# **ZOOTAXA**



## Notes and recommendations on taxonomy and nomenclature of Chironomidae (Diptera)

MARTIN SPIES & OLE A. SÆTHER



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#### Abstract

Various issues in taxonomy and nomenclature of Diptera Chironomidae are discussed, in order to formalize and explain scientific names used in the Fauna Europaea database publications. General and specific remarks point out and exemplify the most common causes for erroneous data: insufficient consultation of the primary sources (literature and material), unjustified assumptions of type status, and uncritical handling of untested information. Recommendations are offered on how to avoid or solve such problems, and increase the stability and quality of the chironomid system.

In addition to a number of changes affecting endings of species epithets, authorship, dates of publication, etc., the following acts and recognitions of nomenclature are proposed.

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Paramerina cingulata (Walker, 1856) remains valid in spite of being a junior homonym. Thienemannimyia geijskesi (Goetghebuer, 1934) by emendation replaces the incorrect original spelling "Ablasblesmyia Geijkesi". Diamesa starmachi Kownacki & Kownacka, 1970 is valid, D. starmachii is an incorrect (variant) original spelling. The new substitute name Cricotopus (Isocladius) maurii is proposed for C. (I.) polychaetus Hirvenoja, 1989, a junior secondary homonym of C. polychaetus (Kieffer, 1923). Dactylocladius longicalcar Kieffer sensu Thienemann (1926) = Eukiefferiella gracei (Edwards, 1929), a misidentification of Dactylocladius longicalcar Kieffer, 1911, is selected as the type species of Eukiefferiella Thienemann, 1926. Gymnometriocnemus and Pseudosmittia are available and valid from Edwards (1932). Limnophyes minimus (Meigen, 1818) is the valid name for Camptocladius foenisuga Potthast, 1914 syn. n. and C. hexatomus Potthast, 1914 syn. n. Metriocnemus cavicola Kieffer, 1921 is valid, M. "martinii" of Thienemann (1921) is a nomen nudum. Nanocladius dichromus (Kieffer, 1906) is the valid name for Chironomus bicolor Zetterstedt, 1838 (preoccupied by Waltl, 1837). Orthocladius (Eudactylocladius) almskari Sæther, nom. nov., replaces the junior primary homonym O. (Eud.) schnelli Sæther, 2004. Paralimnophyes longiseta (Thienemann, 1919) is the senior synonym of P. hydrophilus (Goetghebuer, 1921). Lindebergia Tuiskunen, 1984 has been a junior synonym of Pseudosmittia Edwards, 1932 since Sæther & Ferrington (2003). Both Pseudosmittia hamata (Freeman, 1956) and *P. neohamata* Cranston, 1990 (= *P. hamata* Strenzke, 1960) comb n. are junior synonyms of P. danconai (Marcuzzi, 1947). Zalutschia tornetraeskensis (Edwards & Thienemann in Thienemann, 1941) is the correct spelling and authorship for the species originally described in Trissocladius. Chironomus (Camptochironomus) subaprilinus Kieffer, 1918 has been fixed as the type species of Camptochironomus Kieffer, 1918 by Goetghebuer (1937). Chironomus (Lobochironomus) dorsalis Meigen, 1818 is the valid name for C. longipes Staeger, 1839 syn. n., C. tricolor van der Wulp, 1874 syn. n., and C. bequaerti Goetghebuer, 1921 syn. n. The new substitute name Cladopelma goetghebueri is proposed for Chironomus lateralis Goetghebuer, 1934 (preoccupied by Walker in Curtis, 1837). Dicrotendipes septemmaculatus (Becker) is considered as the valid name for the type species of *Dicrotendipes* Kieffer, 1913: D. pictipennis Kieffer, 1913, a junior synonym. Dicrotendipes pulsus (Walker, 1856), not D. objectans (Walker, 1856), is the valid name for European material previously misidentified as D. modestus (Say, 1823). The type species of Glyptotendipes Kieffer, 1913 is Chironomus verrucosus Kieffer, 1911; a lectotype is designated, and the adult female diagnosed. The three subgenera in Glyptotendipes are reclassified; G. (Caulochironomus) Heyn, 1993 — type species Chironomus caulicola Kieffer, 1913 — is valid; G. (Heynotendipes) nom. nov. — type species Chironomus signatus Kieffer, 1909 — replaces G. (Trichotendipes) Heyn, 1993 (preoccupied by Trichotendipes Guha et al., 1985). Glyptotendipes imbecilis (Walker, 1856) is used as valid, in this correct original spelling. Glyptotendipes cauliginellus (Kieffer, 1913) takes precedence over G. gripekoveni (Kieffer, 1913), and becomes the valid name for Chironomus sparganii Willem, 1908 (preoccupied by C. sparganii Kieffer, 1908), G. gracilis Kieffer, 1918, G. iridis Kieffer, 1918 syn. n., G. scirporum Kieffer, 1924, and G. discolor Kieffer, 1926 syn. n. Kiefferulus Goetghebuer, 1922 is the valid name for Tendochironomus Lenz, 1937 syn. n. Polypedilum octopunctatum (Thunberg, 1784), for which a lectotype is designated, is the valid name for P. quadrimaculatum (Meigen, 1838) syn. n. The new substitute name Stempellinella edwardsi is proposed for Tanytarsus minor Edwards, 1929 (preoccupied by Kieffer, 1916). The type species of Stenochironomus Kieffer, 1919 is Chironomus pulchripennis Coquillett, 1902 by designation of Townes (1945). Stenochironomus gibbus (Fabricius, 1794), nomen protectum, is the valid name for S. parisiensis (Thunberg, 1784) syn. n., nomen oblitum.

The following names require revisionary clarification, any future use should explicitly include the recent reference after which they are interpreted: *Clunio adriaticus* Schiner, 1856; *Clunio* 

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balearicus Bezzi, 1913; Chironomus "annularius" auctt.; Chironomus dorsalis auctt. not Meigen, 1818; Chironomus pallidivittatus auctt. not Malloch, 1915; Chironomus prasinus auctt. not Meigen, 1804; Chironomus venustus auctt. not Staeger, 1839; Chironomus viridis Macquart, 1834; Endochironomus albipennis (Meigen, 1830); Endochironomus tendens (Fabricius, 1775); Glyptotendipes foliicola Kieffer, 1918; Glyptotendipes sigillatus Kieffer, 1918; Tendipes abranchius Kieffer, 1913.

Key words: Chironomidae, taxonomy, nomenclature, bibliography, types, Fauna Europaea

#### Introduction

In the Fauna Europaea project (Fauna Europaea Service, 2004; http://www.faunaeur.org), funded by the European Commission, expert taxonomists are presently assembling a comprehensive database of the scientific names and distribution of all living multicellular land and freshwater animals known to occur in Europe. These data will be accessible to everyone, with the aim of providing a standard reference for science, government and private organizations, the conservation community as well as educational programs.

During preparation of the data on Diptera Chironomidae, a number of problems in the taxonomy or nomenclature of this group have been discovered or revisited. The necessary nomenclatural acts and explanations are published here, as the database itself is inappropriate for that purpose. Some changes pertaining to certain taxa in the subfamily Orthocladiinae have been published by Sæther & Ferrington (2003).

The present contribution attempts to take but one more step on the trek toward a comprehensive, consistent, and reasonably stable system in Chironomidae. Some open cases necessitate more detailed research into the relevant sources (e.g. see Spies, 2001) than feasible within the scope of the Fauna Europaea project. In addition, the amount of data not yet recognized as requiring improvement undoubtedly is greater than negligible. We sincerely hope that the solutions, explanations and recommendations offered here may help other authors settle more such matters, avoid the creation of similar problems in the future, and thereby further reduce the remaining instability impediment to progress in chironomid taxonomy and systematics. However, readers are asked to apply Summary recommendation 1) below to the present work and the Fauna Europaea database as much as to any other source.

#### Methods and material

In trying to gain more knowledge and facilitate communication about what is known, taxonomy can rely on but must adhere to the strengths of the scientific method. The most important principle we perceive in this respect is reproducibility, i.e. that results by any author must be obtained and presented in ways allowing other authors to compare them to evidence from their own research. The purpose of nomenclature, as a subdiscipline of taxonomy, is to provide a reasonably stable system of meaningful names to work and