from India between 1964 and 1966 for the control of potato tuber moth (Clausen, 1978)..

Diadegma fenestralis (Holmgren)

Introduced from England (under the generic name *Angitia*) in 1936 for the control of diamondback moth (Muggeridge, 1937).

Mesoleius caninae Bridgman

Introduced into New Zealand from England and released in 1929 for the control of cherry slug (Dumbleton, 1936).

Rhyssa persuasoria himalayensis Wilkinson

Introduced into New Zealand from India from 1963 to 1965 for the control of sirex wood wasp (FRI, 1963).

Sphecophaga vesparum (Curtis)

Introduced into New Zealand from U.S.A. (1979) and Europe (1980). Released in 1985 for the control of *Vespula* spp. Biology: Donovan & Read, 1987.

ENCYRTIDAE

Copidosoma koehleri Blanchard

Introduced into New Zealand from California in 1964 for the control of potato tuber moth (Noyes, 1988).

Leptomastidea abnormis Girault

Introduced into New Zealand from an unknown source in 1920 for the control of mealybugs (Dumbleton, 1936).

EULOPHIDAE

Achrysocharoides splendens (Delucchi)
Introduced into New Zealand from Switzerland (under the generic name *Enaysma*) (see comment under *Achrysocharoides latreillii*) in 1957 for the control of oak leafminer (Given, 1959).

PTEROMALIDAE

Muscidifurax raptorellus Kogan & Legner

Muscidifurax uniraptor Kogan & Legner

Muscidifurax zaraptor Kogan & Legner

Pachycrepoideus vindemiae (Rondani)
All introduced from Trinidad in 1968-69 for the control of stable flies (Clausen, 1978).

Pteromalus semotus (Walker)
Introduced under the name *Habrocytus milleri* Delucchi & Verbeke, from Europe into New Zealand in 1952 for the control of clover case-bearers (Clausen, 1978).

Spalangia nigra Latreille

TRICHOGRAMMATIDAE

Trichogramma australicum Girault

Trichogramma dendrolimi Matsumura

Trichogramma euproctidis (Girault)

Trichogramma evanescens Westwood
All introduced from India into New Zealand in 1973 for the control of cosmopolitan armyworm, greasy cutworm and green looper (Valentine, 1975b).

BETHYLIDAE

Goniozus [?***antipodum*** Westwood]
Introduced into New Zealand from Australia in 1922 for the control of light brown apple moth (Dumbleton, 1932).

TIPHIIDAE

Thynnoides gracilis (Westwood)
Introduced into New Zealand from Australia between 1945 and 1952 for the control of New Zealand grass grub (Clausen, 1978).

DRYINIDAE

Aphelopus typhlocybae Muesebeck
Introduced into New Zealand from U.S.A. in 1935 for the control of apple leafhopper (Dumbleton, 1937).

APPENDIX III

Species recorded from New Zealand but not known to have become established

VESPIDAE

Polistes olivaceus (De Geer)
Thomson (1924) recorded this species (as *Polistes hebraeus*), and Harris (1979) gives extensive notes on its discovery at Dunedin. All records are from sporadic sightings of "self introduced" individuals.

Vespula (Dolichovespula) maculata (Linnaeus)
A single female has been recorded by Harris (1984) at Dunedin in 1982.

APIDAE

Xylocopa sonorina Smith
Recorded by Mason (1988), who noted a nest found in Auckland in 1987.

APPENDIX IV

Nomina nuda

BRACONIDAE

Dacnusa sonchivorus Cameron, 1903
Name only listed by Cameron (1903), with the comment "ex dipterous insect mines on *Sonchus oleraceus*". Possibly conspecific with *Dacnusa areolaris* (Nees).

PTEROMALIDAE

Ophelosia dactylopii Howard
A Ms. name in Kirk, 1898: 219. Also listed by Gourlay, 1930a. Specimens not located in USNM.

FORMICIDAE

Camponotus (Colobopsis) tane Wheeler, 1935: 43
Names only listed by Wheeler, 1935.

Huberia striata **var.** ***hinemoa*** Wheeler, 1935: 23

Monomorium (Notomyrmex) antarcticum chathamense Wheeler, 1935: 24

Monomorium (Notomyrmex) antarcticum kermadecense Wheeler, 1935: 24

Monomorium (Notomyrmex) antarcticum tangaroa Wheeler, 1935: 24

Monomorium (Notomyrmex) kiki Wheeler, 1935: 24

Monomorium (Notomyrmex) maori Wheeler, 1935: 25

Monomorium (Notomyrmex) maori **var.** ***hybridum*** Wheeler, 1935: 25

Monomorium (Notomyrmex) maui Wheeler, 1935: 25

Monomorium (Notomyrmex) smithi **var.** ***mua*** Wheeler, 1935: 25

APPENDIX V

Incertae sedis

? PLATYGASTRIDAE

Diapria coccophagi Maskell, 1879: 230
From the description and figures this species appears to belong in the Platygastrinae, which are parasitic on leaf-mining Cecidomyiidae. Perhaps this species is conspecific with *Metaclisis oleariae* (Maskell, 1889). No types of either species have been located.

APPENDIX VI

Species wrongly assigned to New Zealand

BRACONIDAE

Apanteles sicarius Marshall, 1885
Species misidentified by Rawlings (1960). Specimens of "*sicarius*" were checked by T. Huddleston (BMNH), who commented that it is probably an undescribed, endemic species. Its hosts have been listed as ?*Plutella xylostella* (Yponomeutidae), *Epiphthora melanombra* (Gelechiidae) and *Ctenopseustis obliquana* (Tortricidae).

ICHNEUMONIDAE

Diadegma lateralis (Gravenhorst, 1829)
Imperial Institute of Entomology, now known as CAB International Institute of Entomology, provisionally identified this species as near *A. lateralis* (Muggeridge, 1930). Robertson (1939) remarked that "the Imperial Institute has since decided that the New Zealand species is distinct and intends to describe it as new." It appears that no description was ever made.

Ophion luteus (Linnaeus, 1758)
Wrongly assigned to New Zealand by Fabricius in 1775. Parrott (1954) noted "*O. luteus* has not been identified from New Zealand since Kirby's 1884 doubtful listing".

EULOPHIDAE

Eulophus albitarsus Ashmead, 1900
A Hawaiian species wrongly assigned to New Zealand by Cameron (1902).

Pnigalio pectinicornis (Linnaeus)
Valentine (1967b) and Swan (1973) recorded this species from New Zealand, but its taxonomic position is questionable in countries outside Europe (Z. Bouček, pers. comm.). The species has been recorded attacking *Phyllonorycter messaniella* (Gracillariidae) and *Bedellia somnulentella* (Lyonetiidae).

TRICHOGRAMMATIDAE

Trichogramma minutum Riley, 1871
Wrongly applied by Gourlay (1930a) to an undescribed endemic species.

Trichogramma pretiosa Riley, 1879
Wrongly applied by Thompson (1922) to an undescribed endemic species.

GASTERUPTIIDAE

Pseudofoenus unguiculatus (Westwood, 1841)
An Australian species wrongly assigned to New Zealand by Kieffer (1902).

SCELIONIDAE

Telenomus phalaenarum Nees, 1834
Wrongly applied by Thompson (1947) to *Mymar crinisacri* Quail, which parasitises the eggs of the New Zealand red admiral butterfly. *T. phalaenarum* is a European species which parasitises the European red admiral butterfly and has not been recorded from New Zealand.

BETHYLIDAE

Sierola antipoda Ashmead, 1900b
An Australian species wrongly assigned to New Zealand by Ashmead (1901).

TIPHIIDAE

Rhagigaster novarae Sassure, 1867
Cameron (1902) questioned Sassure's New Zealand locality and suggested Australia to be more appropriate. No Tiphiidae are recorded from New Zealand.

FORMICIDAE

Leptomyrmex erythrocephalus (Fabricius, 1775)
Described from "nova Hollandia" [Australia]. Incorrectly listed for New Zealand by Kieffer, 1912.

SPHECIDAE

Sceliphon leatum Smith, 1856
Incorrectly listed for New Zealand by Kohl, 1918. This error was corrected by Callen, 1980. Species of *Sceliphon* are occasionally collected in New Zealand, but none are known to have established.

APIDAE

Hylaeus chalybaeus (Friese, 1924)
Cockerell (1926) (as a foot-note under the generic name *Prosopis*) remarked that this species "is based on a female from New Zealand and a male from Australia. They are presumably different species, and the name should be restricted to the New Zealand insect. The male, so far as can be ascertained from the description, appears to be *H. alcyoneus* Erichson". Michener (1965) comments that *Hylaeus fijiensis, H. giganteus* and *P. chalybeus* [all from Australia] "appear to represent the same species". He further remarks that "The old specimen on which the name *fijiensis* was based must have been labelled in error, as was, no doubt, the specimen supposedly from New Zealand on which *chalybaeus* was based." From the above comments it seems unlikely that *chalybaeus* is a New Zealand species.

Hylaeus vicinus (Sichel, 1868)
The species is based on one female and two males said to be from Auckland and six specimens from Tasmania. However, Cameron (1902) doubted the presence of this species in New Zealand, and regarded it as an error in labelling. Michener (1965) remarked that the Auckland specimens (labelled as *vicinus*) "carry the label "Novara R., Sidney" and .... "in spite of the disagreement of the locality given by Sichel with labels on the specimens. They must have come from Sydney NSW since such bees are unknown in New Zealand".

Leioproctus (Leioproctus) confusus (Cockerell, 1904)
Described from New Zealand, but Michener (1965) notes that the type is labelled "N. Holl." and undoubtedly Australian.

Leioproctus (Leioproctus) obscurus Smith, 1853
Described from "Van Dieman's Land" [Australia] and incorrectly listed for New Zealand by Hutton, 1874.

APPENDIX VII

Ambositrinae (Diapriidae) species described by Naumann (1988)

DIAPRIIDAE family

Mainly endoparasitoids of dipterous pupae. Taxonomy: Early, 1978, 1980.

AMBOSITRINAE subfamily

Taxonomy & Biology : Naumann, 1988. See page 32 for information on two previously described species *(Betyla fulva* and *Parabetyla spinosa).*

ARCHAEOPRIA Naumann genus

- **Archaeopria eriodes** Naumann
  Archaeopria eriodes Naumann, 1988: 17. Holotype: WD-OL, Haast Pass; NZAC

  DISTRIBUTION. New Zealand: TO / BR, MC, WD, MK, OL, FD.

  HOSTS. Not known.
- **Archaeopria pelor** Naumann
  Archaeopria pelor Naumann, 1988: 18. Holotype: WD, Mount Hercules Scenic Reserve; NZAC

  DISTRIBUTION. New Zealand: ND, AK, TK / NN, NC, WD.

  HOSTS. Not known.
- **Archaeopria pristina** Naumann
  Archaeopria pristina Naumann, 1988: 19. Holotype: MC, Summit Road, Akaroa; NZAC

  DISTRIBUTION. New Zealand: AK, BP, TK / NN, MB, BR, MC, WD, OL, FD.

  HOSTS. Not known.

BETYLA Cameron genus

- **Betyla auriger** Naumann
  Betyla auriger Naumann, 1988: 58. Holotype: SD, Port Underwood Saddle; NZAC

  DISTRIBUTION. New Zealand: / NN, SD, BR, KA, WD.

  HOSTS. Not known.
- **Betyla eupepla** Naumann
  Betyla eupepla Naumann, 1988: 61. Holotype: WD, Westland National Park, Lake Wombat track; NZAC

  DISTRIBUTION. New Zealand: ND, AK, WO, BP, TO, TK, RI, WA, WN / NN, SD, MB, BR, KA, NC, MC, WD, OL, FD.

  HOSTS. Not known.
- **Betyla karamea** Naumann
  Betyla karamea Naumann, 1988: 61. Holotype: TO, Ahimanawa Range; NZAC

  DISTRIBUTION. New Zealand: ND, GB, TO, RI / NN, BR.

  HOSTS. Not known.
- **Betyla midas** Naumann
  Betyla midas Naumann, 1988: 65. Holotype: AK, Hunua Range, Kohukohunui; NZAC

  DISTRIBUTION. New Zealand: AK / .

  HOSTS. Not known.
- **Betyla paparoa** Naumann
  Betyla paparoa Naumann, 1988: 65. Holotype: BR, Fletcher's Creek; NZAC

  DISTRIBUTION. New Zealand: / BR.

  HOSTS. Not known.
- **Betyla prosedera** Naumann
  Betyla prosedera Naumann, 1988: 57. Holotype: BR, Shennandoah Saddle; NZAC

  DISTRIBUTION. New Zealand: ND, BP / NN, SD, MB, BR, KA, WD, NC.

  HOSTS. Not known.
- **Betyla rangatira** Naumann
  Betyla rangatira Naumann, 1988: 60. Holotype: BR, Tawhai State Forest; NZAC

  DISTRIBUTION. New Zealand: / NN, MB, BR, NC, CO, FD.

  HOSTS. Not known.
- **Betyla thegalea** Naumann
  Betyla thegalea Naumann, 1988: 59. Holotype: NN, Mount Domett summit; NZAC

  DISTRIBUTION. New Zealand: WN / NN.

  HOSTS. Not known.
- **Betyla tuatara** Naumann
  Betyla tuatara Naumann, 1988: 63. Holotype: BR, Tawhai State Forest; NZAC

  DISTRIBUTION. New Zealand: ND / NN, SD, BR, WD, CO, DN, SL.

  HOSTS. Not known.
- **Betyla wahine** Naumann
  Betyla wahine Naumann, 1988: 64. Holotype: SD, Ship Cove; NZAC

  DISTRIBUTION. New Zealand: / SD, MB, OL.

  HOSTS. Not known.

DIPHOROPRIA Kieffer genus

- **Diphoropria sinuosa** Naumann
  Diphoropria sinuosa Naumann, 1988: 33. Holotype: AK, Auckland, Lynfield; NZAC

  DISTRIBUTION. New Zealand: all areas except WA.

  HOSTS. Not known. One male reared from pupal case of mycetophilid fly.
- **Diphoropria kuscheli** Naumann
  Diphoropria kuscheli Naumann, 1988: 36. Holotype: WD, Haast Pass; NZAC

  DISTRIBUTION. New Zealand: ND, AK, CL, BP, TO, TK / NN, MB, BR, KA, NC, MC, WD, OL, FD, SL.

  HOSTS. Not known.

MAORIPRIA Naumann genus

- **Maoripria annettae** Naumann
  Maoripria annettae Naumann, 1988: 41. Holotype: NN, Dun Mountain; NZAC

  DISTRIBUTION. New Zealand: HB, WN, WA / NN, SD, MB, BR.

  HOSTS. Not known.
- **Maoripria earlyi** Naumann
  Maoripria earlyi Naumann, 1988: 42. Holotype: OL, Howden track from Divide to Saddle; NZAC

  DISTRIBUTION. New Zealand: WN / NN, WD, FD.

  HOSTS. Not known.

- **Maoripria masneri** Naumann
  Maoripria masneri Naumann, 1988: 43. Holotype: MB, Black Birch Experimental Station; NZAC

  DISTRIBUTION. New Zealand: / MB, BR, MC, WD, FD, CO.

  HOSTS. Not known.

- **Maoripria verticillata** Naumann
  Maoripria verticillata Naumann, 1988: 39. Holotype: AK, Kohukohunui, Hunua Range; NZAC

  DISTRIBUTION. New Zealand: ND, AK, CL, WO, TK, BP, GB, TO, WA, WN / NN, MB, BR, WD, KA.

  HOSTS. Not known.

PANTOLYTOMYIA Dodd genus

- **Pantolytomyia flocculosa** Naumann
  Pantolytomyia flocculosa Naumann, 1988: 23. Holotype: BR, Mawhera State Forest; NZAC

  DISTRIBUTION. New Zealand: ND, BP, TO, TK, RI, HB / NN, SD, MB, BR, NC, MC, MK, WD, OL.

  HOSTS. Not known.

- **Pantolytomyia insularis** Naumann
  Pantolytomyia insularis Naumann, 1988: 27. Holotype: SI, Big South Cape Island; NZAC

  DISTRIBUTION. New Zealand: / SI.

  HOSTS. Not known.

- **Pantolytomyia polita** Naumann
  Pantolytomyia polita Naumann, 1988: 26. Holotype: MC, Akaroa, Summit Road; NZAC

  DISTRIBUTION. New Zealand: / SD, MC, OL, CO.

  HOSTS. Not known.

- **Pantolytomyia takere** Naumann
  Pantolytomyia takere Naumann, 1988: 26. Holotype: WD, Westland National Park, Lake Wombat track; NZAC

  DISTRIBUTION. New Zealand: / WD, FD, SL.

  HOSTS. Not known.

- **Pantolytomyia taurangi** Naumann
  Pantolytomyia taurangi Naumann, 1988: 29. Holotype: WD, Lake Mahinapua; NZAC

  DISTRIBUTION. New Zealand: all areas except WI, SC, SI.

  HOSTS. Not known.

- **Pantolytomyia tungane** Naumann
  Pantolytomyia tungane Naumann, 1988: 25. Holotype: WD, Lake Mahinapua; NZAC

  DISTRIBUTION. New Zealand: ND, AK / NN, BR, WD, FD.

  HOSTS. Not known.

- **Pantolytomyia wairua** Naumann
  Pantolytomyia wairua Naumann, 1988: 28. Holotype: FD, Tutoko River; NZAC

  DISTRIBUTION. New Zealand: / NC-WD, OL, FD.

  HOSTS. Not known.

PARABETYLA Brues genus

- **Parabetyla nauhea** Naumann
  Parabetyla nauhea Naumann, 1988: 49. Holotype: FD, 19 km east Milford Hotel; NZAC

  DISTRIBUTION. New Zealand: TK / NN, BR, WD, FD, OL.

  HOSTS. Not known.

- **Parabetyla ngarara** Naumann
  Parabetyla ngarara Naumann, 1988: 48. Holotype: NN, Canaan; NZAC

  DISTRIBUTION. New Zealand: / NN.

  HOSTS. Not known.

- **Parabetyla pipira** Naumann
  Parabetyla pipira Naumann, 1988: 48. Holotype: BR-WD, West Inangahua State Forest; NZAC

  DISTRIBUTION. New Zealand: / NN, BR, KA.

  HOSTS. Not known.

- **Parabetyla pokorua** Naumann
  Parabetyla pokorua Naumann, 1988: 49. Holotype: BR, Rahu Saddle; NZAC

  DISTRIBUTION. New Zealand: / BR, WD, FD.

  HOSTS. Not known.

- **Parabetyla tahi** Naumann
  Parabetyla tahi Naumann, 1988: 50. Holotype: TK, Mount Messenger; NZAC

  DISTRIBUTION. New Zealand: TK / WD.

  HOSTS. Not known.

- **Parabetyla tika** Naumann
  Parabetyla tika Naumann, 1988: 46. Holotype: BR, Inangahua State Forest, Stoney Creek; NZAC

  DISTRIBUTION. New Zealand: WO, BP, TO, TK, WA / NN, MB, BR, KA, NC, WD, FD, OL.

  HOSTS. Not known.

ZEALAPTERA Naumann genus

- **Zealaptera chambersi** Naumann
  Zealaptera chambersi Naumann, 1988: 51. Holotype: ND, Omahuta State Forest; NZAC

  DISTRIBUTION. New Zealand: ND, AK, BP, TK / NN, BR, OL.

  HOSTS. Not known.

Invertebrate host — parasitoid list

COLEOPTERA

Coleoptera (stored grain): Anisopteromalus calandrae (Howard)

ANOBIIDAE

Anobium punctatum: Spathius exarator (Linnaeus), Theocolax formiciformis Westwood
Ernobius mollis: Entedon methion Walker
Hadrobregmus australiensis: Chilepyris platythelys Sorg & Walker
Hadrobregmus magnus: Chilepyris platythelys Sorg & Walker
Stegobium paniceum: Lariophagus distinguendus (Foerster)

BUPRESTIDAE

Nascioides enysi: Doryctes pallida Gourlay

CERAMBYCIDAE

Ambeodontus tristis: Doryctes ambeodonti Muesebeck
Astetholea pauper: Aspicolpus hudsoni Turner
Brounopsis sp.: Xanthocryptus novozealandicus (Dalla Torre)
Brounopsis hudsoni: Aspicolpus hudsoni Turner, Xanthocryptus novozealandicus (Dalla Torre)
Didymocantha sp.: Xanthocryptus novozealandicus (Dalla Torre)
Eburilla sericea: Doryctes gourlayi Parrott, Xanthocryptus novozealandicus (Dalla Torre)
Hexatricha pulverulenta: Doryctes gourlayi Parrott, Xanthocryptus novozealandicus (Dalla Torre)
Liogramma zealandica: Xanthocryptus novozealandicus (Dalla Torre)
Navomorpha sulcata: Aspicolpus hudsoni Turner, Xanthocryptus novozealandicus (Dalla Torre)
Oemona hirta: Aspicolpus hudsoni Turner, Xanthocryptus novozealandicus (Dalla Torre)
Poecilippe medialis: Eusandalum barteli (Gourlay)
Prionoplus reticularis: Prionaphes depressus Hincks
Pseudocalliprason marginatum: Doryctes ambeodonti Muesebeck
Stenopotes pallidus: Guiglia schauinslandi (Ashmead)
Xylotoles griseus: Xanthocryptus novozealandicus (Dalla Torre)

COCCINELLIDAE

Coccinella undecimpunctata: Dinocampus coccinellae (Schrank)
Cryptolaemus montrouzieri (in Australia): Inkaka quadridentata Girault
Harmonia conformis: Dinocampus coccinellae (Schrank)
Harmonia dimidiata: Dinocampus coccinellae (Schrank)

COLYDIIDAE

Bothrideres obsoletus: Doryctes pallida Gourlay

CURCULIONIDAE

Curculionidae: Pseudanaphes hirtus Noyes & Valentine
Curculionidae?: Pteromalus sequester Walker
Anagotus helmsi: Oxyserphus maculipennis (Cameron)
Apion sp. (Europe): Mesopolobus incultus (Walker)
Crisius sp.: Doryctes gourlayi Parrott
Gonipterus scutellatus: Anaphes nitens (Girault)
Psepholax barbifrons: Doryctomorpha antipoda Ashmead, Guiglia schauinslandi (Ashmead)
Psepholax coronatus: Doryctomorpha antipoda Ashmead, Guiglia schauinslandi (Ashmead)
Psepholax simplex: Doryctomorpha antipoda Ashmead
Psepholax sulcatus: Doryctomorpha antipoda Ashmead, Guiglia schauinslandi (Ashmead)
Rhynchodes ursus: Certonotus fractinervis (Vollenhoven)
Sitona discoideus: Dinocampus coccinellae (Schrank), Microctonus aethiopoides Loan
Sitophilus granarius: Lariophagus distinguendus (Foerster)
Strongylopterus hylobioides: Guiglia schauinslandi (Ashmead)

LATHRIDIIDAE

Melanophthalma nr. distinguenda: Lamennaisia ambigua (Nees)

LYCTIDAE

Lyctus brunneus: Theocolax formiciformis Westwood

SCOLYTIDAE

Phloeosinus cupressi: Rhaphitelus maculatus Walker

DIPTERA

Dipterous gall on Hebe elliptica: Fusiterga lativentris Boucek

AGROMYZIDAE

Cerodontha australis: Hemiptarsenus varicornis (Girault)
Liriomyza chenopodii: Hemiptarsenus varicornis (Girault)
Phytomyza: Diglyphus isaea (Walker)
Phytomyza syngenesiae: Chrysocharis pubicornis (Zetterstedt), Dacnusa areolaris (Nees)

CALLIPHORIDAE

Calliphoridae: Alysia stramineipes Cameron
Calliphora quadrimaculata: Alysia manducator (Panzer), Nasonia vitripennis (Walker), Tachinaephagus zealandicus Ashmead
Calliphora stygia: Alysia manducator (Panzer), Nasonia vitripennis (Walker), Phaenocarpa antipoda (Ashmead), Tachinaephagus zealandicus Ashmead
Calliphora vicina: Alysia manducator (Panzer), Antarctopria coelopae Early, Nasonia vitripennis (Walker), Tachinaephagus zealandicus Ashmead
Chrysomya rufifacies: Alysia manducator (Panzer), Nasonia vitripennis (Walker)
Lucilia sericata: Alysia manducator (Panzer), Nasonia vitripennis (Walker), Tachinaephagus zealandicus Ashmead
Xenocalliphora eudyptis: Antarctopria coelopae Early
Xenocalliphora hortona: Alysia manducator (Panzer)

CANACEIDAE

Macrocanace australis: Antarctopria latigaster Brues
Macrocanace littorea: Antarctopria diomedeae Early

CECIDOMYIIDAE

Cecidomyiidae gall in Carmichaelia: Torymoides antipoda (Kirby)
Cecidomyiidae galls in Carpodetus serratus and Hebe salicifolia: Fusiterga gallarum Boucek
Cecidomyiidae larvae: Inostemma boscii (Jurine)
Cecidomyiidae?: Stylaclista quasimodo Early
Cecidomyiidae: Metaclisis oleariae (Maskell)
Dasineura mali: Platygaster demades Walker
Dasineura pyri: Platygaster demades Walker
Mayetiola destructor: Aprostocetus zosimus (Walker), Macroneura vesicularis (Ratzius), Pediobius epigonus (Walker), Platygaster hiemalis Forbes
Ophiomyia phaseoli (in Australia): Callitula viridicoxa (Girault)

COELOPIDAE

Coelopidae: Antarctopria campbellana Yoshimoto
Coelopidae: Kleidotoma (Pentakleidota) subantarcticana Yoshimoto
Baeopterus robustus: Antarctopria coelopae Early
Chaetocoelopa littoralis: Antarctopria coelopae Early, Spalangia endius Walker
Coelopa debilis: Antarctopria coelopae Early, Antarctopria latigaster Brues
Protocoelopa philpotti: Antarctopria coelopae Early

DROSOPHILIDAE

Drosophila melanogaster: Leptopilina heterotoma (Thomson)

FANNIIDAE

Fannia albitarsis: Muscidifurax raptor Girault & Sanders, Spalangia endius Walker
Fannia canicularis: Muscidifurax raptor Girault & Sanders, Spalangia endius Walker, Tachinaephagus zealandicus Ashmead

HELOSCIOMYZIDAE

Helosciomyza subalpina: Malvina helosciomyzae Early & Horning

KEROPLATIDAE

Arachnocampa luminosa: Betyla fulva Cameron

MUSCIDAE

Limnohelina? sp.: Hemilexomyia spinosa Early
Musca domestica: Nasonia vitripennis (Walker), Spalangia cameroni Perkins, Spalangia endius Walker, Spalangia nigroaenea Curtis, Tachinaephagus zealandicus Ashmead
Stomoxys calcitrans: Spalangia cameroni Perkins, Spalangia endius Walker, Spalangia nigroaenea Curtis, Tachinaephagus zealandicus Ashmead

SARCOPHAGIDAE

Hybopygia varia: Aphaereta aotea Hughes & Woolcock, Tachinaephagus zealandicus Ashmead

SCIOMYZIDAE

Neolimnia tranquilla: Spilomicrus barnesi Early & Horning

SPHAEROCERIDAE

Leptocera sp.: Antarctopria diomedeae Early

SYRPHIDAE

Melangyna novaezelandiae: Diplazon laetatorius (Fabricius)
Melangyna viridiceps: Diplazon laetatorius (Fabricius)
Melanostoma fasciatum: Diplazon laetatorius (Fabricius)
Syrphus ortas: Diplazon laetatorius (Fabricius)

HEMIPTERA

ALEYRODIDAE

Pealius azaleae: Encarsia formosa Gahan
Trialeurodes vaporariorum: Aphelinus gossypii Timberlake, Aphelinus mali (Haldeman), Encarsia formosa Gahan, Encarsia pergandiella Howard

APHIDIDAE

Acyrthosiphon kondoi: Aphelinus abdominalis (Dalman), Aphidius ervi Haliday
Acyrthosiphon malvae: Aphidius pelargonii Stary & Carver
Acyrthosiphon pisum: Aphidius eadyi Stary, Gonzales & Hall, Aphidius ervi Haliday, Aphidius pelargonii Stary & Carver
Aphis craccivora: Aphidius similis Stary & Carver
Aphis gossypii: Aphidius similis Stary & Carver
Aphis nerii: Aphelinus gossypii Timberlake, Aphelinus mali (Haldeman)
Brevicoryne brassicae: Diaeretiella rapae (M'Intosh)
Capitophorus elaeagni: Aphelinus mali (Haldeman), Aphelinus gossypii Timberlake
Cavariella aegopodii: Aphidius salicis Haliday
Eriosoma lanigerum: Aphelinus mali (Haldeman)
Lipaphis sp.: Diaeretiella rapae (M'Intosh)
Macrosiphum euphorbiae: Aphelinus abdominalis (Dalman), Aphelinus asychis Walker
Macrosiphum solani: Aphidius ervi Haliday
Metopolophium dirhodum: Aphidius rhopalosiphi De Stefani Perez
Myzus (Nectarosiphon) persicae: Diaeretiella rapae (M'Intosh), Moranila comperei (Ashmead)
Rhopalosiphum padi: Aphidius ervi Haliday, Aphidius similis Stary & Carver
Sitobion sp.: Aphidius similis Stary & Carver
Therioaphis trifolii f. maculata: Trioxys complanatus
Toxoptera aurantii: Aphelinus gossypii Timberlake, Aphelinus mali (Haldeman), Aphidius similis Stary & Carver
Toxoptera citricidus: Aphelinus gossypii Timberlake, Aphelinus mali (Haldeman)
Tuberculoides annulata: Aphelinus (Mesidiopsis) subflavescens (Westwood)

ASTEROLECANIIDAE

Asterolecanium quercicola: Habrolepis dalmanni (Westwood)

CICADELLIDAE

Arawa variegata: Dicondylus alpinus (Gourlay)
Typhlocyba froggatti: Anagrus armatus (Ashmead)

CICADIDAE

Amphisalta cingulata: Idiocentrus mirus Gahan
Kikihia muta: Idiocentrus mirus Gahan
Rhodopsalta cruentata: Idiocentrus mirus Gahan

COCCIDAE

Coccidae in Trioza galls (Psyllidae): Aphobetus maskelli Howard
Ceroplastes sinensis: Coccophagus ochraceus Howard, Encarsia citrina (Craw), Euxanthellus philippiae Silvestri
Coccus hesperidum: Coccophagus scutellaris (Dalman), Encarsia citrina (Craw), Encyrtus lecaniorum (Mayr) (in Texas), Eusemion cornigerum (Walker,), Euxanthellus philippiae Silvestri, Metaphycus aurantiacus Annecke & Mynhardt, Microterys flavus (Howard)
Coccus longulus: Euxanthellus philippiae Silvestri
Ctenochiton sp.: Adelencyrtoides blastothrichus Noyes, Adelencyrtoides mucro Noyes, Adelencyrtoides suavis Noyes, Aphobetus maskelli Howard
Ctenochiton perforatus: Adelencyrtoides variabilis Noyes, Euxanthellus philippiae Silvestri, Pidinka nana Boucek
Ctenochiton piperis: Adelencyrtoides blastothrichus Noyes
Ctenochiton viridis: Adelencyrtoides inconstans Noyes, Adelencyrtoides variabilis Noyes
Inglisia sp.: Adelencyrtoides blastothrichus Noyes, Adelencyrtoides variabilis Noyes
Lecanochiton sp.: Adelencyrtoides unicolor Noyes
Parthenolecanium persicae: Euxanthellus philippiae Silvestri, Metaphycus timberlakei (Ishii)
Pulvinaria hydrangeae: Coccophagus scutellaris (Dalman), Euxanthellus philippiae Silvestri
Saissetia coffeae: Coccophagus ochraceus Howard, Encyrtus infelix (Embleton), Euxanthellus philippiae Silvestri, Moranila comperei (Ashmead)
Saissetia oleae: Coccophagus ochraceus Howard, Euxanthellus philippiae Silvestri, Metaphycus lounsburyi (Howard), Microterys flavus (Howard), Moranila californica (Howard)

DELPHACIDAE (FULGORIDAE)

Nilaparvata myersi: Gonatopus zealandicus Olmi
Sulix tasmanii: Gonatopus zealandicus Olmi

DIASPIDIDAE

Diaspididae: Arrhenophagoidea coloripes Girault
Aonidiella aurantii: Aphytis chilensis Howard, Aphytis chrysomphali (Mercet), Encarsia citrina (Craw), Encarsia perniciosi (Tower), Signiphora flavopalliata Ashmead, Signiphora merceti Malenotti
Aspidiotus nerii: Aphytis chilensis Howard, Encarsia citrina (Craw), Zelaphycus aspidioti (Tachikawa & Valentine)
Aulacaspis sp.: Arrhenophagoidea coloripes Girault
Aulacaspis rosae: Adelencyrtus aulacaspidis (Brethes), Arrhenophagus chionaspidis Aurivillius, Encarsia citrina (Craw)
Chionaspis sp: Arrhenophagoidea coloripes Girault
Eulepidosaphes pyriformis: Adelencyrtoides novaezealandiae Tachikawa & Valentine
Hemiberlesia rapax: Aphytis chilensis Howard, Signiphora flavopalliata Ashmead, Signiphora merceti Malenotti
Lepidosaphes ulmi: Aphytis albidus (Westwood), Encarsia citrina (Craw), Epitetracnemus zetterstedtii (Westwood), Zaomma lambinus (Walker)
Leucaspis sp.: Adelencyrtoides otago Noyes, Aphytis chilensis Howard, Encarsia citrina (Craw)
Leucaspis podocarpi: Adelencyrtoides novaezealandiae Tachikawa & Valentine
Leucaspis stricta: Encarsia citrina (Craw)
Lindingaspis rossi: Aphytis ignotus Compere, Encarsia citrina (Craw), Encarsia koebelei (Howard)
Parlatoria fulleri: Encarsia citrina (Craw)
Parlatoria pittospori: Aphytis chilensis Howard, Encarsia citrina (Craw)
Phenacaspis eugeniae: Encarsia citrina (Craw)
Poliaspis argentosus: Adelencyrtoides otago Noyes
Poliaspis media: Adelencyrtoides otago Noyes
Quadraspidiotus ostreaeformis: Aphytis albidus (Westwood), Encarsia citrina (Craw)
Quadraspidiotus perniciosus: Aphytis albidus (Westwood), Aphytis diaspidis Howard, Encarsia citrina (Craw), Encarsia perniciosi (Tower), Epitetracnemus zetterstedtii (Westwood)

ERIOCOCCIDAE

Eriococcidae: Adelencyrtoides similis Noyes
Eriococcus sp.: Aphobetus maskelli Howard
Eriococcus danthoniae: Austrochoreia antipodis Noyes
Eriococcus elaeocarpi: Adelencyrtoides inconstans Noyes
Eriococcus nitidus: Modronila cyanea Boucek
Madarococcus: Adelencyrtoides unicolor Noyes

FLATIDAE

Siphanta acuta: Aphanomerus pusillus Perkins

PENTATOMIDAE
Cermatulus nasalis: Trissolcus basalis (Wollaston)
Cuspicona simplex: Trissolcus basalis (Wollaston)
Dictyotus caenosus: Trissolcus basalis (Wollaston)
Glaucias amyoti: Trissolcus basalis (Wollaston)
Monteithiella humeralis: Trissolcus basalis (Wollaston)
Nezara viridula: Trissolcus basalis (Wollaston)
Oechalia schellembergii: Trissolcus basalis (Wollaston)

PSEUDOCOCCIDAE
Pseudococcidae: Adelencyrtoides unicolor Noyes, Subprionomitus ferus Girault, Tongyus costalis Noyes, Tongyus regis Noyes
Balanococcus poae: Odiaglyptus biformis Noyes
Crocydococcus cottieri: Tetracnemoidea brounii (Timberlake)
Dysmicoccus ambiguus: Tetracnemoidea brounii (Timberlake)
Nipaecoccus aurilanatus: Tetracnemoidea brounii (Timberlake)
Paracoccus glaucus: Adelencyrtoides unicolor Noyes
Phenacoccus graminicola: Tetracnemoidea brevicornis (Girault)
Planococcus mali: Tetracnemoidea zelandica Noyes
Pseudantonina sp.: Rhopus anceps Noyes
Pseudococcus sp.: Gyranusoidea advena Beardsley
Pseudococcus calceolariae: Tetracnemoidea brounii (Timberlake)
Pseudococcus longispinus: Alamella mira Noyes, Coccophagus gurneyi Compere, Tetracnemoidea brevicornis (Girault), Tetracnemoidea peregrina (Compere), Tetracnemoidea sydneyensis (Timberlake)
Trionymus sp.: Tetracnemoidea bicolor (Girault)

PSYLLIDAE
Psyllidae: Ophelimus maskelli Ashmead
Acizzia acaciaebaileyanae: Psyllaephagus acaciae Noyes, Epiblatticida minutissima Girault
Acizzia exquisita: Psyllaephagus acaciae Noyes
Ctenarytaina eucalypti: Psyllaephagus pilosus Noyes
Trioza irregularis: Adelencyrtoides variabilis Noyes

RICANIIDAE
Scolypopa australis: Centrodora scolypopae Valentine

HYMENOPTERA
Hymenoptera sp. in Pseudococcus sp. (Pseudococcidae): Aphobetus maskelli Howard

ALYSIIDAE
Alysia manducator: Nasonia vitripennis (Walker)
Phaenocarpa antipoda: Nasonia vitripennis (Walker)

APHELINIDAE
Encarsia sp. in "Aleyrodidae": Euxanthellus philippiae Silvestri
Euxanthellus philippiae female larvae: Euxanthellus philippiae Silvestri
Pteroptrix sp. in Ctenochiton perforatus (Coccidae): Euxanthellus philippiae Silvestri

APIDAE
Bombus hortorum: Melittobia acasta (Walker)

BRACONIDAE
Apanteles tasmanicus: Gelis tenellus (Say), Pediobius bruchicida (Rondani)
Aphidius sp. in Aphididae: Pachyneuron aphidis (Bouche)
Aphidius? sp. in Aphididae: Aphobetus maskelli Howard
Bracon variegator in Coleophora sp. (Coleophoridae): Macroneura vesicularis (Ratzius)
Diaeretiella rapae in Brevicoryne brassicae (Aphididae): Alloxysta victrix Westwood, Pachyneuron aphidis (Bouche)
Rogas sp.: Gelis tenellus (Say), Pediobius bruchicida (Rondani)
Trioxys sp. in Aphididae: Pachyneuron aphidis (Bouche)
Braconidae in Aphididae: Dendrocerus laticeps (Hedicke)
Braconidae in Aphidius eadyi (Aphididae): Dendrocerus aphidum (Rondani), Dendrocerus carpenteri (Curtis)
Braconidae in Aulacorthum pelargonii (Aphididae): Alloxysta victrix Westwood, Phaenoglyphis villosa (Hartig)
Braconidae in Aulacorthum solani (Aphididae): Alloxysta victrix Westwood
Braconidae in Cavariella aegopodii (Aphididae): Alloxysta victrix Westwood
Braconidae in Diaeretiella rapae (Aphididae): Dendrocerus carpenteri (Curtis)
Braconidae in Lipaphis erysimi (Aphididae): Alloxysta victrix Westwood
Braconidae in Myzus ornatus (Aphididae): Phaenoglyphis villosa (Hartig)
Braconidae in Neophyllaphis totarae (Aphididae): Alloxysta victrix Westwood
Braconidae in Rhopalosiphum padi (Aphididae): Phaenoglyphis villosa (Hartig)

CHARIPIDAE
Alloxysta sp. in Aphididae: Pachyneuron aphidis (Bouche)

CYNIPIDAE
Phanacis hypochoeridis: Stinoplus etearchus (Walker)

DRYINIDAE
Dicondylus sp. in Nilaparvata myersi (Delphacidae): Cheiloneurus gonatopodis Perkins

ENCYRTIDAE
Metaphycus timberlakei in Parthenolecanium persicae (Coccidae): Euxanthellus philippiae Silvestri
Tetracnemoidea sp. in Nipaecoccus aurilanatus (Pseudococcidae): Euxanthellus philippiae Silvestri
Encyrtidae in Ctenochiton perforatus (Coccidae): Aphobetus maskelli Howard
Encyrtidae in Ctenochiton viridis (Coccidae): Aphobetus maskelli Howard
Encyrtidae in Eriococcus (Eriococcidae): Coccidoctonus dubius (Girault)
Encyrtidae in Saissetia oleae (Coccidae): Coccidoctonus dubius (Girault)

EULOPHIDAE
Elachertus sp. in Epiphyas postvittana (Tortricidae): Pediobius bruchicida (Rondani)

EURYTOMIDAE
Bruchophagus? sp.: Pteromalus sequester Walker
Eurytoma gibba in Trifolium repens (Leguminosae): Liodontomerus longfellowi (Girault)
Systole geniculata: Aprostocetus bruchophagi (Gahan)
Tetramesa sp. (in Holarctic): Homoporus chalcidiphagus (Walsh & Riley)

ICHNEUMONIDAE
Diadegma muelleri in Morova subfasciata (Thyrididae): Eupelmus cyaneus (Gourlay)
Glabridorsum stokesii: Gelis cinctus (Linnaeus), Gelis tenellus (Say)
Rhyssa persuasoria persuasoria: Guiglia schauinslandi (Ashmead)

MEGACHILIDAE
Megachile pacifica: Melittobia hawaiiensis Perkins

MEGASPILIDAE
Dendrocerus sp. in Aphididae: Pachyneuron aphidis (Bouche)

PERGIDAE
Phylacteophaga froggatti: Bracon phylacteophagus Austin in Austin & Faulds

PLATYGASTRIDAE
Platygastridae in Inglisia sp. (Coccidae): Aphobetus maskelli Howard

PTEROMALIDAE
Moranila californica in Saissetia oleae (Coccidae): Coccidoctonus dubius (Girault)
Trichomalopsis sp. in Apanteles tasmanicus (Braconidae): Pediobius bruchicida (Rondani)
Trichomalopsis sp. in Bassaris gonerilla (Nymphalidae): Pediobius bruchicida (Rondani)

SIRICIDAE
Sirex noctilio: Guiglia schauinslandi (Ashmead), Ibalia leucospoides (Hockenwarth), Megarhyssa nortoni (Cresson), Rhyssa lineolata (Kirby), Rhyssa persuasoria (Linnaeus)

SPHECIDAE
Pison spinolae: Melittobia australica Girault, Melittobia hawaiiensis Perkins

TENTHREDINIDAE
Caliroa cerasi: Lathrolestes luteolator (Gravenhorst)

VESPIDAE
Vespula spp.: Sphecophaga vesparum (Curtis)
Vespula germanica: Melittobia australica Girault, Melittobia hawaiiensis Perkins

LEPIDOPTERA

ARCTIIDAE
Metacrias huttoni: Echthromorpha intricatoria (Fabricius)
Nyctemera annulata: Echthromorpha intricatoria (Fabricius)
Tyria jacobaeae: Echthromorpha intricatoria (Fabricius)

CARPOSINIDAE
Heterocrossa adreptella: Apanteles carposinae Wilkinson

COLEOPHORIDAE
Coleophora: sp. Chrysonotomyia trifolii (Erdos)
Coleophora spissicornis: Bracon variegator Spinola

GELECHIIDAE
Phthorimaea operculella: Apanteles subandinus Blanchard
Orthoclydon praefactata: Lissopimpla excelsa (Costa), Netelia (Netelia) ephippiata (Smith)

GEOMETRIDAE
Pseudocoremia suavis: Apanteles demeter Wilkinson, Aphanistes kayi Gauld, Aucklandella conspirata (Smith), Aucklandella pyrastis (Cameron), Lissopimpla excelsa (Costa)
Xyridacma alectoraria: Dusona stramineipes Cameron
Xyridacma veronicae: Dusona stramineipes Cameron

GRACILLARIIDAE
Caloptila azaleela: Gelis tenellus (Say)
Phyllonorycter messaniella: Achrysocharoides latreillii (Curtis): Apanteles bicolor (Nees), Apanteles circumscriptus (Nees)

HEPIALIDAE
Wiseana cervinata: Degithina decepta (Smith), Ichneumon lotatorius Fabricius, Lissopimpla excelsa (Costa)
Wiseana umbraculata: Degithina decepta (Smith), Lissopimpla excelsa (Costa)

NOCTUIDAE
Agrotis ipsilon aneituma: Apanteles ruficrus (Haliday), Enicospilus insularis (Kirby), Macrocentrus rubromaculatus (Cameron)
Chrysodeixis eriosoma: Apanteles ruficrus (Haliday), Copidosoma floridanum (Ashmead), Ctenochares bicolorus (Linnaeus), Echthromorpha intricatoria (Fabricius)
Graphania sp.: Macrocentrus rubromaculatus (Cameron)
Graphania ustistriga: Apanteles ruficrus (Haliday), Degithina sollicitoria (Fabricius)
Helicoverpa armigera conferta: Apanteles kazak Telenga, Apanteles ruficrus (Haliday), Echthromorpha intricatoria (Fabricius), Ichneumon promissorius Erichson
Mythimna separata: Apanteles ruficrus (Haliday), Ichneumon promissorius Erichson, Lissopimpla excelsa (Costa), Macrocentrus rubromaculatus (Cameron), Netelia (Netelia) producta (Brulle)
Persectania aversa: Degithina sollicitoria (Fabricius), Macrocentrus rubromaculatus (Cameron), Netelia (Netelia) producta (Brulle)
Thysanoplusia orichalcea: Apanteles ruficrus (Haliday), Copidosoma floridanum (Ashmead), Echthromorpha intricatoria (Fabricius)
Tmetolophota steropastis: Macrocentrus rubromaculatus (Cameron)

NYMPHALIDAE
Bassaris gonerilla: Echthromorpha intricatoria (Fabricius), Pteromalus puparum (Linnaeus)
Bassaris itea: Echthromorpha intricatoria (Fabricius)
Danaus plexippus: Pteromalus puparum (Linnaeus)

OECOPHORIDAE
Hierodorus atychioides: Xanthopimpla rhopaloceros Krieger
Izatha attactella: Aucklandella ursula (Cameron), Camploplex hudsoni (Cameron)
Proteodes carnifex: Zealachertus nothofagi Boucek
Stathmopoda aposema: Meteorus luteus (Cameron)

PIERIDAE
Pieris rapae rapae: Apanteles glomeratus (Linnaeus), Pteromalus puparum (Linnaeus)

PSYCHIDAE
Liothula omnivora: Echthromorpha intricatoria (Fabricius)

PYRALIDAE
Ephestia kuehniella: Bracon hebetor Say, Venturia canescens (Gravenhorst)
Galleria mellonella: Apanteles galleriae Wilkinson
Plodia interpunctella: Bracon hebetor Say
Uresiphita polygonalis maorialis: Echthromorpha intricatoria (Fabricius)

SATURNIIDAE
Antheraea eucalypti: Echthromorpha intricatoria (Fabricius)

THYRIDIDAE
Morova subfasciata: Diadegma muelleri (White)

TINEIDAE
Tinea pellionella: Apanteles carpatus (Say), Chremylus elaphus Haliday
Trichophaga tapetzella: Meteorus cespitator (Thunberg)

TORTRICIDAE
Catamacta alopecana: Meteorus cinctellus (Spinola)
Ctenopseustis obliquana: Apanteles tasmanicus Cameron, Aphanistes kayi Gauld, Euceros coxalis Barron, Glabridorsum stokesii (Cameron), Trichogramma (Trichogrammanza) funiculatum Carver
Cydia pomonella: Ascogaster quadridentata Wesmael, Liotryphon caudatus (Ratzeburg)
Epichorista emphanes: Sympiesis campbellensis (Kerrich & Yoshimoto)
Epiphyas postvittana: Apanteles demeter Wilkinson, Apanteles tasmanicus Cameron, Brachymeria teuta (Walker), Echthromorpha intricatoria (Fabricius), Glabridorsum stokesii (Cameron), Meteorus cinctellus (Spinola), Trichogramma (Trichogrammanza) funiculatum Carver, Trichogrammatoidea bactrae Nagaraja, Xanthopimpla rhopaloceros Krieger
Gelophaula siraea: Aspicolpus hudsoni Turner
Graphania: Trichogrammatoidea bactrae Nagaraja
Grapholita molesta: Gelis cinctus (Linnaeus), Gelis tenellus (Say), Glabridorsum stokesii (Cameron), Liotryphon caudatus (Ratzeburg)
Planotortrix excessana: Glabridorsum stokesii (Cameron)
Planotortrix notophaea: Euceros coxalis Barron
Tortricidae?: Brachymeria phya (Walker)

YPONOMEUTIDAE
Plutella xylostella: Diadegma semiclausum, Diadromus collaris (Gravenhorst)

MANTODEA

Mantidae, Orthodera novaezealandiae: Eupelmus antipoda Ashmead

NEUROPTERA

Hemerobiidae, Drepanacra binocula: Anacharis zealandica Ashmead
Hemerobiidae, Micromus tasmaniae: Anacharis zealandica Ashmead

ORTHOPTERA

Gryllidae, Teleogryllus commodus: Calliscelio teleogrylli Hill, Probaryconus dubius (Nixon)
Rhaphidophoridae: Archaeoteleia novaezealandiae Masner
Tettigoniidae, Conocephalus semivittatum: Centrodora xiphidii (Perkins)

THYSANOPTERA

Thysanoptera: Ceranisus menes (Walker)

ARACHNIDA

Arachnida: Baeus seminulum Haliday
Araneae eggs?: Neobaeus novazealandensis Austin
Spiders: Arachnoobius austini Boucek

[—T. K. Crosby]

Plant host — parasitoid list

APIAXCEAE
Conium maculatum: Systole foeniculi Otten
Foeniculum officinale: Systole foeniculi Otten

COMPOSITAE
Hypochoeris radicata: Phanacis hypochoeridis (Kieffer)

CORULACEAE
Betula alba: Caliroa cerasi (Linnaeus)

FAGACEAE
Nothofagus fusca: Moaxiphia duniana (Gourlay)
Nothofagus menziesii: Moaxiphia duniana (Gourlay)
Quercus palustris: Phylacteophaga froggatti Riek
Quercus robur: Phylacteophaga froggatti Riek

GRAMINEAE
Agropyron repens: Tetramesa linearis (Walker)

LEGUMINOSAE
Acacia mearnsii: Bruchophagus acaciae Cameron
Medicago sativa: Bruchophagus roddi (Gussakovsky)
Trifolium pratense: Bruchophagus gibbus (Boheman)

MORACEAE
Ficus rubiginosa: Herodotia nubatriventris (Girault), Pleistodontes imperialis Saunders

MYRTACEAE
Agonis flexuosa: Phylacteophaga froggatti Riek
Eucalyptus alpina: Ophelimus eucalypti (Gahan)
Eucalyptus amplifoli: Ophelimus eucalypti (Gahan)
Eucalyptus x biangularis: Ophelimus eucalypti (Gahan)
Eucalyptus bicostata: Ophelimus eucalypti (Gahan)
Eucalyptus botryoides: Phylacteophaga froggatti Riek
Eucalyptus camaldulensis: Phylacteophaga froggatti Riek
Eucalyptus cinerea: Ophelimus eucalypti (Gahan), Phylacteophaga froggatti Riek
Eucalyptus citriodora: Phylacteophaga froggatti Riek
Eucalyptus delagatensis: Phylacteophaga froggatti Riek
Eucalyptus eugenioides: Phylacteophaga froggatti Riek
Eucalyptus ficifolia: Phylacteophaga froggatti Riek
Eucalyptus globulus: Ophelimus eucalypti (Gahan), Phylacteophaga froggatti Riek
Eucalyptus grandis: Phylacteophaga froggatti Riek
Eucalyptus gunii: Ophelimus eucalypti (Gahan)
Eucalyptus leucoxylon: Phylacteophaga froggatti Riek
Eucalyptus longifolia: Phylacteophaga froggatti Riek
Eucalyptus macarthurii: Ophelimus eucalypti (Gahan), Phylacteophaga froggatti Riek
Eucalyptus maculosa: Ophelimus eucalypti (Gahan)
Eucalyptus microcorys: Phylacteophaga froggatti Riek
Eucalyptus muelleriana: Phylacteophaga froggatti Riek
Eucalyptus nicholii: Ophelimus eucalypti (Gahan), Phylacteophaga froggatti Riek
Eucalyptus obliqua: Phylacteophaga froggatti Riek
Eucalyptus ovata: Ophelimus eucalypti (Gahan), Phylacteophaga froggatti Riek
Eucalyptus perriniana: Phylacteophaga froggatti Riek
Eucalyptus polyanthemos: Phylacteophaga froggatti Riek
Eucalyptus propinqua: Phylacteophaga froggatti Riek
Eucalyptus regnans: Phylacteophaga froggatti Riek
Eucalyptus robusta: Phylacteophaga froggatti Riek
Eucalyptus rudderi: Phylacteophaga froggatti Riek
Eucalyptus saligna: Phylacteophaga froggatti Riek
Eucalyptus sideroxylon: Ophelimus eucalypti (Gahan), Phylacteophaga froggatti Riek
Eucalyptus smithii: Phylacteophaga froggatti Riek
Eucalyptus urnigera: Ophelimus eucalypti (Gahan)
Eucalyptus viminalis: Ophelimus eucalypti (Gahan), Phylacteophaga froggatti Riek
Lophostemon coniferatus: Phylacteophaga froggatti Riek

PINACEAE
Larix: Sirex noctilio Fabricius
Picea: Sirex noctilio Fabricius
Pinus radiata: Sirex noctilio Fabricius
Pseudotsuga menziesii: Megastigmus spermotrophus Wachtl

ROSACEAE
Crataegus crusgalli: Caliroa cerasi (Linnaeus), Torymus varians (Walker)
Crataegus monogyna: Caliroa cerasi (Linnaeus), Torymus varians (Walker)
Crataegus oxycantha: Caliroa cerasi (Linnaeus)
Prunus: Caliroa cerasi (Linnaeus)
Pyrus communis: Caliroa cerasi (Linnaeus)
Rosa rugosa: Megastigmus aculeatus (Swederus)
Rubus idaeus: Priophorus morio (Lepeletier)

RUBIACEAE
Coprosma robusta: Moaxiphia deceptus (Smith)

SALICACEAE
Salix alba vitelliana: Pontania proxima (Lepeletier)
Salix fragilis: Pontania proxima (Lepeletier)

[—T. K. Crosby]

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[—T. K. Crosby]