

Coleoptera genera of New Zealand

Richard A. B. Leschen¹, John F. Lawrence², Guillermo Kuschel³, Stephen Thorpe⁴, Qiao Wang⁵,

¹ New Zealand Arthropod Collection, Landcare Research, Private Bag 92170, Auckland, New Zealand, email: LeschenR@Landcare.cri.nz

² CSIRO Entomology, G.P.O. Box 1700, Canberra, A.C.T., Australia

³ 7 Tropicana Drive, Mt Roskill, Auckland, New Zealand

⁴ Entomology Department, Auckland War Memorial Museum, Private Bag 92018, Auckland

⁵ Institute of Natural Resources, Massey University, Private Bag 11222, Palmerston North, New Zealand

Abstract

A checklist for the New Zealand genera of Coleoptera is provided and introductory information on the systematics, species number and biology is included. A total of 1091 genera are placed into 82 families and 180 subfamilies.

Key words: Beetles, diversity, biogeography, check list

Introduction

The order Coleoptera (beetles) makes up roughly one-fifth to one-quarter of the total insect fauna of the world and is one of the oft-cited cases of adaptive radiation of organisms. It is the largest group in New Zealand and remains one of the most poorly known groups of insects. For this reason, we prepared an updated checklist of the genera based on a full literature search and new collection records.

The order is well defined by having several diagnostic characters (Lawrence & Britton 1994, larval characters are indicated by an asterisk*): holometabolous development; mesothoracic wings modified into hardened elytra; antennae usually 11-segmented; mandibulate mouthparts, moving in a horizontal plane and with palp-bearing maxillae; prothorax well developed and forming with the head a distinct tagma; body more or less dorsoventrally compressed so that coxae and pleural regions lie ventrally; mesoscutellum relatively small and visible from above between elytral bases; metasternum well developed with invaginated endosternite (cryptosterny); abdominal sternites typically more sclerotised than the tergites, and basal one or two sternites invaginated; terminalia (genital and pregenital structures) usually enclosed within the apical segments of the abdomen; *head capsule complete and sclerotised with antennae and mandibulate mouthparts; *maxillae with well-developed palps;

*labium lacking a silk gland, *abdominal prolegs usually absent; pupa aedepticous (lacking functional mouthparts) and usually exarate (legs and wings free from body).

The order is considered monophyletic, though there are different opinions regarding the relationships of the Strepsiptera as sister taxon to Coleoptera (e.g., compare Kukalova-Peck and Lawrence 1993 with Whiting *et al.* 1997) based on morphology and/or combined morphological and molecular data. There are four suborders recognised, Archostemata, Adephaga, Myxophaga and Polyphaga, with the latter comprising the largest and most diverse, and the Archostemata as the most primitive group (no Archostemata or Myxophaga occur in New Zealand). The phylogenetic relationship among the suborders is contentious (see Beutel and Haas 2000), and a full analysis using all of the available characters is warranted. At present there are 167 extant families and over 450 subfamilies contained in Coleoptera (Lawrence & Newton 1995), though higher taxa are being recognised annually, including family level taxa. The New Zealand fauna contains 82 families with 177 subfamilies and 1090 genera.

At present no comprehensive identification guide is available to the species of New Zealand Coleoptera, though some monographs are available (e.g., see listing of Fauna of New Zealand series dealing with Coleoptera at <http://www.mwpress.co.nz/>). The New Zealand families can be identified using keys and diagnoses included in Klimaszewski & Watt (1997) and the most comprehensive identification tool is the electronic key by Lawrence *et al.* (1999), which can be used to identify families and most of the subfamilies.

Coleoptera are present in every habitat imaginable, and have a diverse array of diets and behaviours that is rivalled only by Diptera in New Zealand. Absent

from the New Zealand fauna are species that are external symbionts on mammals and there are very few species of inquilines (species that live in the nests of social insects). Unfortunately much of what is known about the fauna is fragmentary, largely based on anecdotal data and extrapolations made from related taxa found outside New Zealand. The best source for biological information is the primary literature summarised in Klimaszewski & Watt (1997).

Unique Components of the New Zealand Fauna

The fauna of New Zealand is disharmonic, consisting of ancient lineages that were present long before the break-up of Gondwana and more derived lineages and species that arrived more recently from elsewhere (mainly from Australia, Pacific, Asia and Indonesia). Very old amphitropical or bipolar groups are found in New Zealand and include broscine Carabidae, Derodontidae, and Byrrhidae, to name a few (Crowson 1980). Only one endemic family is present in New Zealand (Cyclaxyridae), but there are other groups representing more widespread Gondwanan elements. For example, Chaetosomatidae only occurs in New Zealand and Madagascar, and there are many examples of other family-group taxa found in New Zealand, southern South America, Australia, New Caledonia, and South Africa (e.g., migadopine Carabidae, camiarine Leiodidae, Cavognathidae, priasilphine Phloeostichidae, Ulodidae, Chalcodryidae).

Fossils dating back to over 26,000 BP during the Last Glacial Maximum (LGM) indicate that the New Zealand beetle fauna was unique and included some very large species that have gone extinct. For example, from sediments dated around 2000 BP (late Holocene, Worthy & Swabey 2002), Kuschel (1987) described a genus of molytine (*Tymbopiptus*) and Leschen and Rhode (2002) described the largest species of ulodid beetle, *Archaeophylax worthyi*. Moreover, there are several species of smaller beetles, including an extraordinary new genus of limnichid, that have been collected from deposits dating from the LGM (M. Marra, pers. comm.).

Areas of endemism have not been established for New Zealand Coleoptera, but certain groups are regionalised (Campbell Plateau, Northwest Nelson

area of the South Island, northern North Island, offshore islands, etc.) or restricted to certain communities (sooty moulds, *Nothofagus* forests, caves, and tussock grasslands).

Number of Species in the New Zealand Fauna

World estimates of the number of beetles vary, though there is general agreement that Coleoptera contains the highest number of described organisms. For example, Nielsen and Mound (1999) estimated 300,000 to 450,000 species worldwide. Calculating the total number of species is like counting stars and indeed Grove and Stork (2000) emphasised that the question about the number of species overshadows more important questions about taxonomy and biology of the species.

Most of the New Zealand beetle species were described between 1880 and 1923 by Thomas Broun, who named a total of 4323 species. His descriptions were based to a large extent on single specimens collected in the North Island lowlands whilst the considerably more varied South Island fauna, in particular the rich but then still largely unknown subalpine and alpine component, had only scanty treatment. Hundreds of native and foreign species have since been added, though many groups require detailed taxonomic study, especially since there are many undescribed species and some that are incorrectly assigned to Holarctic genera.

A few estimates are available for the number of species of beetles existing in New Zealand. Watt (1983) estimated that there are 4300 species, while Klimaszewski and Watt (1997) estimated over 5223 species, and Emberson (1998) estimated 6740 species. Based on the number of beetle species and potential host plants recorded in the Lynfield Survey in suburban Auckland, Kuschel (1990) estimated 10,000 to 10,500 species. The most diverse families in New Zealand are Curculionidae (1496 spp.), Staphylinidae (936 spp.), Carabidae (424 spp.), and Zopheridae (196 spp.) (Klimaszewski and Watt 1997; Larochelle and Larivière 2001). These groups are also well represented in other parts of the world. The least diverse families, with one endemic species each, are Eucinetidae, Heteroceridae, Chelonariidae*, Bostrichidae*, Phycosecidae, Monotomidae*, Cucujidae, and Prostomidae. Those families

marked by an asterisk contain monotypic genera that may be primitive members of their group.

Future Work

A full list of the named beetles is difficult to produce at this time because few genera and species have been revised since the major work done by Thomas Broun. Nevertheless, some undescribed species have conservation status (McGuinness 2001), which illustrates the need for taxonomic work. An ever-present time lag occurs between the discovery of a new species and the availability of a published name, sometimes spanning decades. For example, the Three Kings *Platysus*, which is the only known member of the genus in New Zealand, was first collected by E. S. Gourlay in the 1960's but was not described until almost 40 years later by Watt *et al.* (2001). This process underpins the problems that systematists face regarding modern taxonomy in general, which involves more deep

investigation towards understanding character variation, phylogenetic relationships and classification, and, often, a paucity of study material. Most systematists would certainly argue for more workers and students to describe New Zealand's Coleoptera fauna, but modern times are much different from those in the 19th and 20th centuries when taxonomic names were mass produced and, in some ways, the taxonomic impediment (Heyward & Watson 1995) did not exist. Apart from creating more taxonomic expertise, financial support, and a society that promotes basic research, we believe that future work should include the following: surveys in New Zealand's inaccessible mountaintops, valleys and offshore islands; descriptions of species and revising groups based on sound classifications; and producing catalogues and databases to contain the vast taxonomic information.

Checklist of Genera

The following list is based on the most recent literature including recent catalogues and monographs. Genera are listed by subfamily with the exception of Curculionidae where the entries are listed by tribe. Some of the data is derived from unpublished work by the authors and the reviewers. Misplaced taxa are listed in quotations and the following acronyms designate some of the generic entries: A = adventive, D = doubtfully established in New Zealand, E = extinct taxa, N = new record. Taxa exclusively distributed on off shore islands are indicated as follows: C = Chatham Islands, K = Kermadecs, S = subantarctic islands, T = Three Kings Islands.

GYRINIDAE (1)

Gyrinus (A)

DYTISCIDAE (12)

Hydroporinae

Antiporus

Huxelhydrus

Hyphhydrus

Kuschelydrus

Liodesus

Phreatodesus

Colymbetinae

Lancetes

Rhantus

Copelatinae

Copelatus

Dytiscinae

Dytiscus (A, D)

Hydaticus (K)

Onychohydrus

RHYSODIDAE (4)

Kaveinga

Kupeus

Rhyzodiastes

Tangarona

CARABIDAE (79)

Carabinae

Carabus (A, D)

Maoripamborus

Cicindela

Scaritinae

Amarotypus

Calathosoma (S)

Loxomerus (S)

Taenarthrus

Clivina (A)

Broscinae

Bountyia (S)

Brullea

Diglymma

Mecodema

Metaglymma

Oregus

Psydriinae

Bembidion

Duvaliomimus

Erebotrechus

Hygranillus

Kenodactylus

Maoritrechus

Mecyclothorax

Molopsida

Neanops

Nesamblyops

Oopterus

Paratachys (A)

Pelodiaetodes

Pelodiaetus

Pericompsus (A)

Scototrechus
 Selenochilus
 Synteratus (S)
 Tachys
 Zeanillus
 Zecillenus
 Zolus
Harpalinae
 'Anchomenus'
 'Argutor'
 Actenonyx
 Agonocheila
 Allocinopus
 Anisodactylus (A)
 Anomotarus (A)
 Aulacopodus
 Cerabilia
 Ctenognathus
 Demetrida
 Dicrochile
 Dromius (A, N)
 Egadroma (A)
 Euthenarus
 Gaioxenus
 Gourlayia (T)
 Haplanister (A)
 Harpalus (A)
 Hypharpax
 Laemostenus (A)
 Lecanomerus
 Megadromus
 Neoferonia
 Notagonum
 Parabaris
 Pentagonica
 Perigona (A)
 Philophaeus (A)
 Pholeodytes
 Physolaesthus
 'Platynus'
 Plocamostethus
 Prosopogmus (A)
 Prospodrus
 Psegmatopterus
 Rhytisternus (A)
 Scopodes
 Syllectus
 Trigonothops (A, N)
 Triplosarus
 Zabronothus

Zeopocilus
HYDROPHILIDAE (19)
Horelophinae
 Horelophus
Hydrophilinae
 Berosus
 Cylomissus
 Enochrus (A?)
 Laccobius
 Limnoxenus
 Paracymus (A)
Sphaeridiinae
 Adolopus
 Cercyon (A)
 Cercyodes
 Cyloma
 Dactylosternum (A)
 Exydrus
 Hydrostygnus
 Rygmodus
 Saphydrus
 Sphaeridium (A, D)
 Tormissus
 Tormus
HISTERIDAE (12)
Abraeinae
 'Abraeus'
 Acritus (A)
Saprininae
 Gnathoncus (A)
 Neopachylopus
 Reichardtia
 Saprinus
 Tomogenius
Dendrophilinae
 Carcinops (A)
Histerinae
 Eblisia (A)
 Aulacosternus
Onthophilinae
 'Parepierus'
 'Tribalus'
HYDRAENIDAE (5)
Orchymontinae
 Homalaena
 Orchymontia
 Podaena

Ochthebiinae
 Meropathus
Hydraeninae
 Hydraena
PTILIIDAE (14)
Nanosellinae
 Mikado
 Nellozana
Ptiliinae
 Actidium
 Cissidium
 Dipentium
 Kuschelidium
 Nephanes (A)
 Notoptenidium
 Oligella (A)
 Ptenidotonium
 Ptenidium (A)
 Ptiliodes
 Ptinella
Acrotrichinae
 Acrotrichis (A)
AGYRTIDAE (1)
Necrophilinae
 Zeanecrophilus
LEIODIDAE (19)
Camiarinae
 Agyrtodes
 Catopsolius
 Baeosilpha
 Camiarites
 Camiarus
 Inocatops
 Zenocolon
 Chelagyrtodes
 Zeagyrtus
 Zeagyrtoma
 Zeagyrtodes
Leiodinae
 Isocolon
 Colenisia
 Zeadolopus
 Zelodes
Coloninae
 Colon
Cholevinae
 Mesocolon

Paracatops	Eleusomatus	Amriathaea
Pseudonemadus	Euglyptus	Anocalea
	Eupines	Aphytopus
SCYDMAENIDAE (9)	Eupinogitus	Arena
Scydmaeninae	Eupinolus	Atheta
Adrastia	Euplectopsis	Austrasilida
Chathamaenus (C)	'Euplectus'	'Austrocalea' (A)
Euconnus	Exeirarthra	Baeostethus
Maorinus	Gastrobothrus	Dasytricheta
Microscydmus	Gerallus (A)	Botromana
Sciacharis	Kenocoelus	'Brachida'
Scydmaenus	Logasa	Calodera
Stenichnaphes	Macropectus	Coenonica (A)
Stenichnus	Neosampa	Colle
	Patreus	Cordalia (A)
STAPHYLINIDAE (194)	Phormiobius	Crataraea (A)
Microsilphinae	Physobryaxis	Dasydera
Microsilpha	Placodium	Digrammus
Omaliinae	Plectomorphus	Ecomorypora
Allodrepa (S)	Plesiotyrus	'Encephalus'
Austrolophrum (A)	Pselaphogenius	Euryusa
Brouniellum	Pselaphophus (A)	Falagria
Corneolabium	Pselaphotheseus	Galafria
Crymus	'Pselaphus'	Gastrolamprusa
Ischnoderus	Sagola	'Geostiba'
Macralymma	Sagolonus	Geostibasoma
Metacorneolabium	Simkinion	Gyronotus
Nesomalium (S)	Startes	Gyrophaena
Omaliomimus	Stenosagola	Halobrecta (A)
'Omalium'	Tychotyrus	Heterodoxa (T)
Omalium (A)	Tyrogetus	'Homalota'
Paracorneolabium	Vidamodes	Ischnoglossa
Paraphloeostiba (A)	Vidamus	Leptoglossula
Selonomus (S)	Whitea	Leptusa
Stenomalium	Zeatyryus	Liogluta (A)
'Stenomalium'	Zelandius	Makara
Xylodromus (A)	Phloeocharinae	Myllaena
Zeolymma	Phloeognathus	Myrmecocephalus
Proteininae	Pseudophloeocharis (A)	Myrmecopora
Eupsorus	Tachyporinae	Nehemitropia (A)
Nesoneus	'Coproporus'	Ocalea
Paranesoneus	Sepedophilus	Ocyusa
Silphotelus	Tachyporus (A)	Oligota
Pselaphinae	Habrocerinae	Oxypoda
Adalmus	Habrocerus (A)	Paraconosoma
Agatyryus	Aleocharinae	Paraphytopus
Alloplectus	Adelarthra	Plesiosipalia
Anabaxis	Aleochara	Polylobus
Dalma	Aloconota	Pseudoligota
Dalmissus	Amischa (A)	Pseudopisalia (T)

- Silusa
 Stenomastax
 'Sternotropa'
 Stylogymnusa (S)
 Sytus
 Thamiaraea
 Tramiathaea
 Scaphidiinae
 Baecocera
 Brachynopus
 Cyparium
 Scaphisoma
 'Scaphisoma'
 'Scaphoxium'
 Piestinae
 Parasiagonum
 Osoriinae
 Nototorchus
 Paratorchus
 Zeoleusis
 Oxytelinae
 Anotylus
 Blediotrogus
 Bledius
 Carpelimus
 Coprostygnus
 Oxytelus
 Teropalpus
 Euaesthetinae
 Agnosthaetus
 Edaphus (A)
 Mesoesthetus
 Protopristus
 Pseudopsinae
 Pseudopsis
 Paederinae
 Astenus (A)
 Hyperomma
 Lathrobium
 Lithocharis (A)
 Medon
 Phanophilus
 Pseudomedon (A)
 Rugilus (A)
 Scimbalium (A)
 Scopaeus (T)
 Sunius (A)
 Staphylininae
 Bisnius
 Cafioquedus
- Cafius
 Creophilus
 Gabrius (A)
 Gabronthus (A)
 Gyrohyphus (A)
 'Hadrotres'
 Heterothops (A)
 Leptacinus (A)
 Maorothius
 Neobisnius
 Neohyphus (A)
 Neoxantholinus
 Notolinus
 Pachycorynus
 Paracorynus
 Philonthus
 Pseudocorynus
 Pseudoxantholinus
 Quediocafus
 Quediomimus
 Quedius (A)
 'Quedius'
 Sphingoquedius
 Tasgius (A)
 Thinocafius (C)
 Thyreocephalus (A)
 Xantholinus
- LUCANIDAE** (8)
 Nicaginae
 Holloceratognathus
 Mitophyllus
 Syndesinae
 Syndesus (A)
 Lampriminae
 Dendroblax
 Lamprima (A)
 Lucaninae
 Geodorcus
 Paralissotes
 Ryssonotus (A)
- TROGIDAE** (1)
 Trox (A)
- SCARABAEIDAE** (27)
 Aphodiinae
 Acrossidius (A)
 Aphodius (A)
 Ataenius (A)
- Australaphodius (A)
 Parataenius (A)
 Phycocus
 Proctophanes (A)
 Saprosites
 Tesarius (A, C)
 Scarabaeinae
 Copris (A)
 Epirinus (A)
 Onthophagus (A)
 Saphobiamorpha
 Saphobius
 Melolonthinae
 Costelytra
 Gnaphalopoda
 Mycernus
 Odontria
 Phyllotocus (A, N)
 Prodontria
 Psilodontria
 Pyronota
 Scythrodes
 Sericospilus
 Stethaspis
 Dynastinae
 Adoryphorus (A)
 Dasygnathus (A)
 Heteronychus (A)
 Pericoptus
- EUCINETIDAE** (1)
 Eucinetus
- CLAMBIDAE** (2)
 Clambinae
 Clambus
 Sphaerotherax
- SCIRTIDAE** (11)
 Amplectopus
 Atopida
 Brouncyphon
 Byrrhopsis
 Cyphanodes
 Cyphanus
 Cyphon
 Cyphotelus
 Cyprobius
 Mesocyphon
 Veronatus

BUPRESTIDAE (3)**Buprestinae**

Buprestis (A, D)

Maoraxia

Nascioides

BYRRHIDAE (5)**Syncalyptinae**

Microchaetes

Byrrhinae

Cytillissus

Epichorius

Liochoria

Synorthus

ELMIDAE (1)**Larainae**

Hydora

DRYOPIDAE (1)

Parnida

LIMNICHIDAE (2)**Hyphalinae**

Hyphalus

Limnichinae

Limnichus

HETERO CERIDAE (1)**Heterocerinae**

Heterocerus

PTILODACTYLIDAE (1)**Anchytarsinae**

Byrr cryptocryptus

CHELONARIIDAE (1)

Brounia

EUCNEMIDAE (5)**Melasinae**

Agalba

Neocharis

Talerax

Macraulacinae

Dromaeolus

Nematodes (A, N)

ELATERIDAE (25)**Lissominae**

Protelater

Sphaenelater

Agrypninae

Agrypnus (A)

Conoderus

Denticollinae

Acritelater

Amphiplatys

Amychus

Australaeus

'Ctenicera'

'Elatichrosis'

Hapatesus (A, N)

Insulahypnus

Oxylasma

Prisahypnus

Zeaglophus

Pityobiinae

Metablax

Elaterinae

Aglophus

Betarmonides

Lomemus

Megapenthes (D)

Ochosternus

Panspoeus

Parinus

Thoramus

Cardiophorinae

Brounaeolus

LYCIDAE (1)**Metriorrhynchinae**

Porrostoma (A)

CANTHARIDAE (3)**Malthininae**

Malthodes (A)

Dysmorphocerinae

Asilis

Neoontelus

DERODONTIDAE (1)**Laricobiinae**

Nothoderodontus

NOSODENDRIDAE (1)

Nosodendron

JACOBSONIIDAE (2)

Derolathrus

Saphophagus

DERMESTIDAE (7)**Dermestinae**

Dermestes (A)

Trinodinae

Trichelodes

Attageninae

Attagenus (A, D)

Megatominae

Anthrenocerus (A)

Anthrenus (A)

Reesa (A)

Trogoderma

BOSTRICHIDAE (4)**Dinoderinae**

Dinoderus (A)

Rhyzopertha (A)

Lyctinae

Lyctus (A)

Euderiinae

Euderia

ANOBIIDAE (25)**Ptininae**

Mezium (A)

Niptus (A)

Ptinus

Sphaericus (A)

Trigonogenius (A)

Dryophilinae

Sphinditeles

Ernobiinae

Ernobius (A)

Anobiinae

Australanobium

Anobium (A)

Megabregmus

Xyletobius

Macranobium

Stegobium (A)

Xenocera

Xyletobius

Xyletininae

Deroptilinus (A)

Lasioderma (A)

Leanobium

Dorcatominae

Cyphanobium
'Dorcatoma'
Dorcatomiella (A)
Methemus
Mirosternomorpha
Serianotus (K)

Mesocoelopodinae

Tricornus (A, D)

TROGOSSITIDAE (11)

Protopeltinae

Protopeltis

Rentoniinae

Australiodes
Parentonium
Rentonellum
Rentonidium
Rentonium

Lophocaterinae

Grynoma
Neaspis (A, N)
Promanus

Trogossitinae

Lepidopteryx
Tenebroides (A)

CHAETOSOMATIDAE (2)

Chaetosoma
Chaetosomodes

CLERIDAE (6)

Thaneroclerinae

Metaxina

Clerinae

Balcus

Hydnocerinae

Lemidia

Korynetinae

Necrobia (A)
Paratillus (A)

Enopliinae

Phymatophaea

PHYCOSECIDAE (1)

Phycosecis

MELYRIDAE (3)

Dasytinae

Arthracanthus

'Dasytes'

Halytes

NITIDULIDAE (12)

Epuraeinae

Epuraea

Carpophilinae

Carpophilus

Nitidulinae

Aethina (A)

Brounthina

Nitidula (A)

Omosita (A)

Platipidia

Soronia

Thalycrodes (A)

Cillaeinae

Brachypeplus

Cryptarchinae

Homepuraea

Priateles

MONOTOMIDAE (2)

Monotominae

Lenax

Monotoma (A)

PHLOESTICHIDAE (2)

Agapythinae

Agapytho

Priasilphinae

Priasilpha

SILVANIDAE (7)

Brontinae

Brontopriscus

Cryptomorpha

Dendrophagus

Silvaninae

Ahasverus (A)

Nausibius (A)

Oryzaephilus (A)

Silvanus (A?)

CUCUJIDAE (1)

Platus (T)

LAEMOPHLOEIDAE (3)

Cryptolestes (A)

Microbrontes

Notolaemus (A)

PHALACRIDAE (1)

Phalacrinae

Phalacrus (A)

CYCLAXYRIDAE (1)

Cyclaxyra

CAVOGNATHIDAE (2)

Neocercus

Zeonidicola

CRYPTOPHAGIDAE (11)

Atomariinae

Atomaria (A)

Paratomaria

Salltius

Ephistemus (A)

Cryptophaginae

Antarcticotectus

Brounina

Cryptophagus (A)

Micrambina

Ostreacryptus

Picrotus

Thortus

EROTYLIDAE (7)

Xenoscelinae

Loberonotha

Loberinae

Loberus

Languriinae

Hapalips

Cryptophilinae

Cathartocryptus

Cryptophilus (A)

Erotylinae

Cryptodacne

'Thallis'

BOTHRIDERIDAE (2)

Anommatinae

Anommatus (A)

Bothriderinae

Ascetoderes

CERYLONIDAE (2)

Euxestinae

Hypodacnella

Ceryloninae	Lithostygnus	Sharpides
Philothermus	Corticariinae	ZOPHERIDAE (16)
ENDOMYCHIDAE (2)	Bicava	Colydiinae
Mycetaeinae	Corticaria	Ablabus
Mycetaea (A)	Corticaria (A?)	Allobitoma
Merophysiinae	Melanophthalma	Bitoma
Holoparamesus	Rethusus	Chorasus
COCCINELLIDAE (17)	MYCETOPHAGIDAE (3)	Ciconissus
Coccidulinae	Mycetophaginae	Epistranus
Adoxellus	Litargus (A)	Glenentela
Cassiculus	'Triphyllus'	Heterargus
Rhyzobius	Typhaea (A)	Lasconotus
Rodolia (A)	ARCHEOCRYPTICIDAE (1)	Norix
Veronicobius	Archeocrypticus (A)	Notocoxelus
Scymninae	CIIDAE (5)	Pristoderus
Cryptolaemus (A)	Ciinae	Rytinotus
Diomus (A)	Cis	Syncalus
Midus (A)	Octotemnus (A)	Tarphiomimus
Scymnodes (A)	Orthocis	Zopherinae
Scymnus (A)	Scolytocis	Pycnomerus
Stethorus	Xylographus	Pycnomerodes
Chilocorinae	MELANDRYIDAE (10)	ULODIDAE (5)
Halmus (A)	Melandryinae	Archaeophylax (E)
Coccinellinae	Allorchesia	Arthropus
Adalia (A)	Allopterus	Brouniphylax
Coccinella	Axylita	Exohadrus
Coelophora (A)	Ctenoplectron	Syrphetodes
Harmonia	Doxozilora	CHALCODRYIDAE (3)
Illeis (A)	Hylobia	Chalcodrya
CORYLOPHIDAE (5)	Lyperocharis	Onysius
Orthoperinae	Mecorchesia	Philpottia
Orthoperus (A)	Neorchesia	TENEBRIONIDAE (37)
Peltinodinae	Orchesia	Lagriinae
Holopsis	MORDELLIDAE (5)	Adelium (A, D)
Corylophinae	Mordellinae	Chaerodes
Arthrolips	Hoshihananomia	Exadelium
Clypastraea (A)	Mordella	Kaszabadelium
Sericoderus	'Mordellistena' (A)	Lorelus
LATRIDIIDAE (11)	Stenomordellaria	Mesopatrum
Latridiinae	Zeamordella	Mitua
Adistemia (A, D)	RHIPIPHORIDAE (3)	Periatrum
Aridius (A)	Pelecotominae	Pheloneis
Cartodere (A, D)	Allocinops	Stenadelium
Dienerella (A)	Rhipistena	Wattadelium
Enicmus		Zeadelium
Latridius (A)		Phrenapatinae
		Archaeoglenes

- Zolodininae**
 Zolodinus
- Pimeliinae**
 Actizeta
- Tenebrioninae**
 Alplitobius (A)
 Amarygmus (A)
 Aphthora
 Artystona
 Cerodolus
 Demtrius
 Gonocephalum (A)
 Mimopeus
 Partystona (T)
 Pseudhelops
 Tenebrio (A)
 Tribolium (A)
 Uloma
 Ulomotypus
- Alleculinae**
 Omedes
 Tanychilus
 Xylochus
 Zomedes (T)
- Diaperinae**
 Menimus
 Gnatocerus (A)
 Platydema (A, N)
- Coelometopinae**
 Chrysoplepus
- PROSTOMIDAE** (1)
 Dryocora
- OEDEMERIDAE** (6)
Nacerdinae
 Nacerdes (A)
Oedemerinae
 Baculipalpus
 Koniaphassa
 Parisopalpus
 Selenopalpus
 Thelyphassa
- PYROCHROIDAE** (3)
Pilipalpinae
 Exocalopus
 Techmessa
 Techmessodes
- SALPINGIDAE** (5)
Inopeplinae
 Diagrypnodes
Salpinginae
 Salpingus
 Trichocolposinus
Aegialitinae
 Antarcticodomus
Incertae Sedis
 Rhizonium
- ANTHICIDAE** (7)
Lagrioidinae
 Lagrioida
Macratriinae
 Macratria
Lemodinae
 Cotes
 Trichananca (A)
 Zealanthicus
Anthicinae
 Anthicus
 Sapintus
- ADERIDAE** (2)
 'Xylophilus'
 Scraptogetus
- SCRAPTIIDAE** (3)
Scraptiinae
 Nothotelus
 Phytilea
 Scryptia (A, N)
- CERAMBYCIDAE** (53)
Aseminae
 Arhopalus (A)
Prioninae
 Prionoplus
Cerambycinae
 Agapanthida
 Ambeodontus
 Anencyrus
 Aridaeus (A)
 Astetholea
 Astetholida
 Bethelium (A)
 Blosyropus
 Brounopsis
- Cacodrotus
 Callidiopsis (A)
 Calliprason
 Coptocercus (A)
 Coptomma
 Didymocantha
 Drototelus
 Eburida
 Eburilla
 Gastrosarus
 Gnomodes
 Leptachrous
 Liogramma
 Neocalliprason
 Nesoptychias
 Ochrocydus
 Oemona
 Ophryops
 Phoracantha (A)
 Pseudosemnus
 Tessaromma (A)
 Votum
 Xuthodes
 Zorion
- Lamiinae**
 Adrioepa
 Hexatricha
 Hybolasius
 Mesolamia
 Metalamia
 Microlamia
 Nodulosoma
 Polyacanthia
 Psilocnaeia
 Ptinosa
 Somatidia
 Sphinohybolasius (D)
 Spilotrogia
 Stenellipsis
 Tenebrosoma
 Tetrorea
 Xyloteles
 Xylotoloides
- CHRYSOMELIDAE** (35)
Bruchinae
 Acanthoscelides (A)
 Bruchidius (A)
 Bruchus (A)
 Callosobruchus (A)

- Galerucinae**
 Adoxia
 Agasicles (A)
 Alema
 Allastena
 Altica (A)
 Bryobates
 Chaetocnema
 Disonycha (A)
 Longitarsus (A)
 Phyllotreta (A)
 Pleuraltica
 Psylliodes (A, K)
 Trachytetra
- Chrysomelinae**
 Allocharis
 Aphilon
 Cacomolpus
 Chalcolampra
 Chrysolina (A)
 Cyrtonogetus
 Dicranosterna (A)
 Paropsis (A)
 Peltoschema (A)
 Trachymela (A)
- Eumolpinae**
 Peniticus
 Eucolaspis
 Atrichatus
 Pilacolaspis
- Cryptocephalinae**
 Arnomus
 Ochropsis (A)
 ?Scaphodius
- NEMONYCHIDAE (1)**
Rhinorhynchinae
 Rhinorhynchus
- ANTHRIBIDAE (29)**
Anthribinae
 Androporus
 Arecopais
 Cacephatus
 Caliobius
 Cerius
 Dasyanthribus
 Etnalis
 Euciodes (A)
 Eugonissus
- Garyus
 Gynarchaeus
 Helmoreus
 Hoherius
 Hoplorhaphus
 Isanthribus
 Lawsonia
 Lichenobius
 Lophus
 Phymatus
 Pleosporius
 Sharpius
 Tribasileus (T)
 Xenanthribus
- Choraginae**
 Araecerus (A)
 Dynocryptus
 Liromus
 Micranthribus
 Notochoragus
 Xanthoderopygus (A, N)
- BELIDAE (4)**
Belinae
 Agathinus
 Pachyurinus
 Rhicnobelus
- Aglycyderinae**
 Aralius
- BRENTIDAE (6)**
Brentinae
 Lasiorhynchus
- Apioninae**
Rhadinocybini
 Cecidophyus
 Neocyba
 Strobilobius
 Zelapterus
- Apionini**
 Exapion A
- CURCULIONIDAE (233)**
Cossoninae
Araucariini
 Inosomus
 Xenocnema
- Cossonini**
 Exomesites
 Mesites (A)
- Dryotribini**
 Agrilochilus
 Allaorus
 Arecocyptus
 Arecophaga
 Catolethrobium (A, N)
 Eiratus
 Entium
 Etheophanus
 Exeiratus
 Macrorhyncolus (A)
 Microtribus
 Paedaretus
 Pogonorhinus
 Sericotrogus
 Stenotoura
 Stilbocara
 Stilboderma
 Toura
 Unas
- Onycholipini**
 Pselactus (A, D)
 Stenoscelis (A)
- Pentarthrini**
 Adel
 Agastegnus
 Camptoscapus
 Eucossonus
 Euophryum
 Macroscytalus
 Morronella
 Pentarthrum
 Proconus
 Stenotrupis
 Tansyoma
 Torostoma
 Touropsis
 Zenoteratus
- Phoenicobatini**
 Novitas
- Rhyncolini**
 Eutornopsis (K)
 Pachyops
 Phloeophagosoma
- Curculioninae**
Baridini
 Linogeraeus (A)
- Ceutorhynchini**
 Rhinoncus
 Trichosirocalus (A)

Cryptorhynchini

Adstantes
 Agacalles
 Allanalcis
 Ampagia
 Andracalles
 Baorhynchodes
 Clypeolus
 Crisius
 Crooktacalles
 Dermothrius
 Didymus
 Ectopsis
 Eutyrrhinus
 Hadracalles
 Hiiracalles
 Homoreda
 Indecentia
 Maneneacalles
 Mecistylus
 Mesoreda
 Metacalles
 Microcryptorhynchus
 Mitrastethus
 Notacalles
 Nothaldonus
 Omoeacalles
 Oreda
 Pachyderris
 Paromalina
 Patellitergum (C)
 Postacalles
 Psepholax
 Rainacalles
 Rhynchodes
 Scelodolichus
 Strongylopterus
 Sympedius
 Synacalles
 Trinodicalles
 Tychanopais
 Tychanus
 Whitiacalles
 Zeacalles

Eriirhinini

Athor
 Baeosomus
 Myrtonymus

Eugnomini

Amylopterus

Ancistropterus
 Colabotelus
 Eugnomus
 Goneumus
 Gonoropterus
 Hoplocneme
 Icmalius
 Nyxetes
 Oreocalus
 Pactola
 Pactolotypus
 Philacta
 Rhopalomerus
 Scolopterus
 Stephanorhynchus
 Tysius

Meciniini

Gymnetron (A)

Lixini

Rhinocyllus (A)

Mesoptiliini

Neolaemosaccus (A)

Molytini

Abrotheus
 Allaorops
 Allostyphlus
 Amphiskirra
 Araeoscapus
 Astyphlus
 Bantiades
 Bradypatae
 Chamaecephis
 Cuneopterus
 Dermotrichus
 Doliocentrus
 Erymneus
 Hadramphus
 Halliellara
 Inosogenes
 Karocolens
 Lithocia
 Lyperobius
 Megacolabus
 Memes
 Notonesius (S)
 Pachyprynus
 Phemus
 Phronira
 Phrynixodes
 Phrynixus

Rachidiscodes
 Rachidiscus
 Reyesiella
 Rystheus
 Sosgenes
 Styphlotelus
 Tymbopiptus (E)

Rhamphini

Geochus

Storeini

Abantiadinus
 Aganeuma
 Alloprocas
 Aneuma
 Celetotelus
 Euprocas
 Hypotagea
 Neomycta
 Notinus
 Oropterus
 Peristoreus
 Phorostichus
 Praolepra
 Simachus
 Stilbopsis
 Storeus (A)

Dryophthorinae

Dryophthorus (A)
 Sitophilus (A)
 Sphenophorus (A)

Entiminae

Aterpini

Anagotus
 Heterotyles
 Lyperopais
 Rhadinosomus

Gonipterini

Gonipterus (A)

Naupactini

Asynonychus (A)
 Atrichonotus (A)
 Naupactus (A)

Oosomini

Phlyctinus (A)

Otiorhynchini

Otiorhynchus (A)

Ottistirini

Maleuterpes (A)

Rhytirhinini

Aphela (A)

Gromilus	Heterexis (S)	Chaetoptelius
Liparogetus	Homodus	Dendrotrupes
Listroderes (A)	Hygrochus	Hylastes (A)
Listronotus (A)	Inophloeus	Hylurgus (A)
Neosyagrius (A, D)	Irenimus	Pachycotes
Nestrius	Leptopius (A)	Phloeosinus (A)
Steriphus	Lyperobates	Platypodini
Sitonini	Mandalotus	Crossotarsus (K)
Sitona (A)	Neoevas	Platypus
Trachyphloeini	Nicaeana	Scolytini
Trachyphloeus (A, N, ?D)	Nonnotus	Amasa (A)
Tropiphorini	Oclandius (S)	Ambrosiodmus (A)
Agatholobus	Paelocharis	Coccotrypes (A, N)
Brachyolus	Phaeocharis	Coptodryas (A)
Catodryobiolus (S)	Protolobus	Cryphalus (A)
Catoptes	Sargon	Hypocryphalus
Cecyropa	Thesius	Scolytus (A)
Echinopeplus	Thotmus (C)	Xyleborinus (A)
Epitimetes	Zenagraphus	Xyleborus
Eurynotia	Scolytinae	Xylosandrus (A, N)
Haplolobus	Hylesinini	

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