



## ***Coetzeemyia*, a new subgenus of *Aedes*, and a redescription of the holotype female of *Aedes (Coetzeemyia) fryeri* (Theobald) (Diptera: Culicidae)**

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### **Abstract**

*Coetzeemyia*, a **new subgenus** of *Aedes* Meigen (in the broad traditional sense, pre-Reinert 2000), is characterized and diagnosed. *Aedes fryeri* (Theobald) is removed from the subgenus *Levua* Stone and Bohart (genus *Levua* of Reinert *et al.* 2004) and placed in the new monotypic subgenus *Coetzeemyia* as its type species by present designation. Recognition of *Coetzeemyia* is based in part on a cladistic analysis of 16 species: seven outgroup species (four non-Aedini species and 3 aedine species) and nine within group species, including the three species that had been included in *Levua* and six other species belonging to three related subgenera in *Aedes* (*Geoskusea* Edwards, *Rhinoskusea* Edwards, and *Ochlerotatus* Lynch Arribalzaga). The type female and the male genitalia of *Ae. fryeri* are redescribed and illustrated. Its affinity to other subgenera of the genus *Aedes* is discussed. Information on the type data, distribution, bionomics, medical importance, and taxonomy of this species are presented. Some morphological characteristics of adults of the subgenera *Ochlerotatus* and *Levua* of *Aedes* are tabulated. Based on this cladistic analysis, it is evident that *Levua* is a monotypic lineage represented by a single known species, *Ae. geoskusea*. *Aedes dufouri* is transferred back to the subgenus *Ochlerotatus* and is distinguished from other congeners of this subgenus.

**Key words:** *Coetzeemyia*, new subgenus, *Aedes fryeri*, *Ae. dufouri*, *Ochlerotatus*, *Levua*, *Ae. (Levua) geoskusea* (= *suvae*), characteristics, systematics, Culicidae, Aldabra Island

### **Introduction**

Several hypotheses regarding the classification of *Aedes* Meigen have recently been proposed (Reinert 2000; Reinert *et al.* 2004, 2006, 2008, 2009). Reinert (2000) divided *Aedes*, then with 43 subgenera, into two genera, *Aedes* and *Ochlerotatus*, and assigned 21 of the subgenera that had been included in *Aedes* to *Ochlerotatus*, keeping the remaining 22 subgenera in his redefined concept of *Aedes*. Reinert (2000) assigned the subgenus *Levua* to the genus *Ochlerotatus*. Thus, in Reinert's (2000) classification, *Aedes (Levua)* became *Ochlerotatus (Levua)*.

Reinert *et al.* (2004: 289) subsequently wrote that "(ii) three small subgenera within the basal polytomy...are undoubtedly monophyletic, i.e. *Aedes (Huaedes)*, *Ae. (Skusea)* and *Oc. (Levua)*..." and further (2004: 360) that "*Levua* Stone & Bohart, 1944, stat. nov., [be] raised to generic rank [comprising three species] *dufourii* (Hamon 1953), comb. nov., *fryeri* (Theobald 1912), comb. nov., [and] *geoskusea* (Amos 1944), comb. nov." Reinert *et al.* (2006: 93) continued to treat *Levua* as a genus but later (Reinert *et al.* 2008: 112) modified their classification to include *Levua* as a subgenus of *Ochlerotatus*. More recently, Reinert *et al.* (2009) proposed a more refined classification in which *Levua* was again accorded generic status.