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Species of Culicidae (Diptera) with published illustrations and/or descriptions of female genitalia − Summary

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Abstract

A summary is provided for species of family Culicidae, including subfamilies and tribes, with published illustrations and/or descriptions of the female genitalia.

Key words: Diptera, Culicidae, Anophelinae, Culicinae, Aedeomyiini, Aedini, Culicini, Culisetini, Ficalbiini, Hodgesiini, Mansoniini, Orthopodomyiini, Sabethini, Toxorhynchitini, Uranotaeniini, species, female genitalia

Introduction

Reinert (1974) provided detailed procedures for preparing female genitalia of culicid species for examination and description. These procedures were later revised (Reinert, 2000). Also, the terminology used to describe features of the female genital structures of mosquitoes was provided by Reinert (2000, 2008) and Reinert *et al*. (2009).

The seven previous papers is this series provided lists of species with published illustrations and/or descriptions of the female genitalia for the subfamily Culicinae, tribes Aedini (Reinert, 2010a), Culicini (Reinert, 2010b), Sabethini (Reinert, 2010c), Mansoniini (Reinert, 2010d), Aedeomyiini, Culisetini and Ficalbiini (Reinert, 2010e), Orthopodomyiini, Toxorhynchitini and Uranotaeniini (Reinert, 2010f), and subfamily Anophelinae (Reinert, 2010g). No species in tribe Hodgesiini were found that had published illustrations and/or descriptions of the female genitalia. The following list, as well as the seven papers noted here, utilizes the latest number of valid species, generic-level taxa and other higher-level taxa as reported in the Mosquito Taxonomic Inventory (http://mosquito-taxonomic-inventory.info, accessed 23 April 2010).

Percentage of species of Culicidae with published descriptions and/or illustrations in each subfamily and tribe

Family Culicidae: 887 of 3,525 species = 25%

Subfamily Anophelinae: 51 of 471 species = 11%

Subfamily Culicinae: 836 of 3,054 species = 27%
- Tribe Aedeomyiini: 3 of 6 species = 50%
- Tribe Aedini: 563 (+ 6 subspecies) of 1,255 species = 45%
- Tribe Culicini: 132 of 795 species = 17%
- Tribe Culisetini: 12 of 37 species = 32%
- Tribe Ficalbiini: 14 of 53 species = 26%
- Tribe Hodgesiini: 0 of 11 species = 0%
- Tribe Mansoniini: 24 of 82 species = 29%
- Tribe Orthopodomyiini: 4 of 38 species = 11%
- Tribe Sabethini: 67 of 422 species = 16%
- Tribe Toxorhynchitini: 8 of 90 species = 9%
- Tribe Uranotaeniini: 9 of 265 species = 3%

Discussion

As is evident from the above list, the female genitalia are noticeably better known for the large number of species in tribe Aedini than they are for any other higher level taxon of family Culicidae except for the very small tribe Aedeomyiini. All currently valid aedine genera have at least one species with an illustration and/or description of the female genitalia published and many include all or most features of taxonomic importance. Many of the species within tribe Mansoniini for which the female genitalia have been published include illustrations and/or descriptions of only tergum VIII. Also, for many species of subfamily Anophelinae only the single large spermathecal capsule is illustrated or described. Hopefully, future morphological descriptions, at all taxonomic levels, will include complete illustrations and descriptions of the entire female genitalia as well.

Reinert (2002) and Reinert *et al*. (2004, 2006, 2008, 2009) utilized characters of the female genitalia of tribe Aedini to distinguish and separate various taxa. Within tribe Aedini, female genital characters usually provide useful means of identifying and separating generic-level taxa. Also, based on the limited number of species with complete descriptions and illustrations in the other culicine tribes, characteristics of the female genitalia appear to provide information for distinguishing generic-level taxa.

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