

Family-group names in the Asilidae (Diptera)

[Die Namen mit Rangstufe unterhalb der Familiengruppe der Asilidae (Diptera)]

by
Torsten DIKOW

Ithaca (USA)

Abstract A summary is given of the family-group names in the family Asilidae. Sixty-eight names are listed, of which 58 are available, valid names. Two names refer to families of which only one is currently recognised as valid. Fourteen subfamilial names are available of which 11 names refer to currently recognised subfamilies and three refer to currently unrecognised taxa. Forty-two subordinate names are available and ten are unavailable. Every family-group name is listed with the following information: authorship, type genus, type species, and zoogeographic region in which the type species is found.

Key words Asilidae, Diptera, family-group names, subfamilies, tribes

Zusammenfassung Die Namen mit Rangstufe unterhalb der Familiengruppe der Asilidae werden zusammengefasst. Insgesamt sind 68 Namen aufgeführt von denen 58 verfügbar und valide sind. Zwei Namen beziehen sich auf Familien von welchen nur eine zur Zeit valide und anerkannt ist. 14 Namen beziehen sich auf Unterfamilien von welchen 11 zur Zeit valide Unterfamilien benennen und sich 3 auf nicht anerkannte Taxa beziehen. 44 untergeordnete Namen sind verfügbar und 10 sind nicht verfügbar. Jeder Name ist mit der folgenden Information aufgeführt: Autor, Typusgattung, Typusart und zoogeographische Region in welcher die Typusart vorkommt.

Stichwörter Asilidae, Diptera, Familien-gruppen Namen, Unterfamilien, Triben

Introduction

The knowledge of available, valid taxonomic names is very important in taxonomic studies. Every entomologist describing new taxa, e.g. species, genera, or family-groups, has to be aware of older (senior) available names that may delimit the same taxon. Article 23 in the *International Code of Zoological Nomenclature* (abbreviated ICZN; 4th edition, 1999) outlines the 'Principle of Priority' of names and provides guidelines for the use of taxonomic names.

In a recent publication SABROSKY (1999) summarised the family-group names in Diptera. This extensive work serves as a guideline to every dipterist describing new family-group names or assigning names to taxa following a phylogenetic analysis. The present catalogue does not only summarise available family-group names in Asilidae, but lists additional available names that were not included in SABROSKY (1999). These are Dasylechiini and Neophoneini ARTIGAS, PAPAVERO & PIMENTEL 1988; Machimini, Neomochtherini, and Philonicini LEHR 1996; and Molobratiini LEHR 1999. This catalogue is furthermore intended to familiarise dipterists interested in this taxon with these names, and therefore provides brief comments on a number of them. The *BioSystematic Database of World Diptera* is an online internet search tool in which one can search for taxonomic names used in Diptera (at: <http://www.sel.barc.usda.gov/diptera/biosys.htm>; *Nomenclator (Name Checker)* at: <http://198.77.169.80:591/Diptera/Names/search.htm>). This database is still under development and will be updated from time to time. It will eventually contain all names available in Diptera. A current search, however, revealed that not all names listed in the present catalogue were entered yet, and this publication can therefore assist in updating the data on Asilidae.

The catalogues by HULL (1962) and PAPAVERO (1973) summarised the genera of Asilidae and assigned them to subfamilies. Recently, GELLER-GRIMM (2003) updated the generic catalogue and listed 547 valid genus-group names with original citation, type species, and known distribution and assigned them to subfamilies. However, at present not every asilid genus is assigned to a subordinate taxon (e.g. tribe). Often, authors describing new tribes only examined regional faunas and did not necessarily consult material from other zoogeographical regions. Furthermore, only regional species/generic catalogues are available. These taxa have not been summarised in a single worldwide catalogue and therefore, it is at this stage not possible to provide diagnoses for all family-group names. The long-term goal is to have a well-corroborated phylogeny of Asilidae with every species/genus assigned to a monophyletic taxon within the family. The updated catalogues of genera (GELLER-GRIMM 2003) and the present list of family-group names will certainly be of value for this important task.

Authorship of certain family-group names in which subfamilies and tribes are based on the same type genus remains an outstanding issue. Following the 'Principle of Coordination' (ICZN Article 36) it is necessary to credit authorship and date to the first author of a name who based a family-group name on a particular genus, regardless of the rank the author proposed for the taxon. LATREILLE (1802) described the Asilidae for the first time and therefore the names Asilinae, Asilini, and Asiloidea have the authorship and date LATREILLE 1802, although those three names were separately proposed by different authors in later publications.

Catalogue of family-group names

The family-group names listed below reflect the original spelling proposed by the authors. The present author does not intend to make comments about their ranking, i.e. endings of names are unimportant and no distinction will be made between subfamily, tribe, or even subtribe. Rather, the list should be used as a reference to available and valid names and indicates which names could potentially be applied in the future to higher taxa within the Asilidae. Unavailable and invalid names have no nomenclatural status and should be abandoned.

The following catalogue lists 14 family-group names that refer to a subfamily, i.e. ending -inae. Of these, 11 are available and presently recognised/used (Apocleinae, Asilinae, Dasyopogoninae, Dioctriinae, Laphriinae, Laphystiinae, Leptogastrinae, Ommatiinae, Stenopogoninae, Stichopogoninae, and Trigonimiminae), and three are available, but refer to presently unrecognised taxa (Archilaphriinae, Megapodinae, and Hoplistomerinae). These three names are listed within the subfamily to which the type genus is currently assigned. Fifty-two family-group names refer to subordinate taxa, of which 42 are available, and ten are unavailable names.

The list is arranged alphabetically after currently recognised subfamilies (numbered from 1–11), and within subfamilies alphabetically after taxon name. Following the subfamily entry, the reference to the type genus and species of this taxon is provided, which is not repeated at the alphabetically correct place. The family-group name that appears in the first line is always the oldest published name and indicates the original use or rank of this name. The following information for every taxon is provided: authorship, type genus, type species, zoogeographical region in which the type species is found (in square brackets []), and remarks. Other taxa based on the same generic name with remarks follow as an indented list arranged by year of publication. These are generally taxa proposed by different authors at another rank. Available, valid names, but not necessarily presently recognised names at that specific rank, e.g. Archilaphriinae, are in bold typeface.

Asilidae LATREILLE 1802

Asilici LATREILLE 1802: 432.

Type genus *Asilus* LINNAEUS, 1758: 605. Type species *Asilus crabroniformis* LINNAEUS, 1758 (subsequent designation by LATREILLE 1810: 443) [Palaeartic].

Remarks: HULL (1962: 3) credited LEACH (1819) as the first author to establish the name Asilidae. Two years earlier, KIRBY & SPENCE (1817: 360) had published the name Asilidae in a description of flight behaviour in Diptera. Another two years earlier, LEACH (1815) published an account on the Asilidae as “Tribe VII. Asilides” with a list of five genera. However, LATREILLE (1802) was the first scientist who summarised a number of robber-fly species within a single higher taxon that he named Asilici and provided a short diagnosis of this taxon. A family-group name with an incorrect suffix is available with its original authorship and date, but with a corrected suffix (ICZN Article 11.7.1.3.). Therefore, family status has to be credited to LATREILLE (1802).

LATREILLE (1802: 432–436) included the following species in *Asilus* that are still valid species of Asilidae: *Laphria gibbosa* (LINNAEUS, 1758), *Laphria aurea* (FABRICIUS, 1794), *Asilus crabroniformis* (LINNAEUS, 1758), *Molobratia teutonius* (LINNAEUS, 1767), *Dioctria oelandica* (LINNAEUS, 1758), and *Leptogaster cylindrica* (DE GEER, 1776).

MACQUART (1838: 14) was the first author who divided the Asilidae into three taxa in a key, and assigned genera to them - Asilitae, Dasypogonitae, and Laphritae. This was the first division into subordinate taxa which can be interpreted as subfamilies, and therefore MACQUART can be credited for proposing subfamilies for the first time.

See SABROSKY (1999) for other spellings and usage of names based on *Asilus*.

1. Apocleinae PAPAVERO 1973

Apocleinae PAPAVERO 1973: 233, 236.

Type genus *Apoclea* MACQUART, 1838: 119. Type species *Apoclea pallida* MACQUART, 1838 (subsequent designation by HULL 1962: 453) = *Apoclea algira* (LINNAEUS, 1767) [Palaeartic].

Remarks: The authorship of Apocleinae is with PAPAVERO (1973) and not with LEHR (1969) (see below).

Apocliina LEHR 1969: 532 (341) - *nomen nudum*.

Remarks: LEHR published the name *Apocliina* in a paper on the ecological and morphological analysis of robber flies without any diagnosis or description (ICZN Article 13.1.1.).

Promachina LEHR 1969: 532, 549 (341, 351) - *nomen nudum*.

Type genus *Promachus* LOEW, 1848: 390. Type species *Promachus* sp. (for opinions on type species see GELLER-GRIMM (2003) and SABROSKY (1999: 51)).

Remarks: LEHR published the name *Promachina* in a paper on the ecological and morphological analysis of robber flies without any diagnosis or description (ICZN Article 13.1.1.).

2. Asilinae LATREILLE 1802

Asilici LATREILLE 1802: 432.

Type genus *Asilus* LINNAEUS, 1758: 605. Type species *Asilus crabroniformis* LINNAEUS, 1758 (subsequent designation by LATREILLE 1810: 443) [Palaeartic].

Asilinae LATREILLE 1802

Remarks: MACQUART (1838: 14) divided the Asilidae into three groups of which the Asilinae is one.

Asilini LATREILLE 1802

Remarks: HARDY (1927a: 384; 1927b: 388, 390) proposed the tribe Asilini with a short diagnosis.

Lycomyaria LYNCH ARRIBALZAGA 1882: 145.

Type genus *Lycomya* BIGOT, 1857: 288. Type species *Lycomya germainii* BIGOT, 1857 (monotypy) [Neotropical (Chilean)].

Machimini LEHR 1996: 19, 159.

Type genus *Machimus* LOEW, 1849: 1. Type species *Asilus chrysitis* MEIGEN, 1820 (subsequent designation by COQUILLET 1910: 564) [Palearctic].

Machimina LEHR 1969: 532 (341) - *nomen nudum*.

Remarks: LEHR published the name *Machimina* without any diagnosis or description (ICZN Article 13.1.1.). In 1996, LEHR, however, gave a diagnosis and list of genera included in this tribe and therefore the name *Machimini* LEHR 1996 is available.

Neomochtherini LEHR 1996: 25, 159.

Type genus *Neomochtherus* OSTEN-SACKEN, 1878: 82 replacement name for *Mochtherus* LOEW, 1849. Type species *Asilus pallipes* MEIGEN, 1820 (automatic typification) [Palearctic].

Neomochtherina LEHR 1969: 532 (341) - *nomen nudum*.

Remarks: LEHR published the name *Neomochtherina* without any diagnosis or description (ICZN Article 13.1.1.). In 1996, LEHR, however, gave a diagnosis and list of genera included in this tribe and therefore the name *Neomochtherini* LEHR 1996 is available.

Philonicini LEHR 1996: 26, 159.

Type genus *Philonicus* LOEW, 1849: 144. Type species *Asilus albiceps* MEIGEN, 1820 (monotypy) [Palearctic].

3. Dasyopogoninae MACQUART 1838

Dasyopogonitae MACQUART 1838: 14, 22.

Type genus *Dasyopogon* MEIGEN, 1803: 270. Type species *Asilus diadema* FABRICIUS, 1781: 462 (subsequent designation by WESTWOOD 1840: 133) [Palearctic].

Remarks: See SABROSKY (1999: 107) for other spellings and usage of names based on *Dasyopogon*.

Dasyopogoninae MACQUART 1838

Remarks: MACQUART (1838: 14) divided the Asilidae into three groups of which the Dasyopogoninae is one.

Dasyopogonini MACQUART 1838

Remarks: HENDEL (1936: 1923) is the earliest reference I was able to find that explicitly states the Dasyopogonini as a tribe of Dasyopogoninae.

Archilaphriinae ENDERLEIN 1914: 151.

Type genus *Archilaphria* ENDERLEIN, 1914: 151. Type species *Archilaphria ava* ENDERLEIN, 1914 (original designation) [Palearctic, Oriental].

Remarks: This subfamily is currently unrecognised.

Blepharepiini PAPAVERO 1973: 276, 277.

Type genus *Blepharepium* RONDANI, 1848: 89. Type species *Blepharepium luridum* RONDANI, 1848 (monotypy) [Neotropical].

Brachyrhopalini HARDY 1926: 306, 307.

Type genus *Brachyrhopala* MACQUART, 1847: 35. Type species *Brachyrhopala ruficornis* MACQUART, 1847 (original designation) [Australasia].

Remarks: The spelling is corrected for HARDY's original use of the name *Brachyrhopalini* (SABROSKY 1999: 71; stem *Brachyrhopal-*).

Chrysopogonini HARDY 1934: 506, 508.

Type genus *Chrysopogon* von RÖDER, 1881: 213. Type species *Chrysopogon crabroniformis* von RÖDER, 1881 (monotypy) [Australasia].

Cyrtophryina PAPAVERO 1975: 229.

Type genus *Cyrtophrys* LOEW, 1851: 3. Type species *Dasypogon attenuatus* LOEW, 1851 (original designation) [Neotropical].

Isopogonini HARDY 1948: 118 - **unavailable name**.

Type genus *Isopogon* LOEW, 1847: 492 = *Leptarthrus* STEPHENS, 1829: 55. Type species *Dioctria brevirostris* MEIGEN, 1804 (subsequent designation by HULL 1962: 40) [Palearctic].

Remarks: HARDY (1948) published the name Isopogonini as a note within an identification key to tribes of Asilidae. The note provided no diagnostic information and therefore the name is unavailable (ICZN Article 13.1.1.). Following the most recent edition of the ICZN a name published after 1930 and before 1961 is available if it was adopted by authors before 2000 and not rejected between 1960 and 2000 by an author applying article 13.1. (ICZN Article 13.2.). The name was used by, for example, PAPAVERO (1973: 239) and LEHR (1988: 257) who did not give any diagnoses but merely lists of genera, but was rejected by SABROSKY (1999: 167).

Lagodiina PAPAVERO 1975: 228, 238.

Type genus *Lagodias* LOEW, 1858: 345 = *Pegesimallus* LOEW, 1858: 344. Type species *Lagodias albidipennis* LOEW, 1858 (monotypy) [Afrotropical].

Remarks: *Lagodias* was synonymised with *Pegesimallus* by LONDT (1980). This has no effect on the family-group name (ICZN Article 40.1.).

Lastauracini PAPAVERO 1973: 277.

Type genus *Lastaurax* CARRERA, 1949: 109. Type species *Lastaurax lanei* CARRERA, 1949 (original designation) [Neotropical].

Remarks: The spelling is corrected for Papavero's original use of the name Lastaurini (SABROSKY 1999: 171; stem Lastaurac-).

Megapodini CARRERA 1949: 5.

Type genus *Megapoda* MACQUART, 1834: 288. Type species *Megapoda cyanea* MACQUART, 1834 (monotypy) = *Megapoda labiata* (FABRICIUS, 1805) [Neotropical].

Megapodinae CARRERA 1949

Remarks: HULL (1962: 420) proposed the subfamily Megapodinae, which is currently unrecognised. HULL (1962: 6) published the name first as Megapodininae, but the stem of the genus-group name is Megapod- and therefore Megapodinae should be preferred.

Prytaninae HERMANN 1920: 167 - **unavailable name**.

Remarks: This family-group name is not based on a valid generic name and is therefore not available (ICZN Article 11.7.).

Saropogonini HARDY 1926: 306, 307, 308.

Type genus *Saropogon* LOEW, 1847: 439. Type species *Dasypogon luctuosus* WIEDEMANN in MEIGEN, 1820 (subsequent designation by COQUILLET 1910: 603) [Palearctic].

Remarks: MARTIN & PAPAVERO (1970: 23) published the name Saroponini, which was only a misspelling since on page 11 it was spelled correctly Saropogonini.

Senobasina PAPAVERO 1975: 229.

Type genus *Senobasis* MACQUART, 1838: 52. Type species *Senobasis analis* MACQUART, 1838 (subsequent designation by BROMLEY 1934: 332) [Neotropical].

Remarks: The spelling is corrected for Papavero's original use of the name Senobasiina (SABROSKY 1999: 279; stem Senobas-).

Thereutriini HULL 1962: 291.

Type genus *Thereutria* LOEW, 1851: 20. Type species *Thereutria calcar* LOEW, 1851 (original designation) = *Thereutria amaraca* (WALKER, 1849) [Australasia].

Remarks: The spelling is corrected for HULL's original use of the name Thereutrini (SABROSKY 1999: 305; stem Thereutri-).

4. Dioctriinae ENDERLEIN 1936

Dioctriinae ENDERLEIN 1936: 92.

Type genus *Dioctria* MEIGEN, 1803: 270. Type species *Asilus oelandica* LINNAEUS, 1758 (subsequent designation by LATREILLE, 1810: 443) [Palearctic].

Remarks: Following THOMPSON *et al.* (1999) the publication by ENDERLEIN (1936) predates the one by HENDEL (1936) and therefore the authorship is with ENDERLEIN.

Dioctriini ENDERLEIN 1936

Remarks: HENDEL (1936: 1923) described the tribe Dioctriini originally as a tribe of Dasypogoninae.

Remarks: Recently, LEHR (1999: 625; 2001) described the "Dioctriinae stat. n." crediting HULL (1962) as author of the tribe Dioctriini. LEHR did not take the two earlier publications by ENDERLEIN (1936) and HENDEL (1936) into account, nor did HULL (1962). Earlier, LEHR (1996: page 7 Fig. 1 (part III), page 8) published the name Dioctriinae without providing any diagnosis of the taxon. ENDERLEIN (1936: 92, 94) explicitly ranked the Dioctriinae as a subfamily both in the key to subfamilies and as "6. Unterfamilie", providing a key to genera included in the taxon. HENDEL (1936: 1923) also explicitly placed the Dioctriini as a tribe of Dasypogoninae and gave a brief diagnosis and a list of genera.

The genus *Stenopogon* LOEW, 1847 was included in both ENDERLEIN's Dioctriinae and HENDEL's Dioctriini and therefore the validity of the family-group name Stenopogoninae HULL 1962 has to be verified if the genus *Dioctria* will be placed in that taxon, as it was before LEHR (2001) re-established the Dioctriinae.

Echthodopini ADISOEMARTO & WOOD 1975: 513, 523.

Type genus *Echthodopa* LOEW, 1866: 15, 16. Type species *Echthodopa pubera* LOEW, 1866 (monotypy) [Nearctic].

Molobratini LEHR 1999: 629.

Type genus *Molobratia* HULL, 1958: 251. Type species *Asilus teutonius* LINNAEUS, 1767 (original designation) [Palearctic].

Remarks: LEHR (1999; 2001; 2002) proposed to place *Molobratia* in Dioctriinae in a separate tribe Molobratini. LEHR (1999; 2002) provided a short diagnosis for the tribe that is based on Hull's (1958; 1962) diagnosis of the genus *Molobratia*. In 2001, LEHR did not mention the new tribe to include *Molobratia*, but included *Molobratia* in the identification key to genera of Dioctriinae.

5. Laphriinae MACQUART 1838

Laphritae MACQUART 1838: 14, 56.

Type genus *Laphria* MEIGEN, 1803: 270. Type species *Asilus gibbosus* LINNAEUS, 1758 (subsequent designation by LATREILLE, 1810: 443) [Palearctic].

Remarks: See SABROSKY (1999: 170–171) for other spellings and usage of names based on *Laphria*.

Laphriinae MACQUART 1838

Remarks: MACQUART (1838: 14) divided the Asilidae into three groups of which the Laphriinae is one.

Laphriini MACQUART 1838

Remarks: HARDY (1927a: 384; 1927b: 388, 394) was the first author who explicitly proposed the Laphriini as a new tribe with a short diagnosis. HARDY published the name as Laphrini, but the stem for the genus-group name is Laphri- and therefore Laphriini should be preferred.

Acanthocneminae HERMANN 1912: 9 - unavailable name.

Remarks: This family-group name is not based on a valid generic name and is therefore not available (ICZN Article 11.7.). Initially, HERMANN (1912) placed the Acanthocneminae within the Laphriinae and later (1920) placed this taxon in the Dasypogoninae.

Andrenosomatini HULL 1962: 348.

Type genus *Andrenosoma* RONDANI, 1856: 160. Type species *Asilus ater* LINNAEUS, 1758 (original designation) (= *Andrenosoma atrum*) [Palearctic].

Remarks: The spelling is corrected for Hull's original use of the name Andrenosomini (SABROSKY 1999: 45; stem Andrenosomat-).

Atomosiaria LYNCH ARRIBALZAGA 1882: 144.

Type genus *Atomosia* MACQUART, 1838: 73. Type species *Atomosia incisuralis* MACQUART, 1838 (subsequent designation by COQUILLET 1910: 512) = *Atomosia puella* WIEDEMANN, 1828 [Nearctic, Neotropical].

Atomosinae HERMANN 1912: 21 - **junior objective synonym and junior homonym.**

Atomosiini HARDY 1928: 472 - **junior objective synonym and junior homonym.**

Remarks: HERMANN (1912: 21) proposed the name Atomosinae, but did not intend to rank it as a subfamily (as the ending -inae suggests), but recognised it as a subordinate taxon within the Laphriinae. HARDY (1928: 472) erroneously quoted Hermann's (1912) Atomosinae as Atomosiinae. Both authors were not aware of Lynch Arribalzaga's Atomosiaria which has to be retained as the senior synonym. They described Atomosinae and Atomosiini as new taxa based on the same type genus and therefore these names are junior objective synonyms and junior homonyms.

Ctenotini HULL 1962: 362.

Type genus *Ctenota* LOEW, 1873: 135. Type species *Ctenota molitrix* LOEW, 1873 (monotypy) [Palearctic].

Dasylechiini ARTIGAS, PAPAVERO & PIMENTEL 1988: 237, 252.

Type genus *Dasylechia* WILLISTON, 1907: 1. Type species *Hyperechia atrox* WILLISTON, 1883: 28 (monotypy) [Nearctic].

Dasytricharia LYNCH ARRIBALZAGA 1882: 145.

Type genus *Dasytrich* LOEW, 1851: 21. Type species *Laphria infumata* LOEW, 1851 (subsequent designation by ENGEL 1928: 236) [Afrotropical].

Remarks: The spelling is corrected for Lynch Arribalzaga's original use of the name Dasythricaria (SABROSKY 1999: 108; stem Dasytrich-). SABROSKY (1999) considered *Nusa* WALKER, 1851 as a senior synonym of *Dasytrich*, but in the most recent generic catalogue this is not recognised (GELLER-GRIMM 2003). GELLER-GRIMM (2003) and ARTIGAS *et al.* (1988) considered *Laphria inornata* LOEW, 1851 (original designation) from 'South America' as type species of *Dasytrich* in contrast to ENGEL (1928) cited in SABROSKY (1999).

Dasytrichini ARTIGAS, PAPAVERO & PIMENTEL 1988: 212, 237 - **junior objective synonym and junior homonym.**

Remarks: ARTIGAS *et al.* (1988) were not aware of Lynch Arribalzaga's Dasytricharia which has to be retained as the senior synonym. They described Dasytrichini as a new taxon based on the same type genus and therefore this name is a junior objective synonym and junior homonym.

Eremocneminae HERMANN 1912: 21 - unavailable name.

Remarks: This family-group name is not based on a valid generic name and is therefore not available (ICZN Article 11.7.). Initially, HERMANN (1912) placed the Eremocneminae within the Laphriinae and later (1920) placed this taxon in the Dasypogoninae.

Neophoneini ARTIGAS, PAPAVERO & PIMENTEL 1988: 214, 244.

Type genus *Neophoneus* WILLISTON, 1889: 255 replacement name for *Phoneus* MACQUART, 1838: 79.
Type species *Phoneus servillei* MACQUART, 1838 (automatic typification) [Neotropical].

6. Laphystiinae HENDEL 1936

Laphystiini HENDEL 1936: 1923.

Type genus *Laphystia* LOEW, 1847: 538. Type species *Laphystia sabulicola* LOEW, 1847 (monotypy) [Palearctic]. Remarks: HENDEL proposed the taxon originally as a tribe of Dasypogoninae.

Laphystiinae HENDEL 1936

Remarks: PAPAVERO (1973: 232, 243) proposed the subfamily Laphystiinae with a diagnosis and list of genera. See remarks under Hoplistomerinae.

Hoplistomerinae ENDERLEIN 1936: 91, 94.

Type genus *Hoplistomerus* MACQUART, 1838: 59. Type species *Laphria serripes* FABRICIUS, 1805: 159 (monotypy) [Afrotropical].

Remarks: This subfamily is currently unrecognised. PAPAVERO (1973: 244) in describing the Laphystiinae placed *Hoplistomerus* in this taxon being unaware of the senior name Hoplistomerinae. Following THOMPSON et al. (1999) the publication by ENDERLEIN (1936) predates the one by HENDEL (1036). Therefore, if *Hoplistomerus* and *Laphystia* will be placed in the same taxon the family-name based on *Hoplistomerus* will have priority. Future phylogenetic research will reveal the relationships among the genera and at this point I am not confident to change the currently used application of these names.

7. Leptogastrinae SCHINER 1862

Leptogastrinen SCHINER 1862: xxxviii.

Type genus *Leptogaster* MEIGEN, 1803: 269. Type species *Asilus tipuloides* LINNAEUS, 1758 (monotypy; misidentification) = *Leptogaster cylindrica* (DE GEER, 1776) [Palearctic].

Remarks: SCHINER (1862: xxxviii) validated the name Leptogastrinae (as Leptogastrinen) in a footnote in the key to families discussing the biology and colour of Asilidae.

Leptogastrini SCHINER 1862

Remarks: HARDY (1927a: 384; 1927b: 388, 389) proposed the name as a tribe with a short diagnosis. He published the name as Leptogasterini, but the stem of the genus-group name is Leptogastr- and therefore Leptogastrini should be preferred.

Leptogastridae SCHINER 1862

Remarks: MARTIN (1968: 70) elevated the taxon to family status, which is currently unrecognised (see e.g. OLDROYD 1969; NAGATOMI et al. 2002; DIKOW 2003).

8. Ommatiinae HARDY 1927

Ommatiini HARDY 1927a: 384; 1927b: 388, 390.

Type genus *Ommatius* WIEDEMANN, 1821: 213. Type species *Asilus marginellus* FABRICIUS, 1781 (subsequent designation by COQUILLET 1910: 579) [Neotropical].

Remarks: HARDY (1927b: 390) proposed the Ommatiini as a tribe of Asilinae with a short diagnosis.

Ommatiinae HARDY 1927

Remarks: RICARDO (1929: 120) elevated the name to subfamily level, but without giving any diagnosis.

9. Stenopogoninae HULL 1962

Stenopogonini HULL 1962: 118.

Type genus *Stenopogon* LOEW, 1847: 453 as subgenus of *Dasypogon*. Type species *Asilus sabaudus* FABRICIUS, 1794 (subsequent designation by RONDANI 1856: 158, as *Dioctria sabauda*) [Palearctic].
Remarks: HULL (1962) proposed the Stenopogonini originally as a tribe of Dasypogoninae.

Stenopogoninae HULL 1962

Remarks: PAPAVERO (1973: 233, 245) proposed the subfamily Stenopogoninae with a diagnosis and list of genera. PARAMONOV (1966: 141) only states the name Stenopogoninae in the title of a publication on *Amphisbetetus* HERMANN, 1906 without giving any diagnosis.

Stenopogon was included in both ENDERLEIN's (1936) Dioctriinae and HENDEL's (1936) Dioctriini and therefore the validity of the family-group name Stenopogoninae has to be verified if the genus *Dioctria* will be placed in that taxon, as it was before LEHR (1999) re-established the Dioctriinae.

Acronychini ARTIGAS & PAPAVERO 1991: 141.

Type genus *Acronyches* WILLISTON, 1908: 388. Type species *Acronyches willistoni* HERMANN, 1921 (subsequent designation by HERMANN 1921: 121) [Neotropical].

Bathypogonini ARTIGAS & PAPAVERO 1991: 140.

Type genus *Bathypogon* LOEW, 1851: 13. Type species *Dasypogon asiliformis* LOEW, 1851 (original designation) [Australasia].

Ceraturgini ARTIGAS & PAPAVERO 1991: 141.

Type genus *Ceraturgus* WIEDEMANN, 1824: 12. Type species *Dasypogon aurulentus* FABRICIUS, 1805 (monotypy) [Nearctic].

Cyrtopogonini ARTIGAS & PAPAVERO 1991: 141.

Type genus *Cyrtopogon* LOEW, 1847: 516. Type species *Asilus ruficornis* FABRICIUS, 1794 (subsequent designation by RONDANI 1856: 157) [Palearctic].

Enigmomorphini HULL 1962: 291.

Type genus *Enigmomorphus* HERMANN, 1912: 272. Type species *Enigmomorphus paradoxus* HERMANN, 1912 (original designation) [Neotropical].

Phellini HARDY 1926: 306, 307, 309.

Type genus *Phellus* WALKER, 1851: 110. Type species *Phellus glaucus* WALKER, 1851 (monotypy) [Australasia].

Plesiommatini ARTIGAS & PAPAVERO 1991: 141.

Type genus *Plesiomma* MACQUART, 1838: 54. Type species *Plesiomma testacea* MACQUART, 1838 (junior homonym) (subsequent designation by BACK 1909: 306) [Neotropical].

Tillobromatini ARTIGAS & PAPAVERO 1991: 141.

Type genus *Tillobroma* HULL, 1962: 154. Type species *Clavator punctipennis* PHILIPPI, 1865 (original designation) [Neotropical].

Remarks: The spelling is corrected for the authors' original use of the name Tillobromini (SABROSKY 1999: 308; stem Tillobromat-).

Willistoninini ARTIGAS & PAPAVERO 1991: 141.

Type genus *Willistonina* BACK, 1908: 389. Type species *Habropogon bilineatus* WILLISTON, 1883 (original designation) [Nearctic].

10. Stichopogoninae HARDY 1930

Stichopogonini HARDY 1930: 250, 251, 260.

Type genus *Stichopogon* LOEW, 1847: 499 as subgenus of *Dasypogon*. Type species *Dasypogon elegantulus* WIEDEMANN in MEIGEN, 1820 (subsequent designation by BACK 1909: 332) [Palaeartic].

Remarks: HARDY (1930: 260) proposed the Stichopogonini as a new tribe of Dasypogoninae with a list of genera belonging to it, but stated that he had not personally investigated specimens of *Stichopogon*.

Stichopogoninae HARDY 1930

Remarks: ARTIGAS & PAPAVERO (1988: 97) proposed the subfamily Stichopogoninae in the key to subfamilies.

11. Trigonomiminae ENDERLEIN 1914

Trigonomimini ENDERLEIN 1914: 166.

Type genus *Trigonomima* ENDERLEIN, 1914: 164. Type species *Trigonomima apipes* ENDERLEIN, 1914 (original designation) [Oriental].

Remarks: ENDERLEIN (1914: 166) states in the description of *Trigonomima* that the genus is isolated within the Dasypogoninae because of only two media veins and therefore should be placed in a separate tribe.

Trigonomiminae ENDERLEIN 1914

Remarks: PAPAVERO (1973: 233, 248) proposed the subfamily Trigonomiminae with a diagnosis and list of genera.

Damalini HULL 1962: 51 - **junior synonym**.

Remarks: Article 40.1. of the ICZN rules that if the type genus of a family-group name is a junior synonym, the family-group name is not affected. Therefore, Damalini HULL 1962 is a junior synonym of Xenomyzini HARDY 1948.

Xenomyzini HARDY 1948: 118.

Type genus *Xenomyza* WIEDEMANN, 1817 = *Damalis* FABRICIUS, 1805: 147. Type species *Damalis planiceps* FABRICIUS, 1805 (subsequent designation by HULL 1962: 53 and ICZN 1985) [Oriental].

Acknowledgements

I would like to thank Eduardo ALMEIDA (Cornell University), Fritz GELLER-GRIMM (Museum Wiesbaden), and James LIEBHERR (Cornell University) for useful comments on an earlier draft of this manuscript. I further thank F. Christian THOMPSON (Systematic Entomology Lab., USDA, Smithsonian Institution) for assistance in matters on nomenclature and review of the manuscript. Financial support in form of a Graduate School Fellowship from Cornell University is acknowledged.

Literature

- ADISOEMARTO, S. & WOOD, D. M. (1975): The Nearctic species of *Dioctria* and six related genera (Diptera, Asilidae). – *Questiones Entomologicae* **11**: 505–576; Edmonton.
- ARTIGAS, J. N. & PAPAVERO, N. (1988): The American genera of Asilidae (Diptera): keys for identification with atlas of female spermathecae and other morphological details. I. Key to subfamilies and subfamily Leptogastrinae SCHINER. – *Gayana Zoologia* **52**: 95–114; Concepcion.
- ARTIGAS, J. N. & PAPAVERO, N. (1991): The American genera of Asilidae (Diptera): keys for identification with atlas of female spermathecae and other morphological details. VII. Subfamily Stenopogoninae HULL. A preliminary classification into tribes. – *Gayana Zoologia* **55**: 139–144; Concepcion.
- ARTIGAS, J. N.; PAPAVERO, N. & PIMENTEL, T. (1988): The American genera of Asilidae (Diptera): keys for identification with atlas of female spermathecae and other morphological details. IV. Key to the genera of Laphriinae MACQUART (except tribe Atomosiini HERMANN), with the descriptions of three new tribes and five new species. – *Boletín Museo Paraense Emilio Goeldi, ser. Zoologia* **4**(2): 211–256; Belem.
- BACK, E. A. (1908): *Willistonina*, new genus. – In: WILLISTON, S.W. (ed.): *Manual of North American Diptera* (3rd edition): p. 389; New Haven.

- BACK, E. A. (1909): The robber-flies of America north of Mexico, belonging to the subfamilies Leptogastrinae and Dasypogoninae. – Transactions of the American Entomological Society **35**: 137–400; Philadelphia.
- BIGOT, J. M. F. (1857): Dipteres nouveaux provenant du Chili. – Annales de la Societe Entomologique de France (3)5: 277–308; Paris.
- BROMLEY, S. W. (1934): Asilidae. – In: CURRAN, C. H. (ed.): The Diptera of Kartabo, Bartia District, British Guiana, with descriptions of new species from other British Guiana localities. – Bulletin of the American Museum of Natural History **66**: 327–360; New York.
- CARRERA, M. (1949): Contribuicao ao conhecimento dos Asilidae Neotropicais (Diptera). 1. Sobre as especies brasileiras com esporae na tibia. – Arquivos de Zoologia **10**: 253–330; Sao Paulo.
- COQUILLET, D. W. (1910): The type-species of the North American genera of Diptera. – Proceedings of the United States National Museum **37**: 499–647; Washington.
- DE GEER, C. (1776): Memoires pour servir a l'histoire des insectes. Vol. 6. 523 pp.; Stockholm.
- DIKOW, T. (2003): Revision of the genus *Euscelidia* WESTWOOD, 1850 (Diptera: Asilidae: Leptogastrinae). – African Invertebrates **44**(2): 1–131; Pietermaritzburg.
- ENDERLEIN, G. (1914): Dipterologische Studien XII. Zur Kenntnis der Asilidensubfamilien Dasypogoninae und Archilaphrinae. – Wiener Entomologische Zeitung **33**: 151–174; Wien.
- ENDERLEIN, G. (1936): Asilidae 30. Familie. – In: BROHMER, P.; EHRMANN, P. & ULMER, G. (eds): Die Tierwelt Mitteleuropas. Band VI. Insekten 3. Teil. Abteilung XVI: 91–95; Leipzig.
- ENGEL, E. O. (1928): Asilidae 24. Familie. – In: LINDNER, E. (ed.): Die Fliegen der Paläarktischen Region **4**(2): 129–192; Stuttgart.
- FABRICIUS, J. C. (1781): Species insectorum. Vol. 2. 494 pp.; Hamburg & Kiel.
- FABRICIUS, J. C. (1794): Entomologia systematica emendata et aucta. Vol. 4. 472 pp.; Copenhagen.
- FABRICIUS, J. C. (1805): Systema antliatorum secundum ordines, genera, species. 372 pp.; Braunschweig.
- GELLER-GRIMM, F. (2003): A world catalogue of the genera of the family Asilidae (Diptera). – Studia dipterologica **10**(2): 473–562; Halle (Saale).
- HARDY, G.H. (1926): A new classification of Australian robberflies belonging to the subfamily Dasypogoninae (Diptera, Asilidae). – Proceedings of the Linnean Society of New South Wales **51**: 305–312; Sydney.
- HARDY, G. H. (1927a): On the phylogeny of some Diptera Brachycera. – Proceedings of the Linnean Society of New South Wales **52**: 380–386; Sydney.
- HARDY, G. H. (1927b): Further notes on a new classification of Australian robberflies (Diptera-Asilidae). – Proceedings of the Linnean Society of New South Wales **52**: 387–398; Sydney.
- HARDY, G. H. (1928): Third contribution towards a new classification of Australian Asilidae. – Proceedings of the Linnean Society of New South Wales **53**: 469–473; Sydney.
- HARDY, G. H. (1930): Fifth contribution towards a new classification of Australian Asilidae (Diptera). – Proceedings of the Linnean Society of New South Wales **55**: 249–260; Sydney.
- HARDY, G. H. (1934): The Asilidae of Australia. Part I. – Annals and Magazine of Natural History **10**(13): 498–525; London.
- HARDY, G. H. (1948): On classifying Asilidae. – Entomologist's Monthly Magazine **84**: 116–119; Oxford.
- HENDEL, F. (1936): Asilidae 46. Familie. – Kükenthals Handbuch der Zoologie **4**(2): 1922–1924; Berlin & Leipzig.
- HERMANN, F. (1906): Beitrag zur Kenntnis der Asiliden. – Zeitschrift für systematische Hymenopterologie und Dipterologie **6**: 129–144; Teschendorf.
- HERMANN, F. (1912): Beiträge zur Kenntnis der südamerikanischen Dipterenfauna. Familie Asilidae. – Abhandlungen der Kaiserlich Leopold.-Carol. Deutschen Akademie der Naturforscher XCVI (1): 275 pp; Halle (Saale).
- HERMANN, F. (1920): Beitrag zur allgemeinen Systematik der Asiliden. – Zoologische Jahrbücher **43**: 161–194; Jena.
- HERMANN, F. (1921): L. ZÜRCHER'S Dipteren-Ausbeute aus Paraguay: Mydaiden und Asiliden. – Archiv für Naturgeschichte (A) **87**(3): 118–122; Berlin.
- HULL, F. M. (1958): Some species and genera of the family Asilidae (Diptera). – Proceedings of the Entomological Society of Washington **60**(6): 251–257; Washington.
- HULL, F. M. (1962): Robber flies of the world: the genera of the family Asilidae. Parts 1–2. United States National Museum Bulletin **224**: 907 pp.; Washington.
- International Commission on Zoological Nomenclature (1985): Opinion 1342. *Damalis planiceps* FABRICIUS, 1805, designated as type species of *Damalis* FABRICIUS, 1805 (Insecta, Diptera). – Bulletin of Zoological Nomenclature **42**: 264–265; London.
- International Commission on Zoological Nomenclature (1999): International Code of Zoological Nomenclature, 4th edition. – The International Trust for Zoological Nomenclature: 306 pp.; London.
- KIRBY, W. & SPENCE, W. (1817): Introduction to entomology, or elements of the natural history of insects. Edition 1: 512 pp.; London.
- LATREILLE, P. A. (1802): Histoire naturelle, generale et particuliere, des crustaces et des insectes. Tome trisieme: 467 pp.; Paris.
- LATREILLE, P. A. (1810): Considerations generales sur l'ordre naturel des animaux: 444 pp.; Paris.

- LEACH, W. E. (1815): Entomology. – In: Brewster, D. (ed.): The Edinburgh encyclopedia. Vol. 9, part. 1: 57–172; Edinburgh.
- LEACH, W. E. (1819): Asilidae. – In: Samouelle, G. The entomologist's useful compendium; or an introduction to the knowledge of British insects: 294–295; London.
- LEHR, P. A. (1969): Ecologo-morphological analysis of robber flies (Diptera, Asilidae), II. – Entomologicheskoe Obozrenie **48**: 532–560; St. Petersburg [in Russian, English translation in Entomological Review **48**: 341–357; Washington].
- LEHR, P. A. (1988): Family Asilidae. – In: Soos, A. & Papp, L. (eds): Catalogue of Palaearctic Diptera **5**: 197–326; Budapest.
- LEHR, P. A. (1996): Robber Flies of subfamily Asilinae (Diptera, Asilidae) of Palaearctic. Ecological and morphological analysis, taxonomy and evolution. Russian Academy of Sciences Far Eastern Branch: 183 pp.; Vladivostok. [in Russian].
- LEHR, P. A. (1999): Asilidae 52. Family. – In: LEHR, P.A. (ed): Key to the insects of Russian Far East. Vol. 6, Diptera and Siphonaptera. Part I: 591–640; Vladivostok. [in Russian].
- LEHR, P. A. (2001): Robber flies of the subfamily Dioctriinae stat. n. (Diptera, Asilidae) from Asia: 1. Taxonomy, ecology, and phylogeny. – Entomologicheskoe Obozrenie **80**(1): 194–208; St. Petersburg [in Russian, English translation in Entomological Review **81**: 59–70; Washington].
- LEHR, P. A. (2002): Robber flies (Diptera, Asilidae) of the subfamily Dioctriinae Hull of Asia: 2. Taxonomy and ecology. – Entomologicheskoe Obozrenie **81**(2): 445–459; St. Petersburg [in Russian, English translation in Entomological Review **82**(7): 797–808; Washington].
- LINNAEUS, C. (1758): Systema naturae. Edition 10, Vol. 1: 824 pp.; Stockholm.
- LINNAEUS, C. (1767): Systema naturae. Edition 12, Vol. 1: 533–1327; Stockholm.
- LOEW, H. (1847): Über die europäischen Raubfliegen (Diptera Asilica). – Linnaea Entomologica **2**: 384–568; Berlin & Leipzig.
- LOEW, H. (1848): Über die europäischen Raubfliegen (Diptera Asilica). – Linnaea Entomologica **3**: 386–495; Berlin & Leipzig.
- LOEW, H. (1849): Über die europäischen Raubfliegen (Diptera Asilica). – Linnaea Entomologica **4**: 155 pp; Berlin & Leipzig.
- LOEW, H. (1851): Bemerkungen über die Familie der Asiliden. – Programm der Königlichen Realschule zu Meseritz 1851: 1–22; Meseritz.
- LOEW, H. (1858): Bidrag till kändedomen om Afrikas Diptera. – Öfversigt af Kongliga Vetenskaps-Akademiens Förhandlingar (1857) **14**: 337–383; Stockholm.
- LOEW, H. (1866): Diptera Americae septentrionalis indigena. Centuria septima. – Berliner Entomologische Zeitschrift **10**: 1–54; Berlin.
- LOEW, H. (1873): Systematische Beschreibung der bekannten europäischen zweiflügeligen Insecten. Von Johann Wilhelm Meigen. Zehnter Theil oder vierter Supplementband. Beschreibung europäischer Dipteren. Dritter Band: 320 pp.; Halle (Saale).
- LONDT, J. G. H. (1980): Afrotropical Asilidae (Diptera) 4. The genus *Pegesimallus* LOEW, 1858 (= *Lagodias* LOEW, 1858; *Neolaparus* WILLISTON, 1889), including species from other zoogeographical regions and the description of two new genera, *Brevirostrum* and *Caroncoma*. – Annals of the Natal Museum **24**(1): 233–347; Pietermaritzburg.
- LYNCH ARRIBALZAGA, E. (1882): Catalogo de los Dipteros hasta ahora descritos que se encuentran en las Republicas del Rio de la Plata. – Boletin de la Academia Nacional de Ciencias en Cordoba **IV**: 109–152; Cordoba.
- MACQUART, J. (1834): Histoire naturelle des insectes. Dipteres. Tome premiere: 578 pp.; Paris.
- MACQUART, J. (1838): Dipteres exotiques nouveaux ou peu connus. Tome premier. 2^e partie: 207 pp.; Paris.
- MACQUART, J. (1847): Dipteres exotiques nouveaux ou peu connus. 2^e supplement: 104 pp.; Paris.
- MARTIN, C. H. (1968): The new family Leptogastridae (the grass flies) compared with the Asilidae (robber flies). – Journal of the Kansas Entomological Society **41**(1): 70–100; Manhattan.
- MARTIN, C. H. & PAPAVERO, N. (1970): Family Asilidae. – A Catalogue of the Diptera of the Americas south of the United States **35b**: 139 pp; Sao Paulo.
- MEIGEN, J. W. (1803): Versuch einer neuen Gattungs-Eintheilung der europäischen zweiflügeligen Insekten. – Magazin für Insektenkunde (Illiger) **2**: 259–281; Braunschweig.
- MEIGEN, J.W. (1804): Klassifikation und Beschreibung der europäischen zweiflügeligen Insekten (Diptera Linn.). Erster Band: 314 pp.; Braunschweig.
- MEIGEN, J.W. (1820): Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Zweiter Theil: 363 pp.; Aachen.
- NAGATOMI, A.; OHISHI, H. & YANG, D. (2002): Review of the Genera of Leptogastrinae (Diptera, Asilidae) through the Literature. – The Kagoshima University Museum Monographs **1**: 111 pp; Kagoshima.

- OLDROYD, H. (1969): The family Leptogastridae (Diptera). – Proceedings of the Royal Entomological Society of London (B) **38**(1–2): 27–31; London.
- OSTEN-SACKEN, C. R. (1878): Catalogue of the described Diptera of North America. – Smithsonian Miscellaneous Collections **16**(2): 276 pp; Washington.
- PAPAVERO, N. (1973): Studies of Asilidae (Diptera) systematics and evolution. I. A preliminary classification in sub-families. – Arquivos de Zoologia **23**(3): 217–274; Sao Paulo.
- PAPAVERO, N. (1975): Studies of Asilidae (Diptera) systematics and evolution. IV. Tribe Megapodini CARRERA (Dasypogoninae); with a review of the Neotropical species. – Arquivos de Zoologia **26**: 191–318; Sao Paulo.
- PARAMONOV, S. J. (1966): Notes on Australian Diptera (XLI–XLIII). Notes on three genera of Australian Asilidae, with the description of seven new species. *Psilozona*, *Nyximyia*, *Amphisbetetus*. – Annals and Magazine of Natural History (13)**9**: 137–144; London.
- PHILIPPI, R. A. (1865): Aufzählung der chilenischen Dipteren. – Abhandlungen der Zoologisch-Botanischen Gesellschaft in Wien **15**: 595–782; Wien.
- RICARDO, G. (1929): Stratiomyiidae, Tabanidae and Asilidae. – Insects of Samoa and other Samoan terrestrial Arthropoda **6**: 109–122; London.
- RÖDER, V. VON (1881): Dipterologische Notizen. – Berliner Entomologische Zeitschrift **25**: 209–216; Berlin.
- RONDANI, C. (1848): Esame di varie specie d'insetti ditteri brasiliani. – Studi Entomologici **1**: 63–112; Torino.
- RONDANI, C. (1856): Dipterologiae Italicae prodromus. Vol. I: 226 pp.; Parma.
- SABROSKY, C.W. (1999): Family-group names in Diptera. An annotated catalog. – Myia **10**: 1–360; Leiden.
- SCHINER, I.R. (1862): Asilidae IX Familie. – Fauna Austriaca. Part I. liii–lv, 117–158; Wien.
- STEPHENS, J.F. (1829): A systematic catalogue of British insects. Part II: 328 pp.; London.
- THOMPSON, F.C.; EVENHUIS, N.L. & SABROSKY, C.W. (1999): Bibliography of the family-group names of Diptera. – Myia **10**: 363–576; Leiden.
- WALKER, F. (1849): List of the specimens of dipterous insects in the collection of the British Museum. Part 2. London.
- WALKER, F. (1851): Diptera. Part II. – In: SAUNDERS, W.W. (ed.): Insecta Saundersiana: or characters of undescribed insects in the collection of William Wilson SAUNDERS. Vol. I: 77–156; London.
- WESTWOOD, J. O. (1840): Order XIII. Diptera Aristotle. (Antliata FABRICIUS. Halteriptera Clairv.). – In: WESTWOOD, J. O. – Synopsis of the genera of British Insects: 125–154; London.
- WIEDEMANN, C. R. W. (1817): Ueber einige neue Fliegen=Gattungen. – Zoologisches Magazin **1**(1): 57–61; Kiel.
- WIEDEMANN, C. R. W. in MEIGEN, J.W. (1820): Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Zweiter Theil: 363 pp.; Aachen.
- WIEDEMANN, C. R. W. (1821): Diptera Exotica. 244 pp; Kiel.
- WIEDEMANN, C. R. W. (1824): Analecta entomologica Regio Typographeo scholarum: 60 pp.; Kiel.
- WIEDEMANN, C. R. W. (1828): Aussereuropäische zweiflügelige Insekten. Erster Theil: 608 pp.; Hamm.
- WILLISTON, S. W. (1883): On the North American Asilidae (Dasypogoninae, Laphriinae), with a new genus of Syrphidae. – Transactions of the American Entomological Society (1884) **11**: 1–35; Philadelphia.
- WILLISTON, S. W. (1889): Notes on Asilidae. – Psyche **5**: 225–259; Cambridge.
- WILLISTON, S. W. (1907): Dipterological Notes. – Journal of the New York Entomological Society **15**: 1–2; New York.
- WILLISTON, S. W. (1908): Manual of North American Diptera. Edition. 3: 405 pp.; New Haven.

Author's address

Torsten DIKOW
 Cornell University
 Department of Entomology
 Comstock Hall
 Ithaca, NY 14853
 USA
 E-mail: torsten@tdvia.de

The paper was accepted on 10 October 2003.

Editum: 19 May 2004.