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Review and re-proposal of family-group names used for tribes of Scathophagidae (Diptera)

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Abstract. In 2003, František Šifner proposed to divide the Scathophagidae (Diptera) into eight tribes. The names for three of these tribes—Amaurosomini, Gimnomerini, and Microprosopini—were used for the first time but were not explicitly stated to be new, and thus are not available under the *International Code of Zoological Nomenclature*. In this note, we make the names of those tribes available by proposing them as new. In addition, we call attention to the need for a ruling by the International Commission on Zoological Nomenclature on the status of the family-group names Norelliinae and Clidogastrinae proposed by Theodor Becker based on misidentified type genera.

The suprageneric classification of Scathophagidae has been volatile, with some authors recognizing two subfamilies (e.g., Šifner 2008), some none (e.g., Ozerov & Krivosheina 2023), and others treating the entirety of Scathophagidae as a subfamily of Anthomyiidae (e.g., Vockeroth 1965). Šifner (2003) proposed a taxonomic system of eight tribes of Scathophagidae, which was further refined by Šifner (2008). Five of Šifner's tribal names were subsequent usages of family-group names previously used at other ranks, whereas three were used for the first time, but not explicitly indicated to be new, as required for names published after 1999 by Article 16.1 of the *International Code of Zoological Nomenclature* (hereafter, "the *Code*") (ICZN 1999).

As noted above, there is no consensus on the arrangement of genera into subfamilies or tribes. In fact, recent molecular phylogenetic analyses have suggested that that this family should be included within Anthomyiidae (Kutty *et al.* 2010, 2019; but see Gomes *et al*., 2021), an arrangement that will likely lead to the synonymization of some of the tribal names recognized in this work. Nevertheless, we believe it is prudent to ensure *Code* compliance for the names that were originally introduced by Šifner (2003), as they have repeatedly been treated as available and valid in subsequent works (Šifner 2008, 2018; Engelmark & Haarto 2019; Bernasconi & Šifner 2021; Ivković *et al*. 2021).

In this note, we review the nomenclatural and taxonomic status of the tribes of Scathophagidae introduced by Šifner (2003) and, when necessary, propose their names as new. The diagnosis for each tribe is adapted from Šifner (2003), and the composition of each tribe follows Šifner (2003, 2008) and Bernasconi & Šifner (2021). A key to the tribes of Scathophagidae was published in Šifner (2003).

Amaurosomini Angell & Šifner, **tribus nov**.

Diagnosis: Palpi narrow and with short bristles; propleural and prostigmal bristles well developed; pregonite of male narrow, slightly arched and mostly with short bristles; surstyli of male narrow and long.
Type genus: *Amaurosoma* Becker, 1894.
Included genera: *Amaurosoma* Becker, 1894; *Gabreta* Šifner, 2015; *Gonatherus* Rondani, 1856; *Julienomyia* Šifner, 2015; *Miroslava* Šifner, 1999; *Neorthacheta* Vockeroth, 1995; *Orthacheta* Becker, 1894.

Cleigastrini Becker, 1894

Diagnosis: Palpi narrow or slightly enlarged and always without long apical bristle; propleural and prostigmal bristles present (may be hairlike in *Acerocnema*); lobes of 5th abdominal sternite of male bilobate; pregonite distinctly narrow, straight or forked with one to four bristles.
Type genus: *Cleigastra* Macquart, 1835.
Included genera: *Acerocnema* Becker, 1894; *Cleigastra* Macquart, 1835; *Dromogaster* Vockeroth, 1995; *Gonarcticus* Becker, 1894; *Hajekiana* Šifner, 2016; *Hexamitocera* Becker, 1894; *Huckettia* Vockeroth, 1995; *Megaphthalma* Becker, 1894; *Peratomyia* Vockeroth, 1995; *Spathephilus* Becker, 1894; *Synchysa* Vockeroth, 1995.
Remarks: This family-group name was previously used in a sense equivalent to Delinini, based on a misidentification of the type genus. Becker (1894) proposed Clidogastrinae as the name for a 'stirps' of 'Scatomyzidae' based on *Clidogastra* Agassiz, 1846, an unjustified emendation of *Cleigastra* Macquart, 1835. However, *Clidogastra sensu* Becker (1894) was a misidentification (Sabrosky 1999): he stated that the type species of *Clidogastra* was *Clidogastra nigrita* (Fallén, 1819), following Rondani (1856) and overlooking a previous type fixation for *Cleigastra* of *Cordylura apicalis* Meigen, 1826 by Westwood (1840). Instead, Becker (1894) placed *Cordylura apicalis* as the type species of *Cnemopogon* Rondani, 1856. Becker's (1894) concept of *Clidogastra* is equivalent to *Delina* Robineau-Desvoidy, 1830 (type species *Delina dejeani* Robineau-Desvoidy, 1830 [= *Cordylura nigrita* Fallén, 1819], designated by Séguy (1952)). Williston (1896) later used the spelling Cleigastrinae in the same sense as Becker. If the type genus of Clidogastrinae is taken to be *Cleigastra*, then the tribe Cleigastrini is to be attributed to Becker, 1894. On the other hand, if the type of Clidogastrinae is taken to be *Delina*, it is a junior synonym of Delinini Robineau-Desvoidy, 1830, and a new name may be required for this tribe. According to Articles 41 and 65.2 of the *Code*, when a family-group name is based on a misidentified type genus and this is likely to threaten stability or cause confusion, a case must be submitted to the International Commission on Zoological Nomenclature for a ruling. The name Cleigastrini was attributed in error to Šifner, 2003 by Šifner (2008, 2018) and Bernasconi & Šifner (2021).

Cordilurini Macquart, 1835

Diagnosis: Palpi narrow with one or two apical or subapical bristles; propleural and prostigmal bristles always distinct; katepisternum always with only one bristle; pregonite of male distinct and wide, with varying number of bristles; 7th abdominal sternite of female almost always divided into two to three partially or totally separate sclerites.

Type genus: *Cordilura* Fallén, 1810.
Included genera: *Achaetella* Malloch, 1923; *Acicephala* Coquillett, 1898; *Bucephalina* Malloch, 1919; *Cordilura* Fallén, 1810; *Milania* Šifner, 2010; *Mixocordylura* Hendel, 1909; *Norellisoma* Walhlgren, 1917; *Parallelomma* Becker, 1894; *Paratidia* Malloch, 1931; *Phrosia* Robineau-Desvoidy, 1830; *Pseudacicephala* Malloch, 1931; *Scoliaphleps* Becker, 1894; *Snyderia* James, 1955; *Suwaia* Šifner, 2009.
Remarks: Originally published by Macquart (1835) as Cordylurides (Sabrosky 1999). The name Cordilurini was attributed in error to Šifner, 2003 by Šifner (2008, 2018) and Bernasconi & Šifner (2021).

Delinini Robineau-Desvoidy, 1830

Diagnosis: Palpi very short with one to two bristles or only haired; propleural and prostigmal bristles distinct; lobes of 5th abdominal sternite of male short; pregonite wide and short, with short or medium bristles.
Type genus: *Delina* Robineau-Desvoidy, 1830.
Included genera: *Americina* Malloch, 1923; *Delina* Robineau-Desvoidy, 1830; *Leptopa* Zetterstedt, 1838; *Micropselapha* Becker, 1894; *Mirekiana* Šifner, 2012; *Neochirosia* Malloch, 1917; *Plethochaeta* Coquillett, 1901.

Gimnomerini Angell & Šifner, **tribus nov**.

Diagnosis: Palpi narrow and at most with a very small apical bristle; propleural and prostigmal bristles may be distinct, hairlike, or absent; pregonite of male with distinct and sometimes very long bristles; 8th abdominal sternite of female fused with 8th tergite or both very close together.
Type genus: *Gimnomera* Rondani, 1867.
Included genera: *Gimnomera* Rondani, 1867; *Norellia* Robineau-Desvoidy, 1830.
Remarks: The name Norelliini Becker, 1894 may have priority over Gimnomerini. Becker (1894) proposed "Norellinae" [*sic*] as a 'stirps' of 'Scatomyzidae' based on *Norellia* Robineau-Desvoidy, 1830. However, *Norellia sensu* Becker (1894) was a misidentification: he stated that the type species of *Norellia* was *Norellia nervosa* (Meigen, 1826), and placed its actual type species, *Norellia pseudonarcissi* Robineau-Desvoidy, 1830 (by monotypy), in the genus *Achantholena* Rondani, 1856 as a synonym of *Achantholena spinipes* (Meigen, 1826). Becker's *Norellia* is instead equivalent to *Norellisoma* Hendel, 1910 (type species *Cordilura nervosa* Meigen, 1826, designated by Vockeroth (1965)). If the type genus of Norellinae is taken to be *Norellia* (as stated by Sabrosky 1999), then Norellinae (corrected spelling Norelliini) is a senior synonym of Gimnomerini. On the other hand, if the type of Norellinae is taken to be *Norellisoma*, it is a junior synonym of Cordilurini Macquart, 1835. As with Clidogastrinae Becker, 1894, a case must be submitted to the International Commission on Zoological Nomenclature for a ruling.

Hydromyzini Fallén, 1813

Diagnosis: Palpi wide to flattened; propleural and prostigmal bristles hairlike or lacking; lobes of 5th abdominal sternite of male sometimes with modified secondary lobes; pregonite short, enlarged and at most with one short bristle.

Type genus: *Hydromyza* Fallén, 1813.
Included genera: *Bostrichopyga* Becker, 1894; *Chaetosa* Coquillett, 1898; *Cosmetopus* Becker, 1894; *Ernoneura* Becker, 1894; *Hydromyza* Fallén, 1813; *Lasioscelus* Becker, 1894; *Paracosmetopus* Hackman, 1956; *Pleurochaetella* Vockeroth, 1965; *Pogonota* Zetterstedt, 1860; *Spaziphora* Rondani, 1856; *Staegeria* Rondani, 1856.
Remarks: Originally proposed by Fallén as Hydromyzides in 1810, but the genus *Hydromyza* had not yet been published, so the family-group name was not made available in that work (Sabrosky 1999). *Hydromyza* was proposed and Hydromyzides made available by Fallén (1813). The name Hydromyzini was attributed in error to Šifner, 2003 by Šifner (2008, 2018) and Bernasconi & Šifner (2021).

Microprosopini Angell & Šifner, **tribus nov**.

Diagnosis: Palpi slightly enlarged, never flattened, only with small bristles or haired; propleural and prostigmal bristles hairlike; fore tibia ventrally with short spine-like bristles sometimes arranged totally or partially into two rows; lobes of 5th abdominal sternite of male short; pregonite of male short and sometimes apically arched with or without short bristles.
Type genus: *Microprosopa* Becker, 1894.
Included genera: *Acanthocnema* Becker, 1894; *Allomyella* Malloch, 1923; *Brooksiella* Vockeroth, 1995; *Megaphthalmoides* Ringdahl, 1936; *Microprosopa* Becker, 1894; *Paramicroprosopa* Ringdahl, 1936; *Trichopalpus* Rondani, 1856.

Scathophagini Robineau-Desvoidy, 1830 (1810)

Diagnosis: Palpi narrow and always without long apical or subapical bristles; propleural and prostigmal bristles hairlike and poorly differentiated from the adjacent hairlike bristles; katepisternum always with only one bristle; male pregonite diverse in shape but always with bristles; 8th abdominal sternite of female always distinct and paired.
Type genus: *Scathophaga* Meigen, 1803
Included genera: *Ceratinostoma* Meade, 1885; *Coniosternum* Becker, 1894; *Scathophaga* Meigen, 1803; *Scatomyza* Fallén, 1810.
Remarks: Scathophagidae and coordinate names at other ranks take their date of priority from Scatomyzidae Fallén, 1810, under Article 40.2 of the *Code*, as Scatomyzidae was replaced by Scathophagidae before 1961 because of synonymy of the type genera and Scathophagidae is in prevailing usage (Sabrosky 1999).

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