

Species of subfamily Anophelinae (Diptera: Culicidae) with published illustrations and/or descriptions of female genitalia

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Abstract

Examples are provided for species of the mosquito subfamily Anophelinae with published illustrations and/or descriptions of the female genitalia and include corresponding literature citations.

Key words: Diptera, Culicidae, Anophelinae, *Anopheles*, species, female genitalia

Introduction

Current and previously published catalogs of the dipteran family Culicidae do not include a citation category for descriptions and illustrations of the female genitalia of various taxa. This void is partially filled for species in subfamily Anophelinae by the following list. Each species listed is followed by literature citations in which illustrations and/or descriptions are included.

Numerous characters of the female genitalia have proven to be of value in distinguishing species and generic-level taxa of tribe Aedini (see Reinert, 2002; Reinert *et al.*, 2004, 2006, 2008, 2009). Unfortunately, within Anophelinae many descriptions, at all taxonomic levels, have not included characteristics or illustrations of the female genitalia. Also, for many species of *Anopheles* Meigen only the single large spermathecal capsule is illustrated or described.

The following list includes species of subfamily Anophelinae with female genitalia partially or completely illustrated (denoted by 1) and/or described (denoted by 2) in parentheses following each literature citation. Illustrations of the female abdomen with only the cerci protruding and without other genital characters, or with only the cerci described, are not included in the list. Illustrations/descriptions of species as synonyms are included with currently valid species. Abbreviations of the genus and subgenera follow Reinert (2009).

**Species of Anophelinae with illustrations and/or descriptions
of their female genitalia**

- An. (Anopheles) barberi* Coquillett: Zavortink, 1970 (1).
An. (Ano.) barbirostris van der Wulp: Davis, 1926 (1, 2).
An. (Ano.) costai da Fonseca & da Silva Ramos: Sallum *et al.*, 1999 (1, 2).
An. (Ano.) coustani Laveran: Blanchard, 1905 (1); Macfie & Ingram, 1922 (1, 2, as *mauritanus* de Grandpre & de Charmoy).
An. (Ano.) crucians Weidemann: Davis, 1926 (1, 2).
An. (Ano.) earlei Vargas: Saether, 1977 (1).
An. (Ano.) eiseni Coquillett: Davis, 1926 (1).
An. (Ano.) forattinii Wilkerson & Sallum: Wilkerson & Sallum, 1999 (1, 2).
An. (Ano.) gigas Giles: Christophers, 1923a (1).
An. (Ano.) intermedius (Peryassú): Davis, 1926 (1, 2).
An. (Ano.) koreicus Yamada & Watanabe: Hara, 1957a (1, 2), 1957b (1), 1959 (1, 2).
An. (Ano.) lindesayi japonicus Yamada: LaCasse & Yamaguti, 1950 (1); Hara, 1957a (1, 2), 1957c (1), 1959 (1, 2).
An. (Ano.) maculipennis Meigen: Freeborn, 1926 (1).
An. (Ano.) mediopunctatus Lutz: Shannon, 1933 (1); Sallum *et al.*, 1999 (1, 2).
An. (Ano.) occidentalis Dyar & Knab: Dampf, 1936 (1).
An. (Ano.) pseudomaculipes (Peryassú): Davis, 1926 (1, 2).
An. (Ano.) punctimacula Dyar & Knab: Davis, 1926 (1).
An. (Ano.) punctipennis (Say): Williston, 1908 (1), Shannon & Davis, 1930 (1, 2).
An. (Ano.) quadrimaculatus Say: Ross, 1947 (1).
An. (Ano.) shannoni Davis: Shannon, 1933 (1).
An. (Ano.) sinensis Wiedemann: LaCasse & Yamaguti, 1950 (1); Hara, 1957a (1, 2), 1959 (1, 2); Reid, 1968 (1).
An. (Ano.) sineroides Yamada: Hara, 1957a (1, 2), 1959 (1, 2).
An. (Ano.) vestitipennis Dyar & Knab: Gerry, 1932 (1, 2).
An. (Cellia) annularis van der Wulp: Hara, 1959 (1, 2).
An. (Cel.) culicifacies Giles: Das, 1990 (1, 2, as species A & B).
An. (Cel.) funestus Giles: Macfie & Ingram, 1922 (1, 2).
An. (Cel.) gambiae Giles: Macfie & Ingram, 1922 (1, 2, as *costalis* Theobald).
An. (Cel.) jamesii Theobald: Davis, 1926 (1).
An. (Cel.) kingi Christophers: Christophers, 1923b (2).
An. (Cel.) ludlowae (Theobald): Hara, 1959 (1, 2).
An. (Cel.) maculatus Theobald: Hara, 1959 (1, 2); Reid, 1968 (1).
An. (Cel.) minimus Theobald: Hara, 1959 (1, 2).
An. (Cel.) nili (Theobald): Macfie & Ingram, 1922 (1, 2).
An. (Cel.) pattoni Christophers: Yu & Zhang, 1981 (1).
An. (Cel.) pharoensis Theobald: Macfie & Ingram, 1922 (1, 2), Davis, 1926 (1, 2).
An. (Cel.) rufipes (Gough): Macfie & Ingram, 1922 (1, 2).
An. (Cel.) splendidus Koidzumi: Hara, 1959 (1, 2).
An. (Cel.) squamosus Theobald: Macfie & Ingram, 1922 (1, 2).
An. (Cel.) subpictus Grassi: Davis, 1926 (1, 2, as *rossi* Giles); Hara, 1959 (1, 2).
An. (Cel.) tessellatus Theobald: Hara, 1959 (1, 2).
An. (Cel.) watsonii (Leicester): Christophers, 1923b (2).

- An. (Kerteszia) cruzii* Dyar & Knab: Davis, 1926 (1, 2).
An. (Ker.) neivai Howard, Dyar & Knab: Zavortink, 1973 (1).
An. (Nyssorhynchus) albimanus Wiedemann: Gerry, 1932 (1, 2).
An. (Nys.) aquasalis Curry: Coher, 1949 (1, 2).
An. (Nys.) braziliensis (Chagas): Davis, 1926 (1, 2).
An. (Nys.) dominicanus Zavortink & Poinar: Zavortink & Poinar, 2000 (2, in amber).
An. (Nys.) halophylus Silva do Nascimento & Lourenço-de-Oliveira: Nascimento & Lourenço-de-Oliveira, 2002 (1, 2).
An. (Nys.) konderi Galvão & Damasceno: Flores-Mendoza *et al.*, 2004 (1, 2).
An. (Nys.) lutzii Cruz: Davis, 1926 (1, 2).
An. (Nys.) oswaldoi (Peryassú): Davis, 1926 (1).

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