

NOTE

New Nomenclatural Applications for Certain African Heptageniidae (Ephemeroptera)

Four species of African Heptageniidae have had a dubious history of generic placement. These species were originally described as *Adenophlebia bequaerti* Navás 1930; *A. sinuosa* Navás 1931; *A. tortinervis* Navás 1930; and *Afronurus njalensis* Kimmins 1937. All eventually were placed in the genus *Notonurus* Crass (1947) by Demoulin (1956, 1970). Gillies (1963) synonymized *Notonurus* with *Compsoeuriella* Ulmer, a genus originally described from southeastern Asia (Ulmer 1939). Gillies (1984) later elaborated his rationale but did not account for several other related Asian genera, and his synonymy was not universally accepted. Subsequently, Braasch and Soldán (1986) synonymized *Compsoeuriella* with *Compsoeuriia* Eaton (1881). This synonymy was not followed, and current research shows that *Compsoeuriella* and *Compsoeuriia* belong to different clades (McCafferty and Wang, in manuscript). In recent lists, these African species have continued to be considered in the genus *Compsoeuriella*; however, McCafferty and de Moor (1995) indicated that generic placement was tenuous.

Based on my studies of generic characterization and a broad spectrum of heptageniid materials from throughout the world, the four species are members of the genus *Thalerosphyrus* Eaton (1881). Three of the species are thus placed as *T. bequaerti*, **new combination**, *T. njalensis*, **new combination**, and *T. tortinervis*, **new combination**. Such a new combination of the fourth (*A. sinuosa*) species, however, creates a secondary homonym with respect to a different, Oriental species that has been known as *Thalerosphyrus sinuosus* (Navás) (originally *Eclyonurus sinuosus*) based on Ulmer's (1939) recombination. The African species is therefore renamed *Thalerosphy-*

*rus longinosi* McCafferty, **new replacement name**, for *Adenophlebia sinuosus* Navás [= *T. sinuosus* (Navás) 1931, nec *T. sinuosus* (Navás) 1933]. The new epithet is after the Spanish Jesuit, Longinos Navás.

In addition to examining adults of *T. bequaerti* from the Democratic Republic of Congo and larvae and adults of *T. njalensis* from South Africa now held in the Purdue Entomological Research Collection, the descriptive literature associated with the species in question, for example, that brought together by Gillies (1984), has been sufficient for determining generic assignment. The fundamental characteristics associated with *Thalerosphyrus* include in the adults: mesothoracic sterna with a parallel-sided median depression, penes lacking dorsolateral spines, forelegs with a strongly elongated tarsal segment 1, and male hindtarsi about two-thirds or more the length of the hindtibiae; and in larvae: galealacinae with scattered setae ventrally, mandibles with a single apical denticle, caudal filaments with whorls of spines well-developed, abdominal gills not strongly elongated, and meso- and metathoracic nota above the coxae produced as acute or subacute posterior projections.

The African species *T. ethiopicus* Soldán 1977 was correctly placed to genus when discovered, as was the Madagascar species *T. josettae* Sartori and Elouard 1996. Thus, among the Arctogaeon family Heptageniidae, only *Thalerosphyrus* and the well-documented *Afronurus* Lestage (see e.g., Schoonbee 1968, Demoulin 1970, McCafferty 2003) can presently be documented from the Afrotropical Region.

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W. P. McCafferty, *Department of Entomology, Purdue University, West Lafayette, IN 47907, U.S.A. (e-mail: pat.mccafferty@entm.purdue.edu)*