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World catalog of the genera of Scydmaenidae (Coleoptera)

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Abstract

All generic names of extant and extinct Scydmaenidae are listed in a classification, including the current status and type species designation for each name, plus gross distribution and current number of species for all valid genera and most subgenera. Nomenclatural problems are reviewed and resolved. Type species are newly designated for 27 names, making one of these (*Cephaloconnus* FRANZ subgen.n. of *Euconnus*) available for the first time. *Palaeostigus* NEWTON gen.n. is proposed for the misidentified genus *Mastigus* of LELEUP, 1968 (not LATREILLE, 1802), and *Mastigus* LATREILLE becomes a senior objective synonym of *Australostigus* LELEUP (syn.n.). Preoccupied subgeneric names in *Scydmaenus* are replaced with *Androscydinus* NEWTON nom.n. for *Androscydmaenus* FRANZ, 1992 (not FRANZ, 1980); *Archiscydmaenus* FRANZ nom.n. for *Palaeoscydmaenus* FRANZ, 1985 (not FRANZ, 1975); *Kingius* FRANZ nom.n. for *Heterognathus* KING, 1864 (not GIRARD, 1854 or SCHMARDHA, 1859); and *Parallomicrus* FRANZ nom.n. for *Allomicrus* FRANZ, 1975 (not GAHAN, 1893). Brief introductory comments on classification and biology are also provided. The family now includes at least 4672 extant species placed in 81 genera, 11 tribes and two subfamilies; an additional 22 extinct species placed in 15 genera (10 extinct) are known from Cretaceous through mid-Tertiary deposits.

Key words: Coleoptera, Scydmaenidae, catalog, genera, classification, nomenclature, new name, new genus, new subgenus.

Preface

This work was instigated by the senior author in 1984 with preparation of a world generic checklist that attempted to summarize the current classification of the family. Obvious problems with different generic concepts in use in North America and the rest of the world led to correspondence with the junior author who undertook a study of Casey and LeConte types to resolve these, resulting in a publication (FRANZ 1985c) that clarified many of the problems. We agreed to work together on a more complete and fully referenced catalog of the genera, with indication of overall distribution and number of species for each genus and subgenus. The senior author prepared a draft of the catalog in late 1986, which the junior author extensively reviewed and augmented in early 1987, selecting suitable type species for most of the genera that lacked designated type species and proposing some new names for preoccupied names. After a long delay, the senior author revised and updated the catalog in October 1996, making remaining type species designations and proposals of new names as necessary, and sent it for review to the junior author and several other specialists on the family (see Acknowledgements). Unfortunately, the junior author has been unable to review this final draft, so that the senior author is responsible for final nomenclatural and taxonomic decisions and any remaining errors or problems. New taxa, names or type species designations are credited to whichever author first proposed them.

Introduction

(A.F. NEWTON)

Objectives. The main purpose of this catalog is to summarize the current classification of the family Scydmaenidae at the generic and higher levels. We give special attention to resolving nomenclatural problems with generic names, and indicating the approximate distribution and number of described species for each valid genus and for most subgenera of extant as well as extinct species. Only changes required to resolve nomenclatural problems are made here. The classification and generic concepts adopted here represent our interpretation of the status quo, although we are aware of problems in these areas also (see following paragraphs). As a further resource for the growing number of researchers interested in the systematics and evolution of these very diverse, fascinating and in some ways enigmatic beetles, we provide a brief and highly selective review of recent work on their classification and biology.

Review. Scydmaenids have been treated as a distinct family of beetles since first proposed as such by LEACH (1815), aided perhaps by their often characteristic, ant-like body form which has led to such common names as "Ameisenkäfer" and "ant-like stone beetles". Although placement in the beetle suborder Polyphaga and superfamily Staphylinoidea has never been questioned, their exact relationship to the other families of this group has been and continues to be debated. Suggestions of close relationship to Pselaphidae (e.g., FORBES 1926, BÖVING & CRAIGHEAD 1931), to certain Leioididae (e.g., CROWSON 1955, BROWN & CROWSON 1980), or to Scaphidiidae (NAOMI 1985) have not been sustained by later work (see NEWTON & THAYER 1988, 1995; HANSEN 1997a). Powerful evidence from diverse structures of adults and larvae, summarized by LAWRENCE & NEWTON (1982), NEWTON & THAYER (1995), BEUTEL & MOLEND A (1997) and HANSEN (1997a), does clearly tie Scydmaenidae strongly to the "Brachelytra" or group of staphylinoid families centered on Staphylinidae, but the former three works suggest nearest ties to a "staphylinine group" of staphylinid subfamilies (especially a subgroup including Euaesthetinae, Steninae, Megalopsidiinae, Solieriinae and Leptotyphlinae) while the last work suggests a more basal position outside the family Staphylinidae. A key question still to be resolved is whether long (but often truncate) elytra in scydmaenids are a retained primitive beetle feature or secondarily derived from more staphylinid-like shorter elytra.

Classification within the family Scydmaenidae has been less controversial, with few changes above the generic level since the early part of this century (CSIKI 1919), although this is probably due more to lack of attention than to robustness of the classification. No comprehensive phylogenetic analysis of higher taxa has been published, although some recent work or comments (CASTELLINI 1996, HANSEN 1997a, O'KEEFE & al. 1997, O'KEEFE 1998) suggest that the subfamily Mastiginae and at least two of its three included tribes are monophyletic, but Scydmaeninae very likely is not. Within the latter subfamily, the tribes Chevrolatiini, Leptoscydmini and Scydmaenini share a unique and complex elytral-abdominal interlock involving a groove in tergum 7 and tongue at the apex of each elytron (Newton, personal observations); the tribes Cyrtoscydmini, Plaumanniolini and Siamitini have similar maxillary palps (with subulate or aciculate apical palpomere) and male genitalia (e.g., FRANZ 1989a, 1990); and the tribes Cephenniini and Eutheiini are isolated and probably basal groups within this subfamily, but much further work is needed to support these tribes or tribal groupings as monophyletic. At the generic level, some of the very large genera such as *Euconnus* and *Scydmaenus* are probably paraphyletic with respect to smaller allied genera, and substantial changes in generic classification are likely as modern studies are completed. At the species level, only central and western Europe are likely to be relatively completely known; the vast numbers of new species collected and described from various tropical and southern temperate areas during the past four decades by H. Franz alone suggest that only a small fraction of the species in these faunas have been discovered.

Recent fossil finds (O'KEEFE & al. 1997) have pushed the known age of scydmaenids back to the Cretaceous, but other fossils of Brachelytra are known and already diverse in mid- and late-Jurassic deposits so still earlier discoveries of scydmaenids might be expected. Extinct genera and extant genera with extinct species are listed in the catalog below; SPAHR (1981) lists the extinct species, all from amber deposits. Additional scydmaenids have been mentioned but not formally described, from Baltic amber by KLEBS (1910) and Canadian amber by MCALPINE & MARTIN (1969).

The biology of scydmaenids is still inadequately known. Most species inhabit leaf litter and other debris, rotting logs, or mosses in forests and sometimes more open areas, while a few are associated with nests of ants, termites or mammals, or found in caves (FRANZ 1980c, HANSEN 1997b, NEWTON 1991, SUTER 1966). Because of their small size (about 0.5-3 mm, rarely to 7 mm) and cryptic habits, they are most often collected by use of Berlese funnels or Moczarski extractors (e.g., BESUCHET & al. 1987, SUTER 1966, WHEELER & MCHUGH 1987). Although adults and larvae have been known or suspected to be predators of mites and other small organisms, some details have become clear only recently with the work of SCHUSTER (1966a, 1966b) and especially SCHMID (1988a), who experimented with species belonging to four tribes of Scydmaeninae. These are all highly specialized predators of armored mites (Acarina of the groups Oribatei and Uropodina) which penetrate the prey, inject digestive juices into it, and ingest the resulting liquid. Two penetration strategies were observed by SCHMID (1988a) (with adults and available larvae behaving similarly in each genus): *Cephennium* (and possibly other Cephennini) hold the mite with suction disks on their labium, and use the rasp-like external edge of their mandibles to slowly grind a hole in the thick dorsal surface of the mite; penetration can take more than four hours. The other species studied by SCHMID (1988a) (from five genera of Cyrtoscydmini, two of Eutheiini, and *Scydmaenus*) hold the mite with their legs and use the slender piercing-cutting apices of their mandibles to dissect the cover from a ventral orifice of the mite to gain quick access. DE MARZO (1983) described the unusual life cycle of *Palaeostigus* (as *Mastigus*) in which the first two larval instars feed only on secretions deposited with the eggs by the mother, and only the third instar leaves to seek prey.

Immature stages of scydmaenids are still poorly known, although with recent advances larvae of at least 11 genera belonging to six tribes and both subfamilies have now been adequately described. Most of these are described and keyed in BROWN & CROWSON (1980), with modifications to that key for newly discovered larval genera proposed by DE MARZO (1984) and VIT & DE MARZO (1989). Other important contributions with family characterizations and description or illustration of additional larval types include BÖVING & CRAIGHEAD (1931), KASULE (1966), LAWRENCE & al. (1993), NEWTON (1991), PAULIAN (1941) and SCHMID (1988b - but note that his unreared "Typ 3" larva tentatively attributed to *Euconnus* actually belongs to the oxyteline staphylinid genus *Syntomium*!). WHEELER & PAKALUK (1983) proposed a detailed scheme for labeling setae and pores of *Stenichnus* larvae. DE MARZO (1983, 1984) described the first scydmaenid eggs and pupae, respectively.

Identification guides and catalogs of Scydmaenidae are inadequate for most of the world. The last comprehensive catalog is nearly 80 years old (CSIKI 1919); only family-group taxa have been cataloged more recently (NEWTON & THAYER 1992). Drafts of species catalogs have been prepared but not yet published for New World scydmaenids (by S.T. O'Keefe) and world *Euconnus* (by A. Davies). Few comprehensive revisions, identification guides or diagnoses exist for most genera and higher taxa on a world basis; some rare exceptions cover Mastigini (LELEUP 1968, BORDONI & CASTELLINI 1973), *Leptomastax* (CASTELLINI 1996) and *Lophioderus* (O'KEEFE 1996). Useful guides exist for some regional faunas, such as species of western Europe (e.g., FRANZ & BESUCHET 1971) and genera of North America (e.g., ARNETT 1963, completely revised in a work in press by S.T. O'Keefe). Although H. Franz has done a tremendous amount of systematic work on many tropical and southern temperate faunas, based extensively on his own collecting, much of this work is necessarily descriptive taxonomic in nature and lacks keys.

Exceptions that treat certain faunas relatively completely and include at least some keys and checklists cover Latin America (FRANZ 1967, 1980a, 1984b, 1986b, 1988a, 1989d, 1991b, 1993a, 1993b, 1994a, 1995, 1997), Australia and New Zealand (FRANZ 1975, 1977a, 1980b, 1986d), southwest Pacific islands (FRANZ 1971b, 1986c), South Africa (FRANZ 1979a, 1984a), Madagascar (FRANZ 1986a), Sri Lanka (FRANZ 1982), Sumatra (FRANZ 1984c), Sabah (FRANZ 1992) and Thailand (FRANZ 1989a). A detailed geographic review and complete bibliography of Franz's systematic work on Scydmaenidae is provided by O'KEEFE (this volume).

Nomenclature. Family-group names in Scydmaenidae were reviewed recently by NEWTON & THAYER (1992), who implemented two changes from common usage required by priority: use of Mastiginae rather than Clidicinae for the name of one subfamily, and Cyrtoscydmini rather than one of several alternatives for the name of one tribe of Scydmaeninae. Original citations for all family-group names are repeated in the Catalog below. During the present review of generic names, a number of further nomenclatural problems or unresolved issues were found, including more than two dozen names for which type species had never been established or were incorrectly cited, several previously overlooked cases of homonymy, and some variant spellings including original ones. Generally these have been resolved according to the current Code of Zoological Nomenclature (ICZN 1985). However, the Code has been under revision for several years, and a new Code will take effect on 1 January 1999; major changes in it have been outlined by MINELLI & RIDE (1997). In two or three cases, the anticipated new rules in the revised Code would lead to a different action from the current Code. These situations, two of them complex for other reasons, are discussed in more detail here.

Nevraphes and *Neuraphes* THOMSON. THOMSON (1859: 61) when establishing this name used the spelling *Nevraphes* in the one place the name appeared. In his later detailed treatment, THOMSON (1862: 80, 265) used the spelling *Neuraphes* twice, without comment. This latter spelling has been almost universally adopted for the name of the genus ever since then, although the original spelling has been noted, e.g., by NEAVE (1939-40) and POPE (1977), and recently used in a few works (e.g., SILFVERBERG 1979, O'KEEFE & al. 1997). The current Code (ICZN 1985, Art. 32b) requires use of *Nevraphes* as the correct original spelling, but the pending revised Code (MINELLI & RIDE 1997, item 12) will evidently require maintaining the almost universally used spelling *Neuraphes*, which is therefore retained here.

Scydmaenus LATREILLE. The type species of *Scydmaenus* by monotypy is "*Pselaphus hellwigii* PAYKULL" (LATREILLE 1802). There is no such available name; PAYKULL (1800: 366) referred the name to *P. hellwigii* HERBST, 1792. MÜLLER & KUNZE (1822) presented evidence that the species treated by PAYKULL (1800) and LATREILLE (1802) was a misidentification of HERBST's *P. hellwigii*, and actually referred to the species that they named *Scydmaenus tarsatus* MÜLLER & KUNZE; see further discussion by REITTER (1887a, 1889) and SCHAUFUSS (1888). Both species are placed in the current genus *Scydmaenus*, but in different subgenera. Under the current Code (ICZN 1985, Art. 70b), a misidentification cannot serve as a type species, and application must be made to ICZN to fix the type species as either (1) the nominal species *P. hellwigii* HERBST, or (2) the supposedly intended species *Scydmaenus tarsatus* MÜLLER & KUNZE. Option (2) would preserve the generally accepted use of the subgenus *Scydmaenus* s.str. as well as the subgenus *Cholerus* THOMSON; option (1) would make *Scydmaenus* a senior objective synonym of *Cholerus*, replacing that subgeneric name, and require adoption of one of several available names for *Scydmaenus* s.str. The new Code (MINELLI & RIDE 1997, item 13) would allow an author to choose whichever option promotes stability directly, without application to ICZN. Given the unlikelihood that any decision on an application to ICZN now could be made before the new Code takes effect in 1999 and eliminates the need for such application, I prefer to select and implement option (2) now. Thus, *Scydmaenus tarsatus* MÜLLER & KUNZE is here adopted as type species of *Scydmaenus* LATREILLE, preserving the prevailing usage of this name as well as *Cholerus* for subgenera of *Scydmaenus*. Note that a further source of long-term confusion was the use of the name *Scydmaenus* in still another sense (the current *Cyrtoscydmus* or *Stenichnus*) by

THOMSON (1859), REITTER (1882b), SHARP (1887), CASEY (1897) and others. This application of the name probably originated from ERICHSON's (1837) arrangement of species within *Scydmaenus* and was made formal when THOMSON (1859) subdivided *Scydmaenus* and incorrectly designated *S. godarti* LATREILLE, 1806 (ERICHSON's first-listed species, but not originally included by LATREILLE) as type species. This mistake was recognized and corrected already by, e.g., SCHAUFUSS (1888) and REITTER (1889), but its effects continued into the twentieth century (e.g., ARNETT 1963).

Mastigus LATREILLE. The establishment of *Ptinus spinicornis* FABRICIUS as type species of *Mastigus* seems clear, both in the original description of LATREILLE (1802), where this is the only available species-group name thus making *P. spinicornis* the type by virtual monotypy (since *M. palpalis* LATREILLE listed there was not actually described until LATREILLE (1804)), and explicitly by subsequent designation of LATREILLE (1810). It is most curious that LATREILLE (1804) included his newly described *M. palpalis* in *Mastigus* but expressed doubt about including *P. spinicornis*! Unfortunately, in his review and dismemberment of *Mastigus*, LELEUP (1968) thought that LATREILLE (1804) was the earliest publication of *Mastigus*, and accordingly treated *M. palpalis* as type species by virtual monotypy. LATREILLE's designation of 1802 makes the name *Mastigus* a senior objective synonym of *Australostigus* LELEUP (syn.n.); the genus *Mastigus* of LELEUP (1968) is then left without an available name, and a new one is proposed in the Catalog below. It is not clear that the new Code would allow an alternative resolution of this problem without application to the Commission. However, a further complication involving *Mastigus* is the use of the name by ILLIGER (1801, nomen nudum; 1802). ILLIGER's *Mastigus*, probably correctly, has been regarded by later authors (e.g., MÜLLER & KUNZE 1822, LACORDAIRE 1854) as of the same origin and intended concept as LATREILLE's *Mastigus*. However, neither author attributed this name to the other, and when first made available *Mastigus* ILLIGER (1802) included only "*Pselaphus hellwigii*, *hirticollis*" and other [unnamed] species of "*Pselaphus*" with long elytra (these named species now belong in *Scydmaenus* and *Euconnus*, respectively). If considered as an available, independent name (e.g., NEAVE 1939-40), *Mastigus* ILLIGER is a homonym of *Mastigus* LATREILLE, and designation here of *P. hellwigii* Herbst as type species of *Mastigus* ILLIGER makes it a senior objective synonym of *Cholerus*. Although exact publication dates for ILLIGER (1802) and LATREILLE (1802) are not known, ILLIGER's name is here regarded as the junior homonym and therefore unavailable. Under the new Code (MINELLI & RIDE 1997, item 11), *Mastigus* ILLIGER apparently would be treated as a forgotten name and would not threaten *Mastigus* LATREILLE or *Cholerus*.

Methods

The general methods used by the senior author to search for, study and record literature, search for homonyms and other nomenclatural problems, seek subsequent type species designations, and estimate number of described species and distribution, are those explained in detail in NEWTON & CHANDLER (1989). The junior author assisted greatly with checking the first draft, estimating species (especially for subgenera), providing obscure literature, proposing replacement names, and designating appropriate type species for those names that required such designation. All but one cited reference was seen by at least the senior author. In general, no attempt has been made to cite all misspellings and lapsus calami that have appeared in the literature, but the more important ones (including alternate original spellings and those that have been adopted by subsequent authors) are noted. Likewise, no attempt is made to cite all significant subsequent literature dealing with individual names or taxa and changes in their rank or status, or all revisions and keys, but many such works are noted (especially when needed anyway for nomenclatural reasons). Literature was surveyed through 1997 (Zoological Record Vol. 133, and FRANZ 1997).

In the catalog, subgenera are listed (in brackets) alphabetically within a genus, and genera alphabetically within a tribe, but higher taxa are in a supposedly more natural sequence.

World Generic Catalog

(A.F. NEWTON & H. FRANZ)

Family SCYDMAENIDAE LEACH

Scydmaenides LEACH, 1815: 92. Type genus: *Scydmaenus* LATREILLE, 1802.

Subfamily SCYDMAENINAE LEACH

Tribe EUTHEIINI CASEY

Eutheiini CASEY, 1897: 507. Type genus: *Eutheia* STEPHENS, 1830.

Ascydmini CASEY, 1897: 505. Type genus: *Ascydmus* CASEY, 1897 (= *Euthiconus* REITTER, 1881). Note: tribe synonymized by O'KEEFE (1998) by synonymy of type genus with *Euthiconus* of Eutheiini.

Eutheia STEPHENS: Palearctic, Nearctic, Nepal, Thailand, Taiwan (33 spp.)

Eutheia STEPHENS, 1830: 115 (attributed to Waterhouse). Type species: *Eutheia scydmaenoides* STEPHENS, 1830 (monotypy). Note: review of Palearctic species by FRANZ (1971c).

Euthia AGASSIZ, 1847: 152 (unjustified emendation of *Eutheia*).

Euthiopsis MÜLLER, 1925: 17 (as subgenus of *Euthia*). Type species: *Eutheia ventricosa* MÜLLER, 1925 (des.orig.). Note: not mentioned by FRANZ (1971c); listed as subgenus of *Eutheia* by Franz (in litteris, 1987), but treated as synonym in most recent literature.

Eutheimorphus FRANZ & LÖBL: Malaysia (Sabah) (1 sp.)

Eutheimorphus FRANZ & LÖBL, 1990: 169. Type species: *Eutheimorphus paradoxus* FRANZ & LÖBL, 1990 (des.orig.).

Euthiconus REITTER: W Europe, Russia, Japan, E Nearctic (5 spp.)

Euthiconus REITTER, 1881: 545 (replacement name for *Conoderus* SAULCY).

Conoderus SAULCY, 1878a: 221 (preoccupied, not ESCHSCHOLTZ, 1829). Type species: *Scydmaenus conicollis* FAIRMAIRE & LABOULBENE, 1854 (des. SAULCY 1878b: 45).

Euthiodes BRENDL, 1893: 283. Type species: *Euthiodes lata* BRENDL, 1893 (des. CASEY 1897: 515). Note: genus synonymized by O'KEEFE (1998).

Ascydmus CASEY, 1897: 505. Type species: *Ascydmus tener* CASEY, 1897 (monotypy). Note: genus synonymized by O'KEEFE (1998).

Protoeuthia FRANZ: Italy (2 spp.)

Protoeuthia FRANZ, 1970a: 31. Type species: *Protoeuthia mirifica* FRANZ, 1970 (monotypy). Note: alternate original spelling *Prothoeuthia* (FRANZ 1970a: 32); *Protoeuthia* selected here as correct original spelling.

Veraphis CASEY: Nearctic, Sweden, E Russia, Mongolia, Japan (12 spp.)

Veraphis CASEY, 1897: 509. Type species: *Eutheia impressa* LECONTE, 1879 (des.n. Franz). Note: review of Palearctic spp. by KURBATOV (1995).

Tribe CEPHENNIINI REITTER

Cephenniini REITTER, 1882b: 142. Type genus: *Cephenium* MÜLLER & KUNZE, 1822.

Anisosphaeridae TÖMÖSVÁRY, 1882: 128 (as new family of Thysanura; based on larva only). Type genus: *Anisosphaera* TÖMÖSVÁRY, 1882 (= *Cephenium* MÜLLER & KUNZE, 1822). Note: family placed in new insect order Anisosphaeridia, near Collembola, by SILVESTRI (1899), but recognized as based on larva of *Cephenium* by BERGROTH (1899).

Cephenium MÜLLER & KUNZE: W Palearctic, Nearctic (124 spp.)

Cephenium MÜLLER & KUNZE, 1822: 188 (as *Cephenium truncorum* MÜLLER, published in synonymy with *Scydmaenus thoracicus*). Type species: *Cephenium truncorum* MÜLLER, 1822 (= *Scydmaenus thoracicus* MÜLLER & KUNZE, 1822) (monotypy). Note: accepted as valid name by SCHAUM (1844: 459), LACORDAIRE (1854: 188) and later authors; distribution of and number of species assigned to current subgenera not clear.

(Cephennarium REITTER)

Cephennarium REITTER, 1881: 554 (as subgenus of *Cephennium*). Type species: *Cephennium apicale* REITTER, 1881 (des.n. Newton).

(Cephennium s.str.)

Microdema LAPORTE, 1835: 138. Type species: *Scydmaenus thoracicus* MÜLLER & KUNZE, 1822 (monotypy).

Megaladerus STEPHENS, 1835: 428. Type species: *Scydmaenus thoracicus* MÜLLER & KUNZE, 1822 (monotypy).

Tyttosoma WESTWOOD, 1840: 157 (published in synonymy with *Megaladerus*; attributed to WESMAEL; unavailable, never used as valid). Type species: *Scydmaenus thoracicus* MÜLLER & KUNZE, 1822 (des.orig. via objective synonymy with *Megaladerus*).

Tytthosoma AGASSIZ, 1847: 383 (unjustified emendation of *Tyttosoma*; attributed to WESMAEL).

Anisosphaera TÖMÖSVARY, 1882: 128 (as new genus of Thysanura; based on larva only). Type species: *Anisosphaera problematica* TÖMÖSVARY, 1882 (monotypy). Note: first recognized as Scydmaenidae and genus synonymized with *Cephennium* by BERGROTH (1899).

(Geodytes SAULCY)

Geodytes SAULCY, 1864: 256. Type species: *Geodytes caecus* SAULCY, 1864 (monotypy).

Microtherium PETRI, 1908: 570 (preoccupied, not MEYER, 1837). Type species: *Microtherium tenue* PETRI, 1908 (monotypy).

Etelea CSIKI, 1909a: 4; 1909b: 8 (replacement name for *Microtherium* PETRI). Note: genus synonymized with *C.* (*Geodytes*) by DODERO (1920).

(Macroderus CROISSANDEAU)

Macroderus CROISSANDEAU, 1894a: 416 (as subgenus of *Cephennium*). Type species: *Cephennium divergens* REITTER, 1884 (monotypy). Note: as synonym of *C.* (*Cephennium*) in CSIKI (1919), but a valid subgenus, teste C. Besuchet (letter to senior author, dated 4 April, 1997).

(Neocephennium APFELBECK)

Neocephennium APFELBECK 1911: 210; 1916: 341 (as subgenus of *Cephennium*). Type species: *Cephennium holdhausi* APFELBECK, 1911 (monotypy).

(Phennecium NORMAND)

Phennecium NORMAND 1912: 199 (as subgenus of *Cephennium*; replacement name for *Geodytes* of REITTER, 1881, not SAULCY (misidentified)). Type species: *Cephennium scabrum* NORMAND, 1912 (des.n. Newton).

Cephennodes REITTER: E Russia, Japan, Oriental, Tanzania, Hawaii (11 spp.)

Cephennodes REITTER 1884: 420. Type species: *Cephennodes simonis* REITTER, 1884 (monotypy). Note: 16 spp. according to KURBATOV (1995).

Cephennomicrus REITTER: Tanzania, Madagascar, Comoro Is. (13 spp.)

Cephennomicrus REITTER 1907: 297. Type species: *Cephennomicrus perpunctillum* REITTER, 1907 (monotypy).

Chelonoidium STRAND: Palearctic, Nearctic (12 spp.)

Chelonoidium STRAND, 1935: 285 (replacement name for *Chelonioides* CROISSANDEAU).

Chelonioides CROISSANDEAU, 1894a: 418 (as subgenus of *Cephennium*; preoccupied, not HITCHCOCK, 1858). Type species: *Cephennium turgidum* REITTER, 1877 (monotypy).

Coatesia LEA: Australia (1 sp.)

Coatesia LEA, 1915: 230. Type species: *Coatesia lata* LEA, 1915 (monotypy). Note: possible synonym of *Cephennomicrus* according to FRANZ (1975); probable synonym of *Cephennodes*, teste C. Besuchet (letter to senior author, dated 4 April, 1997).

Elacatophora SCHAUFUSS: Indonesia (Java) (1 sp.)

Elacatophora SCHAUFUSS, 1884: 403. Type species: *Elacatophora robusta* SCHAUFUSS, 1884 (monotypy).

Nanophthalmus MOTSCHULSKY: Caucasus, Turkey, Yugoslavia, Istria (8 spp.)

Nanophthalmus MOTSCHULSKY, 1851: 506. Type species: *Nanophthalmus megaloderoides* MOTSCHULSKY, 1851 (monotypy).

Neseuthia SCOTT: Seychelles, Mascarene Is., SW Pacific, Australia, Sri Lanka (22 spp.)

Neseuthia SCOTT, 1922: 201. Type species: *Neseuthia typica* SCOTT, 1922 (des.orig.).

Paraneseuthia FRANZ: Fiji, Russia (4 spp.)

Paraneseuthia FRANZ, 1986c: 154. Type species: *Paraneseuthia peckorum* FRANZ, 1986 (des.orig.).

Pseudocephennium REITTER: Colombia, Venezuela (2 spp.)

Pseudocephennium REITTER, 1883: 385. Type species: *Pseudocephennium integricolle* REITTER, 1883 (des.n. Newton).

Tribe CYRTOSCYDMINI SCHAUFUSS

Cyrtoscydmini SCHAUFUSS, 1889: 2. Type genus: *Cyrtoscydmus* MOTSCHULSKY, 1869 (= *Stenichnus* THOMSON, 1859). Note: adopted as valid name for tribe by NEWTON & THAYER (1992) due to priority over Euconnini, Stenichnini and Neuraphini.

Scydmaenini of REITTER, 1882b: 159 (based on misidentified type genus). Type genus: *Scydmaenus* of THOMSON, 1859 (not LATREILLE, 1802; = *Stenichnus* THOMSON, 1859).

Glandulariidae SCHAUFUSS, 1889: 3. Type genus: *Glandularia* SCHAUFUSS, 1889 (= *Euconnus* (*Napochus*) THOMSON, 1859). Note: family and genus synonymized by FRANZ (1970b).

Lophioderini CASEY, 1897: 356. Type genus: *Lophioderus* CASEY, 1897. Note: tribe synonymized by FRANZ (1985c).

Euconnini CASEY, 1897: 362. Type genus: *Euconnus* THOMSON, 1859. Note: as synonym of Neuraphini in CSIKI (1919).

Opresini CASEY, 1897: 493. Type genus: *Opresus* CASEY, 1897 (= *Microscydmus* SAULCY & CROISSANDEAU, 1893). Note: tribe synonymized by FRANZ (1985c).

Stenichnini GANGLBAUER, 1899: 25. Type genus: *Stenichnus* THOMSON, 1859. Note: as synonym of Neuraphini in CSIKI (1919).

Neuraphini CSIKI, 1909b: 18. Type genus: *Neuraphes* THOMSON, 1859. Note: as valid name for tribe in CSIKI (1919), reason unknown.

Syndicini CSIKI, 1919: 17. Type genus: *Syndicus* MOTSCHULSKY, 1851. Note: tribe synonymized by FRANZ (1971a).

Sciacharini CSIKI, 1919: 69. Type genus: *Sciacharis* BROWN, 1893. Note: tribe synonymized by FRANZ (1980b).

Allohoraeomorphus FRANZ: Fiji (1 sp.)

Allohoraeomorphus FRANZ, 1986c: 164. Type species: *Allohoraeomorphus calcarifer* FRANZ, 1986 (monotypy).

Alloraphes FRANZ: Brazil, Jamaica, Peru, Venezuela, Mexico (7 spp.)

Alloraphes FRANZ, 1980a: 212. Type species: *Alloraphes jamaicae* FRANZ, 1980 (des.orig.). Note: generic limits discussed, checklist provided by FRANZ (1989b).

Anhoraemorphus FRANZ: Madagascar (2 spp.)

Anhoraemorphus FRANZ, 1986a: 175. Type species: *Anhoraemorphus obscurus* FRANZ, 1986 (des.orig.).

Archiconnus FRANZ: Peru, Mexico (2 spp.)

Archiconnus FRANZ, 1980a: 189. Type species: *Archiconnus huallaganus* FRANZ, 1980 (monotypy).

Borneosabahia FRANZ: Malaysia (Sabah) (1 sp.)

Borneosabahia FRANZ, 1992: 893. Type species: *Borneosabahia mirifica* FRANZ, 1992 (des.orig.).

Brachycepsis BRENDEL: Nearctic (5 spp.)

Brachycepsis BRENDEL, 1889: 193. Type species: *Brachycepsis fuchsii* BRENDEL, 1889 (monotypy). Note: elevated from subgenus of *Stenichnus* by FRANZ (1985c).

Catalinus CASEY: USA (California) (1 sp.)

Catalinus CASEY, 1897: 492. Type species: *Scydmaenus angustus* LECONTE, 1852 (monotypy).

Chathamaenus FRANZ: New Zealand (Chatham Is.) (1 sp.)

Chathamaenus FRANZ, 1980b: 254. Type species: *Chathamaenus chathamensis* FRANZ, 1980 (des.orig.).

Euconnomorphus FRANZ: Peru (1 sp.)

Euconnomorphus FRANZ, 1980a: 207. Type species: *Euconnomorphus pilosissimus* FRANZ, 1980 (des.orig.).

Euconnus THOMSON: Worldwide (2457 spp.)

Euconnus THOMSON, 1859: 61. Type species: *Pselaphus hirticollis* ILLIGER, 1798 (des.orig.). Note: many spp. have not been placed to subgenus.

(**Alloconophron** FRANZ): Madagascar, Réunion (2 spp.)

Alloconophron FRANZ, 1986a: 261 (as subgenus of *Euconnus*). Type species: *Euconnus grucheti* FRANZ, 1986 (des.orig.).

(Allonapochus FRANZ): Madagascar, Mauritius (3 spp.)

Allonapochus FRANZ, 1972: 3 (as subgenus of *Euconnus*; not as new). Type species: *Euconnus mauritii* FRANZ, 1972 (monotypy). Note: FRANZ (1972) referred the subgeneric name to a work in press (FRANZ 1986a) with the implied type species "*E. perineti* m.", a name not available until FRANZ (1986a).
Allonapochus FRANZ, 1986a: 199 (as subgenus of *Euconnus*; as new). Type species: *Euconnus perineti* FRANZ, 1986 (des.orig.).

(Androconnus FRANZ): Neotropical (Mexico to Bolivia) (30 spp.)

Androconnus FRANZ, 1986b: 21 (as subgenus of *Euconnus*). Type species: *Euconnus bechyneae* FRANZ, 1986 (des.orig.).

(Anthicimorphus FRANZ): Madagascar, Australia (23 spp.)

Anthicimorphus FRANZ, 1975: 175 (as subgenus of *Euconnus*; not as new). Type species: *Phagonophana anthicoides* Lea, 1915 (monotypy). Note: also spelled *Anticimorphus* (FRANZ 1975: 303); FRANZ (1975) made comparisons to Madagascar spp., evidently referring to those described later in FRANZ (1986a).

Anthicimorphus FRANZ, 1986a: 234 (as subgenus of *Euconnus*; as new). Type species: *Euconnus anthiciformis* FRANZ, 1986 (preoccupied, not FRANZ, 1968) (des.orig.).

(Borneoconnus FRANZ): Malaysia (Sabah) (3 spp.)

Borneoconnus FRANZ, 1992: 900 (as subgenus of *Euconnus*). Type species: *Euconnus laticlava* FRANZ, 1992 (des.orig.).

(Cephaloconnus FRANZ), subgen.n.: Africa (19 spp.)

Cephaloconnus FRANZ, subgen.n. (as subgenus of *Euconnus*; validation of *Cephaloconnus* FRANZ, 1962). Type species: *Euconnus hypertrophicus* FRANZ, 1962 (des.n. Franz).

Cephaloconnus FRANZ, 1962: 349 (as subgenus of *Euconnus*; nomen nudum, no type species designated).

(Cerviconnus FRANZ): Africa (6 spp.)

Cerviconnus FRANZ, 1962: 368 (as subgenus of *Euconnus*). Type species: *Euconnus bundukii* FRANZ, 1962 (des.orig.).

Cervinocnus FRANZ, 1961a: 194 (nomen nudum, no description); 1991a: 34 (lapsus calami for *Cerviconnus*?).

(Cladoconnus REITTER): C+S Europe, Caucasus, Turkey (27 spp.)

Cladoconnus REITTER, 1909: 226 (as subgenus of *Euconnus*). Type species: *Scydmaenus motschulskii* STURM, 1838 (des.n. Franz).

(Dimorphaconnus FRANZ): Australia (9 spp.)

Dimorphaconnus FRANZ, 1975: 177 (as subgenus of *Euconnus*). Type species: *Scydmaenus insigniventris* LEA, 1912 (des.orig.).

(Drastophus CASEY): USA (California) (1 sp.)

Drastophus CASEY, 1897: 389. Type species: *Drastophus laevicollis* CASEY, 1897 (monotypy). Note: genus synonymized with *E.* (*Euconnus*) by FRANZ (1985c); resurrected as subgenus by O'KEEFE (1998). *Drasterophus*; FRANZ, 1985c: 171 (subsequent misspelling of *Drastophus*).

(Euconnus s.str.): Worldwide? (71 spp.)

Glyptostoma SCHAUFUSS, 1889: 2. Type species: *Glyptostoma cribricolle* SCHAUFUSS, 1889 (des.orig.). Note: genus as synonym of *E.* (*Euconnus*), CSIKI (1919).

(Euconophron REITTER): S Europe, Africa (125 spp.)

Euconophron REITTER, 1909: 226 (as subgenus of *Euconnus*). Type species: *Euconnus promptus* COQUEREL, 1860 (des.n. Franz).

(Eupentarius REITTER): Borneo, E Africa (2 spp.)

Eupentarius REITTER, 1907: 300 (as subgenus of *Euconnus*). Type species: *Euconnus grandiclavis* REITTER, 1907 (monotypy).

(Filonapochus FRANZ): Madagascar (1 sp.)

Filonapochus FRANZ, 1986a: 202 (as subgenus of *Euconnus*). Type species: *Euconnus grylloides* FRANZ, 1986 (des.orig.).

(Heteroconnus FRANZ): Africa, New Caledonia (4 spp.)

Heteroconnus FRANZ, 1963: 40 (as subgenus of *Euconnus*). Type species: *Euconnus impressicollis* FRANZ, 1963 (des.orig.).

(Heterotetramelus FRANZ): New Caledonia (2 spp.)

Heterotetramelus FRANZ, 1971b: 63 (as subgenus of *Euconnus*). Type species: *Euconnus caledonicus*

FRANZ, 1971 (des.orig.).

(**Himaloconnus** FRANZ): Oriental (10 spp.)

Himaloconnus FRANZ, 1979b: 244 (as subgenus of *Euconnus*). Type species: *Euconnus shujensis* FRANZ, 1979 (des.orig.).

Himalayaconnus FRANZ, 1979b: 247 (alternate original spelling for *Himaloconnus*). Note: apparent lapsus calami, used once compared to four times for *Himaloconnus*; also subsequently misspelled *Himalayoconnus* (FRANZ 1981: 48).

(**Microconnus** FRANZ): Neotropical (5 spp.)

Microconnus FRANZ, 1994b: 81 (as subgenus of *Euconnus*). Type species: *Euconnus canaimanus* FRANZ, 1994 (des.orig.).

(**Myrmecodytes** CROISSANDEAU): Egypt (1 sp.)

Myrmecodytes CROISSANDEAU, 1898b: 160 (as subgenus of *Euconnus*). Type species: *Scydmaenus pharaonis* MOTSCHULSKY, 1851 (monotypy).

Myrmecoides; CSIKI 1919: 57 (subsequent misspelling of *Myrmecodytes*).

(**Napochus** THOMSON): Worldwide? (266 spp.)

Napochus THOMSON, 1859: 61. Type species: *Scydmaenus claviger* MÜLLER & KUNZE, 1822 (des.orig.).

Glandularia SCHAUFUSS, 1889: 3. Type species: *Glandularia fricatoris* SCHAUFUSS, 1889 (des. FRANZ 1970b: 547). Note: genus synonymized with *E. (Napochus)* by FRANZ (1970b).

Connophron CASEY, 1897: 390. Type species: *Connophron repletum* CASEY, 1897 (des.n. Franz). Note: genus synonymized with *E. (Napochus)* by FRANZ (1985c); status discussed by O'KEEFE (1998).

(**Napoconnus** FRANZ): Worldwide? (55 spp.)

Napoconnus FRANZ, 1957: 31 (as subgenus of *Euconnus*). Type species: *Euconnus kubienai* FRANZ, 1957 (des.orig.).

(**Neonapochus** MACHULKA): Europe (1 sp.)

Neonapochus MACHULKA, 1929: 21 (as subgenus of *Napochus*). Type species: *Scydmaenus maecklinii* MANNERHEIM, 1844 (monotypy).

(**Nepaloconnus** FRANZ): Nepal (1 sp.)

Nepaloconnus FRANZ, 1979b: 242 (as subgenus of *Euconnus*). Type species: *Euconnus khumbuensis* FRANZ, 1979 (monotypy).

(**Noctophus** CASEY): E USA (1 sp.)

Noctophus CASEY, 1897: 387. Type species: *Noctophus schmitti* CASEY, 1897 (monotypy). Note: genus synonymized with *E. (Euconnus)* by FRANZ (1985c); resurrected as subgenus by O'KEEFE (1998).

(**Nodoconnus** FRANZ): Madagascar (3 spp.)

Nodoconnus FRANZ, 1986a: 258 (as subgenus of *Euconnus*). Type species: *Euconnus gomyanus* FRANZ, 1986 (des.orig.).

(**Palaeoconnus** FRANZ): Guatemala (1 sp.)

Palaeoconnus FRANZ, 1995: 53 (as subgenus of *Euconnus*). Type species: *Scydmaenus brevipes* SHARP, 1887 (not *Eumicrus brevipes* SHARP, 1887 (now *Scydmaenus*)) (des.orig.).

(**Paranapochus** FRANZ): Oriental, Madagascar (13 spp.)

Paranapochus FRANZ, 1986a: 192 (as subgenus of *Euconnus*). Type species: *Euconnus marojejyanus* FRANZ, 1986 (des.orig.).

Paranapochus FRANZ, 1973: 133; 1985c: 174 (as subgenus of *Euconnus*; not as new; nomen nudum, no type species designated).

(**Paratetramelus** FRANZ): Africa, Madagascar, Nepal (18 spp.)

Paratetramelus FRANZ, 1963: 25 (as subgenus of *Euconnus*). Type species: *Euconnus kenyae* FRANZ, 1963 (des.orig.).

(**Psomophus** CASEY): Worldwide (23 spp.)

Psomophus CASEY, 1897: 366 (as subgenus of *Euconnus*). Type species: *Euconnus callidus* CASEY, 1897 (des. FRANZ 1985c: 165).

Spanioconnus GANGLBAUER, 1899: 46 (as subgenus of *Euconnus*). Type species: *Scydmaenus intrusus* SCHAUM, 1844 (des.n. Franz). Note: subgenus synonymized by FRANZ (1985c, 1986a).

Diarthroconnus GANGLBAUER, 1900: 261 (as subgenus of *Euconnus*). Type species: *Euconnus birnbacheri* GANGLBAUER, 1900 (= *E. intrusus* (SCHAUM, 1844) (monotypy)). Note: subjective/objective synonym of *Spanioconnus*.

Psocophus; FRANZ, 1994a: 341, 379 (apparent lapsus calami for *Psomophus*). Note: used twice with reference to CASEY, no correct spelling used.

(Pycnophus CASEY): Circumtropical, Nearctic (71 spp.)

Pycnophus CASEY, 1897: 385. Type species: *Scydmaenus rasus* LECONTE, 1852 (monotypy). Note: reduced to subgenus of *Euconnus* by FRANZ (1985c).

Nudatoconnus FRANZ, 1980a: 116 (as subgenus of *Euconnus*). Type species: *Euconnus sphaerocephalus* FRANZ, 1980 (des.orig.). Note: subgenus synonymized by FRANZ (1985c).

(Rhomboconnus FRANZ): Venezuela (2 spp.)

Rhomboconnus FRANZ, 1986b: 20 (as subgenus of *Euconnus*). Type species: *Euconnus perplexus* FRANZ, 1986 (des.orig.).

(Scopophus CASEY): Nearctic (8 spp.)

Scopophus CASEY, 1897: 365 (as subgenus of *Euconnus*). Type species: *Euconnus affinis* CASEY, 1897 (des. FRANZ 1985c: 162).

(Scydmaenites CROISSANDEAU): SW Europe, Africa (7 spp.)

Scydmaenites CROISSANDEAU, 1898b: 165 (as subgenus of *Euconnus*). Type species: *Euconnus kraatzii* REITTER, 1881 (des.n. Franz).

(Smicrophus CASEY): E Nearctic (2 spp.)

Smicrophus CASEY, 1897: 467. Type species: *Smicrophus leviceps* CASEY, 1897 (des.n. Franz; also O'KEEFE 1998). Note: not mentioned by FRANZ (1985c); placed as subgenus of *Euconnus* by O'KEEFE (1998).

(Tetramelus MOTSCHULSKY): Worldwide? (172 spp.)

Tetramelus MOTSCHULSKY, 1870: 257. Type species: *Scydmaenus oblongus* STURM, 1838 (des.n. Franz). *Euconnoides* CROISSANDEAU, 1898b: 154 (as subgenus of *Euconnus*). Type species: *Scydmaenus styriacus* GRIMMER, 1841 (des.n. Franz). Note: as synonym of subgenus *Tetramelus* in CSIKI (1919).

(Ursoconnus FRANZ): E Africa (18 spp.)

Ursoconnus FRANZ, 1963: 42 (as subgenus of *Euconnus*). Type species: *Euconnus basilewskyi* FRANZ, 1962 (des.orig.).

(Xestophus CASEY): E USA (1 sp.)

Xestophus CASEY, 1897: 365 (as subgenus of *Euconnus*). Type species: *Scydmaenus salinator* LECONTE, 1852 (monotypy). Note: subgenus synonymized with *E. (Psomophus)* by FRANZ (1985c); resurrected as subgenus by O'KEEFE (1998).

(Heteroscydmus FRANZ): Bolivia (1 sp.)

Heteroscydmus FRANZ, 1980a: 208. Type species: *Heteroscydmus yapacariensis* FRANZ, 1980 (monotypy).

(Homoconnus SHARP): Mexico to Brazil, Cuba, Galapagos Is. (15 spp.)

Homoconnus SHARP, 1887: 64. Type species: *Scydmaenus batesi* SCHAUFUSS, 1867 (des.n. Franz). *Macroplocrates* REITTER, 1890: 220 (published in synonymy with *Homoconnus* SHARP; unavailable, never used as valid).

(Horaeomorphus SCHAUFUSS): Oriental, Madagascar, Mauritius, New Caledonia, Australia (55 spp.)

Horaeomorphus SCHAUFUSS, 1889: 21. Type species: *Horaeomorphus eumicrooides* SCHAUFUSS, 1889 (des.orig.).

Vinsoniana LHOSTE, 1956: 283 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus mauritiensis* LHOSTE, 1956 (monotypy). Note: subgenus synonymized by FRANZ (1986a); also subsequently misspelled as *Vinsonia* (FRANZ 1986a: 174).

Pseudosyndicus FRANZ, 1973: 122 (as subgenus of *Horaeomorphus*). Type species: *Horaeomorphus nepalensis* FRANZ, 1973 (monotypy). Note: subgenus proposed for one sp. from Nepal, but other *Horaeomorphus* spp. have not been assigned to subgenera (e.g., FRANZ 1975, 1986a).

(Leptocharis REITTER): Mediterranean (Algeria to Turkey, Sardinia to Crete) (4 spp.)

Leptocharis REITTER, 1887b: 275 (as subgenus of *Euconnus*). Type species: *Euconnus revelieri* REITTER, 1887 (monotypy). Note: elevated to genus and reviewed by BESUCHET (1958) and FRANZ (1960).

(Loebliites FRANZ): Thailand, Malaysia (Sabah) (2 spp.)

Loebliites FRANZ, 1986f: 965. Type species: *Loebliites mastigicornis* FRANZ, 1986 (des.orig.).

(Lophioderus CASEY): Nearctic (36 spp.)

Lophioderus CASEY, 1897: 356. Type species: *Lophioderus arcifer* CASEY, 1897 (des. FRANZ 1985c: 150). Note: revised by O'KEEFE (1996).

(Madagassoconnus FRANZ): Madagascar (28 spp.)

Madagassoconnus FRANZ, 1986a: 112. Type species: *Cyrtoscydmus kolbei* SCHAUFUSS, 1890 (des.orig.). *Madagassoconnus* FRANZ, 1977b: 351 (as subgenus of *Euconnus*; nomen nudum, no description).

Maorinus FRANZ: Australia, New Zealand (52 spp.)

Maorinus FRANZ, 1980b: 291 (replacement name for *Maoria* FRANZ). Note: elevated from subgenus of *Euconnus* by KUSCHEL (1990), but only 1 sp. mentioned.

Maoria FRANZ, 1975: 14 (as subgenus of *Euconnus*; preoccupied, not LAPORTE, 1868; not PILSBRY, 1892; not WARREN, 1912; not CAMERON, 1945). Type species: *Phagonophana alacer* BROUN, 1915 (des.orig.).

Microraphes FRANZ: Brazil (1 sp.)

Microraphes FRANZ, 1980a: 222. Type species: *Microraphes pygmaeus* FRANZ, 1980 (monotypy).

Microscydmus SAULCY & CROISSANDEAU: Worldwide (167 spp.)

Microscydmus SAULCY & CROISSANDEAU, 1893: 225 (without spp.). Type species: *Scydmaenus nanus* SCHAUM, 1844 (subsequent monotypy by CROISSANDEAU, 1898b: 105).

(Delius CASEY): E USA (1 sp.)

Delius CASEY, 1897: 497 (not FAUVEL, 1899). Type species: *Delius robustulus* CASEY, 1897 (monotypy).

Note: reduced from genus to subgenus of *Microscydmus* by FRANZ (1985c).

(Microscydmus s.str.): Worldwide (156 spp.)

Opresus CASEY, 1897: 494. Type species: *Scydmaenus misellus* LECONTE, 1852 (des. FRANZ 1985c: 175).

Note: genus synonymized with *M.* (*Microscydmus*) by FRANZ (1985c).

(Neladius CASEY): E USA (1 sp.)

Neladius CASEY, 1897: 498. Type species: *Neladius tenuis* CASEY, 1897 (monotypy). Note: genus synonymized with *M.* (*Delius*) by FRANZ (1985c); resurrected as subgenus by O'KEEFE (1998).

(Neoscydmus FRANZ): South America, West Indies (9 spp.)

Neoscydmus FRANZ, 1980a: 200 (as subgenus of *Microscydmus*). Type species: *Microscydmus amazonicus* FRANZ, 1980 (des.orig.).

Mimoscydmus FRANZ: Brazil (2 spp.)

Mimoscydmus FRANZ, 1980a: 220. Type species: *Mimoscydmus brasiliensis* FRANZ, 1980 (des.orig.).

Napochoomorphus FRANZ: Brazil (1 sp.)

Napochoomorphus FRANZ, 1980a: 206. Type species: *Napochoomorphus extraneus* FRANZ, 1980 (monotypy).

Neuraphanax REITTER: Colombia, Venezuela, Peru (8 spp.)

Neuraphanax REITTER, 1883: 385. Type species: *Eumicrus dux* SCHAUFUSS, 1867 (monotypy).

Neuraphes THOMSON: Palearctic, Nepal, Kashmir (108 spp.)

Nevraphes THOMSON, 1859: 61 (treated as incorrect original spelling here; see Introduction). Type species: *Scydmaenus angulatus* MÜLLER & KUNZE, 1822 (des.orig.).

Neuraphes THOMSON, 1862: 80 (subsequent (corrected) spelling of *Nevraphes*).

(Neuraphes s.str.): Palearctic (48 spp.)

Tropithorax CROISSANDEAU, 1894b: 359 (as subgenus of *Neuraphes*). Type species: *Neuraphes fauveti* CROISSANDEAU, 1887 (des.n. Franz). Note: subgenus synonymized by GANGLBAUER (1899).

(Pararaphes REITTER): Palearctic (53 spp.)

Pararaphes REITTER, 1891: 131 (as subgenus of *Neuraphes*). Type species: *Neuraphes capellae* REITTER, 1881 (des.n. Franz).

Neuraphomorphus REITTER: Ethiopia (1 sp.)

Neuraphomorphus REITTER, 1882a: 242. Type species: *Neuraphomorphus adustus* REITTER, 1882 (monotypy).

Oneila PERINGUEY: South Africa, Cameroon (11 spp.)

Oneila PERINGUEY, 1899: 240. Type species: *Oneila heterocera* PERINGUEY, 1899 (des.n. Franz). Note: key to most spp., FRANZ (1979a).

Parapseudoconnus FRANZ, sens.n.: Peru, Brazil (4 spp.)

Parapseudoconnus FRANZ, 1980a: 218 (as subgenus of *Pseudoconnus* FRANZ). Type species: *Pseudoconnus aberrans* FRANZ, 1980 (monotypy). Note: because the name *Pseudoconnus* FRANZ is unavailable, this subgeneric name now has priority for the name of the genus.

(Neuraphomimus FRANZ): Peru (3 spp.)

Neuraphomimus FRANZ, 1986e: 44 (replacement name for *Pseudoconnus* FRANZ).

Pseudoconnus FRANZ, 1980a: 216 (preoccupied, not LELEUP, 1971). Type species: *Pseudoconnus simulator* FRANZ, 1980 (des.orig.).

Vetusteconnus FRANZ, 1993a: 101 (replacement name for *Pseudoconnus* FRANZ (unnecessary)).

(*Parapseudoconnus* s.str.): Brazil (1 sp.)

Parascydmus CASEY: E Nearctic (4 spp.)

Parascydmus CASEY, 1897: 473 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus corporuscum* CASEY, 1897 (des. FRANZ 1985c: 157). Note: elevated from subgenus of *Stenichnaphes* by FRANZ (1985c).

Parastenichnaphes FRANZ: Indonesia (Sumatra), Sri Lanka, S Brazil (3 spp.)

Parastenichnaphes FRANZ, 1984c: 90 (as subgenus of *Stenichnaphes*). Type species: *Stenichnaphes sumatrensis* FRANZ, 1984 (des.orig.). Note: elevated from subgenus of *Stenichnaphes* and checklist provided by FRANZ (1989b).

Parastenichnus FRANZ: Singapore (2 spp.)

Parastenichnus FRANZ, 1970b: 574. Type species: *Parastenichnus singaporenensis* FRANZ, 1970 (des.orig.).

Protandroconnus FRANZ: Peru (Loreto) (1 sp.)

Protandroconnus FRANZ, 1989c: 636. Type species: *Protandroconnus peruvensis* FRANZ, 1989 (des.orig.).

Protoconnus FRANZ: Peru, Bolivia, Paraguay, Venezuela (10 spp.)

Protoconnus FRANZ, 1967: 716. Type species: *Protoconnus andicola* FRANZ, 1967 (des.orig.).

Protoscydmus FRANZ: Malaysia (Sabah) (1 sp.)

Protoscydmus FRANZ, 1992: 948. Type species: *Protoscydmus sabahensis* FRANZ, 1992 (des.orig.).

Psepharobius KING: Australia (New South Wales) (1 sp.)

Psepharobius KING, 1864: 93. Type species: *Psepharobius elongatus* KING, 1864 (monotypy). Note: genus not mentioned by FRANZ (1975).

Pseudoraphes FRANZ: Peru (2 spp.)

Pseudoraphes FRANZ, 1980a: 209. Type species: *Pseudoraphes huallagae* FRANZ, 1980 (des.orig.).

Sciacharis BROWN: New Zealand, Australia, SW Pacific, South America, S Africa (237 spp.)

Sciacharis BROWN, 1893: 1062. Type species: *Sciacharis fulva* BROWN, 1893 (monotypy). Note: number of spp. in total and for some subgenera uncertain.

(*Anthicimimus* FRANZ): Chile (1 sp.)

Anthicimimus FRANZ, 1993a: 100 (as subgenus of *Sciacharis*). Type species: *Euconnus anthiciformis* FRANZ, 1967 (des.orig.).

(*Magellanoconnus* FRANZ): New Zealand, Australia, SW Pacific, South America, S Africa (78 spp.)

Magellanoconnus FRANZ, 1967: 628 (as subgenus of *Euconnus*). Type species: *Euconnus laurisilvae* FRANZ, 1967 (des.orig.). Note: also spelled *Magelanoconnus* once (FRANZ 1967: 617), here deemed a lapsus calami; moved from *Euconnus* to subgenus of *Sciacharis* by FRANZ (1980b), elevated to genus by KUSCHEL (1990), but retained as subgenus by FRANZ (1993a, 1997).

Neuraphoconnus FRANZ, 1971b: 46. Type species: *Neuraphoconnus caledonicus* FRANZ, 1971 (des.orig.). Note: genus synonymized by FRANZ (1986d).

(*Sciacharis* s.str.): New Zealand, Fiji, etc.? (123 spp.)

Austroconophron FRANZ, 1971b: 69 (as subgenus of *Euconnus*). Type species: *Euconnus tindou* FRANZ, 1971 (des.orig.). Note: subgenus synonymized with S. (*Sciacharis*) by FRANZ (1986b).

Allomaoria FRANZ, 1975: 49 (as subgenus of *Euconnus*). Type species: *Phagonophana lanosa* BROWN, 1886 (des.orig.). Note: subgenus synonymized with S. (*Sciacharis*) by FRANZ (1980b, 1989c).

(*Valdivioconnus* FRANZ): Chile (35 spp.)

Valdivioconnus FRANZ, 1980a: 252 (as subgenus of *Euconnus*). Type species: *Euconnus stenichniformis* FRANZ, 1967 (des.orig.). Note: moved from *Euconnus* to subgenus of *Sciacharis* by FRANZ (1993a); subsequent misspelling *Validioconnus* (FRANZ, 1997: 165).

Scydmorephes REITTER: Palearctic, Brazil, Peru, Venezuela, India (103 spp.)

Scydmorephes REITTER, 1891: 131 (as subgenus of *Neuraphes*). Type species: *Neuraphes geticus* SAULCY, 1877 (des.n. Franz). Note: treated as genus by FRANZ (1961b).

Atropidus CROISSANDEAU, 1894b: 361 (as subgenus of *Neuraphes*). Type species: *Neuraphes occipitalis* SAULCY, 1878 (des.n. Franz). Note: subgenus synonymized by GANGLBauer (1899).

Stenichnaphes FRANZ: New Zealand, Madagascar, Brazil (7 spp.)

Stenichnaphes FRANZ, 1980b: 255. Type species: *Stenichnaphes urbanus* FRANZ, 1980 (des.orig.). Note: subgenus *Parastenichnaphes* removed and checklist provided in FRANZ (1989b).

Stenichnoconnus FRANZ: Surinam (1 sp.)

Stenichnoconnus FRANZ, 1985a: 114. Type species: *Stenichnoconnus huijbregtsensis* FRANZ, 1985 (des.orig.). Note: alternate original spelling *Stenochnoconnus* (FRANZ 1985a: 116); *Stenichnoconnus* selected here as correct original spelling.

Stenichnodes FRANZ: Chad (1 sp.)

Stenichnodes FRANZ, 1966: 626. Type species: *Stenichnodes saheliensis* FRANZ, 1966 (des.orig.).

Stenichnoteras SCOTT: Seychelles (1 sp.)

Stenichnoteras SCOTT, 1922: 215. Type species: *Stenichnoteras montanum* SCOTT, 1922 (des.orig.).

Stenichnus THOMSON: Worldwide (except South Africa, Chile) (193 spp.)

Stenichnus THOMSON, 1859: 61. Type species: *Scydmaenus exilis* ERICHSON, 1837 (des.orig.).

(Austrostenichnus FRANZ): New Zealand, New Caledonia (3 spp.)

Austrostenichnus FRANZ, 1971b: 45 (as subgenus of *Stenichnus*). Type species: *Stenichnus caledonicus* FRANZ, 1971 (monotypy).

(Cyrtoscydmus MOTSCHULSKY): Worldwide (except South Africa, Chile) (147 spp.)

Cyrtoscydmus MOTSCHULSKY, 1870: 260. Type species: *Scydmaenus collaris* MÜLLER & KUNZE, 1822 (des.n. Franz).

Scydmaenus of THOMSON, 1859: 61 (misidentified, not LATREILLE, 1802). Type species: *Scydmaenus godarti* LATREILLE, 1806 (des. THOMSON 1859: 61; invalid designation, species not originally included).

Leptoderoides CROISSANDEAU, 1898a: 404 (as subgenus of *Cyrtoscydmus*). Type species: *Scydmaenus leptoderus* REITTER, 1881 (des.n. Franz). Note: as synonym in CSIKI (1919).

(Scydmaenichnus REITTER): Cyprus, Syria (5 spp.)

Scydmaenichnus REITTER, 1905: 99 (as subgenus of *Stenichnus*). Type species: *Stenichnus fossifrons* REITTER, 1905 (des.n. Franz).

(Scydmaenilla KING): Australia (7 spp.)

Scydmaenilla KING, 1864: 93. Type species: *Scydmaenilla pusilla* KING, 1864 (monotypy). Note: reduced to subgenus of *Stenichnus* by FRANZ (1975).

(Stenichnus s.str.): Worldwide (except South Africa, Chile) (28 spp.)

Pseudoleptocharis CROISSANDEAU, 1898a: 407 (as subgenus of *Cyrtoscydmus*). Type species: *Scydmaenus ellipticus* REITTER, 1884 (monotypy). Note: as synonym of *S.* (*Stenichnus*) in CSIKI (1919).

Syndicomorphus FRANZ: Malaysia (Sabah) (1 sp.)

Syndicomorphus FRANZ, 1992: 892. Type species: *Syndicomorphus magnus* FRANZ, 1992 (des.orig.).

Syndicus MOTSCHULSKY: Oriental, Australia (14 spp.)

Syndicus MOTSCHULSKY, 1851: 502. Type species: *Syndicus pilicornis* MOTSCHULSKY, 1851 (monotypy). Note: genus revised by FRANZ (1971a).

(Androsyndicus FRANZ): Sri Lanka (1 sp.)

Androsyndicus FRANZ, 1971a: 20 (as subgenus of *Syndicus*). Type species: *Syndicus calcarifer* FRANZ, 1971 (monotypy).

(Syndicus s.str.): Oriental, Australia (13 spp.)

Phagonophana KING, 1864: 92. Type species: *Phagonophana kingii* KING, 1864 (monotypy). Note: genus synonymized with *S.* (*Syndicus*) by FRANZ (1971a).

Taphroscydmus CASEY: USA (California) (1 sp.)

Taphroscydmus CASEY, 1897: 473 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus californicus* MOTSCHULSKY, 1845 (monotypy). Note: elevated to genus from subgenus of *Stenichnus* by O'KEEFE (1998).

Venezolanoconnus FRANZ: Venezuela (4 spp.)

Venezolanococonnus FRANZ, 1988a: 81. Type species: *Venezolanococonnus andinus* FRANZ, 1988 (des.orig.).

Tribe PLAUMANNIOLINI COSTA LIMA

Plaumanniolinae COSTA LIMA, 1962: 415 (as subfamily of Ptinidae). Type genus: *Plaumanniola* COSTA LIMA, 1962. Note: transferred from Ptinidae to Scydmaenidae, as separate tribe, by LAWRENCE & REICHARDT (1966).

Plaumanniiini; FRANZ, 1990: 33 (incorrect subsequent spelling).

Plaumanniola COSTA LIMA: Brazil (Santa Catarina, São Paulo, N Amazonas) (1 sp.)

Plaumanniola COSTA LIMA, 1962: 415. Type species: *Plaumanniola sanctaecatharinæ* COSTA LIMA, 1962 (monotypy). Note: partial redescriptions and comments on placement by LAWRENCE & REICHARDT (1966), LENKO (1972) and FRANZ (1990); myrmecophile (LENKO 1972).

Tribe SIAMITINI FRANZ

Siamitini FRANZ, 1989a: 44. Type genus: *Siamites* FRANZ, 1989.

Siamites FRANZ: Thailand (1 sp.)

Siamites FRANZ 1989a: 44. Type species: *Siamites loebli* FRANZ, 1989 (des.orig.).

Tribe CHEVROLATIINI REITTER

Chevrolatini REITTER, 1882b: 142 (incorrect original spelling). Type genus: *Chevrolatia* JACQUELIN DU VAL, 1850.

Chevrolatia JACQUELIN DU VAL: Nearctic, Mexico, W Palearctic, Ethiopia, South Africa (11 spp.)

Chevrolatia JACQUELIN DU VAL, 1850: 45. Type species: *Chevrolatia insignis* JACQUELIN DU VAL, 1850 (monotypy). Note: review of Nearctic spp., catalog, O'KEEFE (1997a).

Tribe LEPTOSCYDMINI CASEY

Leptoscydmini CASEY, 1897: 518. Type genus: *Leptoscydmus* CASEY, 1897.

Leptoscydmus CASEY: E Nearctic (2 spp.)

Leptoscydmus CASEY, 1897: 518. Type species: *Leptoscydmus cavifrons* CASEY, 1897 (des. FRANZ 1985c: 177).

Tribe SCYDMAENINI LEACH

Eumicrini REITTER, 1882b: 192. Type genus: *Eumicrus* LAPORTE, 1832 (= *Scydmaenus* LATREILLE, 1802).

Adrastia BROUN: New Zealand (24 spp.)

Adrastia BROUN, 1881: 663. Type species: *Adrastia laetans* BROUN, 1881 (monotypy). Note: treated as a subgenus of *Scydmaenus* by FRANZ (1980b), but elevated to genus by BESUCHET (1958) and KUSCHEL (1990).

Zeemicrus LHOSTE, 1938: 95 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus angulifrons* BROUN, 1915 (des.orig.). Note: subgenus synonymized with *Adrastia* by FRANZ (1980b) and KUSCHEL (1990).

Austroscydmaenus FRANZ, 1975: 117 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus edwardsi* SHARP, 1874 (des.orig.). Note: subgenus synonymized with *Adrastia* by KUSCHEL (1990).

Ceramphis CASEY: W Nearctic (1 sp.)

Ceramphis CASEY, 1897: 538. Type species: *Scydmaenus deformatus* HORN, 1885 (monotypy). Note: reviewed by O'KEEFE (1997b).

Clavigeroscydmus FRANZ: Madagascar (1 sp.)

Clavigeroscydmus FRANZ, 1986a: 374. Type species: *Clavigeroscydmus corticariaeformis* FRANZ, 1986 (monotypy).

Eudesis REITTER: W Palearctic (3 spp.)

Eudesis REITTER, 1881: 583. Type species: *Eudesis aglena* REITTER, 1881 (monotypy).

Palaeoscydmaenus FRANZ: Australia (South Australia) (1 sp.)

Palaeoscydmaenus FRANZ, 1975: 272. Type species: *Palaeoscydmaenus australiensis* FRANZ, 1975 (monotypy).

Pseudoeudesis BINAGHI: W Palearctic, E Africa, Cameroon, Brazil, Chile (10 spp.)

Pseudoeudesis BINAGHI, 1948: 35. Type species: *Eudesis sulcipennis* REITTER, 1890 (des.orig.).

(Afroeudesis FRANZ): Tanzania (1 sp.)

Afroeudesis FRANZ, 1963: 16 (as subgenus of *Pseudoeudesis*). Type species: *Pseudoeudesis basilewskyi* FRANZ, 1963 (des.orig.).

(**Oreoeudesis** FRANZ): Tanzania, Kenya, Cameroon (3 spp.)

Oreoeudesis FRANZ, 1985b: 332 (as subgenus of *Pseudoeudesis*). Type species: *Pseudoeudesis lindneri* FRANZ, 1963 (des.orig.).

(**Pseudoeudesis** s.str.): W Palearctic, Brazil, Chile (6 spp.)

Scydmaenus LATREILLE: Worldwide (730 spp.)

Scydmaenus LATREILLE, 1802: 116. Type species: *Pselaphus hellwigii* of PAYKULL, 1800, not HERBST, 1792 (= *Scydmaenus tarsatus* MÜLLER & KUNZE, 1822) (monotypy). Note: see Introduction for explanation of type species selection; many spp. have not been placed to subgenus.

(**Afroscydmaenus** FRANZ): Chad (1 sp.)

Afroscydmaenus FRANZ, 1963: 5 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus mariusi* FRANZ, 1963 (des.orig.).

(**Agathelor** SCHAUFUSS): Malaysia (Sarawak) (1 sp.)

Agathelor SCHAUFUSS, 1884: 420. Type species: *Agathelor deplanatum* SCHAUFUSS, 1884 (des. FRANZ 1992: 867). Note: genus synonymized with genus *Scydmaenus* by FRANZ (1984c); reviewed, placed as subgenus of *Scydmaenus* by FRANZ (1992).

(**Alaudula** SCHAUFUSS): Zanzibar, Aden, Arabia (2 spp.)

Alaudula SCHAUFUSS, 1889: 31. Type species: *Alaudula rectispina* SCHAUFUSS, 1889 (des.n. Franz). Note: not preoccupied by *Alaudula* HUME, 1867, which is simply a subsequent misspelling of *Alaudula* HORSFIELD & MOORE, 1858 (NEAVE 1939-40).

(**Androscydmaenus** FRANZ): Africa (3 spp.)

Androscydmaenus FRANZ, 1980d: 691 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus pilosissimus* FRANZ, 1961 (des.orig.).

(**Androscydymus** NEWTON), nom.n.: Malaysia (Sabah) (1 sp.)

Androscydymus NEWTON, nom.n. (for *Androscydmaenus* FRANZ, 1992).

Androscydmaenus FRANZ, 1992: 870 (as subgenus of *Scydmaenus*; preoccupied, not FRANZ, 1980). Type species: *Scydmaenus densepunctatus* FRANZ, 1992 (monotypy).

(**Archiscydmaenus** FRANZ), nom.n.: Surinam (1 sp.)

Archiscydmaenus FRANZ, nom.n. (for *Palaeoscydmaenus* FRANZ, 1985).

Palaeoscydmaenus FRANZ, 1985a: 109 (as subgenus of *Scydmaenus*; preoccupied, not FRANZ, 1975). Type species: *Scydmaenus huijbregtsi* FRANZ, 1985 (des.orig.).

(**Armatoscydmaenus** FRANZ): Afrotropical, Oriental, S Pacific, Guadeloupe (15 spp.)

Armatoscydmaenus FRANZ, 1971b: 100 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus regularis* SCHAUFUSS, 1889 (des.orig.).

(**Breviclavatoscydmaenus** FRANZ): N South America (5 spp.)

Breviclavatoscydmaenus FRANZ, 1994b: 63 (as subgenus of *Scydmaenus*; as new). Type species: *Scydmaenus kavacanus* FRANZ, 1994 (des.orig.).

Breviclavatoscydmaenus FRANZ, 1993b: 27 (as subgenus of *Scydmaenus*, not as new; nomen nudum, no description).

(**Choleropsis** FRANZ): Australia (2 spp.)

Choleropsis FRANZ, 1975: 291 (as subgenus of *Scydmaenus*). Type species: *Heterognathus gracilis* KING, 1864 (= *S. procerus* CSEKI, 1919) (monotypy).

(**Cholerus** THOMSON): Worldwide (45 spp.)

Cholerus THOMSON, 1859: 62. Type species: *Pselaphus hellwigii* HERBST, 1792 (des.orig.).

Mastigus ILLIGER, 1801: 142 (nomen nudum, no description or included species); 1802: 296 (not LATREILLE, 1802; nomen oblitum). Type species: *Pselaphus hellwigii* HERBST, 1792 (des.n. Newton). Note: see Introduction for further discussion of the status of this name.

(**Conoscydmaenus** FRANZ): Brazil (Paraná) (1 sp.)

Conoscydmaenus FRANZ, 1980a: 68 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus unicornis* FRANZ, 1980 (des.orig.).

(**Corbulifer** FRANZ): Australia (SE Queensland) (2 spp.)

Corbulifer FRANZ, 1975: 286 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus tamborinensis* FRANZ, 1975 (des.orig.).

(*Eustemmoides* FRANZ): Africa, Madagascar, Malaysia (30 spp.)

Eustemmoides FRANZ, 1958: 3 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus alluvialis* FRANZ, 1958 (des.orig.).

(*Eustemmus* REITTER): S Europe, Africa, Madagascar, New Caledonia (49 spp.)

Eustemmus REITTER, 1881: 582 (as subgenus of *Eumicrus*). Type species: *Scydmaenus antidotus* GERMAR, 1817 (des. SCHAUFUSS 1888: 317).

(*Geoscydmaenus* FRANZ): Africa, Madagascar (6 spp.)

Geoscydmaenus FRANZ, 1961a: 177 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus pullus* FRANZ, 1961 (monotypy).

(*Heteroeustemmus* FRANZ): New Caledonia (5 spp.)

Heteroeustemmus FRANZ, 1971b: 97 (as subgenus of *Scydmaenus*). Type species: *Eumicrus atrorufus* FAUVEL, 1889 (des.orig.).

(*Heteromicrus* FRANZ): Australia, Fiji (3 spp.)

Heteromicrus FRANZ, 1975: 300 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus mirus* FRANZ, 1975 (des.orig.).

Heteromicrus FRANZ 1971b: 112 (as subgenus of *Scydmaenus*; not as new; nomen nudum, no description). Note: ? = *Heteromicrus* FRANZ, 1975.

(*Kingius* FRANZ), nom.n.: Australia, etc.? (2 spp.)

Kingius FRANZ, nom.n. (for *Heterognathus* KING). Note: subgenus treated as synonym of *S. (Cholerus)* by CSIKI (1919), but as valid subgenus by FRANZ (1975); number of spp. and distribution not clear.

Heterognathus KING, 1864: 96 (preoccupied, not GIRARD, 1854; not SCHMARDER, 1859). Type species: *Heterognathus carinatus* KING, 1864 (des. FRANZ 1975: 274).

(*Mascarensia* FRANZ): Madagascar, Oriental, Australia (9 spp.)

Mascarensia FRANZ, 1973: 120 (as subgenus of *Scydmaenus*; not as new). Type species: *Scydmaenus dendrophilus* FRANZ, 1973 (monotypy). Note: FRANZ (1973) referred the subgeneric name to a work in press (FRANZ 1986a) and designated as type species "*Mascarensia reunionis* m.", a name not available until FRANZ (1986a).

(*Mimoscydmaenus* FRANZ): Thailand, Malaysia (4 spp.)

Mimoscydmaenus FRANZ, 1986f: 967 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus chiangmai* FRANZ, 1986 (des.orig.).

(*Nepaloscydmaenus* FRANZ): Himalayas, Taiwan (5 spp.)

Nepaloscydmaenus FRANZ, 1973: 118 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus ghokarnae* FRANZ, 1973 (des.orig.).

(*Paraeustemmus* FRANZ): Morocco (2 spp.)

Paraeustemmus FRANZ, 1955: 1051 (as subgenus of *Eustemmus*). Type species: *Scydmaenus vividus* REITTER, 1887 (des.orig.).

(*Parageoscydmaenus* FRANZ): Bolivia, Brazil, Venezuela (3 spp.)

Parageoscydmaenus FRANZ, 1980a: 69 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus baloghi* FRANZ, 1980 (des.orig.).

(*Parallomicrus* FRANZ), nom.n.: W Europe, Australia, New Caledonia (6 spp.)

Parallomicrus FRANZ, nom.n. (for *Allomicrus* FRANZ).

Allomicrus FRANZ 1971b: 101 (as subgenus of *Scydmaenus*; not as new; nomen nudum, no description). Note: FRANZ (1971b) referred this subgeneric name to a work later published as FRANZ (1975).

Allomicrus FRANZ 1975: 284 (as subgenus of *Scydmaenus*; preoccupied, not GAHAN, 1893). Type species: *Scydmaenus rufus* MÜLLER & KUNZE, 1822 (des.orig.).

(*Parascydmaenus* JEANNEL & PAULIAN): E Africa (1 sp.)

Parascydmaenus JEANNEL & PAULIAN, 1945: 125 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus spathifer* REITTER, 1907 (des.orig.). Note: JEANNEL & PAULIAN (1945) included 12 spp.; Franz (in litteris, 1987) included 1 sp. only.

(*Pseudeumicrus* JEANNEL & PAULIAN): Kenya (1 sp.)

Pseudeumicrus JEANNEL & PAULIAN, 1945: 126 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus tachyoryctidis* JEANNEL & PAULIAN, 1945 (des.orig.). Note: JEANNEL & PAULIAN (1945) included 4 spp.; Franz (in litteris, 1987) included 1 sp. only.

(*Scottiscydmaenus* FRANZ): Australia, Madagascar, Seychelles (8 spp.)

Scottiscydmaenus FRANZ, 1975: 277 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus lodoiceae* SCOTT, 1922 (des.orig.).

(*Scydmaenus* s.str.): Europe, Africa to Solomon Is., New World (35 spp.)

Eumicrus LAPORTE, 1832: 395. Type species: *Scydmaenus tarsatus* MÜLLER & KUNZE, 1822 (des.n. Newton).

Microstemma MOTSCHULSKY, 1858: 57 (not SIGNORET, 1858). Type species: *Scydmaenus tarsatus* MÜLLER & KUNZE, 1822 (des. SCHAUFUSS 1888: 317).

Ensimus THOMSON, 1859: 62 (not FOERSTER, 1868). Type species: *Scydmaenus tarsatus* MÜLLER & KUNZE, 1822 (des.orig.).

Pseudomicrus MOTSCHULSKY, 1863: 425. Type species: *Scydmaenus alatus* NIETNER, 1856 (des.n. Newton).

Acholerops CASEY, 1897: 535. Type species: *Acholerops retrusa* CASEY, 1897 (des. FRANZ 1985c: 181). Note: genus synonymized with *S.* (*Scydmaenus*) by FRANZ (1985c).

(*Seychellinus* FRANZ): Seychelles (1 sp.)

Seychellinus FRANZ, 1986a: 359 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus insularum* SCOTT, 1922 (des.orig.).

(*Termitoscydmaenus* FRANZ): South Africa, etc.? (2 spp.)

Termitoscydmaenus FRANZ, 1980c: 55 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus kistneri* FRANZ, 1980 (des.orig.).

(*Trapezoscymaenus* FRANZ): Morocco, Madagascar (3 spp.)

Trapezoscymaenus FRANZ, 1986a: 366 (as subgenus of *Scydmaenus*). Type species: *Scydmaenus cavipennis* PEYERIMHOFF, 1939 (des.orig.).

Tribe Incertae Sedis

Cryptoglyptus GISTEL, nom.dub.: Austria (Styria) (1 sp.)

Cryptoglyptus GISTEL, 1857a: 10; 1857b: 522. Type species: *Cryptoglyptus subterraneus* GISTEL, 1857 (monotypy). Note: not cited by later authors?, status and placement uncertain; GISTEL (1857b) not seen, cited from NEAVE (1939-40).

Subfamily MASTIGINAE FLEMING

Mastigoidae FLEMING, 1821: 49 (incorrect original spelling). Type genus: *Mastigus* LATREILLE, 1802.

Note: Mastiginae has priority over Clidicinae for the name of the subfamily (NEWTON & THAYER 1992).

Mastigini REITTER, 1882b: 142. Type genus: *Mastigus* LATREILLE, 1802.

Tribe CLIDICINI CASEY

Clidicinae CASEY, 1897: 541. Type genus: *Clidicus* LAPORTE, 1832.

Clidicini GANGLBAUER, 1899: 60. Type genus: *Clidicus* LAPORTE, 1832.

Clidicus LAPORTE: Oriental (11 spp.)

Clidicus LAPORTE, 1832: 396. Type species: *Clidicus grandis* LAPORTE, 1832 (monotypy). Note: revised in part by BESUCHET (1971).

Erineus WALKER, 1858: 205. Type species: *Erineus monstrosus* WALKER, 1858 (monotypy). Note: genus synonymized by PASCOE (1863).

Leptochromus MOTSCHULSKY: Mexico, Panama (2 spp.)

Leptochromus MOTSCHULSKY, 1855: 12. Type species: *Leptochromus fulvescens* MOTSCHULSKY, 1855 (monotypy). Note: *Papusus* added as synonym by FRANZ (1995), but removed as valid genus by O'KEEFE (1998).

Hecotus SHARP, 1887: 70. Type species: *Hecotus mexicanus* SHARP, 1887 (des.n. Franz). Note: genus synonymized by CSKI (1919).

Papusus CASEY: USA (California) (1 sp.)

Papusus CASEY, 1897: 542. Type species: *Papusus macer* CASEY, 1897 (monotypy). Note: genus moved to *Scydmaenini* by FRANZ (1985c); genus synonymized with *Leptochromus* by FRANZ (1995); resurrected as valid genus of Clidicinae by O'KEEFE (1998).

Tribe LEPTOMASTACINI CASEY

Leptomastacini CASEY, 1897: 541. Type genus: *Leptomastax* PIRAZZOLI, 1855.

Ablepton FRIVALDSZKY: Romania (Banat) (1 sp.)

Ablepton FRIVALDSZKY, 1877: 17. Type species: *Ablepton treforti* FRIVALDSZKY, 1877 (monotypy). Note: revised by BESUCHET (1969); restricted by FRANZ (1988b) with removal of two species to *Taurablepton*.

Leptomastax PIRAZZOLI: W Palearctic (22 spp.)

Leptomastax PIRAZZOLI, 1855: 3. Type species: *Leptomastax hypogaeum* PIRAZZOLI, 1855 (monotypy). Note: revised by CASTELLINI (1996).

Pyladus FAIRMAIRE, 1856a: 179. Type species: *Pyladus coquereli* FAIRMAIRE, 1856 (monotypy). Note: publication date April 1856, teste NEAVE (1939-40); genus synonymized with *Leptomastax* by FAIRMAIRE (1856b).

Pylades FAIRMAIRE, 1856b: 526. Type species: *Pylades coquereli* FAIRMAIRE, 1856 (monotypy). Note: reference made to FAIRMAIRE (1856a); publication date May 1856, teste NEAVE (1939-40).

Leptomastoides KARAMAN, 1962: 170 (as subgenus of *Leptomastax*; nomen nudum, no type species designated). Note: name treated as synonym of *Leptomastax* by CASTELLINI (1996).

Taurablepton FRANZ: Turkey (3 spp.)

Taurablepton FRANZ, 1988b: 111. Type species: *Taurablepton subterraneum* FRANZ, 1988 (des.orig.). Note: revised by FRANZ (1988b).

Tribe MASTIGINI FLEMING

Mastigus LATREILLE, sens.n.: South Africa (6 spp.)

Mastigus LATREILLE, 1802: 115. Type species: *Ptinus spinicornis* FABRICIUS, 1787 (virtual monotypy, and des. LATREILLE 1810: 427). Note: the original type species designation of LATREILLE (1802) requires that this name be used in the sense of *Australostigus* and not *Mastigus* of LELEUP (1968); see Introduction for further explanation; revised by LELEUP (1968), addendum by BORDONI & CASTELLINI (1973).

Australostigus LELEUP, 1968: 42. Type species: *Ptinus spinicornis* FABRICIUS, 1787 (des.orig.). *Syn.n.*

Palaeostigus NEWTON, gen.n.: W Palearctic, South Africa (14 spp.)

Palaeostigus NEWTON, gen.n. (for *Mastigus* of LELEUP, 1968, not LATREILLE, 1802). Type species: *Mastigus palpalis* LATREILLE, 1804 (des. Newton). Note: the original type species designation of LATREILLE (1802) for *Mastigus* makes that name a senior objective synonym of *Australostigus*, leaving *Mastigus* of LELEUP (1968) without an available name; see Introduction for further explanation.; revised by LELEUP (1968) and BORDONI & CASTELLINI (1973); includes 2 spp. "incertae sedis" of LELEUP (1968) (types lost), but a third such sp. was transferred to *Australostigus* by BORDONI & CASTELLINI (1973) after rediscovery of the types.

Mastigus of LELEUP, 1968: 10 (misidentified, not LATREILLE, 1802). Type species: *Mastigus palpalis* LATREILLE, 1804 (des. LELEUP 1968: 7; invalid designation, species not originally included).

Stenomastigus LELEUP: South Africa (14 spp.)

Stenomastigus LELEUP, 1968: 55. Type species: *Stenomastigus franzi* LELEUP, 1968 (des.orig.). Note: revised by LELEUP (1968).

(*Acanthostigus* LELEUP): South Africa (3 spp.)

Acanthostigus LELEUP, 1968: 95 (as subgenus of *Stenomastigus*). Type species: *Stenomastigus basilewskyi* LELEUP, 1968 (des.orig.).

(*Stenomastigus* s.str.): South Africa (11 spp.)

Extinct Taxa

SCYDMAENINAE: CYRTOSCYDMINI

Euconnus [extant genus]: Baltic and Sicilian Amber (5 spp.)

Note: see SPAHR (1981), FRANZ (1976, 1983); also 1 unnamed species in Dominican amber (FRANZ 1983).

Homoconnnus [extant genus]: Dominican Amber (1 sp.)

Note: see FRANZ (1983).

Neuraphes [extant genus]: Dominican Amber (1 sp.)

Note: see FRANZ (1983); genus uncertain.

Stenichnus [extant genus]: Baltic Amber (4 spp.)

Note: see SCHAUFUSS (1890), as *Cyrtoscydium* spp.

MASTIGINAE: CLIDICINI

Clidicus [extant genus]: Baltic Amber (1 sp.)

Note: see SCHAUFUSS (1896).

Palaeoleptochromus O'KEEFE: Canadian Amber (1 sp.)

Palaeoleptochromus O'KEEFE in O'KEEFE & al., 1997: 380. Type species: *Palaeoleptochromus schaufussi* O'KEEFE, 1997 (des.orig.).

Subfamily and Tribe Incertae Sedis

Cryptodiodon SCHAUFUSS: Baltic Amber (1 sp.)

Cryptodiodon SCHAUFUSS, 1890: 564. Type species: *Cryptodiodon corticaroides* SCHAUFUSS, 1890 (monotypy).

Electroscydmaenus SCHAUFUSS: Baltic Amber (1 sp.)

Electroscydmaenus SCHAUFUSS, 1890: 584. Type species: *Electroscydmaenus pterostichoides* SCHAUFUSS, 1890 (monotypy).

Heterothelia SCHAUFUSS: Baltic Amber (1 sp.)

Heterothelia SCHAUFUSS, 1890: 579. Type species: *Heterothelia elegans* SCHAUFUSS, 1890 (monotypy).

Heuretus SCHAUFUSS: Baltic Amber (1 sp.)

Heuretus SCHAUFUSS, 1890: 583. Type species: *Heuretus coriaceus* SCHAUFUSS, 1890 (monotypy).

Microlynx KOHRING & SCHLÜTER: Sicilian Amber (1 sp.)

Microlynx KOHRING & SCHLÜTER, 1989: 46. Type species: *Microlynx franzbesucheti* KOHRING & SCHLÜTER, 1989 (monotypy). Note: ex Mio/Pliocene "resin" (simetite).

Palaeomastigus SCHAUFUSS: Baltic Amber (1 sp.)

Palaeomastigus SCHAUFUSS, 1890: 575. Type species: *Palaeomastigus helmi* SCHAUFUSS, 1890 (monotypy).

Palaeothia SCHAUFUSS: Baltic Amber (1 sp.)

Palaeothia SCHAUFUSS, 1890: 581. Type species: *Palaeothia tenuitarsis* SCHAUFUSS, 1890 (monotypy).

Scydmaenoides MOTSCHULSKY: Baltic Amber (1 sp.)

Scydmaenoides MOTSCHULSKY, 1857: 27. Type species: *Scydmaenoides nigrescens* MOTSCHULSKY, 1857 (monotypy).

Semmodioceras SCHAUFUSS: Baltic Amber (1 sp.)

Semmodioceras SCHAUFUSS, 1890: 573. Type species: *Semmodioceras haiticaeforme* SCHAUFUSS, 1890 (monotypy).

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Summary

The family Scydmaenidae has grown from 1194 extant species placed in 47 genera and 11 tribes listed in the last world catalog (CSIKI 1919) to at least 4672 species placed in 81 genera, 11 tribes

and two subfamilies at present. An additional 22 extinct species placed in 15 genera (10 extinct) are known from Cretaceous through mid-Tertiary amber deposits. The near-quadrupling of extant species and near-doubling of genera is due in large part to the great productivity of one individual, H. Franz, during the past four decades. Although the descriptive taxonomic phase of scydmaenid systematics clearly is far from over, increasing attention must and is being paid to higher classification, phylogeny, biology and immature stages.

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