

# GENERIC CATALOGUE AND TAXONOMIC STATUS OF LANGURIIDAE (CUCUJOIDEA)

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**Abstract.** — The classification of the Languriidae is reviewed and a catalogue of the 98 described genera is provided. Salient adult characters and comments on the monophyly are discussed for each family group. Notes on the taxonomic status of genera are included and type species are designated for *Glisonotha* Motschulsky (*Glysonotha setosa* Motschulsky), *Lacertobelus* Gorham (*Lacertobelus dentipes* Gorham), *Leptolanguria* Fowler (*Languria longicollis* Fowler), *Loberolus* Grouvelle (*Loberolus agilis* Grouvelle), *Ortholanguroides* Fowler (*Ortholanguroides egensis* Fowler), and *Philophtaeus* Germain (*Philophtaeus aeneus* Germain). Two generic names proposed are *Slipinskiella*, **new name** (type species: *Languria dimidiata* Guérin-Méneville; fifty new combinations) and *Crowsonguptus*, **new name** (type species: *Coelocryptus mexicanus* Sharp; four new combinations). One specific name is proposed: *Hapalips investigatus* **new name** (for *Hapalips fuscus* (Lea) **new combination**, nec *Hapalips fuscus* Reitter). New generic synonymies are given as follows: *Cathartocryptus* Sharp (= *Xenoscelinus* Grouvelle; seven new combinations), *Isolanguria* Lea (= *Hapalips* Reitter; one new combination) and *Tetrphala* Sturm (= *Tetralanguria* Crotch, = *Tetralanguroides* Fowler, = *Metabelus* Gorham; twenty three new combinations). The genera *Stenodina* Fairmaire and *Fitoa* Dajoz are transferred from Endomychidae to Languriidae. The species name *Pachylanguria paivae* Wollaston is corrected to *Pachylanguria paivai*.



**Key words.** — Coleoptera, Cucujoidea, Languriidae, catalogue of genera, taxonomy, classification.

## INTRODUCTION

The family Languriidae currently contains five subfamilies (Pakaluk *et al.* 1994; Lawrence and Newton 1995). The familiar large-bodied (about 7–20 mm) phytophagous species, commonly known as Lizard Beetles, are included in the subfamily Languriinae while the many smaller species, which have a diversity of habits, are contained within the other four subfamilies. Most of the smaller species were at one time included in the family Cryptophagidae (Schenkling 1923). The classification of Languriidae was comprehensively covered by Sen Gupta and Crowson (1971) and most of their work focused on smaller “microlanguriids”. Although their studies are of profound importance to understanding Languriidae systematics, unfortunately they do not cover all of the key taxa. Despite previous attempts at defining the limits of higher languriid taxa, intrafamilial relationships among the Languriidae are obscure and do not support clearly-defined higher taxa. Therefore, the only way to resolve the current problems in languriid taxonomy would be to completely reanalyze the phylogenetic relationships

of the family which would, in turn, define monophyletic lineages and provide a natural classification for the family. Here we review the current family classification and provide a generic catalogue.

## CLASSIFICATION

Any historical treatment of languriid taxonomy must include a discussion of other cucujoid families, especially the Erotylidae and Cryptophagidae. The families Languriidae and Erotylidae have been considered either as a single family, Erotylidae (e.g., Crotch 1876; Gorham 1887a, b; Fowler 1908) or as separate families (e.g., Arrow 1925; Crowson 1952; Boyle 1956; Schenkling 1928; Sen Gupta and Crowson 1971). Based on a variety of characters (e.g., adult procoxae externally closed by lateral flanges of the prosternal process, larval mala blunt) the family Erotylidae is probably monophyletic but may be phylogenetically contained within the family Languriidae (see below) suggesting that these families should be united to avoid recognizing a paraphyletic taxon. Erotylidae did at one time include members of the Languriidae, and some

authors (e.g., Rymer Roberts 1939, 1958; Lawrence 1991) have questioned the separation of these families which was initially proposed by Crotch (1873a) and is followed currently. Their shared monophyly is supported by a combination of adult characters (head with glandular ducts, gular sutures absent, mesocoxal cavities laterally closed, and medial fleck of the hind wing primitively absent). Therefore, they should probably be considered as a single family (the family name Erotylidae has nomenclatural priority over Languriidae), but any decision must await a comprehensive phylogenetic study of the superfamily Cucujoidea.

### Family Classifications

The taxonomic history of the Languriidae is confusing because many of the currently recognized genera were at one time either included in the Cryptophagidae or the Erotylidae (Lawrence and Newton 1982; Sen Gupta and Crowson 1971; Leschen 1996). Some earlier classifications were so broadly-defined that they included languriids with cryptophagids and sometimes biphyllids in the Erotylidae (Ganglbauer 1899; Handlirsch 1925; Falcoz 1922) or with the Cryptophagidae (Gemminger and Harold 1868). Prior to the current familial concept of Languriidae recognized by Sen Gupta and Crowson (1971), most of the smaller species now included in the subfamilies Cryptophilinae, Setariolinae, Toraminae, and Xenoscelinae were excluded from the Languriidae.

The genus *Languria* was originally included in the family Erotylene in the subdivision Tetramera by Latreille (1804) based on tarsal formula (Latreille [1825] later placed *Languria* in the family Clavipalpes). The inclusion of *Languria* and its relatives as a subfamily or tribe in Erotylidae was followed by many 19th century authors (Chapuis 1876; LeConte 1854; Crotch 1873a, 1876; Gorham 1887a, b) and some 20th century authors (Fowler 1912; Sharp and Muir 1912; Rymer Roberts 1939, 1958).

Although Languriidae was first ranked as a family by Hope (1840; the name he used, Languiridae, is based on a misspelling of the type genus), it was Lewis (1884) who gave reasons for the separation of the family from the Erotylidae. He believed that the phytophagous habits of larval and adult *Languria*, which had been described by Comstock (1879) and observed by him in Asian species, showed that the Languriidae were more closely related to the Chrysomelidae (Phytophaga) than to the mycophagous Erotylidae. This view was initially supported by Fowler (1886a) but later rejected (Fowler 1908, 1912), due, in part, to Gorham's (1887b) discussion. Gorham (1887b) countered the recognition of the Languriidae as a family and argued that the tarsi of the Languriidae and Erotylidae differed from those in Phytophaga with respect to the relative size of the tarsomeres. He argued that the small tarsomere IV, which is present in the Languriidae and Erotylidae (as

well as the Endomychidae), was evidence for a single family, Erotylidae. This tarsal character was used by Arrow (1929a) to separate members of the Languriidae and Erotylidae from the Cryptophagidae. Gorham (1887b) also pointed out that character of the indistinct separation of the metepimeron and metepisternum, which according to Chapuis (1876) excluded *Languria* from the Erotylidae, was unsupported. An additional character that supported Gorham's view was the development of a basal sulcus on the pronotum of the Languriidae, Erotylidae and Endomychidae. However, Gorham's (1887b) combined Erotylidae was either ignored or the two-family system was adopted without strong evidence for or against paraphyly. In either case the family Languriidae was recognized as a separate taxonomic entity by numerous workers and their treatment is followed today: Casey (1900), Kolbe (1897, 1901), Blatchley (1910), Arrow (1925, 1929a), Forbes (1926), Schenkling (1928), Böving and Craighead (1931), Peyerimhoff (1933), Arnett (1968), Crowson (1952, 1955), Sen Gupta (1969), Sen Gupta and Crowson (1971), Lawrence (1982, 1991), Lawrence and Newton (1982, 1995), Lawrence and Vaurie (1983), and Pakaluk *et al.* (1994). Cucujoid taxonomy remained in state of flux during the late 1800's and early 1900's. Gorham (1896) eventually adopted a two-family system but other workers, such as Reitter (1875a, b, 1887, 1911) periodically changed their familial concepts (especially the Cryptophagidae and Biphyllidae) which usually reflected different taxonomic ranks and familial combinations.

Limited character systems, especially those based on tarsal characters, excluded the smaller species from being considered as languriids and these were placed in the Cryptophagidae by several authors, often in the previously recognized subfamily (or tribe) Telmatophilinae (Sharp 1900; Arrow 1925; Falcoz 1929; Schenkling 1923; Arnett 1968; Lohse 1967). The type genus *Telmatophilus* is a member of the Cryptophagidae (Bruce 1951; Leschen 1996) which was originally included in Jacquelin du Val's (1859) classification as Telmatophilides. Although Arrow (1925) separated the Cryptophagidae (including Telmatophilinae) from the Languriidae based on the presence of stridulatory files, in the later he (Arrow 1929a) dismissed the utility of this character and found it to be present in members of the Telmatophilinae. Again referring to tarsal characters, the minute fourth tarsomere was used by Arrow (1929a) to remove the telmatophilines from the Cryptophagidae placing them in the Languriidae. Crowson (1952, 1955) supported Arrow's classification and added *Setariola* to the Languriidae, but regarded *Cryptophilus* as a member of the Erotylidae. *Cryptophilus* was later included in the Languriidae by Sen Gupta and Crowson (1971). The Arrow-Crowson classification was followed by Sen Gupta and Crowson in several papers appearing in the 1960's.

Characters that are used to distinguish the Languriidae from the Cryptophagidae are as follows: elytral epipleura well-developed and extending to apex (poorly-developed in *Loberonotha*), hind wing with a closed anal cell, tarsomeres 5-5-5 in both sexes (many Cryptophagidae in the subfamily Cryptophaginae have 5-5-4 male tarsomeres), scutellary striole present (absent in the Toraminae and Cryptophilinae), and well-developed stridulatory files on the head (weakly developed in some atomariine cryptophagids).

While most works relied upon adult characters to define the families, Rymer Roberts (1939) provided the first refutation of a separate Languriidae based on larval characters. His view is based on the "intermediate position" of some members of the erotylid subfamily Dacninae between Languriidae and Erotylidae and characters of the mouthparts. According to Rymer Roberts (1939), *Dacne* (Erotylidae) has a well developed crushing mola and a "flattened process" or prosthema and well-developed epipharyngeal ridges which are absent in the remaining erotylids but present in the Languriidae (Languriinae). An adult character used to support the intermediate position of Dacninae is the presence of an acuminate maxillary palp, whereas most other erotylids have a securiform or triangular maxillary palp. However, the form of the mala in Dacninae shows that its members are allied to the erotylid Tritominae (= Triplacinae). Because of the blending of characters observed by Rymer Roberts (1939) he suggested a reversion to Ganglbauer's (1899) earlier classification of a broadly-defined Erotylidae. In a study published posthumously, Rymer Roberts (1958) noted that a free labium and presence of setae on the inner and dorsomedial positions of the mala, which are present in the Dacninae, are also present in the Languriidae but absent in the Tritominae and Erotylinae.

### Subfamily Classifications

The current subfamily classification, the one used here, is that developed by Sen Gupta and Crowson (1971 and previous papers). However, as their classification was constructed prior to the advent of cladistics many of the diagnostic characters listed by them may be plesiomorphies and the taxonomic groups may reflect morphological grades or phenetic groupings. A classification based strictly on monophyletic definitions of higher taxa should be developed but this is not the purpose of the paper. Here we briefly review the subfamily groupings and discuss a few of the problematic taxa. Taxonomic problems remain within many of the larger genera (e.g., *Hapalips*, *Loberus*, many languriines and *Toramus*) and need investigation. Immatures were covered by Lawrence (1991) and we have listed references for described larval languriids.

**Languriinae** (Lizard Beetles etc.). This subfamily is characterized by an asymmetrical antennal club in the

adult and phytophagous larvae (Crowson 1952). Arrow (1925) divided the Languriinae (ranked as a family) into two tribes the Languriini (51 genera) and Cladoxenini (4 genera). He separated the Cladoxenini from Languriini based on the following characters: club of antenna symmetrical and 3-segmented, antennomeres loosely articulate, and a generally broad body form. Villiers (1961) accepted this classification and as further evidence for the separation of the two tribes added several mouthpart characters for recognizing the Languriini (e.g., mola poorly-developed, galea short and brushy, and ligula well-developed with strong lobes). Although separating the two tribes is difficult (Crowson 1955; Sen Gupta and Crowson 1971), the preceding characters were included in a taxonomic key provided by Sen Gupta (1968b). Sen Gupta (1968b) erected the tribe Thallisellini for *Thallisella* and *Platoberus* which are separated from the Cladoxenini by strongly lobed tarsomeres 1-3, two apical spines present on the lacinia, apex of galea pointed, mentum long, and tibial spurs absent, and apex of the gonocoxite blunt. Division of the Languriinae into two major groups based on tarsal morphology was attempted by Gorham (1887b) and later expanded into four groups by Villiers (1943). Larval languriines were described by Böving and Craighead (1931), Peterson (1951), and Rymer Roberts (1958).

**Xenoscelinae.** This subfamily was recognized initially by Ganglbauer (1899) for the genus *Xenoscelis* and later enlarged to include several more genera by Sen Gupta (1968a, as Loberinae) and is certainly the most heterogeneous subfamily of the Languriidae (Zablotny and Leschen 1996). There are no clear synapomorphies for the monophyly of the group and most of the genera were included in the Cryptophagidae (Telmatophilinae). There are at present three tribes in the Xenoscelinae: Loberonothini (1 genus), Pharaxonothini (13 genera), and Xenoscelini (10 genera). Crowson (1952) described the tribe Pharaxonothini to include *Pharaxonotha* and *Xenocryptus* (*Cnecosa* was originally included in this tribe but was subsequently removed and placed in the Erotylidae by Lawrence, 1988) and Sen Gupta and Crowson (1967, 1969, 1971) added several genera. Several characters are listed in these studies (see also Sen Gupta 1968a) but only one character seems consistent for the tribe Pharaxonothini; that is, the absence of subcoxal lines on ventrite 1. Another character that supports this grouping is the presence of an internal monocondylic articulation between the meso- and metasternal process. Members of the Xenoscelini have subcoxal lines on ventrite 1 while the monotypic tribe Loberonothini described by Sen Gupta and Crowson (1969) lacks this character and differs from all of these by a reduced elytral epipleuron and elytral striae absent (note that the form of the transverse groove on the gula described for *Loberonotha* occurs in various other

Xenoscelinae and members of other subfamilies). Although the majority of described genera can be easily identified, the major systematic problems include the monophyly of genera and tribes. The unusual genus *Hoplepiscapha* Lea (1922) was originally described as a member of the Erotylidae and was later transferred to the Xenoscelinae (Pharaxonothini) by Sen Gupta and Crowson (1971) based on externally open procoxal cavities and a monocondylic articulation between the meso- and metasternal process. Lawrence (1988) countered this argument by noting that the procoxal cavities are externally closed and the meso-metasternal fitting is "weakly" dicondylic, supporting its placement in the Erotylidae.

*Loberopsyllus* is a genus containing four species that are either free-living or are found on the bodies of rodents (see below). Leschen and Ashe (1998) discuss several characters that associate *Loberopsyllus* with members of the Cryptophilinae, although it is currently placed in the Pharaxonothini in this study.

The widespread genus *Loberus* is very variable and has a number of identifiable morphological forms that could be named as subgenera. Moreover, the genera *Fitoa*, *Paphezia* and *Stenodina* are three genera that are very similar to some members of *Loberus*, suggesting that these may eventually be synonymized, or placed in subgenera within *Loberus*. A comprehensive review of the genus is necessary before major taxonomic decisions are made.

Larval xenoscelines have been described by Böving and Craighead (1931), Lundberg (1973), Rymer Roberts (1958), Lawrence (1991), Sen Gupta (1968b), and Sen Gupta and Crowson (1969).

**Setariolinae.** This monotypic subfamily was previously either included in the Cryptophagidae or the Erotylidae (Casey 1900; Schenkling 1928; Falcoz 1922; Falcoz 1929). Crowson (1952) recognized this genus as a separate subfamily based on the strongly-deflexed head, apical palpomeres somewhat securiform, elytral striae absent, and the body form ciid-like. Note that Setariini Casey (1900) originally included *Setariola* (= *Setaria*), *Leucohimatium*, and *Macrophagus* (= *Haplotophus*) and was based on a preoccupied name (Pakaluk *et al.* 1994). *Setariola serica* appears superficially similar in appearance to species of *Cryptophilus* (Lawrence 1991) and the larva of *Setariola* is unknown.

**Toraminae.** This subfamily was described by Sen Gupta (1967) to include some of the genera that were originally included in the Cryptophagidae. While many characters are shared with the Cryptophilinae (see below), two salient characters for recognizing toramines as a distinct group are the externally open procoxal cavities and the presence of an internal dicondylic articulation between the meso- and metasternal process. Other characters diagnostic for this group and the Cryptophilinae vary (see Leschen

1997). Leschen (1997) defined a monophyletic lineage that he informally named the *Empoecryptus* group consisting of *Empoecryptus*, *Lepidotoramus*, and *Lobosternum*. We include eight genera in this subfamily. Larval Toraminae were included in the study by Lawrence (1991).

**Cryptophilinae.** *Cryptophilus* was originally included in the Cryptophagidae by Reitter (1874) and the tribe was first recognized by Casey (1900). This genus has also been placed in the broadly-defined Erotylidae discussed above or in the Biphyllidae (Ganglbauer 1899; Arrow 1929a; Schenkling 1934). Other authors included *Cryptophilus* in or allied to the Languriidae Ganglbauer (1899) included *Cryptophilus* in the Biphyllidae based on procoxal closure and the presence of the subcoxal lines on ventrite 1. Problems with the inclusion of *Cryptophilus* in the Erotylidae, Languriidae, and Biphyllidae are based mainly on the interpretation of the external closure of the procoxal cavities (see Arrow 1925, Crowson 1955, Sen Gupta and Crowson 1971). Procoxal cavities in the Languriidae may be completely open, partially open, or completely closed behind, while in the Erotylidae and Biphyllidae the cavities are completely closed behind, but in different ways. The external closure of the procoxal cavity in *Cryptophilus* differs from the erotylid condition and is similar to some other primitive cucujoids (including biphyllids) where the cavities are closed by inward expansions of the prothorax (notal processes). In contrast, the procoxal closure in the Erotylidae is due to lateral expansions of the prosternal process. Sen Gupta and Crowson (1971) added *Coelocryptus* and *Xenoscelinus* to the Cryptophilinae, placing the later genus in the monogeneric tribe Xenoscelinini. *Cathartocryptus* was placed in the Cryptophilinae without explanation by Klimaszewski and Watt (1997), and we formally synonymize *Xenoscelinus* with this genus in the catalogue (see note for *Cathartocryptus*). Zablotny and Leschen (1996) and Ljubarsky (1997) recently added two genera, placing them in the Cryptophilini. We tentatively place the genus *Cryptophagops* in this tribe.

This subfamily has been recognized as a separate family, Cryptophilidae, by other authors including Crowson (1981), but whether or not it will make other taxa paraphyletic (e.g., Toraminae) must be determined by cladistic analysis (see Leschen, 1997). The Cryptophilinae and Toraminae appear to be sister taxa based on the following characters: meso-metasternal junction with a double knob (C1), metacoxal process broad (C2), hind wing vein CuA2+3+4+AA1+2 contacting the medial fleck (C3), and lack of a scutellary striole on the elytron (C4). Most of these characters are unique within languriids and limited to Cryptophilinae and Toraminae with the exception of C1 which is present in many Erotylidae and C2 which is present in the recently described xenosceline genus *Paphezia*

(Zablotny and Leschen 1996). Character C1 is variable in *Cryptophilus* and absent in *Cathartocryptus* while wing vein CuA2+3+4+AA1+2 is separate from the medial fleck (C3) in *Cryptophilus* and *Crowsonguptus*. Note that the key to Cryptophilinae in Zablotny and Leschen (1996) is incorrect because the antenna in *Cathartocryptus* is actually 3-segmented and appears 2-segmented in some species with a reduced terminal antennomere. The larva of *Cryptophilus* is included in the study by Lawrence (1991).

## BIOLOGY

In addition to the intriguing systematic problems, the Languriidae is biologically interesting and rich in natural history (see review of biology in Lawrence 1991). Some species are considered incidental pests of stored grain (*Cryptophilus integer* [Heer], *Leucohimatium arundinaceum* [Forskål], *Pharaxonotha kirschii* Reitter; Hinton 1945, Aitken 1975 and Delobel and Tran 1993), tea (*Leucohimatiops javanus* Heller; Heller 1923), or herbaceous crops (*Anadastus parvulus* Wiedemann, *Languria mozardi* Latreille; Arrow 1925, Vaurie 1948). In contrast, some species may be regarded as beneficial in pollinating African and New World eyebees (*Pharaxonotha* spp., Rymer Roberts 1939; Crowson 1981; Tang 1987; Pakaluk 1988). While members of the Erotylidae typically feed on large-bodied Basidiomycetes (Scheerpeltz and Höfler 1948; Benick 1952; Skelley *et al.* 1991), the diets of the Languriidae are very diverse and do not include species that feed exclusively on the tissues of macrofungi. Members of the Languriinae (Languriini), and some Xenoscelinae are strictly phytophagous while most of the remaining taxa (some Xenoscelinae, Cryptophilinae, Setariolinae, and Cladoxenini [Languriinae]) are either associated with decaying plant materials and are saprophagous or mycophagous (feeding on spores and hyphae of microfungi) or are pollen feeders (Falcoz 1922; Villiers 1943; Lawrence 1991; Zablotny and Leschen 1996; Leschen 1997). The Toraminae and Cryptophilinae have been collected from a variety of fungi (Peyerimhoff 1919; Lawrence 1991) and larvae of Neotropical species of *Toramus* and *Loberoschema* have been collected from members of the fungal family Xylariaceae (unpublished data).

The behaviour of some members of the Languriidae departs from the typical associations with plants or fungi. The rarely collected European xenosceline *Zavaljus brunneus* (Gyllenhal) is sometimes associated with wasp nests (Lundberg 1966), but is probably not a true inquiline. Some members of *Loberosyllus* have been collected on the bodies and in the nests of Neotropical cricetine rodents (Martinez and Barrera 1966; Barrera 1969; Leschen and Ashe 1998) and are phoretic. *Lepidotoramus* and some languriines have been found in association with Lepidoptera cocoons or chrysalises (Leschen 1997). One

species of languriine (near the genus *Anadastus*) was observed to mimic a species of *Paederus* (Staphylinidae) in behaviour and morphology (Reid and Noerdjito 1994).

## IDENTIFICATION OF LANGURIIDAE

Identification of the family groups is possible with the adult key provided by Lawrence and Britton (1991) and the larval key provided by Rymer Roberts (1939). An older key is also available in Crowson (1952, 1955). The adult key included in Sen Gupta and Crowson (1971) includes several mistakes in numbering of the couplets and the larval key was based partly on incorrect identifications of the Cryptophilinae (Lawrence 1991). Non-regional keys available for the Languriinae are Gorham (1887b), Fowler (1908) and Sen Gupta (1968b). Regional keys for the Languriinae are available for Asia (Arrow 1925; and Villiers 1945), Africa (Villiers 1961), Central and South America (Martins and Pereira 1966) and North America (Vaurie 1948). The genera of Toraminae and Cryptophilinae can be identified using the keys in Sen Gupta (1967), Leschen (1997) and Zablotny and Leschen (1996) and the Japanese fauna is covered by Sasaji (1990, 1992). Keys for the Xenoscelinae are included in Sen Gupta and Crowson (1967) and Sen Gupta (1968a). Keys to the eastern European and northern Asian fauna are provided by Ljubarsky (1994) and Krivolutskaya (1994).

## ACKNOWLEDGMENTS

This study would not have been complete without the help of the Library of the Museum and Institute of Zoology, Polish Academy of Sciences and the library faculty of the Field Museum of Natural History, Chicago. Copies of important taxonomic papers and references were provided by Mario Elgueta, Bernd Franzen, Andre Larochele, John Lawrence, Al Newton, Joachim Schulze, and Paul Skelley to whom we are very grateful. The first author extends his great thanks (particularly for their patience) to the curators of the collections listed in Leschen (1996), including Mario Elgueta (Museum Historia Nacional), who made various languriids available during this study. The second author is grateful to Manfred Uhlig (Museum für Naturkunde, Berlin), Nicole Berti (Muséum National d'Histoire Naturelle, Paris) and Malcolm Kerley (Natural History Museum, London) for their help during his visits to Berlin, Paris and London. We also thank Adam Ślipiński for his help with this project, and John Lawrence who assisted in determining the taxonomic status of *Isolanguria* during a visit of the first author to CSIRO, Canberra. Travel to Europe to examine type specimens by the first author was made possible by a grant from the National Science Foundation (DEB-922863), the Hungerford Fund (Department of Entomology, University of Kansas), and a University of Kansas Graduate Student Fellowship.

## CATALOGUE OF THE GENERA

This catalogue includes 98 genera arranged alphabetically within subfamilies and tribes according to the current classification of the Languriidae. The number of species contained within each genus is given and at present the total for the family is 1051 species. The taxonomic changes are summarized and type species designated for the genera according to current rules of zoological nomenclature (International Code of Zoological Nomenclature 1985, see also review in Newton and Chandler 1989). Taxonomic problems are noted for some genera. New combinations resulting from synonymies and other changes are listed in the Appendix. A species catalog is currently in preparation by Węgrzynowicz and Leschen.

## LANGURIIDAE Crotch

Languriides Crotch, 1873a: 349. Type genus: *Languria* Latreille, 1802.

## LANGURIINAE Crotch

## Languriini Crotch

*ACROPTEROXYS* Gorham, 1887a: 13.

Type species: *Acropteryx caudatus* Gorham, 1887a: 13 (original designation).

Distribution: North and Central America.

Number of species: 4.

Note: Gorham, 1887b: 362 unnecessarily designated *Languria gracilis* Newman, 1838: 390 as a new type species.

*AMYDUVEA* Zia, 1934: 140.

Type species: *Amyduvea micans* Zia, 1934: 141 (by monotypy).

Distribution: Asia.

Number of species: 1.

*ANADASTUS* Gorham, 1887b: 362.

Type species: *Languria cambodiae* Crotch, 1876: 388 (by monotypy).

*Neolanguria* Gorham, 1887b: 361. Type species: *Trogosita filiformis* Fabricius, 1801: 152 (by monotypy). First synonymized by Jakobson, 1915: 938.

*Stenodastus* Gorham 1887b: 362. Type species: *Languria melanosterna* Harold, 1879: 82 (by monotypy). First synonymized by Arrow, 1925: 207.

*Perilanguria* Fowler 1908: 19. Type species: *Languria monticola* Fowler, 1885: 387 (original designation). First synonymized by Arrow, 1929a: 4.

Distribution: Africa, Asia, Australia.

Number of species: 268.

*ANISODEROMORPHA* Arrow, 1925: 182.

Type species: *Anisoderomorpha tuberculata* Arrow, 1925: 183 (by monotypy).

Distribution: Asia.

Number of species: 1.

*ANOMALOLANGURIA* Villiers, 1943: 84.

Type species: *Ichnolanguria crassicollis* Arrow, 1929a: 3 (by monotypy).

Distribution: Africa.

Number of species: 6.

*APTERODASTUS* Arrow, 1925: 244.

Type species: *Stenodastus metallescens* Gorham, 1903: 342 (original designation).

Distribution: Asia.

Number of species: 5.

*BASULANGURIA* Sengupta and Mukherjee, 1977: 1.

Type species: *Basulanguria lavanica* Sengupta and Mukherjee, 1977: 4 (by monotypy).

Distribution: Asia.

Number of species: 1.

*BRASILANGURIA* Martins and Pereira, 1966: 213.

Type species: *Goniolanguria flavipes* Fowler, 1886a: 317 (by monotypy).

Distribution: South America.

Number of species: 1.

*CAENOLANGURIA* Gorham, 1887b: 361.

Type species: *Languria coarctata* Crotch, 1876: 387 (by monotypy).

*Coenolanguria* Gorham. Misspelling by Gorham, 1901: 172.

*Caenoelanguria* Gorham. Misspelling by Villiers, 1948: 131.

*Acrolanguria* Kolbe, 1897: 116. Type species: *Acrolanguria aeneonigra* Kolbe, 1897: 117 (by monotypy).

First synonymized by Arrow 1929a: 14.

*Gurilana* Heller, 1918: 31. Type species: *Gurilana ascendens* Heller, 1918: 31 (by monotypy). First synonymized by Villiers, 1945: 250.

Distribution: Africa, Asia, Australia.

Number of species: 60.

*CALLILANGURIA* Crotch, 1876: 381.

Type species: *Callilanguria luzonica* Crotch, 1876: 381 (original designation).

Distribution: Asia.

Number of species: 12.

*CAMPTOCARPUS* Gorham, 1887a: 6.

Type species: *Trapezidera longicollis* Motschulsky, 1860: 244 (original designation).

Distribution: Central and South America.

Number of species: 2.

*CELOLANGURIA* Arrow, 1925: 184.

Type species: *Celolanguria curvipes* Arrow, 1925: 184 (by monotypy).

Distribution: Asia.

Number of species: 1.

*CHROMAUGES* Gorham, 1887b: 361.

Type species: *Languria refulgens* Fowler, 1886a: 314 (by monotypy).

Distribution: Asia.

Number of species: 1.

*CLEROLANGURIA* Villiers, 1943: 84.

Type species: *Clerus tricolor* Fabricius, 1787: 126 (by monotypy).

*Clerolianguria* Villiers. Misspelling by Villiers, 1945: 34.

Distribution: Africa.

Number of species: 6.

*COMPSOLANGURIA* Fowler, 1886a: 314.

Type species: *Compsolanguria concinna* Fowler, 1886a: 315 (= *Goniolanguria reichii* Crotch, 1876: 395) (by subsequent designation, Martins and Pereira, 1966: 247).

Distribution: South America.

Number of species: 2.

Note: Martins and Pereira, 1966: 247 designated *Goniolanguria reichii* Crotch as the type species, with Fowler's species (*C. concinna* and *C. teres*) listed as junior synonyms. This designation is valid even though *C. reichii* (Crotch) was not included in the original generic description (ICNZ (1985) Article 69 (V)). Martins and Pereira (1966) state that *C. teres* was originally designated as a type species of genus *Compsolanguria* by Fowler (1886a) which is incorrect, no types were formally designated in his paper.

*CONGODASTUS* Villiers, 1961: 342.

Type species: *Congodastus mirificus* Villiers, 1961: 342 (by monotypy).

Distribution: Africa.

Number of species: 1.

*DASYDACTYLUS* Gorham, 1887a: 14.

Type species: *Dasydactylus buprestoides* Gorham, 1887a: 15 (by subsequent designation, Vaurie, 1948: 146).

Distribution: New World.

Number of species: 24.

*DOUBLEDAYA* White, 1850a: 13/1850b: 2834.

Type species: *Doubledaya viator* White, 1850a: 13/1850b: 2834 (by monotypy).

*Languriosoma* Crotch, 1876: 379. Type species: *Languriosoma muhoti* (sic!) Crotch, 1876: 379 (= *Languriosoma mouhoti* Crotch) (original designation). First synonymized by Arrow, 1925: 185.

*Coptolanguria* Gorham, 1896: 261. Type species: *Coptolanguria dilatipes* Gorham, 1896: 262 (by subsequent designation, Arrow, 1925: 185). First synonymized by Arrow, 1925: 185.

*Cosmolanguria* Kraatz, 1900b: 352. Type species: *Cosmolanguria ruficollis* Kraatz, 1900b: 351 (by monotypy). First synonymized by Arrow, 1925: 185.

*Glyphilanguria* Fowler, 1908: 14. Type species: *Glyphilanguria andrewesi* Fowler, 1908: 15 (original designation). First synonymized by Arrow, 1925: 185.

Distribution: Asia.

Number of species: 40.

Note: It is difficult to determine which of White's papers dated 1850 were published first.

*ECTRAPEZIDERA* Fowler, 1908: 24.

Type species: *Trapezidera semiotina* Gorham, 1887a: 4 (by monotypy).

Distribution: Central America.

Number of species: 1.

*EPILANGURIA* Fowler, 1908: 18.

Type species: *Epilanguria tenuicornis* Fowler, 1908: 18 (by monotypy).

*Leptolanguria* Fowler, 1908: 35. Type species: *Languria longicollis* Fowler, 1887: 122 (**here designated**). First synonymized by Arrow 1925: 249.

Distribution: Asia.

Number of species: 5.

*FATUA* Dejean, 1837: 430.

Type species: *Languria longicornis* Wiedemann, 1823: 48 (by monotypy).

*Macromelea* Hope, 1840: 190. Type species: *Languria longicornis* Wiedemann, 1823: 48 (by monotypy).

*Macromela* Hope. Misspelling by Miwa, 1931: 75.

Distribution: Asia.

Number of species: 1.

*GANLURIA* Heller, 1918: 29.

Type species: *Ganluria subimpressa* Heller, 1918: 30 (by monotypy).

Distribution: Asia.

Number of species: 1.

*GONIOLANGURIA* Crotch, 1876: 395.

Type species: *Languria latipes* Saunders, 1834: 149 (original designation).

*Goniocephala* Chevrolat in Dejean, 1837: 430 (nomen nudum). First synonymized by Gemminger and Harold, 1876: 3680.

Distribution: Central and South America.

Number of species: 13.

*IDIOLANGURIA* Arrow, 1925: 181.

Type species: *Tetralanguria opaca* Kraatz, 1900b: 350 (by monotypy).

Distribution: Asia.

Number of species: 1.

*ISCHNOLANGURIA* Kraatz, 1900a: 308.

Type species: *Ischnolanguria concolor* Kraatz, 1900a: 308 (by subsequent designation, Villiers, 1945: 163).

*Ischonolanguria* Kraatz. Misspelling by Villiers, 1952: 821.

Distribution: Africa.

Number of species: 2.

*LABIDOLANGURIA* Fowler, 1908: 9.

Type species: *Labidolanguria mucronata* Fowler, 1908: 10 (by monotypy).

Distribution: Asia.

Number of species: 1.

*LANGURIA* Latreille, 1802: 209.

Type species: *Languria ruficollis* Latreille, 1802: 209 (= *Trogosita bicolor* Fabricius, 1798: 50) (by monotypy).

*Janessa* Chevrolat in Dejean 1837: 430. Type species: *Languria thoracica* Olivier, 1807: 463 (= *Trogosita bicolor* Fabricius, 1798: 50), (by monotypy). First synonymized by LeConte, 1854: 159.

*Languria* Latreille. Misspelling? by Hope, 1831: 22.

*Langura* Latreille. Misspelling? by Rafinesque, 1815: 116.

Distribution: North and Central America.

Number of species: 18.

Note: Crotch, 1873a: 349 incorrectly designated *Languria mozardi* Latreille, 1807: 66 as a type species of *Languria*. Vaurie, 1948: 126 unnecessarily designated *Languria bicolor* Fabricius as a type species of the same genus. The type species of *Janessa* Chevrolat in Dejean, according to Gorham, 1887b: 361 is *Languria bicolor* Fabricius, and was unnecessarily designated. Hope (1831) and Rafinesque (1815) were not seen.

*LANGURIOMORPHA* Gorham, 1887b: 361.

Type species: *Languria lewisii* Crotch, 1873b: 184 (by monotypy).

Distribution: Asia.

Number of species: 5.

Note: Arrow, 1925: 172 considered *Languriomorpha* Gorham as a synonym of *Pachylanguria* Crotch.

*LANGURIOPHASMA* Arrow, 1925: 203.

Type species: *Languria cyanea* Hope, 1835: 94 (original designation).

Distribution: Asia.

Number of species: 4.

*LANGURITES* Motschulsky, 1860: 243.

Type species: *Languria lineata* Laporte de Castelnau, 1832: 412 (by subsequent designation, Crotch, 1876: 392).

Distribution: North and Central America.

Number of species: 2.

Note: Crotch, 1876: 392 designated *Languria lineata* Laporte de Castelnau, 1832: 412 as the type species, with all three of Motschulsky's species (*L. vitticollis*, *L. vittatus* and, *L. infuscatus*) listed as junior synonyms. This designation is valid even though *L. lineata* Castelnau was not included in original generic description (ICNZ Article 69 (V)). Vaurie, 1948: 151 unnecessarily designated *Langurites vitticollis* Motschulsky, 1860: 243 as the type species.

*LIGURANA* Chûjô, 1974: 33.

Type species: *Ligurana cleroides* Chûjô, 1974: 35 (by monotypy).

Distribution: Asia.

Number of species: 1.

*MALLEOLANGURIA* Martins and Pereira, 1966: 211.

Type species: *Malleolanguria xenopus* Martins and Pereira, 1966: 212 (by monotypy).

Distribution: Central America.

Number of species: 1.

*MEGALANGURIA* Arrow, 1925: 168.

Type species: *Pachylanguria metasternalis* Crotch, 1876: 378 (original designation).

Distribution: Asia.

Number of species: 8.

*MERISTOBELUS* Gorham, 1887a: 7.

Type species: *Meristobelus forcipatus* Gorham, 1887a: 7 (by monotypy).

Distribution: Central America.

Number of species: 1.

*NEANADASTUS* Zia, 1959: 368 and 371.

Type species: *Neanadastus gracilis* Zia, 1959: 368 and 371 (original designation).

Distribution: Asia.

Number of species: 1.

*NEOCLADOXENA* Maeda, 1974: 6.

Type species: *Neocladoxena hisamatsui* Maeda, 1974: 7 (by monotypy).

Distribution: Asia.

Number of species: 1.

*NOMOTUS* Gorham, 1887a: 24.

Type species: *Nomotus plutonus* Gorham, 1887a: 25 (original designation).

Distribution: Central America.

Number of species: 5.

*ORTHOLANGURIA* Crotch, 1876: 395.

Type species: *Ortholanguria batesii* Crotch, 1876: 395 (original designation).

*Ortholanguroides* Fowler, 1886a: 316. Type species: *Ortholanguroides egensis* Fowler, 1886a: 316 (**here designated**). First synonymized by Fowler, 1908: 26.

Distribution: Central and South America.

Number of species: 7.

*OXYLANGURIA* Crotch, 1876: 380.

Type species: *Oxylanguria acutipennis* Crotch, 1876: 381 (by monotypy).

Distribution: Asia.

Number of species: 1.

*PACHYLANGURIA* Crotch, 1876: 377.

Type species: *Languria paivae* (sic!) Wollaston, 1859: 430 (= *P. paivai* **emend.**), (original designation).

Distribution: Asia.

Number of species: 2.



Note: The epithet of the species name *Languria paivai*, a patronym for Prof. Barão do Castello de Paiva, should end with -i, not -e.

**PAEDEROLANGURIA** Mader, 1939: 44.

Type species: *Paederolanguria holdhausi* Mader, 1939: 44 (by monotypy).

*Sinolanguria* Zia, 1959: 366 and 370. Type species: *Sinolanguria alternata* Zia, 1959: 366 and 370 (original designation). First synonymized by Maeda, 1972: 24.

Distribution: Asia.

Number of species: 12.

**PAULIANUS** Villiers, 1943: 84.

Type species: *Languria illaetabilis* Pascoe, 1860: 131 (by monotypy).

Distribution: Africa.

Number of species: 2.

**PENTELANGURIA** Crotch, 1876: 380.

Type species: *Pentelanguria elateroides* Crotch, 1876: 380 (original designation).

*Pentalanguria* Crotch. Misspelling by Miwa, 1931: 73.

Distribution: Asia.

Number of species: 3.

**PROMECOLANGURIA** Fowler, 1885: 384.

Type species: *Languria nyassae* Fowler, 1885: 384 (by monotypy).

*Barbaropus* Gorham, 1887b: 362. Type species: *Languria nyassae* Fowler, 1885: 384 (by monotypy).

Distribution: Africa.

Number of species: 56, see Appendix.

Note: This is *Barbaropus* auctorum. Fowler (1885: 384) recognized this genus based on his species *Languria nyassae*. Later Fowler (1908) considered it a full genus that included *Barbaropus* as a synonym. Arrow 1929a: 4 includes this genus as a synonym of *Anadastus*.

**SLIPINSKIELLA** new name

Type species: *Languria dimidiata* Guérin-Ménéville, 1844: 314 (**here designated**).

*Promecolanguria* auctorum, nec Fowler, 1885: 384.

Distribution: Africa, see Appendix.

Number of species: 50.

Note: see *Promecolanguria* Fowler.

Etymology: A patronym for Dr. Adam S. Ślipiński, our friend and mentor in the study of Coleoptera.

**STENOLANGURIA** Fowler, 1885: 387.

Type species: *Stenolanguria tricolor* Fowler, 1885: 388 (by subsequent designation, Gorham, 1887b: 362).

Distribution: Africa.

Number of species: 6.

**TERETILANGURIA** Crotch, 1876: 394.

Type species: *Teretilanguria kirschii* Crotch, 1876: 394 (original designation).

Distribution: Central and South America.

Number of species: 5.

Note: Gemminger and Harold, 1876: 3678 synonymized *Teretilanguria* with *Trapezidera* Motschulsky but they are currently regarded as distinct genera.

**TETRAPHALA** Sturm, 1843: 306.

Type species: *Languria splendens* Wiedemann, 1823: 46 (= *Tetraphala angularis* (Motschulsky, 1860: 243), (by monotypy).

*Tetraphala* Chevrolat in Dejean, 1837: 430 (nomen nudum). First synonymized under the name *Languria* Latreille by Gemminger and Harold, 1876: 3678.

*Tetralanguria* Crotch, 1876: 378. Type species: *Languria splendens* Wiedemann, 1823: 46 (= *Tetraphala angularis* (Motschulsky, 1860: 243), (original designation).

**New synonym.**

*Tetralanguroides* Fowler, 1886a: 318. Type species: *Tetralanguroides fryi* Fowler, 1886a: 319 (by monotypy). **New synonym.**

*Metabelus* Gorham, 1887b: 361. Type species: *Pachylanguria borrei* Fowler, 1886b: CVII (by monotypy). **New synonym.**

*Metabellus* Gorham. Misspelling by Zia, 1935: 690.

Distribution: Asia.

Number of species: 23, see Appendix.

Note: Villiers (1945: 274) incorrectly designated *Trogosita elongata* Fabricius, 1801: 152 as the type species of *Tetralanguria*. Arrow (1925: 172) considered *Tetralanguria* and *Metabelus* synonyms of *Pachylanguria* Crotch. Fowler (1913: 133) incorrectly designated *Tetralanguroides sauteri* Fowler, 1913: 133 as a type species of *Tetralanguroides*. Arrow (1925: 172) considered *Metabelus* a synonym of *Pachylanguria* Crotch. Villiers, 1945: 274 listed *Tetralanguroides* as a synonym of *Tetralanguria* Crotch.

**TRAPEZIDERA** Motschulsky, 1860: 244.

Type species: *Trapezidera angusticollis* Motschulsky, 1860: 244 (by subsequent designation, Crotch, 1876: 393).

Distribution: Central America.

Number of species: 5.

Note: Gorham, 1887a: 4 unnecessarily designated *Trapezidera aenea* Crotch, 1876: 393 as a new type species for this genus.

**TRAPEZIDISTES** Fowler, 1887: 124.

Type species: *Trapezidistes ritsemae* (sic!) Fowler, 1887: 124 (= *T. ritsemai* Fowler) (by monotypy).

*Lacertobelus* Gorham, 1900: 358. Type species: *Lacertobelus dentipes* Gorham, 1900: 358 (**here designated**). First synonymized by Villiers, 1945: 177.

*Chiolanguria* Heller, 1918: 27. Type species: *Chiolanguria provocatrix* Heller, 1918: 28 (by monotypy). First synonymized by Villiers, 1945: 177.

Distribution: Asia.

Number of species: 10.

**Cladoxenini** Arrow

Cladoxeninae Arrow, 1925: 253. Type genus: *Cladoxena* Motschulsky, 1866.

*CLADOXENA* Motschulsky, 1866: 428.

Type species: *Cladoxena rufipes* Motschulsky, 1866: 429 (subsequent designation by Crotch, 1876: 396).

Distribution: Asia.

Number of species: 4.

Note: Arrow, 1925: 264 unnecessarily designated *Cladoxena maculata* Motschulsky, 1866: 428 as a type species.

*CROTCHIA* Fowler, 1886a: 305.

Type species: *Crotchchia vagabunda* Fowler, 1886a: 306 (subsequent designation by Gorham, 1887b: 362).

*Croatchia* Fowler. Misspelling by Fleutiaux, 1887: 68.

*Cladophila* Chevrolat in Dejean, 1837: 430 (nomen nudum). First synonymized by Harold, 1879: 63.

*Deerratus* Bruce, 1952: 468. Type species: *Hapalips spegazzinii* Bruch, 1919: 522 (by monotypy). First synonymized by Martins and Costa, 1967: 60.

Distribution: Central and South America.

Number of species: 20.

Note: Sen Gupta, 1968a: 469 unnecessarily designated *Crotchchia metallica* Fowler, 1886a: 306 as the type species. The name *Deerratus* Bruce (1952) is valid because characters are provided for the genus although they were discussed with regard to placement of the species in the old concept of Diphylini (Erotylidae).

*MICROLANGURIA* Lewis, 1884: 348.

Type species: *Languria jansoni* Crotch, 1873b: 185 (by monotypy).

*Microcladoxena* Fowler, 1886a: 312. Type species: *Languria jansoni* Crotch, 1873b: 185 (original designation). First synonymized by Jakobson, 1915: 938.

*Platycladoxena* Kraatz, 1900a: 312. Type species: *Platycladoxena castanea* Kraatz, 1900a: 312 (by subsequent designation, Arrow 1929b: 316). First synonymized by Arrow, 1925: 260.

Distribution: Africa, Asia.

Number of species: 14.

Note: *Microcladoxena* is an unjustified emendation by Fowler, 1886a: 312.

*PARACLADOXENA* Fowler, 1886a: 310.

Type species: *Paracladoxena abundans* Arrow, 1925: 262 (= *Paracladoxena trifoliata* sensu Fowler, 1886a: 311) (by original designation).

*Parachladoxena* Fowler. Misspelling by Miwa, 1931: 76.

Distribution: Africa, Asia.

Number of species: 20.

Note: Gorham, 1901: 176 designated *Languria trifoliata* Harold, 1879: 738 as a type species of *Paracladoxena* and synonymized it with *Cladoxena*.

*PENOLANGURIA* Kolbe, 1897: 117.

Type species: *Penolanguria minuta* Kolbe, 1897: 117 (by monotypy).

Distribution: Africa.

Number of species: 15.

**Thallisellini** Sen Gupta

Thallisellini Sen Gupta, 1968a: 470. Type genus: *Thallisella* Crotch, 1876.

*PLATOBERUS* Sharp, 1900: 586.

Type species: *Platoberus latus* Sharp, 1900: 586 (by subsequent designation, Sen Gupta 1968a: 472).

Distribution: Central and South America.

Number of species: 10.

*THALLISELLA* Crotch, 1876: 402.

Type species: *Thallisella peruviana* Crotch, 1876: 403 (original designation).

*Thalisella* Crotch. Misspelling by Fowler, 1908: 39.

*Thalasiella* Crotch. Misspelling by Heller, 1920: 54.

Distribution: Central and South America.

Number of species: 13.

**CRYPTOPHILINAE** Casey

Cryptophilini Casey, 1900: 77. Type genus: *Cryptophilus* Reitter, 1874.

**Cryptophilini** Casey

*BRACHYPTEROSA* Zablony and Leschen, 1996: 382.

Type species: *Brachypterosa pecki* Zablony and Leschen, 1996: 385 (original designation).

Distribution: Asia.

Number of species: 1.

*CHINOPHAGUS* Ljubarsky, 1997: 112.

Type species: *Chinophagus mirabilis* Ljubarsky, 1997: 112 (original designation).

Distribution: Asia.

Number of species: 1.

**CROWSONGUPTUS** new name

Type species: *Coelocryptus mexicanus* Sharp, 1900: 594 (here designated).

Gender: masculine.

*Coelocryptus* Sharp, 1900: 593, nec *Coelocryptus* Thomson, 1873: 519 (Hymenoptera). Type species: *Coelocryptus mexicanus* Sharp, 1900: 594 (by subsequent designation, Sen Gupta and Crowson, 1971: 24).

*Calocryptus* Sharp. Misspelling by Fowler, 1912: 111.

Distribution: Central America.

Number of species: 4, see Appendix.

Note: The name *Coelocryptus* is preoccupied and we provide a new name.

Etymology: Patronyms for Professor Roy A. Crowson and Dr. Tapan Sen Gupta in honor of their contributions to languriid taxonomy.

*CRYPTOPHAGOPS* Grouvelle, 1919a: 67.

Type species: *Cryptophilus alluaudi* Grouvelle, 1896: 89 (by monotypy).

Distribution: Africa, Asia.

Number of species: 4.

*CRYPTOPHILUS* Reitter, 1874: 381.

Type species: *Cryptophagus integer* Heer, 1841: 426 (by subsequent designation Chûjô, 1969: 277).

*Gryptophilus* Reitter. Misspelling by Li Jng Ke, 1992: 130.

Distribution: World wide.

Number of species: 15.

### Xenoscelinini Sen Gupta and Crowson

Xenoscelinini Sen Gupta and Crowson, 1971: 25. Type genus: *Xenoscelinus* Grouvelle, 1910.

*CATHARTOCRYPTUS* Sharp, 1886: 392.

Type species: *Cathartocryptus obscurus* Sharp, 1886: 393 (= *Paramecosoma maculosa* Broun, 1881: 670), (by monotypy).

*Xenoscelinus* Grouvelle, 1910: 143. Type species: *Xenoscelinus malaicus* Grouvelle, 1910: 144 (by monotypy). **New synonym.**

Distribution: Asia, Australia, Africa.

Number of species: 8, see Appendix.

Note: The species *Paramecosoma maculosa* Broun, first described in 1881, was noted by Bruce (1943: 60) to be congeneric with the genus *Xenoscelinus*. Broun's species was later redescribed by Sharp (1886) in the genus *Cathartocryptus*, however we could not find a reference formalizing the synonymy of the two names, although the combination *Cathartocryptus maculosus* was used by Kuschel (1990) and the genus was included in the Cryptophilinae by Klimaszewski and Watt (1997) without justification. Here we formalize the synonymy of these genera, informally recognized by previous authors, after making dissections of identified specimens of *C. maculosus* to confirm its placement. The previously described species of *Xenoscelinus* are new combinations included in *Cathartocryptus*.

### TORAMINAE Sen Gupta

Toraminae Sen Gupta, 1967: 168. Type genus: *Toramus* Grouvelle, 1916.

*ATOMAROPS* Reitter, 1889: 302.

Type species: *Atomarops lewisi* Reitter, 1889: 302 (by monotypy).

Distribution: Asia.

Number of species: 3.

*EMPOCRYPTUS* Sharp, 1900: 593.

Type species: *Empoecryptus ovalis* Sharp, 1900: 593 (by monotypy).

*Emboecryptus* Sharp. Misspelling by Blackwelder 1945: 428.

*Pseudhenoticus* Sharp 1900: 596. Type species: *Pseudhenoticus parallelus* Sharp, 1900: 596 (by monotypy). First synonymized by Leschen, 1997: 313.

*Pseudohenoticus* Sharp. Misspelling by Grouvelle, 1913: 51; 1919b: 154 and Blackwelder 1945: 428.

Distribution: Central and South America.

Number of species: 15.

*LEPIDOTORAMUS* Leschen, 1997: 314.

Type species *Lepidotoramus grouvellei* Leschen, 1997: 315 (by monotypy).

Distribution: South America.

Number of species: 1.

*LOBEROSCHEMA* Reitter, 1896: 160.

Type species: *Loberoschema bimaculata* Reitter, 1896: 160 (by monotypy).

*Philophlaeus* Germain, 1855: 395, nec *Philophlaeus* Chaudoir, 1844: 472 (Coleoptera). Type species: *Philophlaeus aeneus* Germain, 1855: 396 (**here designated**). First synonymized by Grouvelle, 1919a: 67.

*Philophloeus*. Misspelling by Grouvelle, 1919a: 67.

Distribution: South America.

Number of species: 7.

Note: The name *Philophlaeus* Germain (1855) was synonymized by Grouvelle (1919a) who transferred one species to *Diplocoelus* (Biphylidae) and the other to *Loberoschema*. *Stengita* is similar to the type species of *Loberoschema*, and they may be synonyms but no taxonomic change is made here.

*LOBOSTERNUM* Reitter, 1875a: 39.

Type species: *Lobosternum clavicorne* Reitter, 1875a: 39 (by monotypy).

Distribution: South America.

Number of species: 1.

*STENGITA* Reitter, 1875a: 39.

Type species: *Stengita nodifera* Reitter, 1875a: 39 (by monotypy).

Distribution: South America.

Number of species: 1.

Note: See *Loberoschema* regarding possible synonymy.

*TOMAROPS* Grouvelle, 1903: 343.

Type species: *Tomarops punctatus* Grouvelle, 1903: 343 (by monotypy).

Distribution: Asia, Africa.

Number of species: 3.

*TORAMUS* Grouvelle, 1916: 26.

Type species: *Tomarus pulchellus* LeConte, 1863: 71 (by monotypy), (*Toramus* was a new name for *Tomarus* LeConte, nec Erichson).

*Tomarus* LeConte, 1861: 99, nec Erichson, 1847: 95 (Coleoptera). Type species: *Tomarus pulchellus* LeConte, 1863: 71 (by subsequent monotypy).

*Itomarus* Reitter, 1920: 220 (unnecessary new name for *Tomarus* LeConte, nec Erichson). Type species: *Tomarus pulchellus* LeConte, 1863: 71 (by monotypy).

*Itotomarus* Reitter. Misspelling by Schenkling, 1923: 13.

*Eudodactylus* Motschulsky: Reitter, 1883: 75 (nomen nudum)

Distribution: World wide.

Number of species: 44.

#### SETARIOLINAE Crowson

Setariini Casey, 1900: 77. Type genus: *Setaria* Mulsant and Rey, 1863. Setariolinae Crowson, 1952: 127. Type genus: *Setariola* Jakobson, 1915.

Note: The name Setariini Casey is unavailable, because is based on the preoccupied genus *Setaria* Mulsant and Rey, nec Viborg, nec Blyth (ICZN (1985) Article 39).

*SETARIOLA* Jakobson, 1915: 941.

Type species: *Setaria sericea* Mulsant and Rey, 1863: 2 (by monotypy), (new name for *Setaria* Mulsant and Rey, nec Viborg, nec Blyth).

*Setaria* Mulsant and Rey, 1863: 1, nec Viborg, 1795 (Nematoda), nec Blyth, 1844: 385 (Aves). Type species: *Setaria sericea* Mulsant and Rey, 1863: 2 (by monotypy).

*Setarella* Reitter, 1920: 220. Type species: *Setaria sericea* Mulsant and Rey, 1863: 2 (by monotypy), (unnecessary new name for *Setaria* Mulsant and Rey, nec Viborg, nec Blyth).

Distribution: Southern Europe.

Number of species: 1.

Note: The work of Oken (1815), in which he used name *Setaria* (Vermes), is placed on the Official Index of Rejected and Invalid Works in Zoological Nomenclature (Opinion 417 ICNZ, 1956).

#### XENOSCELINAE Ganglbauer

Xenoscelini Ganglbauer, 1899: 649. Type genus: *Xenoscelis* Wollaston, 1864.

##### Xenoscelini Ganglbauer

Xenoscelini Ganglbauer, 1899: 649. Type genus: *Xenoscelis* Wollaston, 1864.

Pharaxonothinae Crowson, 1952: 127. Type genus: *Pharaxonotha* Reitter, 1875a.

Eicolycetini Vogt, 1967: 103. Type genus: *Eicolycetus* Sahlberg, 1919.

*HENOTICONUS* Reitter, 1878: 127.

Type species: *Henoticus* (sic!) *triphylloides* Reitter, 1878: 127 (by monotypy).

Distribution: Asia.

Number of species: 1.

*LEUCOHIMATIOPS* Heller, 1923: 275.

Type species: *Leucohimatiops javanus* Heller, 1923: 275 (by monotypy).

Distribution: Asia.

Number of species: 1.

*LEUCOHIMATIUM* Rosenhauer, 1856: 179.

Type species: *Leucohimatium angustum* Rosenhauer, 1856: 181 (= *Tenebrio arundinaceus* Forskål, 1775: 78 (by monotypy)).

*Leucohimatium*. Misspelling by Reitter in Brenske and Reitter, 1884: 62

Distribution: World wide.

Number of species: 8.

*LOBEROGOSMUS* Reitter, 1876: 291.

Type species: *Engis fasciata* Kolenati, 1846: 54 (by monotypy).

Distribution: Europe.

Number of species: 1.

*LOBEROLUS* Grouvelle, 1919b: 113.

Type species: *Loberolus agilis* Grouvelle, 1919b: 113 (here designated).

Distribution: Madagascar, South America.

Number of species: 2.

*LOBEROPSYLLUS* Martínez and Barrera, 1966: 11.

Type species: *Loberopsyllus traubi* Martínez and Barrera, 1966: 11 (original designation).

Distribution: Central America.

Number of species: 2.

*MACROPHAGUS* Motschulsky, 1845: 51.

Type species: *Macrophagus robustus* Motschulsky, 1845: 51 (by monotypy).

*Haplotophus* Frivaldszky, 1865: 190. Type species: *Haplotophus neglectus* Frivaldszky, 1865: 191 (by monotypy). First synonymized by Reitter in Heyden, Reitter and Weise, 1906: 331.

Distribution: Asia, Europe.

Number of species: 2.

*OTHNIOCRYPTUS* Sharp, 1900: 598.

Type species: *Othniocryptus variegatus* Sharp, 1900: 599 (by monotypy).

Distribution: Central America.

Number of species: 1.

*PHARAXONOTHA* Reitter, 1875a: 44.

Type species: *Pharaxonotha kirschii* Reitter, 1875a: 44 (by monotypy).

*Pharaxonota* Reitter. Misspelling by Bedel, 1889: 151.

*Pharaxonotha* Reitter. Misspelling by Sharp, 1900: 598.

*Pharaxonata* Reitter. Misspelling by Mader, 1955: 65.

*Pharaxonotha* Reitter. Misspelling by Sasaji, 1991: 14.

*Planismus* Casey, 1890: 500. Type species: *Planismus floridanus* Casey, 1890: 501 (by monotypy). First synonymized by Kingsolver, 1973: 247.

Distribution: Central and North America, Asia.

Number of species: 11.

Note: Reitter (1875a) described this genus as *Pharaxonotha* and in the heading it was misspelled as *Pharoxonotha* which was corrected in proof (Reitter 1875a: 86).

*RHOPALOCRYPTUS* Arrow, 1929b: 313.

Type species: *Rhopalocryptus pulcher* Arrow, 1929b: 314 (by monotypy).

Distribution: Asia.

Number of species: 1.

*XENOCRYPTUS* Arrow, 1929b: 314.

Type species: *Xenocryptus tenebrioides* Arrow, 1929b: 315 (by monotypy).

Distribution: Australia.

Number of species: 1.

*XENOSCELIS* Wollaston, 1864: 132.

Type species: *Pristoscelis deplanatus* Wollaston, 1862: 152 (by monotypy), (*Xenoscelis* was a new name for *Pristoscelis* Wollaston, nec LeConte).

*Pristoscelis* Wollaston, 1862: 151, nec LeConte, 1861: 193 (Coleoptera). Type species: *Pristoscelis deplanatus* Wollaston, 1862: 152 (by monotypy).

*Pediaphloeus* Tournier, 1869: 11. Type species: *Pediacus costipennis* Fairmaire, 1852: 78 (by monotypy). First synonymized under the name *Xenoscelis* by Ganglbauer, 1899: 649.

*Diochares* Reitter, 1872: 168, nec Pascoe, 1866: 303 (Coleoptera). Type species: *Diochares depressus* Reitter, 1872: 169 (by monotypy). First synonymized under the name *Pediaphloeus* by Kraatz, 1872: 186. First synonymized under the name *Xenoscelis* by Reiche, 1878: CXXXIV.

Distribution: Southern Europe, Northern Africa.

Number of species: 3.

*ZAVALJUS* Reitter, 1880: 544.

Type species: *Zavaljus fausti* Reitter, 1880: 544 (= *Cryptophagus brunneus* Gyllenhal, 1808) (by monotypy).

*Eicolycetus* Sahlberg, 1919: 4. Type species: *Cryptophagus brunneus* Gyllenhal, 1808: 174. First synonymized by Silfverberg, 1992: 53.

*Eicalycetus* Sahlberg. Misspelling by Crowson, 1955: 103.

Distribution: Europe.

Number of species: 1.

#### Loberonothini Sen Gupta and Crowson

Loberonothini Sen Gupta and Crowson, 1969: 127. Type genus: *Loberonotha* Sen Gupta and Crowson, 1969.

*LOBERONOTHA* Sen Gupta and Crowson, 1969: 127.

Type species: *Telmatophilus olivescens* Broun, 1893: 1104 (original designation).

Distribution: New Zealand.

Number of species: 2.

#### Loberini Bruce

Loberinae Bruce, 1951: 4. Type genus: *Loberus* LeConte, 1861.

*ACRYPTOPHAGUS* Grouvelle, 1919b: 71.

Type species: *Acryptophagus loberinus* Grouvelle, 1919b: 71 (by monotypy).

Distribution: South America.

Number of species: 1.

*BOLERUS* Grouvelle, 1919b: 92.

Type species: *Crotchia* (sic!) *minuta* Fleutiaux, 1887: 68 (= *Crotchia minuta* Fleutiaux), (by subsequent designation, Sen Gupta, 1968b: 16).

*Thallisellodes* Arrow, 1925: 256. Type species: *Thallis transversus* Gorham, 1895: 325 (original designation). First synonymized by Arrow, 1929b: 316.

Distribution: Asia.

Number of species: 16.

Note: Arrow, 1929b: 316 erroneously synonymized genera *Bolerus* and *Thallisellodes* Arrow with *Platycladoxena* Kraatz (= *Microcladoxena* Lewis).

*FITOA* Dajoz, 1973: 210.

Type species: *Fittoa testacea* Dajoz, 1973: 211 (by monotypy).

Distribution: Madagascar.

Number of species: 1.

Note: This monotypic genus was originally included in Endomychidae and is very similar to *Loberus* (S. A. Ślipiński, pers. comm.) and *Stenodina*.

*HAPALIPS* Reitter, 1877: 122.

Type species: *Hapalips mexicanus* Reitter, 1877: 122 (by subsequent designation, Sen Gupta, 1968b: 6).

*Loberina* Grouvelle, 1902: 485. Type species: *Loberina taprobanae* Grouvelle, 1902: 485 (by monotypy). First synonymized by Grouvelle, 1919a: 66.

*Isolanguria* Lea, 1929: 240. Type species: *Hapalips investigatus* **new name** (= *Isolanguria fusca* Lea, 1929: 241) (= *Hapalips fuscus* (Lea, 1929) **new combination**, nec *Hapalips fuscus* Reitter, 1877) (by monotypy). **New synonym.**

Subgenus *Cavophorus* Sen Gupta, 1968b: 8. Type species: *Hapalips fuscus* Reitter, 1877: 127 (original designation).

Subgenus *Xenosceloides* Sen Gupta, 1968b: 8. Type species: *Xenoscelis prolixus* Sharp, 1876: 26 (original designation).

Distribution: World wide.

Number of species: 57.

Note. Examination of the type specimen of *Isolanguria fusca* Lea resulted in the above synonymy. Because *Hapalips fuscus* (Lea) is preoccupied by *Hapalips fuscus* Reitter, we provide the replacement name *Hapalips investigatus* **new name**.

*LOBERUS* LeConte, 1861: 98.

Type species: *Loberus impressus* LeConte, 1863: 70 (by subsequent monotypy).

*Glisonotha* Motschulsky, 1863: 430. Type species: *Glysonotha* (sic!) *setosa* Motschulsky, 1863: 431 (= *Glisonotha setosa*) (**here designated**). First synonymized by Reitter, 1875b: 74.

*Glysonotha* Motschulsky. Misspelling by Motschulsky, 1863: 431 and Grouvelle, 1902: 485.

Distribution: World wide.

Number of species: 2.

*PAPHEZIA* Zablotny and Leschen, 1996: 385.

Type species: *Paphezia detritophila* Zablotny and Leschen, 1996: 388 (by monotypy).

Distribution: Asia.

Number of species: 1.

*PSEUDHAPALIPS* Champion, 1913: 112.

Type species: *Pseudhapatips lamellifer* Champion, 1913: 112 (by monotypy).

*Pseudohapalips* Champion. Misspelling by Grouvelle, 1919b: 70.

Distribution: South America.

Number of species: 2.

*STENODINA* Fairmaire, 1898: 498.

Type species: *Stenodina quadriguttata* Fairmaire, 1898: 499 (by monotypy).

Distribution: Madagascar.

Number of species: 1.

Note: Previously included in Endomychidae (J. Pakaluk, pers. com.). This is probably a junior synonym of *Loberus* (P. Węgrzynowicz, pers. obs.).

*TELMATOSCIUS* Sharp, 1900: 581.

Type species: *Telmatoscius claviger* Sharp, 1900: 581 (by monotypy).

Distribution: Central America.

Number of species: 2.

*TRUQUIELLA* Champion, 1913: 87.

Type species: *Truquiella gibbifera* Champion, 1913: 87 (by monotypy).

Distribution: Central America.

Number of species: 1.

## TAXON INCORRECTLY INCLUDED IN LANGURIDIIDAE

*ACROPTERYX* Gistel, 1831: 308.

Type species: *Acropteryx rufipes* Gistel, 1831: 308 (by monotypy).

*Acropteroxys* Gistel. Misspelling by Martins and Pereira, 1966: 159.

Note: This genus was included in Languriidae by Schenkling 1928: 34, but it probably belongs to Tenebrionidae as *Acropteron rufipes* (Gistel) (see Martins and Pereira, 1966: 159).

## NOMEN NUDUM

*THALASSIA* Chevrolat in Dejean, 1837: 430 (nomen nudum).

Species included: *Thalassia viridipennis* Dejean, 1837: 430 (nomen nudum).

*Civilion* Gistel, 1848. Unnecessary new name for *Thalassia* Chevrolat in Dejean, nec Solander (Najadaceae).

## REFERENCES

- Aitken, A. D. 1975. Insect Travellers. Volume I. Coleoptera. Ministry of Agriculture, Fisheries and Food Agricultural Development and Advisory Service, Pest Infestation Control Laboratory. Technical Bulletin, 31: XVI + 191 pp., photog., 45 tabs., 12 pls., fig. A.
- Arnett, R. H. 1968. The Beetles of the United States. (A Manual for Identification). The American Entomol Inst, Ann Arbor, Michigan, 1112 pp.
- Arrow, G. J. 1925. Coleoptera. Clavicornia. Erotylidae, Languriidae, and Endomychidae. In: A. E. Shipley and H. Scott (eds.), The Fauna of British India, including Ceylon and Burma. Taylor and Francis, London, XVI + 416 pp., 76 figs., 1 pl., 1 map.
- Arrow, G. J. 1929a. A Revision of the African Coleoptera belonging to the Family Languriidae. Proceedings of the General Meetings for Scientific Business of the Zoological Society of London, 1929 (1): 1–15, pl. 1.
- Arrow, G. J. 1929b. On the Families of Coleoptera related to the Erotylidae, with Descriptions of a new Family, Two new Genera, and a few new Species. The Annals and Magazine of Natural History, including Zoology, Botany, and Geology (ser. 10), 4 (22): 305–322.
- Barrera, A. 1969. Notes on the behaviour of *Loberopsyllus traubi*, a cucujoid beetle associated with the volcano mouse, *Neotomodon alstoni* in Mexico. Proceedings of the Entomological Society of Washington. 71 (4): 481–486, 2 figs.
- Bedel, L. 1889. Révision des Érotylides de l'Ancien-Monde. D'après les travaux récents de M. Edmond Reitter devant servir à compléter la monographie de M. Louis Bedel publiée en 1868 dans le tome v de l'Abeille. L'Abeille, 27: 149–166.
- Beniek, L. 1952. Pilzkäfer und Käferpilze. Ökologische und Statistische Untersuchungen. Acta Zoologica Fennica, 70: 250 pp., 23 tabs., 8 figs.
- Blackwelder, R. E. 1945. Checklist of the Coleopterous Insects of Mexico, Central America, the West Indies, and South America. Part 3. Smithsonian Institution United States National Museum Bulletin, 185: IV + 343–550.
- Blatchley, W. S. 1910. An illustrated Catalogue of the Coleoptera or beetles (exclusive of the Rhyncoptera) known to occur in Indiana. Bulletin of Indiana Department of Geological Natural Research, 1: 1–1386, 590 figs.
- Blyth [E.] 1844. Appendix to Mr. Blyth's Report for December Meeting, 1842. Journal of the Asiatic Society of Bengal (N. S.), 13 (1): 361–395.
- Boyle, W. W. 1956. A revision of the Erotylidae of America north of Mexico (Coleoptera). Bulletin of the American Museum of Natural History 110: 61–172.
- Böving, A. G. and F. C. Craighead. 1931. An Illustrated Synopsis of the Principal Larval Forms of the Order Coleoptera. Entomologica Americana (New Series), 11 (1) [1930–1931]: 1–351, 125 pls.
- Brenske, E. and E. Reitter. 1884. Neuer Beitrag zur Käferfauna Griechenlands. Deutsche Entomologische Zeitschrift. 25 [1884] (1): 17–100, 2 pls.
- Broun, T. 1881. Manual of the New Zealand Coleoptera. Part II. Georg Didsbury, Wellington. I–VIII + 653–744 + XXI–XXIII pp.
- Broun, T. 1893. Manual of the New Zealand Coleoptera, Parts V, VII and VIII. Colonial Museum and Geological Survey Department, Wellington. V–XVII + 975–1504 pp.
- Bruce, N. 1943. Drei neue tropische Cryptophagiden nebst Bemerkungen zur Synonymie der Cryptophagidenfamilie. (Coleoptera: Cryptopha-

- gidae). Arbeiten über morphologische und taxonomische Entomologie aus Berlin-Dahlem, 10 (1): 56–61, 6 figs.
- Bruce, N. 1951. Cryptophagidae (Coleoptera Polyphaga). Exploration du Parc National Albert. Mission G. F. de Witte (1933-1935), 75: 3–26, 11 figs., 2 pls.
- Bruce, N. 1952. Revision der im Deutschen Entomologischen Institut befindlichen *Hapalips*-Arten. Beiträge zur Entomologie, 2 (4–5): 461–473.
- Bruch, C. 1919. Descripción de un nuevo criptofágido. Physis, 4 (18): 522–523, figs.
- Casey, T. L. 1890. Coleopterological Notices. Annals of the New York Academy of Sciences, 5: 307–504, pl. 4.
- Casey, T. L. 1900. Review of the American Corylophidae, Cryptophagidae, Tritomidae and Dermestidae, with other studies. Journal of the New York Entomological Society, 8 (2): 51–172, 4 figs.
- Champion, G. C. 1913. Notes on various Central American Coleoptera, with descriptions of new genera and species. The Transactions of the Entomological Society of London, 1913 [1913-1914]: 58–169, pls. 3 and 4.
- Chapuis, F. 1876. Famille des Érotyliens, des Endomychides et des Coccinellides. In: T. Lacordaire and F. Chapuis (eds.) Histoire Naturelle des Insectes. Genera des Coléoptères ou exposé méthodique et critique de tous les genres proposés jusqu'ici dans cet ordre d'insectes. Tome Douzième. Librairie Encyclopédique de Roret, Paris, 424 pp.
- Chaudoir, M. 1844. Trois mémoires sur la famille des Carabiques. Bulletin de la Société Impériale des Naturalistes de Moscou, 17 (3): 415–479.
- Chûjô, M. 1969. Erotylidae (Insecta: Coleoptera). Fauna Japonica. Academic Press of Japan, Tokyo. XII + 316 pp., 20 figs., 23 pls.
- Chûjô, M. 1974. Languriid-Beetles from Philippines, Sarawak and Malaysia. Studies on the Languriid-Beetles (13). Bulletin of the Japan Entomological Academy, 8 (2): 17–41.
- Comstock, J. H. 1879. Report of the Entomologist. The clover-stem. Annual Report of the Department of Agriculture, 1879: 199–200, pl. 1, fig. 6. [not seen]
- Crotch, G. R. 1873a. Synopsis of the Erotylidae of Boreal America. Transactions of the American Entomological Society, 3 [1870-1871]: 349–358.
- Crotch, G. R. 1873b. A descriptive list of Erotylidae collected by Geo Lewis, Esq., in Japan (with addenda to the genus *Languria* by E. W. Janson and C. O. Waterhouse). The Entomologist's Monthly Magazine, 9 [1872-1873]: 184–189.
- Crotch, G. R. 1876. A Revision of the Coleopterous Family Erotylidae. Cistula Entomologica, 1 [1869-1876]: 377–572.
- Crowson, R. A. 1952. The classification of the families of British Coleoptera. The Entomologist's Monthly Magazine, 88: 109–132.
- Crowson, R. A. 1955. The natural classification of the families of Coleoptera. Nathaniel Lloyd & Co., Ltd., London, 187 pp.
- Crowson, R. A. 1981. The Biology of the Coleoptera. Academic Press, London, XII + 802 pp., 319 figs., 9 pls., 15 tabs.
- Dajoz, R. 1973. Deux nouveaux genres de Coléoptères Mycetocidae. Bulletin de la Société entomologique de France, Paris, 77 (7–8) [1972]: 210–215, 16 figs.
- Dejean, [P. F. M. A.] 1837. Catalogue des Coléoptères de la Collection de M. le Comte Dejean. 5a Livraison. Méquignon-Marvis Père et Fils, Paris, pp. 361–443.
- Delobel, A. and M. Tran. 1993. Les Coléoptères des denrées alimentaires entreposées dans les régions chaudes. Faune tropicale. Vol. 32. Institut Français de Recherche pour le Développement en Coopération Centre Technique de Coopération Agricole et Rurale, 424 pp.
- Erichson, G. F. 1847. Conspectus Insectorum Coleopterorum, quae in Republica Peruana observata sunt. Archiv für Naturgeschichte, 13 (1): 67–185.
- Fabricius, J. C. 1787. Mantissa Insectorum sistens eorum species nuper detectas adiectis characteribus genericis, differentiis specificis, emendationibus, observationibus. Tom. I. Hafniae, XX + 348 pp.
- Fabricius, J. C. 1798. Supplementum Entomologiae Systematicae. Hafniae, [2] + 572 pp.
- Fabricius, J. C. 1801. Systema Eleutheratorum secundum ordines, genera, species adiectis synonymis, locis, observationibus, descriptionibus. Tomus I. Kiliae, XXIV + 506 pp.
- Fairmaire, L. 1852. Quelques Coléoptères nouveaux du midi de l'Europe et du Nord de l'Afrique. Annales de la Société entomologique de France (Ser. 2) 10: 69–93.
- Fairmaire, L. 1898. Matériaux pour la faune coléoptérique de la région malgache. Annales de la Société entomologique de Belgique, 42: 463–499.
- Falcoz, L. 1922. Études sur les Cryptophaginae (Coléoptères Erotylides) I. Morphologie et affinités systématiques de *Setaria sericea* Muls. Annales de la Société linnéenne de Lyon (Nouvelle Série), 68 [1921]: 25–40, 10 figs.
- Falcoz, L. 1929. Tableaux analytiques des Coléoptères de la faune franco-rhénane (France, Hollande, Belgique, Région rhénane, Valais): Famille XXXII: Cryptophagidae. Miscellanea Entomologica, 31 (12): 1–48, 46 figs.
- Fleutiaux, E. 1887. Descriptions de Coléoptères nouveaux de l'Annam. Rapportés par M. le capitaine Delauney. Annales de la Société entomologique de France (Ser. 6), 7: 59–68.
- Forbes, W. T. M. 1926. The wing folding patterns of the Coleoptera. Journal of New York Entomological Society, 34: 9–115, pls. 7–18.
- Forskål, P. 1775. Descriptiones Animalium. Avium, Amphibiorum, Piscium, Insectorum, Vermium; que in Itinere Orientali. Mölleri, Hauniae, 20 + XXXIV + 2 + 164 pp., 1 map.
- Fowler, W. W. 1885. New species of Languriidae. The Transactions of the Entomological Society of London, 1885 (3): 381–388.
- Fowler, W. W. 1886a. New genera and species of Languriidae. The Transactions of the Entomological Society of London, 1886 (3): 303–322, pl. 3.
- Fowler, W. W. 1886b. Descriptions of new species of Languriidae. Bulletin ou Comptes-Rendus des Séances de la Société entomologique de Belgique (ser. 3), 1886 (72): CVII–CXII.
- Fowler, W. W. 1887. A new genus and new species of Languriidae from the collection of the Leyden Museum. Notes from the Leyden Museum, 9 (1): 121–125.
- Fowler, W. W. 1908. Coleoptera fam. Erotylidae subfam. Languriinae. In: P. Wytman (ed.), Genera Insectorum. P. Wytman, Bruxelles, 78: 45 pp., 3 pls.
- Fowler, W. W. 1912. Coleoptera. General Introduction and Cicindelidae and Paussidae. A. E. Shipley and G. A. K. Marshall (eds.), The Fauna of British India, including Ceylon and Burma. Taylor and Francis, London, XX + 529 pp., 240 figs.
- Fowler, W. W. 1913. H. Sauter's Formosa-Ausbeute: Languriidae. Archiv für Naturgeschichte, 79 (A) 1913 (7): 132–138.
- Frivaldszky, J. 1865. Jellemző Adatok Magyarország Faunájához. Eggenberger Ferdinánd Magy. Akad. Könyvtáránál, Pesten. 275 pp + 12 pls.
- Ganglbauer, L. 1899. Die Käfer von Mitteleuropa. Die Käfer der österreichisch-ungarischen Monarchie, Deutschlands, der Schweiz, sowie des französischen und italienischen Alpengebietes. Dritter Band. Familienreiche Clavicornia, Sphaeritidae, Ostomidae, Byturidae, Nitidulidae, Cucujidae, Erotylidae, Phalacridae, Thoricidae, Lathridiidae, Mycetophagidae, Colydiidae, Endomychidae, Coccinellidae. II Theil. Carl Gerold's Sohn, Wien. III + 409–1046 pp., 46 figs.
- Gemminger, [M.] and [E.] von Harold. 1868. Catalogus Coleopterorum hucusque descriptorum synonymicus et systematicus. Tom. III. Histeridae, Phalacridae, Nitidulidae, Trogositidae, Colydiidae, Rhyssodidae, Cucujidae, Cryptophagidae, Derodontidae, Latrididae, Othnidae, Mycetophagidae, Thoricidae, Dermestidae, Byrrhidae, Georyssidae, Parnidae, Heteroceridae, Lucanidae. E. H. Gummi, Monachii, pp. 753–978 + 5 pp.
- Gemminger, [M.] and [E.] von Harold. 1876. Catalogus Coleopterorum hucusque descriptorum synonymicus et systematicus. Tom. XII. Chrysomelidae (Pars II.), Languridae, Erotylidae, Endomychidae, Coccinellidae, Corylophidae, Platypyllidae, Accedit. Index Generum universalis. Theodor Ackermann, Monachii, pp. 3479–3824.
- Germain, [P.] 1855. Descripción de Coléopteros de diversas especies que no se hallan en la obra del señor Gay, por el señor Germain: presentada a la Facultad de Ciencias Físicas i Matemáticas. Anales de la Universidad de Chile, 12: 386–407.
- [Gistel] Gistel, J. 1831. Entomologische Fragmente. Isis (Oken), 1831: 301–310.

- Gistel, J. 1848. Naturgeschichte des Thierreichs, für höhere Schulen. Hoffmann'sche Verlag-Buchhandlung. XVI + 216 + 4 pp., 32 pls.
- Gorham, H. S. 1887a. Erotylidae. Subfam. Languriidae. In: F. Godman and O. Salvin (eds.), *Biologia Centrali-Americana. Insecta. Coleoptera*. Vol. VII [1887-1899]: 1-32, pl. 1.
- Gorham, H. S. 1887b. On the Classification of the Coleoptera of the sub-family Languriidae. Proceedings of the Scientific Meetings of the Zoological Society of London, 1887: 358-362.
- Gorham, H. S. 1895. List of the Coleoptera in the Collection of H. E. Andrewes. Esq. from India and Burma, with Descriptions of New Species and Notes. Families: Malacodermata - Erotylidae - Endomychidae. *Annales de la Société Entomologique de Belgique*, 39: 293-330.
- Gorham, H. S. 1896. Viaggio di Leonardo Fea in Birmania e regioni vicine. LXIX. Languriidae, Erotylidae and Endomychidae. *Annali del Museo Civico di Storia Naturale di Genova* (ser. 2), 16: 257-302.
- Gorham, H. S. 1900. Species of the Sub-Family Languriidae contained in the Civic Museum of Genoa. *Annali del Museo Civico di Storia Naturale di Genova* (ser. 2), 20 [1899]: 354-368.
- Gorham, H. S. 1901. Erotylidae, Endomychidae and Coccinellidae of Sumatra. *Entomologische Zeitung*, 62 (1-2): 169-214.
- Gorham, H. S. 1903. On Coleoptera Collected in India by MM. H.-E. and H.-L. Andrewes. *Familles Malacodermata, Erotylidae, Endomychidae and Coccinellidae. Annales de la Société Entomologique de Belgique*, 47: 323-347.
- Grouvelle, A. 1896. Descriptions de Clavicornes d'Afrique et de Madagascar. *Annales de la Société Entomologique de France*, 65: 71-94, figs.
- Grouvelle, A. 1902. Voyage du Dr W. Horn a Ceylan. Coléoptères Clavicornes. *Annales de la Société Entomologique de France*, 71: 481-487.
- Grouvelle, A. 1903. Voyage de M. Maurice Maindron dans l'Inde Méridionale (Mai-Novembre 1901). Coléoptères Clavicornes. *Annales de la Société Entomologique de France*, 72: 340-347, 6 figs.
- Grouvelle, A. 1910. Description d'un nouveau genre et d'une nouvelle espèce d'Erotylidae (Col.). *Bulletin de la Société entomologique de France*, 1910: 143-145.
- Grouvelle, A. 1913. Mission géodésique de l'Equateur. Insectes recueillis par M. le Dr Rivet. Coléoptères Clavicornes. *Bulletin du Muséum National d'Histoire Naturelle*, 29: 43-56.
- Grouvelle, A. 1916. Famille des Cryptophagidae. Notes synonymiques et rectifications à la nomenclature. *Mémoires Entomologiques. Études sur les Coléoptères*, 1: 26-29.
- Grouvelle, A. 1919a. Famille des Cryptophagidae. Notes synonymiques et rectifications à la nomenclature. *Mémoires Entomologiques. Études sur les Coléoptères*, 2: 66-69.
- Grouvelle, A. 1919b. Descriptions de genres nouveaux et d'espèces nouvelles de Cryptophagidae. *Mémoires Entomologiques. Études sur les Coléoptères*, 2: 70-203.
- Guérin-Ménéville, M. F. E. 1844. Iconographie du Règne Animal de G. Cuvier, ou représentations d'après de l'une espèces les plus remarquables, et souvent non encore figurées, de chaque genre d'animaux. Avec un texte descriptif mis au courant de la science. Ouvrage pouvant servir d'atlas a tous les traités de zoologie. Insectes. J. B. Baillié, Libraire de l'Académie Royale de Médecine, Paris [1829-1844]: 576 pp.
- Gyllenhal, L. 1808. *Insecta Succica. Classis I. Coleoptera sive Eleuterata*. Tomus I. F. J. Leverentz, Scaris, XII + 572 pp.
- Handlirsch, A. 1925. Systematische Übersicht, pp. 377-1140. In: C. Schröder (Ed.), *Handbuch der Entomologie*. Band 3, Gesichte, Literatur, Technik, Paläontologie, Phylogenie, Systematik. Gustav Fischer, Jena.
- Harold, E. v. 1879. Beiträge zur Kenntnis der *Languria*-Arten aus Asien und Neuholland. *Mittheilungen des Münchener Entomologischen Vereins*, 3 (1): 46-94.
- Heer, O. 1841. *Fauna Coleopterorum Helvetica. Pars I. Impensis Orellii, Fuesslini et Sociorum, Turici*, XII + 652 pp.
- Heller, K. M. 1918. Philippinische Langurinae (Coleopt. Erotylidae). *Wiener Entomologische Zeitung*, 37 (1-3): 25-33, 2 figs.
- Heller, K. M. 1920. Beitrag zur Kenntnis der Erotyliden der indo-australischen Region mit besonderer Berücksichtigung der philippinischen Arten. *Archiv für Naturgeschichte* (A), 84 (8) [1918]: 1-121, 15 figs., 2 pls.
- Heller, K. M. 1923. Ein neuer Cryptophagine (Coleopt.) aus Java. *Treubia*, 3 (3-4): 275-276.
- Heyden L. von, E. Reitter and J. Weise. 1906. *Catalogus Coleopterorum Europae, Caucasi et Armeniae rossicae. Editio secunda*. Edmund Reitter, Paskau. 6 + 774 pp.
- Hinton, H. E. 1945. A Monograph of the Beetles Associated with Stored Products. Vol 1. British Museum (Natural History), London, 443 pp.
- Hope, F. W. 1831. Synopsis of the new species of Nepal Insects in the collection of Major Gen. Hardwicke. *Zoologica Miscelanea*, 1831: 21-32. [not seen]
- Hope, F. W. 1835. Characters and Descriptions of several New Genera and Species of Coleopterous Insects. *Transactions of the Zoological Society of London*, 1 (2): 91-112, pls. 13-16.
- Hope, F. W. 1840. *The Coleopterist's Manual, Part the Third, Containing Various Families, Genera, and Species, of Beetles, Recorded by Linnaeus and Fabricius. Also Descriptions of Newly Discovered and Unpublished Insects*. J. C. Bridgewater, and Bowdery and Kerby, London. 191 pp., 3 pls.
- International Commission on Zoological Nomenclature. 1956. Opinion 417. Rejection for nomenclatorial purposes of volume 3 (Zoologie) of the work by Lorenz Oken entitled *Oken's Lehrbuch der Naturgeschichte* published in 1815-1816. *Opinions and Declarations rendered by the International Commission on Zoological Nomenclature*, 14 (1): 1-42.
- International Commission on Zoological Nomenclature. 1985. *International Code of Zoological Nomenclature. Third Edition*. University of California Press, Berkeley and Los Angeles. XX + 338 pp.
- Jakobson, G. G. 1915. Beetles of Russia and Western Europe. Part 11. A. F. Devren, St. Petersburg, pp. 865-1024 [in Russian].
- Jacquelin du Val, C. 1859. *Genera des Coléoptères d'Europe comprenant leur Classification en familles naturelles, la description de tous les Genres, des Tableaux dichotomiques destinés à faciliter l'étude, le Catalogue de toutes les espèces de nombreux dessins au trait de caractères. Tome deuxième*. A. Deyrolle, Paris, pp. 90-204. + Catalogue, pp. 111-114, pls. 48-52.
- Kingsolver, J. M. 1973. New synonymy in Languriidae (Coleoptera). *Proceedings of the Entomological Society of Washington*, 75 (2): 247.
- Klimaszewski, J. and J. C. Watt. 1997. Coleoptera: family-group review and keys to identification. *Fauna of New Zealand*, No. 37. Manaaki Whenua Press, Lincoln, New Zealand, 199 pp.
- Kolbe, H. J. 1897. *Coleopteren. Die Käfer Deutsch-Ost-Afrikas*. Verlag von Dietrich Reimer, Berlin, 368 pp., 4 pls
- Kolbe, 1901. Vergleichend-morphologische Untersuchung an Coleopteren nebst Grundlagen zu einem System und zur Systematik derselben. *Archiv für Naturgeschichte*, 67: 89-150.
- Kolenati, F. A. 1846. *Insecta Caucasi. Coleoptera, Dermaptera, Lepidoptera, Neuroptera, Mutillidae, Aphaniptera, Anoplura. Meletemata Entomologica. Fasc. V. Typis Imperialis Academiae Scientiarum, Petropoli*, III + 4-170 pp., pls. 17-19.
- Kraatz, G. 1872. [No title]. *Berliner Entomologische Zeitschrift*, 16 (2-4): 186.
- Kraatz, G. 1900a. Ueber die Languriiden-Arten von Kamerun nebst einigen verwandten Formen. *Deutsche Entomologische Zeitschrift*, 1899 (2): 307-315.
- Kraatz, G. 1900b. Einige Bemerkungen zu Gorham's Aufsatz von 1896: Languriidae in Birmania ex regione vicina a Leonardo Fea collecta. *Deutsche Entomologische Zeitschrift*, 1899 (2): 345-352.
- Krivolutskaya, G. O. 1994. Languriidae. pp. 248-285. In: Ler, P.A. (Ed.), *Opredelitel' nasekomykh Dal'nego Vostoka SSSR. Tom 3 - Zhestkokrylye, ili zhuki. Chast 2. Keys to the insects of the Soviet Union and the Far East. 3 - Coleoptera, or beetles. Part 2. Nauka. St. Petersburg* (in Russian).
- Kuschel, G. 1990. Beetles in a suburban environment: a New Zealand case study. The identity and status of Coleoptera in the natural and modified habitats of Lynfield, Auckland (1974-1989). *DSIR Plant Protection Report*, 3. 119 pp. + 230 figs.
- Laporte de [Castelnau] F. L. 1832. Mémoire sur cinquante espèces nouvelles ou peu connues d'insectes. *Annales de la Société entomologique de France*, 1: 386-415.



- Latreille, P. A. [1802]. Histoire Naturelle, générale et particulière des Crustacés et des Insectes. Ouvrage faisant suite à l'Histoire Naturelle générale et particulière, composée par Leclerc de Buffon, et rédigée par C. S. Sonnini, membre de plusieurs Sociétés savantes. Familles Naturelles des Genres. Tome troisième. De l'Imprimerie de F. Dufart, Paris, 467 pp.
- Latreille, P. A. [1804]. Histoire Naturelle, générale et particulière, des Crustacés et des Insectes. Ouvrage faisant suite aux Ouvrages de Leclerc de Buffon, et partie du Cours complet d'Histoire naturelle rédigé par C. S. Sonnini, membre de plusieurs Sociétés savantes. Tome douzième. De l'Imprimerie de F. Dufart, Paris, 424 pp.
- Latreille, P. A. 1807. Genera Crustaceorum et Insectorum secundum ordinem naturalem in familias disposita, iconibus exemplisque plurimis explicata. Tomus tertius. Amand Koenig. Parisiis et Argentorati. 258 pp., pls.
- Latreille, P. A. 1825. Familles Naturelles du Règne Animal. Baillière, Paris, 570 pp.
- Lawrence, J. F. 1982. Coleoptera, pp. 482–553. In: S. P. Parker (ed.) Synopsis and Classification of Living Organisms. Vol. 2. McGraw-Hill, New York.
- Lawrence, J. F. 1988. Notes on the classification of some Australian Cucujoidea (Coleoptera). Journal of the Australian Entomological Society, 27: 53–54.
- Lawrence, J. F. 1991. Languriidae (Coleoptera) (including Cryptophilidae), pp. 471–473, figs. 34.543–34.547. In: Stehr, F.W. (ed.), Immature Insects. Volume 2. Kendall/Hunt Publishing Company, Dubuque. XVI + 975 pp., figs.
- Lawrence, J. F. and E. B. Britton. 1991. Coleoptera, pp. 543–683. In: The Insects of Australia: a Textbook for Students and Researchers. Vol. 2. Second ed. Cornell University Press, Ithaca.
- Lawrence, J. F. and E. B. Britton. 1994. Australian Beetles. Melbourne University Press, Carlton, X + 192 pp., 62 figs., 16 pls.
- Lawrence, J. F. and A. F. Newton, Jr. 1982. Evolution and classification of beetles. Annual Review of Ecology and Systematics, 13: 261–290.
- Lawrence, J. F. and A. F. Newton, Jr. 1995. Families and subfamilies of Coleoptera (with selected genera, notes, references and data on family-group names), pp. 779–1006. In: J. Pakaluk and S. A. Ślipiński (Eds.) Biology, Phylogeny and Classification of Coleoptera: Papers Celebrating the 80th Birthday of Roy A. Crowson. Part 2. Muzeum i Instytut Zoologii PAN, Warszawa.
- Lawrence, J. F. and P. Vaurie. 1983. A Catalog of the Coleoptera of America North of Mexico. Family: Languriidae. United States Department of Agriculture. I-X + 13 pp., 1 map.
- Lea, A. [M.] 1922. On Australian Coleoptera. Part IV. Records of the South Australian Museum, 2 (2) [1921–1924]: 271–308, figs., pl. 4.
- Lea, A. M. 1929. Notes on Some Miscellaneous Coleoptera, With Descriptions on New Species. Part VII. Transactions and Proceedings of the Royal Society of South Australia, 53: 203–244, 5 figs.
- LeConte, J. L. 1854. Synopsis of the Erotylidae of the United States. Proc Acad Philad., 7: 158–163.
- LeConte, J. L. 1861. Classification of the Coleoptera of North America. Part I. Smithsonian Miscellaneous Collections, Washington, XXIV + 214 pp.
- LeConte, J. L. 1863. New Species of North American Coleoptera. Part I. Smithsonian Miscellaneous Collections, Washington, 167 [1863–1866]: 1–86.
- Leschen, R. A. B. 1996. Phylogeny and revision of the genera of Cryptophagidae (Coleoptera: Cucujoidea). Kansas Science Bulletin, 55: 549–634.
- Leschen, R. A. B. 1997. The *Empoeryptus* Group (Languriidae: Toraminae): Relationships and a New Genus Associated with a Lepidopteran Cocoon. The Coleopterists Bulletin, 51 (4): 303–318.
- Leschen, R. A. B. and J. S. Ashe. New species, phylogenetic placement, and mammal associations of *Loberopsyllus* (Languriidae: Xenoscelinae). Journal of Kansas Entomological Society Special Publication Honoring Byron Alexander (in press).
- Lewis, G. 1884. Japanese Languriidae, with Notes on their Habits and External Sexual Structure. The Journal of the Linnean Society. Zoology, 17: 347–361, pl. 14.
- Li Jing Ke. 1992. The Coleoptera Fauna of Northeast China. Education Publishing House, Jilin, 205 pp.
- Ljubarsky, G. Y. 1994. New materials on Languriidae and Cryptophagidae of eastern Europe and northern Asia. Byulletyn' Moskovskogo Obshechestva Ispytatelei Prirody Otdel Biologicheskii, 99: 35–43 (in Russian).
- Ljubarsky, G. Y. [as Lyubarsky] 1997. *Chinophagus mirabilis* n. gen., n. sp. of Languriidae from China with new records of Cryptophagidae (Coleoptera, Clavicornia). Miscellanea Zoologica, 20 (1): 111–117, 3 figs.
- Lohse, G. A. 1967. 55. Familie: Cryptophagidae, pp. 110–158, figs. In: H. Freude, K. W. Harde, G. A. Lohse (Eds.), Die Käfer Mitteleuropas. Band 7. Clavicornia. Goecke & Evers, Krefeld.
- Lundberg, S. 1966. *Eteolyetus brunneus* Gyll. (Coleoptera), något om bl.a. biologin. Entomologisk Tidskrift, 87 (1–2): 47–49, fig.
- Lundberg, S. 1973. Bidrag till kännedom om Svenska skalbaggar, 14. Entomologisk Tidskrift, 94: 28–33.
- Mader, L. 1939. Neue Coleopteren aus China. Entomologisches Nachrichtenblatt, 13 (1–2): 41–51.
- Mader, L. 1955. Neue Coleopteren aus Fukien (China). Helvetidae, Languriidae, Erotylidae, Endomychidae, Coccinellidae. Koleopterologische Rundschau, 33 (1–6): 62–78.
- Maeda, Y. 1972. Two New Species of the Family Languriidae from Taiwan (Coleoptera). The Entomological Review of Japan, 24 (1–2): 21–24, fig., pl. 7.
- Maeda, Y. 1974. A New Genus and a New Species of Tribe Cladoxenini from Taiwan (Col.). Reports on Languriidae from Taiwan, II. The Entomological Review of Japan, 27 (1–2): 6–8, pl. 2.
- Martinez, A. and A. Barrera. 1966. Hallazgo de Cryptophagidae, anófalmo y apteros, asociados a mamíferos (Ins., Coleopt.). Ciencia (Mexico), 25: 11–16, 10 figs.
- Martins, U. R. and C. Costa. 1967. Género *Crotchia* Fowler (Col., Languriidae). III. Espécies com élitros de lados paralelos. Papéis Avulsos do Departamento de Zoologia, 20 (6): 59–64, 14 figs.
- Martins, U. R. and F. S. Pereira. 1966. Revisão dos Languriinae neotropicais (Coleoptera, Languriidae). Arquivos de Zoologia do Estado de São Paulo, 13 [1965]: 139–30, 97 figs., 4 maps.
- Miwa, Y. 1931. A Systematic Catalogue of Formosan Coleoptera. Report No. 55. Department of Agriculture, Government Research Institute Taihoku. XI + A–B + 359 pp.
- Motschulsky, V. de [as Motschoulsky]. 1845. Remarques sur la collection de Coléoptères russes. Bulletin de la Société Impériale des Naturalistes de Moscou, 18 (1): 3–127, 3 pls.
- Motschulsky, V. [de]. 1860. Coléoptères rapportés de la Sibirie orientale et notamment des pays situés sur les bords du fleuve Amour par MM. Schrenck, Maack, Ditmar, Voznessenski etc. In: L. von Schrenck (ed.) Reisen und Forschungen im Amur-Lande. Band II. Kaiserliche Akademie der Wissenschaften, St. Petersburg, 2 (2): 79–257, pls. 6–11.
- Motschulsky, V. de. 1863. Essai d'un Catalogue des Insectes de l'île Ceylan. Bulletin de la Société Impériale des Naturalistes de Moscou, 36 (1): 421–532.
- Motschulsky, V. [de]. 1866. Essai d'un catalogue des insectes de l'île de Ceylan. Bulletin de la Société Impériale des Naturalistes de Moscou, 39 (1): 393–446.
- Mulsant, [M.] E. and [C.] Rey. 1863. Description d'un Genre nouveau de la Famille des Cryptophagides. Annales de la Société Linnéenne de Lyon, Nouvelle Série, 10: 1–3.
- Newman, E. 1838. Entomological Notes. The Entomological Magazine, 5: 372–402, figs.
- Newton, A. F. Jr. and D. S. Chandler. 1989. World catalog of the genera of Pselaphidae (Coleoptera). Fieldiana, 53: 1–93.
- Oken, L. 1815. Lehrbuch der Naturgeschichte. Bd. 3. Zoologie. Schmid, Jena. [not seen]
- Olivier, A. G. 1807. Entomologie, ou Histoire Naturelle des Insectes, avec leurs caractères généraux et spécifiques, leur description, leur synonymie, et leur figure enluminée. Coléoptères. Tome cinquième. Desray, Paris, 612 pp.
- Pakaluk, J. 1988. Review of the New World species of *Pharaxonotha* Reitter (Coleoptera: Languriidae). Revista de Biología Tropical, 36 (2B): 447–451, 10 figs.
- Pakaluk, J., S. A. Ślipiński and J. F. Lawrence. 1994. Current classification and family-group names in Cucujoidea (Coleoptera). Genus, 5 (4): 223–268.

- Pascoe, F. P. 1860. Notices of new or little-known Genera and Species of Coleoptera. The Journal of Entomology. Descriptive and Geographical, 1 [1860-1862]: 98-132, pls. 5-8.
- Pascoe, F. P. 1866. Longicornia Malayana: or, a Descriptive Catalogue of the Species of the three Longicorn Families Lamidae, Cerambycidae and Prionidae, collected by Mr. A. R. Wallace in the Malay Archipelago. The Transactions of the Entomological Society of London (Ser. 3), 3 [1864-1869]: 225-336.
- Peterson, A. 1951. Larvae of Insects. An introduction to Nearctic species. Part II. Coleoptera, Diptera, Neuroptera, Siphonaptera, Mecoptera, Trichoptera. A. Peterson, Columbus, Ohio. 416 pp.
- Peyerimhoff, P. de. 1919. Notes sur la biologie de quelques Coléoptères phytophages du Nord-Africain (troisième série). Annales de la Société entomologique de France, 102: 77-106.
- Peyerimhoff, P. de. 1933. Les larves des Coléoptères d'après A. G. Böving et F. C. Craighead et les grands critères de l'ordre. Annales de la Société entomologique de France, 102: 77-106.
- Rafinesque, C. S. 1815. Analyse de la nature ou tableau de l'univers et des corps organisés. Palerme, Aux dépans de l'autur, 224 pp., portrait. [not seen]
- Reiche, L. 1878. [No title]. Annales de la Société entomologique de France (ser. 5), 8: CXXXIV.
- Reid, C.A.M. and W.A. Noerdjito. 1994. Mimicry of a *Peaderus* species (Col., Staphylinidae) by a species of Languriinae (Col., Languriidae) in Java. Entomologist's Monthly Magazine, 130: 63-65.
- Reitter, E. 1872. Neue Käferarten von Oran, gesammelt von Hans Leder. Berliner Entomologische Zeitschrift, 16 (2-4): 167-186.
- Reitter, E. 1874. Beitrag zur Kenntniss der japanesischen Cryptophagiden. Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien, 24 (3-4): 379-382.
- Reitter, E. 1875a. Revision der europäischen Cryptophagiden. Deutsche Entomologische Zeitschrift, 19 (3): 1-86.
- Reitter, E. 1875b. Beitrag zur Kenntniss der aussereuropäischen Cryptophagidae. Coleopterologische Hefte, 13: 73-87.
- Reitter, E. 1876. Neue transcaucasische Coleopteren, gesammelt von Hans Leder. Deutsche Entomologische Zeitschrift, 20 (2): 289-294.
- Reitter, E. 1877. *Hapalips*, neue Gattung der Rhizophagidae. Verhandlungen des Naturforschenden Vereins in Brünn, 15: 122-128, pl. 2.
- Reitter, E. 1878. *Henoliconus* nov. gen. Cryptophagidarum. Deutsche Entomologische Zeitschrift, 22 (1): 127-128.
- Reitter, E. 1880. Neue Coleopteren aus dem südöstlichen Russland, aufgefunden von Herrn J. Faust aus Helsingfors. Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien, 29 [1879]: 543-546.
- Reitter, E. 1883. Coleopterologische Notizen. Deutsche Entomologische Zeitschrift, 27 (2): 74-75.
- Reitter, E. 1887. Bestimmungs-Tabellen der europäischen Coleopteren. XVI Heft. Enthaltend die Familien: Erotylidae und Cryptophagidae. W. Burkart, Brünn, 56 pp.
- Reitter, E. 1889. Die bekannten Cryptophagiden Japans, mit Beschreibungen neuer, in den Jahren 1880 und 1881 von George Lewis gesammelten Arten. Wiener Entomologische Zeitung, 8 (9): 299-304.
- Reitter, E. 1896. *Loberoschema*, nov. gen. Cryptophagidarum. Deutsche Entomologische Zeitschrift, 1896 (1): 160
- Reitter, E. 1911. Fauna Germanica. Die Käfer des Deutschen Reiches. III. Band. K. G. Lutz' Verlag, Stuttgart. 436 pp., 147 figs., pls. 81-128.
- Reitter, E. 1920. Coleopterologische Notizen. Entomologische Blätter, 15 (10-12) [1919]: 220-221.
- Rosenhauer, W. G. 1856. Die Thiere Andalusiens nach dem Resultate einer Reise zusammengestellt, nebst den Beschreibungen von 249 neuen oder bis jetzt noch unbeschriebenen Gattungen und Arten. Theodor Blaesing, Erlangen. VIII + 429 pp., 3 pls.
- Rymer Roberts, A. W. 1939. On the taxonomy of Erotylidae (Coleoptera), with special reference to the morphological characters of the larvae. Transactions of the Royal Entomological Society of London, 88 (3): 89-118, 45 figs.
- Rymer Roberts, A. W. 1958. On the taxonomy of Erotylidae (Coleoptera), with special reference to the morphological characters of the larvae, II. Transactions of the Royal Entomological Society of London, 110: 245-284.
- Sahlberg, J. 1919. Vad är *Cryptophagus brunneus* Gyll? Entomologisk Tidskrift, 40 (1): 1-8.
- Sasaji, H. 1990. Notes on the Japanese Languriidae (Coleoptera) (I). Entomological Journal of Fukui, 7: 13-18.
- Sasaji, H. 1991. Contribution to the Taxonomy of the Superfamily Cucujoidea (Coleoptera) of Japan and her Adjacent Districts. VI. Memoirs of the Faculty of Education, Fukui University (Ser. 2) (Nat. Sci.), 41: 11-25, 6 figs.
- Sasaji, H. 1992. Notes on the Japanese Languriidae (Coleoptera) (II). Entomological Journal of Fukui, 10: 43-46.
- Saunders, S. S. 1834. Descriptions of some new Species of Coleopterous Insects lately received from Monte Video. The Transactions of the Entomological Society of London, 1: 149-157, pl. 15
- Scheerpeltz, O. and K. Höfler. 1948. Käfer und Pilze. Verlag für Jugend und Volk, Vienna, 351 pp., 9 pls.
- Schenkling, S. 1923. Cryptophagidae. In: W. Junk and S. Schenkling (Eds.), Coleopterorum Catalogus. Pars 76. W. Junk, Berlin, 92 pp.
- Schenkling 1928. Languriidae. In: W. Junk and S. Schenkling (Eds.), Coleopterorum Catalogus. Pars 100. W. Junk, Berlin, 40 pp.
- Schenkling, 1934. Biphylidae. In: W. Junk and S. Schenkling (Eds.), Coleopterorum Catalogus. Pars 133. W. Junk, Berlin, 7 pp.
- Sen Gupta, T. 1967. A new subfamily of Languriidae (Coleoptera) based on four genera, with a key to the species of *Toramus*. Proceedings of the Royal Entomological Society of London (B) 36 (11-12): 167-176, 26 figs.
- Sen Gupta, T. 1968a. Revision of the genera of Cladoxenini (=Cladoxeninae Arrow) and Thallsellini trib. nov. of the family Languriidae (Coleoptera: Clavicornia). Journal of Natural History, 2: 463-475, 36 figs.
- Sen Gupta, T. 1968b. Review of the genera of the tribe Loberini (Coleoptera: Languriidae). Breviora, 303: 1-27, 34 figs.
- Sen Gupta, T. 1969. On the taxonomy of Erotylidae (Insecta: Coleoptera: Clavicornia), with descriptions of two new larvae. Proceedings of the Zoological Society of Calcutta, 22: 97-107.
- Sen Gupta, T. and R. A. Crowson. 1967. The systematic position of *Eiolyctus* Sahlberg (Coleoptera: Languriidae). Proceedings of the Royal Entomological Society of London, Series B. Taxonomy, 36 (5-6): 87-93, 12 figs.
- Sen Gupta, T. and R. A. Crowson. 1969. On a new family of Clavicornia (Coleoptera) and a new genus of Languriidae. Proceedings of the Royal Entomological Society of London, Series B. Taxonomy, 38: 125-131.
- Sen Gupta, T. and R. A. Crowson, 1971. A review of classification of the family Languriidae (Coleoptera: Clavicornia) and the place of Languriidae in the natural system of Clavicornia. Memoirs of the Zoological Survey of India, 15 (2): 1-42, 14 figs.
- Sengupta, T. and A. K. Mukherjee. 1977. A new genus of Languriidae (Coleoptera) from India. Oriental Insects, 11 (1): 1-4, 2 figs.
- Sharp, D. 1876. Descriptions of some new genera and species of New Zealand Coleoptera. The Entomologist's Monthly Magazine, 13 [1876-1877]: 20-28.
- Sharp, D. 1886. On New Zealand Coleoptera with descriptions of new genera and species. Transactions of the Royal Irish Academy, 2 (3): 351-454, + pls. xii & xiii. [not seen]
- Sharp, D. 1900. Cryptophagidae, pp. 579-624. In: F. D. Godman and O. Salvin (Eds.), Biologia Centrali-Americana. Insecta, Coleoptera II. Part 1. Dulau and Co., London.
- Sharp, D. and F. Muir. 1912. The comparative anatomy of the male genital tube in Coleoptera. Transactions of the Entomological Society of London, 3: 477-642.
- Silfverberg, H. 1992. Enumeratio Coleopterorum Fennoscandiae, Daniae et Baltiae. Helsinki. V + 94 pp.
- Skelley, P. E., M. A. Goodrich and R. A. B. Leschen. 1991. Fungal host records of the Erotylidae (Coleoptera: Cucujoidea) of America north of Mexico. Entomological News, 102 (2): 57-72.
- Sturm, J. 1843. Catalog der Käfer-Sammlung Nürnberg. XII + 386 pp., 6 pls.
- Tang, W. 1987. Insect pollination in the cycad *Zamia pumila* (Zamiaceae). American Journal of Botany, 74: 90-99.
- Thomson, C. G. 1873. Försök till gruppering och beskrifning af Crypti. Opuseula Entomologica, 6: 589-612.
- Tournier, H. 1869. [No title]. Petites nouvelles entomologiques, 1 (3): 11.

- Vaurie, P. 1948. A review of the North American Languriidae. Bulletin of the American Museum of Natural History, 92 (3): 119–155, 2 figs.
- Viborg, E. 1795. Sammlung von Abhandlungen für Thierärzte und Oekonomen aus dem Dänischen. 1. Copenhagen. [not seen]
- Villiers, A. 1943. Étude morphologique et biologique des Languriitae [Coléopt. Erotylidae]. Publications du Muséum National d'Histoire Naturelle, 6: 100 pp., 217 figs.
- Villiers, A. 1945. Révision des Languriides de l'Ancien Monde. L'Abeille, 37: 1–317, 637 figs.
- Villiers, A. 1948. Les Languriitae et Cladoxenitae de la région du Mont Nimba (Col. Erotylidae). Revue de Zoologie et de Botanique Africaines, 41 (2–3): 128–132, 4 figs.
- Villiers, A. 1952. Mission A. Villiers au Togo et au Dahomey (1950). XVI. Coléoptères Erotylidae subfam. Languriinae. Bulletin de l'Institut français d'Afrique Noire, 14 (3): 819–821.
- Villiers, A. 1961. Révision des Coléoptères Languriides africains. Annales du Musée Royal du Congo Belge, Serie in So, Sciences Zoologiques, 98: 7–385, 836 figs.
- Vogt, K. 1967. Cucujidae, pp. 83–104. In: H. Freude, K. W. Harde and G. A. Lohse (Eds.), Die Käfer Mitteleuropas. Band 7. Clavicornia. Goecke and Evers, Krefeld.
- White, A. 1850a. [No title]. The Transactions of the Entomological Society of London (New Series), 1 (1) [1850–1851]: 13.
- White, A. 1850b. [No title]. The Zoologist, 8: 2834.
- Wiedemann, C. R. W. 1823. Zweihundert neue Käfer von Java, Bengalen und dem Vorgebirge der guten Hoffnung. Zoologisches Magazin, 2 (1): 3–132.
- Wollaston, T. V. 1859. Descriptions of two Coleopterous Insects from the North of China. The Annals and Magazine of Natural History, including Zoology, Botany, and Geology (Ser. 3), 4 (24): 430–431.
- Wollaston, T. V. 1862. On the *Euphorbia*-infesting Coleoptera of the Canary Islands. The Transactions of the Entomological Society of London (Ser. 3), 1 [1862–1864]: 136–189, pl. 7.
- Wollaston, T. V. 1864. Catalogue of the coleopterous insects of the Canaries in the collection of the British Museum. Trustees, London, XIII + 648 pp.
- Zablotny, J. E. and R. A. B. Leschen. 1996. Two new genera of flightless Languriidae (Coleoptera: Cucujoidea) from the Australo-Pacific. The Coleopterists Bulletin, 50: 382–390.
- Zia, Y. 1934. Un Languriide nouveau de l'Inde (Col.). Revue Française d'Entomologie, 1 (2): 140–141, figs.
- Zia, Y. 1935. Catalogue of Chinese Languriidae with description of a new species. Sinesia, 6 (6): 689–697, figs.
- Zia, Y. 1959. New genera and species of Chinese Languriidae. Acta Entomologica Sinica, 9 (4): 366–372, 4 figs.

Received: March 24, 1998

Accepted: August 20, 1998

Corresponding Editor: D. Iwan

Issue Editor: S. A. Ślipiński

## APPENDIX: List of new combinations resulting from taxonomic changes

- Promecolanguria adami* (Villiers 1952) **comb. nov.**  
*Promecolanguria aethiopica* (Villiers 1961) **comb. nov.**  
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