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SYNONYMICAL NOTES FOR CORYLOPHIDAE AND CRYPTOPHAGIDAE (COLEOPTERA: CUCUJOIDEA)

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Abstract

Examination and dissection of type specimens of Corylophidae resulted in three generic synonomies: *Holopsis* Broun (=*Bathona* Casey), *Ectinocephalus* Matthews (=*Conodes* Matthews), *Gloeosoma* Wollaston (=*Gronevus* Casey), **new synonyms.** The corylophid species *Microstagetus parvulus* Wollaston is reported for the first time in North America. Synonomy of the cryptophagid genus *Scytomaria* Lyubarsky with *Anitamaria* Leschen, **new synonymy,** is proposed and the proliferation of higher taxon names in Cryptophagidae by Ljubarsky (1998b) is determined to be unnecessary.

In this paper we provide taxonomic changes and a distributional record for the families Corylophidae and Cryptophagidae. Recent reviews and classifications for the West Palaearctic Corylophidae (Bowestead 1999) and the world Cryptophagidae (Leschen 1996) form the basis of this study.

The acronyms used are as follows: BMNH (The Natural History Museum, London), MNHG (Muséum d'histoire naturelle, Genève), SMNS (Staatliches Museum für Naturkunde, Stuttgart), USNM (United States National Museum, Smithsonian Institution, Washington, DC).

Corylophidae

North American Peltinodinae

Holopsis Broun, 1883: 498. Type species: *Holopsis nigellus* Broun, 1883 (designated by Bowestead 1999).

Corylophodes Matthews, 1885: 160. Type species: *Corylophodes punctipennis* Matthews, 1899 (designated by Paulian 1950). Synonymized by Matthews 1899: 145.

Bathona Casey, 1900: 62. Type species: *Bathona corolinae* Casey, 1900 (here designated). **New synonymy.**

Peltinodes Paulian, 1950: 19. Type species: *Peltinodes gigas* (Abeille de Perrin, 1894) (by monotypy). Synonymized by Bowestead 1999: 23.

Notes. We examined the type specimens described by Casey (1900) that led to the generic synonymy of *Bathona* with *Holopsis*. The **new combinations**

are *Holopsis carolinae* (Casey), *H. virginica* (Casey), *H. convexa* (Casey), and *H. sphaericula* (Casey). Peltinodinae is a monogeneric subfamily that can be recognized by the basally open procoxal cavities (a key to the higher taxa is included in Bowestead 1999).

Material Examined (USNM). United States: *Bathona carolinae* Casey; Lectotype female (present designation) labelled ''N.C. [=North Carolina], Casey bequest 1925, Type USNM 48390, Bathona carolinae Cas., det *Holopsis carolinae* (Casey) by S. Bowestead''. *Bathona virginica* Casey; labelled ''Va [=Virginia], Casey bequest 1925, virginica 3, Paratype USNM 48391, det *Holopsis virginica* (Casey) by S. Bowestead''.

North American Corylophinae: Corylophini

Microstagetus parvulus Wollaston, 1861. **New Record from North America.**

Notes. A dissected female confirmed that the specimens collected in Oklahoma are *M. parvulus,* a species introduced from the Palaearctic. *Microstagetus* is a genus containing two species with an Atlantic, Mediterranean, and Afrotropical distribution. Of the two described genera of Old World Corylophini, *Microstagetus* can be distinguished from *Corylophus* Stephens by having a small projecting plate on the anterior margin of the prosternum, antenna with antennomeres 4 and 6 well developed, and a vestigial spermatheca.

Material Examined (7, USNM). United States: Oklahoma, Latimer Co., VIII.1987, Karl Stephan, det *Microstagetus*? by J. Pakaluk, det *Microstagetus parvulus* Wollaston, by S. Bowestead.

Neotropical Corylophinae: Aenigmaticini

Ectinocephalus Matthews, 1888: 105. Type species: *Ectinocephalus tropicus* Matthews, 1888 (by monotypy).

Conodes Matthews, 1888: 107. Type species: *Conodes conicus* Matthews, 1888 (by monotypy). **New synonymy.**

Notes. The synonymy of *Conodes* with *Ectinocephalus* was suggested previously by Pakaluk and Lawrence (1986) who included the genus in a paraphyletic Orthoperini. Dissections of the female type specimens confirm the generic synonymy resulting in the **new combination** *Ectinocephalus conicus* (Matthews). *Ectinocephalus* can be distinguished from other members of Aenigmaticini by having the prothorax widest at the base and a 10-segmented antennal club.

Material Examined (BMNH). Guatemala: *''Ectinocephalus tropicus* Matthews; Lectotype female (present designation), labelled *''Ectinocephalus tropicus* Capetillo Guat. Champion [hand written by D. Sharp], figured, Capetillo Guatemala G. Champion (printed), *Ectinocephalus tropicus* [hand written by A. Matthews]''; and 1 paralectotype, female, same locality; labelled ''Mason number 3, Matthews number 2, Matthews coll 1904-120, *Ectinocephalus tropicus* [hand written by A. Matthews]''. *Conodes conicus* Matthews (1888); Lectotype female (present designation), labelled: ''*Conodes conicus* Guatemala, Capetillo Guatemala G. Champion [hand written by D. Sharp], Capetillo Guatemala G. C. Champion [printed], Conodes conicus [hand written by A. Matthews], det *Ectinocephalus tropicus* (Matthews) by S. Bowestead''; and 1 paralectotype, female, same locality, labelled ''Mason number 4, Capetillo Guatemala G. C. Champion, Matthews coll 1904-120, *Conodes conicus* [hand written by A. Matthews], det *Ectinocephalus tropicus* (Matthews) by S. Bowestead''.

North American Rypobiinae: Gloeosomatini

Gloeosoma Wollaston, 1854: 480. Type species: *Gloeosoma velox* Wollaston, 1854 (by monotypy).

Moronillus Jacquelin du Val, 1854: 38. Type species: *Moronillus ruficollis* Jacquelin du Val, 1854 (by monotypy). Synonymized by Jacquelin du Val 1859: 234.

Lewisium Matthews, 1899: 164. Type species: *Lewisium ceylonicum* Matthews, 1899 (designated by Lucas 1920). Synonymized by Bowestead 1999: 129.

Gronevus Casey, 1900: 64. Type species: *Gronevus sticticus* Casey, 1900 (here designated). **New synonymy.**

Sahlberginus Bruce, 1948: 33. Type species: *Sahlberginus inexpectatus* Bruce, 1948 (by monotypy). Synonymized by Bowestead 1999: 129.

Notes. Casey (1900) described five species of *Gronevus* and we examined two species to confirm the synonymy above resulting in the following **new combinations**: *Gloeosoma sticticum* (Casey), *G. fuscicornis* (Casey), *G. truncatum* (Casey), *G. hesperum* (Casey), *G. laevis* (Casey).

The tribe Gloeosomatini Bowestead contains the genera: *Gloeosoma* Wollaston, 1854 and *Catoptyx* Matthews, 1887. *Gloeosoma* can be distinguished from Oriental genus *Catoptyx* by the procoxal cavities elongate and the presence of a prosternal process, which is effaced in *Catoptyx* and also has the anterior margin of the pronotum emarginate and thickened ventrally.

Material Examined (USNM). United States: *Gronevus sticticus* Casey; Lectotype (not sexed, present designation) labelled ''Ia [=Iowa], Casey bequest 1925, Type USNM 48398, sticticus, det *Gloeosoma sticticum* (Casey) by S. Bowestead''. *Gronevus hesperum*: labelled, ''Ia [=Iowa], Casey bequest 1925, hesperus 3, Paratype USNM 48396, det *Gloeosoma hesperum* (Casey) by S. Bowestead''.

Cryptophagidae

Circumtropical Atomariinae: Cryptafricini

Anitamaria Leschen, 1996: 625. Type species: *Anitamaria thayerorum* Leschen, 1996 (original designation).

Scytomaria Lyubarsky, 1998a: 2. Type species: *Scytomaria himalaica* Lyubarsky, 1998 (original designation). **New synonymy.**

Notes. Type specimens of *Scytomaria himalaica* are very similar to those that Leschen (1996) examined for his generic description of *Anitamaria*, which included an undescribed species similar to *S. himalaica* also from Nepal (see appendix in Leschen 1996, deposited in MNHG). The synonymy results in the **new combination** *Anitamaria himalaica* (Lyubarsky).

The phylogenetic classification of Leschen (1996) was amended subsequently by Lyubarsky (1998b) to include several new family-group taxa. Critical assessment of all of the steps of Lyubarsky's (1998b) analysis was not possible, though Leschen's (1996) data matrix was modified (10% of the original characters were changed) and four new characters and two additional taxa (*Scytomaria* and *Hypophagus* Lyubarsky) were added. Remarkably, the relationships among the higher taxa in the one tree presented by Lyubarsky (1998b) were not significantly different from those presented by Leschen (1996) with the exception of Atomariinae. Lyubarsky (1998*b*) splits the tribe Cryptafricini Leschen into three separate tribes: Cryptafricini, Microphagini Lyubarsky and

Scytomariini Lyubarsky. Surprisingly, Cryptafricini was found to be paraphyletic because this tribe was strongly supported by 12 characters in the reference tree (and other trees) discussed by Leschen (1996). Possibly, the paraphyly of Cryptafricini is the result of wrongly duplicating *Anitamaria* and *Scytomaria* in the revised data matrix. A more detailed evaluation of Ljubarsky's (1998*b*) methods is beyond the scope of this paper though his analytical work on Cryptophagidae has been criticised in the Russian literature (Kirejtshuk and Kryzhanovskij 1998).

Lyubarsky (1998b) increased the number of higher taxa contained in the two subfamilies of Cryptophagidae from six tribes to four supertribes, nine tribes, and seven subtribes. Included are new family-group names for south temperate Cryptosomatulini, a group for which specimens were not examined by Lyubarsky (1998*b*) and is poorly known anyway (Leschen 1996). The proliferation of family-group names seems unwarranted especially when critical specimens have not been examined.

Material Examined (SMNS). 3, Nepal, Myagdi Distr. 1995, Myagdi Khola N. Dobang, 2,800-3,100 m, 22.-24.V. Martens & Schawaller; Paratypus, *Scytomaria himalaica* n. sp. Lyubarsky.

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Literature Cited

Abeille de Perrin, E. 1894. Diagnoses de Coléoptères réputés nouveaux. L'Echange, Revue Linnéenne 10:91.

Bowestead, S. 1999. A revision of the Corylophidae (Coleoptera) of the West Palaearctic region. Instrumentum Biodiversitatis, Museum d'histoire naturelle, Geneva 3:1–203.

Broun, T. 1883. Revision of the New Zealand Cossonidae, with descriptions of new species. The New Zealand Journal of Science, J. Wilkie & Co, Dunedin, New Zealand, 1:487–499.

Bruce, N. 1948. The Scandinavian species of the genus *Orthoperus* Steph. (Coleoptera). Opuscula Entomologica, Supplumentum. IX: 1–35, + 4 plates.

Casey, T. L. 1900. Review of the American Corylophidae, Cryptophagidae, Tritomidae and Dermestidae with other studies. Journal of the New York Entomological Society 8:51–172.

Jacquelin du Val, 13.IX.1854 (date on wrappers). Bulletin entomologique. Annales de la Société Entomologique de France (Ser. 3), 2:28.

Jacquelin du Val, 1859. Genera des Coléoptères d'Europe, Famille des Corylophides Vol. 2: 229–236, A. Deyrolle, Paris.

Kirejtshuk A. G., and O. L. Kryzhanovskij. 1998. Some notes on ''archetype, style, and rank in biological systematics'' of the family Cryptophagidae and other beetles. Entomologicheskoe Obozrenie, 77:258–267. [in Russian]

Leschen, R. A. B. 1996. Phylogeny and revision of the genera of Cryptophagidae (Coleoptera: Cucujoidea). Kansas Science Bulletin 55:549–634.

Lucas, R. 1920. Catalogus alphabeticus generum et subgenerum Coleopterorum orbis terrarum totius (Famil., trib., suntr., sect., inlu.). Pars I. Arkive für Naturgeschichte (A) 84: xxxxi + 696 pp.

Lyubarsky, G. Y. 1998*a*. *Scytomaria*, a new genus of Cryptophagidae (Coleoptera) from Nepal Himalayas. Stuttgarter Beiträge zur Naturkunde Serie A (Biologie), 572:1–6.

Lyubarsky, G. Y. 1998*b*. Phylogenetics of the beetles of the family Cryptophagidae: a gradistic analysis, Zoologicheskie Issledovania, 1:1–90. [in Russian]

Matthews, A. 1885. On a new genus allied to *Corylophus*. Entomologists Monthly Magazine 22:160.

Matthews, A. 1887. New genera and species of Corylophidae in the collection of the British Museum. Annals and Magazine of Natural History (Ser. 5), 19:105–116.

Matthews, A. 1888. Fam. Corylophidae [pp. 102–125, pl. 3]. *In:* Biologia Centrali-Americana. Insecta, Coleoptera. Vol. 2(1) Taylor and Francis, London.

Matthews, A. 1899. A monograph of the Coleopterous Families Corylophidae and Sphaeriidae. O. E. Janson & Son, London, 220 pp., pls. A, 1–8.

Pakaluk, J., and J. F. Lawrence. 1986. *Priamima*, a new genus of Corylophidae (Coleoptera) from Australia. Journal of the Australian Entomological Society 25:81–84.

Paulian, R. 1950. Les Corylophidae d'Afrique. Memoires de l'Institut francais d'Afrique noire 12:1–126.

Wollaston, T.V. 1854. Insecta Maderensia; being an account of the insects of the islands of the Madeiran Group. J. Van Voorst, London, xlii + 634 pp.

Wollaston, T. V. 1861. Additions to the Madeiran Coleoptera. Annals and Magazine of Natural History (Ser. 3), 8:103–106.

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