

## **List of mosquitoes (Diptera: Culicidae) with published illustrations and/or descriptions of first-instar larvae**

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### **Abstract**

Species of Culicidae with published illustrations and/or morphological descriptions of the first-instar larvae are listed with their literature citations.

**Key words:** Diptera, Culicidae, Anophelinae, Culicinae, Aedini, Culicini, Culisetini, Mansoniini, Orthopodomyiini, Sabethini, Toxorhynchitini, Uranotaeniini, *Aedes*, *Aedimorphus*, *Allotheobaldia*, *Anopheles*, *Bironella*, *Brugella*, *Cellia*, *Chagasia*, *Climacura*, *Coquillettidia*, *Culex*, *Culicada*, *Culicella*, *Culicelsa*, *Culiseta*, *Dahlia*, *Deinocerites*, *Empihals*, *Fredwardsius*, *Georgecraigius*, *Grabhamia*, *Gymnometopa*, *Heteraspidion*, *Hulecoeteomyia*, *Janthinosoma*, *Jarnellius*, *Lutzia*, *Lynchiella*, *Mansonia*, *Melanoconion*, *Metalutzia*, *Mucidus*, *Mukwaya*, *Neoculex*, *Nyssorhynchus*, *Ochlerotatus*, *Opifex*, *Orthopodomyia*, *Protoculex*, *Protomacleaya*, *Pseudoficalbia*, *Psorophora*, *Rusticoidus*, *Sabethes*, *Sabethoides*, *Stegomyia*, *Tanakaius*, *Toxorhynchites*, *Tricholeptomyia*, *Trichoprosopon*, *Tripteroides*, *Uranotaenia*, *Woodius*, *Wyeomyia*, mosquito, first-instar larva

### **Introduction**

A listing of mosquito species in the dipteran family Culicidae with published illustrations and/or descriptions of the first-instar larvae is provided below. Many published articles on first-instar larvae of Culicidae provide short descriptions and/or illustrations of the head and appendages, abdominal segments VIII and X, and the siphon. A few articles have detailed illustrations and/or descriptions of the entire first-instar larva, e.g. Belkin (1956, 1962), Service (1970), Harrison & Rattanarithikul (1973), Floore *et al.* (1976) and Harbach (1991). Some articles provide first-instar larval descriptions and illustrations of numerous species of mosquitoes, e.g. Marshall (1938), Bohart (1954), Price (1960), Dodge (1966) and Knight & Wonio (1969). A few descriptions are included in keys.

The following list provides examples of mosquitoes with the first-instar larvae illustrated (denoted by 1) and/or described (denoted by 2). Literature citations follow each species. The latest listing of currently valid species and generic-level taxa reported in the Mosquito Taxonomic Inventory (<http://mosquito-taxonomic-inventory.info>, accessed 7 September 2010) was utilized. Abbreviations of genera and subgenera follow Reinert (2009).

### Subfamily Anophelinae Grassi, 1900

- Anopheles (Anopheles) Algeriensis* Theobald: la Face, 1930 (1); Evans, 1938 (1, 2); Marshall, 1938 (1, 2); Dodge, 1966 (2).
- An. (Ano.) atropos* Dyar & Knab: Dodge, 1966 (1, 2).
- An. (Ano.) aztecus* Hoffmann: Dodge, 1966 (1, 2).
- An. (Ano.) baezai* Gater: Baisas & Ubaldo-Pagayon, 1952 (1, as *gateri* Baisas).
- An. (Ano.) barberi* Coquillett: Dodge, 1966 (1, 2).
- An. (Ano.) barianensis* James: Dodge, 1966 (2).
- An. (Ano.) bradleyi* King: Dodge, 1966 (2); Floore *et al.*, 1976 (1).
- An. (Ano.) brevialpis* Roper: Strickland, 1915 (1, 2).
- An. (Ano.) claviger* (Meigen): Lang, 1920 (1, 2 as *bifurcatus* (Linnaeus), see Cranston *et al.*, 1987, p. 7); Martini, 1929 (1, as *bifurcatus*); la Face, 1930 (1, 2, as *bifurcates*); Marshall, 1938 (1, 2); Kramář, 1958 (1); Dodge, 1966 (2).
- An. (Ano.) crucians* Wiedemann *s.l.*: Hurlbut, 1941 (1, 2); Breeland, 1951 (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2); Floore *et al.*, 1976 (1); Peyton *et al.*, 1992 (1).
- An. (Ano.) earlei* Vargas: Dodge, 1966 (2); Knight & Wonio, 1969 (1, 2).
- An. (Ano.) franciscanus* McCracken: Dodge, 1966 (2).
- An. (Ano.) freeborni* Aitken: Belkin, 1953 (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2).
- An. (Ano.) gabaldoni* Vargas: Vargas & Martinez Palacios, 1946 (1, 2).
- An. (Ano.) georgianus* King: Dodge, 1966 (2).
- An. (Ano.) grabhamii* Theobald: Pratt, 1943 (1, 2); Dodge, 1966 (1, 2).
- An. (Ano.) lindesayi* Giles: Dodge, 1966 (2, as *lindesaii* Giles).
- An. (Ano.) maculipennis* Meigen: Blanchard, 1905 (1); Lang, 1920 (1, 2); Langeron, 1928 (1); la Face, 1930 (1, 2); Marshall, 1938 (1, 2); Kramář, 1958 (1); Gutsevich *et al.*, 1974 (1).
- An. (Ano.) messeae* Falleroni: Dodge, 1966 (2, as *maculipennis* Meigen variety *messeae*).
- An. (Ano.) nigerrimus* Giles: Baisas, 1947 (1, as *hyrcanus* (Pallas) subspecies *nigerrimus*).
- An. (Ano.) occidentalis* Dyar & Knab: Dodge, 1966 (2).
- An. (Ano.) perplexens* Ludlow: Dodge, 1966 (2).
- An. (Ano.) plumbeus* Stephens: Lang, 1920 (1, 2); Marshall, 1938 (1, 2); Kramář, 1958 (1); Dodge, 1966 (2).
- An. (Ano.) pseudopictus* Grassi: la Face, 1930 (1, 2).
- An. (Ano.) pseudopunctipennis* Theobald: Dodge, 1966 (1, 2).
- An. (Ano.) punctipennis* (Say): Hurlbut, 1941 (1, 2); Breeland, 1951 (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2).
- An. (Ano.) quadrimaculatus* Say *s.l.*: Howard, 1900a (1), 1900b (1); Hurlbut, 1941 (1, 2); Abdel-Malek & Goulding, 1948 (2); Breeland, 1951 (1, 2); Jones, 1953 (1, 2); Shalaby, 1956 (2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2).
- An. (Ano.) sinensis* Wiedemann: Makiya, 1969 (2, as *hyrcanus* (Pallas) subspecies *sinensis*).

*An. (Ano.) vestitipennis* Dyar & Knab: Pratt, 1943 (1, 2); Dodge, 1966 (1, 2).  
*An. (Ano.) walkeri* Theobald: Hurlbut, 1938 (1, 2), 1941 (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2).

*Anopheles (Cellia) aconitus* Dönitz: Stanton, 1912 (1, 2, as *albirostris* Theobald).  
*An. (Cel.) annularis* van der Wulp: Baisas, 1947 (1).  
*An. (Cel.) balabacensis* Baisas: Baisas & Ubaldo-Pagayon, 1956 (1, 2).  
*An. (Cel.) culicifacies* Giles: Dodge, 1966 (2).  
*An. (Cel.) farauti* Laveran: Belkin, 1962 (2); Dodge, 1966 (2).  
*An. (Cel.) flavirostris* (Ludlow): Baisas, 1947 (1, as *minimus* Theobald subspecies *flavirostris*).  
*An. (Cel.) funestus* Giles: de Meillon, 1941 (1).  
*An. (Cel.) gambiae* Giles *s.l.*: Soper & Wilson, 1943 (1); Dodge, 1966 (2).  
*An. (Cel.) kochi* Dönitz: Baisas & Ubaldo-Pagayon, 1956 (1, 2); Dodge, 1966 (2).  
*An. (Cel.) koliensis* Owen: Belkin, 1962 (2); Dodge, 1966 (2).  
*An. (Cel.) lungae* Belkin & Schlosser: Belkin, 1962 (2); Dodge, 1966 (2).  
*An. (Cel.) punctulatus* Dönitz: Belkin, 1962 (1, 2); Dodge, 1966 (2); Peyton *et al.*, 1992 (1).  
*An. (Cel.) solomonsis* Belkin, Knight & Roseboom: Belkin, 1962 (1, 2); Dodge, 1966 (2).  
*An. (Cel.) subpictus* Grassi: Dodge, 1966 (2).  
*An. (Cel.) superpictus* Grassi: la Face, 1930 (1, 2).  
*An. (Cel.) tessellatus* Theobald: Stanton, 1913 (1, 2); Baisas & Ubaldo-Pagayon, 1956 (1, 2); Dodge, 1966 (2).  
*An. (Cel.) turkhudi* Liston: Dodge, 1966 (2).  
*An. (Cel.) willmori* (James): Puri, 1931 (1, as *maculatus* Theobald variety *willmori*); Gutsevich *et al.*, 1974 (1, as *maculatus* variety *willmori*); Dodge, 1966 (2, as *maculatus* variety *willmori*).

*Anopheles (Nyssorhynchus) albimanus* Wiedemann: Pratt, 1943 (1, 2); Dodge, 1966 (1, 2).  
*An. (Nys.) albitarsis* Lynch Arribálzaga: Galvão & Lane, 1936 (1, 2); Peyton *et al.*, 1992 (1).  
*An. (Nys.) argyritarsis* Robineau-Desvoidy: Goeldi, 1905 (1).  
*An. (Nys.) strodei* Root: Galvão & Lane, 1936 (1, 2).

*Bironella (Brugella) hollandi* Taylor: Belkin, 1962 (1, 2); Dodge, 1966 (2); Peyton *et al.*, 1992 (1).

*Chagasia fajardi* (Lutz): Galvão & Barretto, 1938 (1).

### **Subfamily Culicinae Meigen, 1818**

#### **Tribe Aedini Neveu-Lemaire, 1902**

*Aedes cinereus* Meigen: Dyar, 1902 (2, as *fuscus* Osten Sacken); Marshall, 1938 (1, 2); Bohart, 1954 (2); Price, 1960 (1, 2); Dodge, 1966 (2); Knight & Wonio, 1969 (1, 2).

*Aedimorphus vexans* (Meigen): Mail, 1934 (1); Marshall, 1938 (1, 2); Bohart, 1954 (1, 2); Price, 1960 (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2).

*Dahlia geniculata* (Olivier): Marshall, 1938 (1, 2).

*Fredwardsius vittatus* (Bigot): Service, 1970 (1, 2); Mattingly, 1970a (1, 2).

*Georgecraigius* (*Georgecraigius*) *atropalpus* (Coquillett): Price, 1960 (1, 2); Dodge, 1966 (2).

*Gymnometopa mediiovittata* (Coquillett): Dodge, 1966 (2).

*Hulecoeteomyia japonica* (Theobald): Makiya, 1969 (2).

*Jarnellius sierrensis* (Ludlow): Dodge, 1966 (2); Bohart & Washino, 1978 (1).

*Ja. varipalpus* (Coquillett): Dyar, 1904b (1, 2); Bohart, 1954 (1, 2).

*Mucidus* (*Mucidus*) *alternans* (Westwood): Mattingly, 1970b (1).

*Ochlerotatus annulipes* (Meigen): Marshall, 1938 (1, 2).

*Oc. aurifer* (Coquillett): Lake, 1968 (1, 2).

*Oc. cantans* (Meigen): Dyar, 1904a (1, 2); Marshall, 1938 (1, 2).

*Oc. cantator* (Coquillett): Lake, 1963 (1, 2); Dodge, 1966 (2).

*Oc. caspius* (Pallas): Marshall, 1938 (1, 2).

*Oc. cataphylla* (Dyar): Bohart, 1954 (1, 2); Dodge, 1966 (2).

*Oc. communis* (de Geer): Marshall, 1938 (1, 2); Bohart, 1954 (1, 2); Price, 1960 (1, 2); Dodge, 1966 (2).

*Oc. detritus* (Haliday): Marshall, 1938 (1, 2).

*Oc. dorsalis* (Meigen): Marshall, 1938 (2); Bohart, 1954 (1, 2); Price, 1960 (1, 2); Dodge, 1966 (2); Knight & Wonio, 1969 (1, 2).

*Oc. euedes* (Howard, Dyar & Knab): Price, 1960 (1, 2, as *barri* Rueger); Dodge, 1966 (2, as *barri*).

*Oc. excrucians* (Walker): Dodge, 1966 (2).

*Oc. fitchii* (Felt & Young): Bohart, 1954 (1, 2); Price, 1960 (1, 2); Dodge, 1966 (2); Knight & Wonio, 1969 (1, 2); Bohart & Washino, 1978 (1).

*Oc. flavescens* (Müller): Hearle, 1929 (1, 2); Marshall, 1938 (2); Price, 1960 (2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (2).

*Oc. grossbecki* (Dyar & Knab): Lake, 1968 (1, 2).

*Oc. hexodontus* (Dyar): Bohart, 1954 (1, 2); Dodge, 1966 (2).

*Oc. imperfectus* (Dobrotworsky): Dobrotworsky, 1965 (1, 2).

*Oc. impiger* (Walker): Danks & Corbet, 1973 (1, 2).

*Oc. implicatus* (Vockeroth): Dodge, 1966 (2).

*Oc. increpitus* (Dyar): Bohart, 1954 (1, 2); Dodge, 1966 (2).

*Oc. melanimon* (Dyar): Dodge, 1966 (2).

*Oc. nigripes* (Zetterstedt): Danks & Corbet, 1973 (1, 2).

*Oc. pulchritarsis* (Rondani): Montchadsky, 1926 (1, 2, as *pulchritarsis* variety *stegomyina* Stackelberg & Montchadsky).

*Oc. pullatus* (Coquillett): Dyar, 1904f (2).

*Oc. punctor* (Kirby): Marshall, 1938 (1, 2); Price, 1960 (1, 2); Dodge, 1966 (2).

*Oc. squamiger* (Coquillett): Bohart, 1954 (1, 2); Dodge, 1966 (2).

- Oc. sticticus* (Meigen): Bohart, 1954 (1, 2); Price, 1960 (1, 2); Dodge, 1966 (2); Knight & Wonio, 1969 (1, 2).
- Oc. stimulans* (Walker): Price, 1960 (1, 2); Dodge, 1966 (2); Knight & Wonio, 1969 (2).
- Oc. thibaulti* (Dyar & Knab): Dodge, 1966 (1, 2).
- Oc. ventrovittis* (Dyar): Bohart, 1954 (1, 2); Dodge, 1966 (2).
- Ochlerotatus (Culicada) canadensis* (Theobald): Dyar, 1902 (2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2, as *canadensis* subspecies *canadensis*).
- Ochlerotatus (Culicelsa) mitchellae* (Dyar): Dodge, 1966 (1, 2).
- Oc. (Cul.) nigromaculis* (Ludlow): Bohart, 1954 (1, 2); Price, 1960 (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2); Bohart & Washino, 1978 (1).
- Oc. (Cul.) sollicitans* (Walker): Lake, 1963 (1, 2); Knight, 1964 (1, 2); Dodge, 1966 (2); Knight & Wonio, 1969 (1).
- Oc. (Cul.) taeniorhynchus* (Wiedemann): Bohart, 1954 (1, 2); Knight, 1964 (2); Dodge, 1966 (1, 2).
- Ochlerotatus (Empihals) vigilax* (Skuse): Shinkarenko *et al.*, 1986 (2).
- Ochlerotatus (Ochlerotatus) infirmatus* (Dyar & Knab): Breland, 1951 (1, 2); Dodge, 1966 (1, 2).
- Oc. (Och.) trivittatus* (Coquillett): Abdel-Malek & Goulding, 1948 (2); Abdel-Malek, 1949 (1, 2); Price, 1960 (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2).
- Ochlerotatus (Protoculex) atlanticus* (Dyar & Knab): Dodge, 1966 (1, 2).
- Oc. (Pcx.) dupreei* (Coquillett): Dodge, 1966 (1, 2); Knight & Wonio, 1969 (2).
- Oc. (Pcx.) tormentor* (Dyar & Knab): Dodge, 1966 (1, 2).
- ‘*Ochlerotatus (Protomacleaya) triseriatus* (Say): Dyar, 1904d (1, 2); Price, 1960 (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2); Teng & Apperson, 1996 (2).
- ‘*Oc. (Pro.) zoosophus* (Dyar & Knab): Dodge, 1966 (2).
- Ochlerotatus (Rusticoidus) bicristatus* (Thurman & Winkler): Bohart, 1954 (1, 2); Dodge, 1966 (2).
- Oc. (Rus.) provocans* (Walker): Dyar, 1904c (1, 2, as *trichurus* (Dyar)); Price, 1960 (1, 2, as *trichurus*); Dodge, 1966 (2, as *trichurus*).
- Oc. (Rus.) rusticus* (Rossi): Howard, 1900a (1, as *pungens* Robineau-Desvoidy), 1900b (1, as *pungens*); Marshall, 1938 (1, 2); Dodge, 1966 (2).
- Ochlerotatus (Woodius) diantaeus* (Howard, Dyar & Knab): Price, 1960 (1, 2); Dodge, 1966 (2).
- Oc. (Woo.) intrudens* (Dyar): Price, 1960 (1, 2); Dodge, 1966 (2).
- Opifex (Opifex) fuscus* Hutton: Mattingly, 1970c (1).
- Psorophora (Grabhamia) columbiae* (Dyar & Knab): Hedeon, 1959 (2, as *confinnis* (Lynch Arribáizaga)); Dodge, 1966 (1, 2, as *confinnis*); Knight & Wonio, 1969 (2, as *confinnis*).

*Ps. (Gra.) discolor* (Coquillett): Hedeem, 1959 (2); Dodge, 1966 (2).

*Ps. (Gra.) signipennis* (Coquillett): Hedeem, 1959 (1, 2); Dodge, 1966 (2).

*Psorophora (Janthinosoma) cyanescens* (Coquillett): Dodge, 1966 (1, 2).

*Ps. (Jan.) ferox* (von Humboldt): Dodge, 1966 (1, 2); Knight & Wonio, 1969 (2).

*Ps. (Jan.) horrida* (Dyar & Knab): Dodge, 1966 (1, 2); Knight & Wonio, 1969 (2).

*Ps. (Jan.) longipalpus* Randolph & O'Neill: Dodge, 1966 (2).

*Ps. (Jan.) varipes* (Coquillett): Dodge, 1966 (1, 2).

*Psorophora (Psorophora) ciliata* (Fabricius): Shalaby, 1957c (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (2).

*Ps. (Pso.) howardii* Coquillett: Dodge, 1966 (2).

*Stegomyia albopicta* (Skuse): Makiya, 1969 (2); Teng & Apperson, 1996 (2).

*St. polynesiensis* (Marks): Mattingly, 1970a (1, 2).

*St. seatoi* (Huang): Harrison & Rattanarithikul (1, 2).

*Stegomyia (Heteraspidion) annandalei* Theobald: Mattingly, 1970a (1, 2).

*Stegomyia (Mukwaya) woodi* (Edwards): Mattingly, 1970a (1, 2).

*Stegomyia (Stegomyia) aegypti* (Linnaeus): Martini, 1930 (1, as *fasciatus* Fabricius); Abdel-Malek & Goulding, 1948 (2); Hopkins, 1952 (1); Smart *et al.*, 1956 (1); Shalaby, 1957a (1, 2); Christophers, 1960 (1, 2); Dodge, 1966 (1, 2); Harrison & Rattanarithikul, 1973 (1, 2); Wood & Dalingwater, 1975 (2).

*Tanakaius togoi* (Theobald): Makiya, 1969 (2).

### Tribe Culicini Meigen, 1818

*Culex (Culex) annulus* Theobald: Yan, 1977 (1, 2).

*Cx. (Cux.) declarator* Dyar & Knab: Dodge, 1966 (2).

*Cx. (Cux.) fuscocephala* Theobald: Yan, 1977 (1, 2).

*Cx. (Cux.) nigripalpus* Theobald: Dodge, 1966 (1, 2); Hager & O'Mera, 1983 (2).

*Cx. (Cux.) orientalis* Edwards: Makiya, 1969 (2).

*Cx. (Cux.) pipiens* Linnaeus: Dyar, 1905 (2); Marshall, 1938 (1, 2); Dodge, 1966 (2, as *pipiens* subspecies *pipiens*); Knight & Wonio, 1969 (2); Makiya, 1969 (2, as *pipiens* subspecies *molestus* Forskål); Krida *et al.*, 1998 (1, 2).

*Cx. (Cux.) pseudovishnui* Colless: Yan, 1977 (1, 2, as *neovishnui* Lien).

*Cx. (Cux.) quinquefasciatus* Say: Shalaby, 1957b (1, 2); Forattini, 1962 (1, as *pipiens* subspecies *fatigans* Wiedemann); Dodge, 1966 (1, 2, as *pipiens* subspecies *quinquefasciatus*); Knight & Wonio, 1969 (2); Mattingly, 1969 (1, as *fatigans*); Yan, 1977 (1, 2, as *pipiens* subspecies *fatigans*); Hager & O'Mera, 1983 (2).

*Cx. (Cux.) restuans* Theobald: Dyar, 1902 (2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (2); Hager & O'Mera, 1983 (2).

*Cx. (Cux.) salinarius* Coquillett: Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2); Hager & O'Mera, 1983 (2).

*Cx. (Cux.) tarsalis* Coquillett: Dodge, 1966 (1, 2); Knight & Wonio, 1969 (2).

*Cx. (Cux.) thriambus* Dyar: Dodge, 1966 (2).

*Cx. (Cux.) tritaeniorhynchus* Giles: Makiya, 1969 (2); Yan, 1977 (1, 2, as *tritaeniorhynchus* subspecies *summosus* Dyar).

*Cx. (Cux.) vishnui* Theobald: Makiya, 1969 (2).

*Culex (Melanoconion) atratus* Theobald: Dodge, 1966 (1?, 2).

*Cx. (Mel.) erraticus* (Dyar & Knab): Dodge, 1966 (1, 2); Knight & Wonio, 1969 (2).

*Cx. (Mel.) peccator* Dyar & Knab: Dodge, 1966 (1, 2).

*Cx. (Mel.) pilosus* (Dyar & Knab: Dodge, 1966 (1, 2).

*Culex (Neoculex) apicalis* Adams: Natvig, 1948 (1, 2); Abdel-Malek & Goulding, 1948 (2).

*Cx. (Ncx.) territans* Walker: Dyar, 1904d (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2); de Oliveira & Durand, 1978 (2).

*Deinocerites cancer* Theobald: Dodge, 1966 (1, 2).

*De. mathesoni* Belkin & Hogue: Dodge, 1966 (2).

*Lutzia (Metalutzia) vorax* Edwards: Makiya, 1969 (2).

#### **Tribe Culisetini Belkin, 1962**

*Culiseta (Allotheobaldia) longiareolata* (Macquart): Maslov, 1989 (2).

*Culiseta (Climacura) melanura* (Coquillett): Dodge, 1966 (1, 2); Knight & Wonio, 1969 (2).

*Culiseta (Culicella) fumipennis* (Stephens): Marshall, 1938 (1, 2).

*Cs. (Cuc.) litorea* (Shute): Marshall, 1938 (2).

*Cs. (Cuc.) morsitans* (Theobald): Marshall, 1938 (1, 2); Dodge, 1966 (2); Knight & Wonio, 1969 (2, as *morsitans* subspecies *dyari* (Coquillett)).

*Culiseta (Culiseta) annulata* (Schrank): Marshall, 1938 (1, 2).

*Cs. (Cus.) bergrothi* (Edwards): Natvig, 1948 (1, 2); Maslov, 1989 (1, 2); Stojanovich & Scott, 1995a (1), 1995b (1), 1995c (1), 1996 (1), 1997 (1).

*Cs. (Cus.) inornata* (Williston): Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2).

*Cs. (Cus.) particeps* (Adams): Dodge, 1966 (1, 2).

*Cs. (Cus.) subochrea* (Edwards): Marshall, 1938 (1, 2).

#### **Tribe Mansoniini Belkin, 1962**

*Coquillettidia (Coquillettidia) perturbans* (Walker): Dyar, 1904e (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2).

*Cq. (Coq.) richiardii* (Ficalbi): Marshall, 1938 (1, 2).

*Mansonia (Mansonia) indubitans* Dyar & Shannon: Dodge, 1966 (1, 2).

#### **Tribe Orthopodomyiini Belkin & Heinemann, 1970**

*Orthopodomyia alba* Baker: Wilkins & Breland, 1951 (1, 2); Breland, 1959 (1, 2); Dodge, 1966 (1, 2).

*Or. pulcripalpis* (Rondani): Marshall, 1938 (1, 2); Dodge, 1966 (2).

*Or. signifera* (Coquillett): Breland, 1959 (1, 2); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2).

#### **Tribe Sabethini Blanchard, 1905**

*Sabethes (Sabethoides) chloropterus* (van Humboldt): Harbach, 1991 (1, 2).

*Trichoprosopon digitatum* (Rondani): Pawan, 1922 (1).

*Tripteroides (Tricholeptomyia) microcala* (Dyar): Baisas & Ubaldo-Pagayon, 1952 (1).

*Tripteroides (Tripteroides) bambusa* (Yamada): Makiya, 1969 (2).

*Wyeomyia (Wyeomyia) haynei* Dodge: Dodge, 1966 (1, 2).

*Wy. (Wyo.) smithii* (Coquillett): Price, 1958 (1); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2); Mattingly, 1973 (1).

*Wy. (Wyo.) vanduzeei* Dyar & Knab: Dodge, 1966 (2).

#### **Tribe Toxorhynchitini Lahille, 1904**

*Toxorhynchites (Lynchiella) portoricensis* (Roeder): Dodge, 1966 (2).

*Tx. (Lyn.) rutilus septentrionalis* (Dyar & Knab): Breland, 1949 (1, 2, as *Megarhinus septentrionalis*); Breland, 1959 (2); Dodge, 1964 (1, 2), 1966 (1, 2); Knight & Wonio, 1969 (1, 2); Mattingly, 1970a (2).

*Tx. (Lyn.) theobaldi* (Dyar & Knab): Mattingly, 1970a (1, 2, as *hypoptes* Knab and *trinidadensis?* Dyar & Knab).

*Toxorhynchites (Toxorhynchites) amboinensis* (Doleshall): Mattingly, 1973 (1).

*Tx. (Tox.) brevipalpis* Theobald: Muspratt, 1951 (1, 2); Trpis, 1972 (1).

*Tx. (Tox.) brevipalpis conradti* Grünberg: Corbet, 1963 (1, 2).

*Tx. (Tox.) splendens* (Wiedemann): Chan, 1968 (2); Furumizo & Rudnick, 1978 (2).

#### **Tribe Uranotaeniini Lahille, 1904**

*Uranotaenia (Pseudoficalbia) anhydor* Dyar: Belkin & McDonald, 1956 (1, 2).

*Ur. (Pfc.) anhydor syntheta* Dyar & Shannon: Dodge, 1966 (2).

*Uranotaenia (Uranotaenia) lowii* Theobald: Dodge, 1966 (1, 2).



*Ur. (Ura.) sapphirina* (Osten Sacken): Dyar, 1901 (1, 2); Blanchard, 1905 (1); Dodge, 1966 (1, 2); Knight & Wonio, 1969 (1, 2).

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