



Review of Afrotropical *Thienemanniella* Kieffer (Diptera: Chironomidae: Orthoclaadiinae)

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Abstract

A new species from Ghana, *Thienemanniella cavata* is described and illustrated as adult male. *T. antennata* Freeman, 1953, *T. trivittata* Goetghebuer, 1935 and *T. lineola* Freeman, 1953 are redescribed. Additional measurements and comments are given for *T. fuga* Lehmann, 1979. Additional records of *T. antennata* from Ghana and *T. fuga* from South Africa and Tanzania are given. *T. afra* Lehmann, 1981 is tentatively transferred to the genus *Corynoneurella* Brundin. Male and female genital structures are discussed. A large bursa below gonapophysis VIII and the vagina is considered to be an egg-laying chamber. Keys to the known males and females of Afrotropical species of the genus *Thienemanniella* are given.

Key words: Chironomidae, Orthoclaadiinae, *Thienemanniella*, *Corynoneurella*, key, new species, new combination, Afrotropics

Introduction

Kieffer (1911) established the orthoclad genus *Thienemanniella* with *Corynoneura clavicornis* (Kieffer) as type species. The genus is encountered in almost all kinds of larger freshwater bodies, but is most frequently found in lotic habitats, including large rivers such as the Missouri River (Hestenes & Sæther 2000). The tiny larvae often live in interstices, between stones and gravel, thus resisting strong currents. The adults are often seen in dense swarms just above the vegetation at mid-day.

Many of descriptions of *Thienemanniella* species are old and incomplete. Type material of some species is apparently lost. The *Corynoneura*-group at one time was given higher taxonomic rank as the subfamily Corynoneurinae (Goetghebuer 1939). Brundin (1956) placed them into Orthoclaadiinae as *Corynoneura*-group. Lindeberg (1962) placed them into Tanypodinae as Corynoneurini, and Sæther (1977) in his preliminary phylogenetic analysis places *Corynoneura* and *Thienemanniella* combined as the plesiomorphic sister group to most of the orthoclad genera. According to Mendes *et al.* (2004) the *Corynoneura*-group forms the sister group of the *Eukiefferiella*-group. Recently, some clearly related genera, i.e. *Onconeura* Andersen & Sæther 2005 and the Neotropical genus *Tempisquitoneura* Epler in Epler & de la Rosa 1995 as well as some probably closely related genera such as the Neotropical *Physoneura* Ferrington & Sæther 1995, *Ichthyocladus* Fittkau 1974 and *Ubatubaneura* Wiedenbrug & Trivinho-Strixino 2009, the New Zealand *Kaniwhaniwhanus* Boothroyd 1999 and the South African *Notocladus* Harrison 1997, have been added to the group.

Freeman and Cranston (1980) list 4 species of *Thienemanniella* from the Afrotropical region, of which *T. flava* Kieffer 1923 from Cameroon is described as adult female only and the type apparently lost. Freeman (1953) redescribed *T. trivittata* Goetghebuer 1935, and described *T. antennata* and *T. lineola* from South Africa. Later Lehmann (1979, 1981) described 3 species, *T. fuga* Lehmann, *T. safi* Lehmann and *T. afra* Lehmann, all from Democratic Republic of the Congo. Generally there is a lack of associated immatures for the Afrotropical *Thienemanniella* species, but some pupae and larvae have been described (Lehmann 1979,