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World catalog of extant and fossil Corethrellidae (Diptera)

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Abstract

A world catalog of extant and fossil frog-biting midges (Diptera: Corethrellidae) provides full type information, known life stages, and distribution of each species. There are 105 extant and seven fossil species of Corethrellidae but unnamed species are known from Costa Rica, Colombia and Madagascar. New information on types and other important specimens are provided.

Key words: Frog-biting midges, *Corethrella*, Zoogeography

Introduction

Borkent (2008) provided a comprehensive worldwide monograph of the frog-biting midges (Diptera: Corethrellidae), including a revision of all taxa and a summary of all aspects of the biology of the genus and each species. There are only two articles of subsequent importance regarding taxonomy: Borkent & Grafe (2012) described the fauna of Borneo (primarily based on material from the 5770 km² country of Brunei) and Gilka & Szadziewski (2009) redescribed *C. buettikeri* Cranston. Borkent (1993) provided a world catalog to the species of Corethrellidae but there have been so many changes made in the works noted above that a new catalog is necessary.

There are now 105 valid extant and seven fossil species of *Corethrella* Coquillett. Seven additional names are *nomina dubia*. The stages known for each species are given below, with P indicating the pupal stage, L indicating the larval stage, and E indicating the egg stage.

Borkent (2008) suggested that there were many more species of *Corethrella* yet to be discovered. The report of eight new species on Borneo by Borkent & Grafe (2012) partially confirmed that observation. I have also seen another five undescribed species from Costa Rica, six undescribed species from Colombia, and at least six of seven species from Madagascar are undescribed (Robert & Borkent in press).

Borkent (2008) noted missing types or other valuable specimens for a number of species. A visit to the USNM in 2009 led to the discovery of some of these, all slide-mounted, as follows:

- *C. blanda* Dyar. Male holotype. The specimen appears to be teneral and has a crumpled wing. Four pupal exuviae and two larvae associated with the holotype were also present on slides.
- *C. solomonis* Belkin. Three additional larvae, each on a separate slide, from Bougainville, B.S.I. (these should be considered paratypes, although they are not indicated as such).
- *C. kerrvillensis* (Stone). Female, labeled: "Lutzomiops kerrvillensis Stone, Tex; Kerville [sic], VIII-28-53, L.J. Bottimer, det A. Stone", "Lutzomiops kerrvillensis Stone Paratype No. 67423 U.S.N.M.". Also the wing of a female: "Luzomiops kerrvillensis Stone, wing. Kerrville, Texas, mounted by I. Miyagi".
- A box of 81 specimens collected by Aitken in Trinidad with the following species identifications indicated by Aitken (Lane & Aitken 1956): *C. davisii* Shannon & Del Ponte, *C. nr. nigrescens* Lane, *C. juquiana* Lane, and *C. melanica* Lane & Aitken.
- Four slides boxes with additional numbered "*Lutzomiops*" from the Belkin collection.
- *C. wirthi* Stone. Additional paratypes, all from Florida: female from 213 SW, 41 st, Gainesville, 5-V-1962;

dominicana Borkent, 2008:202. Type locality: North mines, Dominican Republic. Holotype ♀ (AMNH).
Stages known: ♀.
Age: Miocene.

miocaenica Szadziewski, Krzeminski & Kutscher, 1994:87. Type locality: Germany (Saxonian amber). Holotype ♂ (ISZP).
Stages known: ♂.
Age: Eocene.

nudistyla Borkent & Szadziewski, 1992:460. Type locality: Dominican Republic. Holotype ♂ (AMNH).
Stages known: ♂.
Age: Miocene.

prisca Borkent & Szadziewski, 1992:457. Type locality: Bitterfeld, Germany (Saxonian amber). Holotype ♂ (ZMHB).
Stages known: ♂.
Age: Miocene.

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