

### A summary of the names of European mosquitoes

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#### Abstract

The outline meanings of the names of the mosquitoes of Europe are presented and categorised.

#### Introduction

This article summarises the meanings of the names of the one hundred and three species of mosquitoes recorded from Europe, together with the names of the associated taxa. In earlier issues of the *Bulletin* explanations were provided for the names of each taxon together with the author and the date and reference to the original description (Snow, 1999-2002). This was accompanied by either a quotation from the original description, translated where necessary, or a résumé indicating the author's reason for coining the name in question. Where appropriate, a brief explanation of the etymology was provided. In this introduction and the list that follows, the species names under discussion are in bold font and are accompanied by the generic name for ease of reference.

These scientific names are a mixture of descriptive terms in Latin, sometimes from Greek origins, and Latinized versions of the names of people and places. Of the descriptive names, some are straightforward Latin words e.g. *Culex pipiens* (piping) while others are of Greek origin e.g. the generic and subgeneric name *Aedes* (troublesome) and *Ochlerotatus sticticus* (dotted, dappled). Some names are more complex, being derived from several Latin or Greek words. Examples of such compounded names are *albopictus* from the Latin *albus* (white) and *pictus* (painted) and *Culiseta fumipennis* from the Latin *fumus*, smoke and *penna*, wing. A few names derive from other languages as with *Oc. krymmontanus* from the Ukrainian, Krym (Crimea) and the subgeneric epithet *Maillotia* from the French maillot meaning swaddling clothes.

Names dedicated to people and places are varied in their construction. Thus a variety of suffixes are used following the names of people, from the expected masculine genitive *sacharovi* showing that the species was named after Nikolai Sacharov to the feminine genitive endings of *messeae* and *labranchiae* for the masculine Italians, Alessandro Messea and Antonio Labranca. It is also of note that having selected to name the species after Labranca, Falleroni decided to insert an additional "h", to preserve the hard sound. In some cases there have been errors in the naming of species as with *Anopheles petragnani*, which was named after Giovanni Petragnani and hence should have been *petragnanii*. Yet others, such as *An. sergentii* named after Edmond Sergent, have been given an "-ii" suffix which is incorrect Latin. Examples of the correct use of the "-ii" suffix are *Culex martinii*, named after Erich Martini and *Ochlerotatus coluzzii*, dedicated to Mario Coluzzi. Three genera/ subgenera named after people show other constructions: *Coquillettidia* (after Daniel Coquillett), *Barraudius* (Philip Barraud) and *Cellia* (Angelo Celli).

The largest category, with forty-five species, contains mosquitoes named after a precise or general morphological characteristic, which may be a structural feature, the size of the insect or its colour. *Anopheles atroparvus* is in fact named after both its colour (black) and its small size while others are named after the colour of a body part e.g. the black palps of *Oc. atropalpus* and the yellow-ochre wings of *Culiseta ochroptera*. Some have impressed their discoverers by their sheer beauty, as with *An. pulcherrimus* and *Cs. glaphyoptera* while others (*Cx. modestus*) by their lack of overt beauty. In the case of *Cx. pusillus* and *Cx. perexiguus* it was size alone that gave them their name. Most species are named after a feature of the adult, invariably the female, but a few owe their name to a characteristic of the larval stage. Thus *Oc. echinus* derives its name from its spiny appearance, *Oc. diantaeus* its large antennae, *Oc. pionips* its large larval stage and *Oc. hexodontus* its six comb scales. One species, *An. melanoon*, is named because of the dark colour of the egg. Interestingly, the name *cinereus* meaning ash-coloured or grey, has been used for a species of *Aedes* and of *Anopheles*.

The relationship of the newly described species to another or its distinction from an existing species has been used on seven occasions in naming species. Thus *An. superpictus*, *Oc. quasirusticus* and *Oc. punctodes* are regarded as close to or similar to *An. pictus*, *Oc. rusticus* and *Oc. punctor* respectively, while *Ae. geminus* is considered the twin of *Ae. cinereus* and *Oc. duplex* a replica of *Oc. dorsalis*. *Ochlerotatus subdiversus* was so named because it either resembles or is smaller than *Oc. diversus*, or both.

Twenty-two species are named after people and this is the second largest category. A wide range of people are represented, from those involved in mosquito and malaria research and control, through collectors to relatives and members of the government. Some are famous personalities of the time while others are relatively unknown. Among the more prominent personalities of the past include Patrick Buxton (*Cq. buxtoni*), Alexandre Brumpt (*Cx. brumpti*) and Arnold Theiler (*Cx. theileri*), while Mario Coluzzi (*Oc. coluzzii*) represents the researchers of today. Collectors who provided the specimens are also acknowledged and include Dr Bergroth for providing Frederick Edwards with specimens of *Cs. bergrothi* and J.K. Thibault for sending adults of *Oc. thibaulti* to Harrison Dyar and Frederick Knab. Relatives are also among those with mosquito species dedicated to them. The wife of Georges Senevet, Marie Marter, is remembered in the name of *An. marteri* and a granddaughter of the Sergent brothers (Edmond and Étienne), called Marie, has the species *Oc. mariae* named after her. Refik Saydam, one-time Minister of Health and later Prime Minister of the Turkish Republic, was acknowledged by Medchid who named *Oc. refiki* in his honour.

The geographic area from which a species was originally collected is the basis of twelve names while a further six are designated as a result of the general habitat in which they were found. Examples of the former are *alaskaensis* (Alaska), *aegypti* (Egypt) and *phoeniciae* (ancient Phoenicia) and of the latter *deserticola* (deserts), *rusticus* (rural) and *hortensis* (gardens). The most bizarre is *cataphylla* for a now *Ochlerotatus* species and is derived from a translation of the location in which it was discovered, namely Fallen Leaf in California. Since the publication of the explanations of the names in earlier issues of the *Bulletin*, Linton *et al.* (2002) have formally placed *An. subalpinus* (meaning south of the Alps) in synonymy with *An. melanoon*, and hence it does not appear in the list below.

The biting nuisance of mosquitoes has made an impression on a number of authors with five specific and several generic/ subgeneric names in this category. Among these are *Aedes vexans* (annoying), *Cx. territans* (alarming) and *Oc. excrucians* (tormenting).

The high-pitched sound made by the beating wings of mosquitoes led to two names being employed: *Cx. pipiens* (piping) and *Oc. cantans* (singing). Two more are named because of their common (*Oc. communis*) or widespread (*Cx. vagans*) occurrence and yet a further two for their behaviour - high activity in the case of *Oc. impiger* and entrance into dwellings by *Oc. intrudens*. The generic name *Culex* is perhaps the simplest, being derived from the Latin for gnat or midge.

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#### List of species and associated taxa

Brief explanations of the reasons for the names are given and fuller explanations are provided by Snow (1999-2002).

##### Colour/ Appearance/ Size (45 species)

*Anopheles atroparvus* (black and small)  
*Anopheles claviger* (club bearing)  
*Anopheles maculipennis* (spotted wing)  
*Anopheles melanoon* (black egg)  
*Anopheles plumbeus* (lead-coloured)  
*Anopheles cinereus* (ash-coloured, grey)  
*Anopheles multicolor* (many colours)  
*Anopheles pulcherrimus* (very beautiful)  
*Aedes cinereus* (ash-coloured, grey)  
*Aedes vittatus* (with a fillet / ribbon)

subgenus *Stegomyia* (covered fly)  
*Aedes albopictus* (painted white)  
*Culex modestus* (unassuming/ unpretentious)  
*Culex pusillus* (tiny)  
*Culex laticinctus* (wide girdle)  
*Culex perexiguus* (very small)  
*Culex tritaeniorhynchus* (three banded proboscis)  
 subgenus *Maillotia* (wrapped in swaddling clothes)  
*Culex impudicus* (impudent, shameless)  
 genus/ subgenus *Culiseta* (gnat with bristles)  
*Culiseta longiareolata* (long open spaces)  
 subgenus *Culicella* (small gnat)  
*Culiseta fumipennis* (smoky wing)  
*Culiseta ochroptera* (yellow ochre wing)  
*Culiseta annulata* (ringed)  
*Culiseta glaphyroptera* (elegant wing)  
*Culiseta subochrea* (almost yellow-ochre)  
*Ochlerotatus echinus* (spiny)  
*Ochlerotatus geniculatus* (with a knee)  
*Ochlerotatus annulipes* (ringed foot)  
*Ochlerotatus atropalpus* (black palp)  
*Ochlerotatus cyprius* (copper coloured)  
*Ochlerotatus detritus* (rubbed away/ naked)  
*Ochlerotatus diantaeus* (two pillars)  
*Ochlerotatus dorsalis* (pertaining to the back)  
*Ochlerotatus euedes* (well shaped)  
*Ochlerotatus flavescens* (yellowish)  
*Ochlerotatus hexodontus* (six teeth [comb scales])  
*Ochlerotatus leucomelas* (white and black)  
*Ochlerotatus nigrinus* (black, dark)  
*Ochlerotatus nigripes* (black feet)  
*Ochlerotatus nigrocanus* (black and whitish-grey)  
*Ochlerotatus pionips* (fat worm/ large larva)  
*Ochlerotatus pulcritarsis* (beautiful ankle)  
*Ochlerotatus pullatus* (clad in black)  
*Ochlerotatus sticticus* (dappled)  
*Ochlerotatus lepidonotus* (scaled back)  
 genus *Orthopodomyia* (straight footed fly)  
*Orthopodomyia pulcripalpis* (beautiful palps)  
 genus *Uranotaenia* (heavenly-coloured band)  
*Uranotaenia unguiculata* (finger or toe-nail)

**Distiguated from another taxon (7 species)**

*Anopheles superpictus* (similar to *An. pictus*)  
*Aedes geminus* (twin of *Ae. cinereus*)  
 subgenus *Aedimorphus* (distinct from but related to *Aedes*)  
*Culex mimeticus* (imitation, mimic of another species [*An. superpictus*])  
 subgenus *Neoculex* (new form of *Culex*)  
 subgenus *Allothobaldia* (different from *Theobaldia* = *Culiseta*)  
*Ochlerotatus duplex* (similar to *Oc. dorsalis*)  
*Ochlerotatus punctodes* (resembling *Oc. punctor*)  
 subgenus *Rusticoides* (resembling *Oc. rusticus*)

*Ochlerotatus quasirusticus* (a sort of *Oc. rusticus*)  
*Ochlerotatus subdiversus* (close to or smaller than *Oc. diversus*)  
subgenus *Pseudoficalbia* (resemblance to *Ficalbia*)

**Patronymics (22 species)**

*Anopheles beklemishevi* (Beklemishev)  
*Anopheles labranchiae* (Labranca)  
*Anopheles marteri* (Marter)  
*Anopheles messeae* (Messea)  
*Anopheles petragnani* (Petragnani)  
*Anopheles sacharovi* (Sacharov)  
subgenus *Cellia* (Celli)  
*Anopheles sergentii* (Sergent)  
genus *Coquillettidia* (Coquillett)  
*Coquillettidia buxtoni* (Buxton)  
*Coquillettidia richiardi* (Richiardi)  
subgenus *Barraudius* (Barraud)  
*Culex brumpti* (Brumpt)  
*Culex theileri* (Theiler)  
*Culex martinii* (Martini)  
*Culiseta bergrothi* (Bergroth)  
subgenus *Finlaya* (Finlay)  
*Ochlerotatus gilcolladoi* (Gil Collado)  
*Ochlerotatus behningi* (Behning)  
*Ochlerotatus berlandi* (Berland)  
*Ochlerotatus coluzzi* (Coluzzi)  
*Ochlerotatus mariae* (Marie)  
*Ochlerotatus surcoufi* (Surcouf)  
*Ochlerotatus thibaulti* (Thibault)  
*Ochlerotatus zammitti* (Zammit)  
*Ochlerotatus refiki* (Refik Saydam)

**Place of discovery/ distribution (12 species)**

*Anopheles algeriensis* (Algeria)  
*Anopheles hyrcanus* (ancient Hyrcania)  
*Aedes esoensis rossicus* (Ezo = Hokkaido, Japan and Russia)  
*Aedes aegypti* (Egypt)  
*Aedes cretinus* (Crete)  
*Culiseta alaskaensis* (Alaska)  
*Ochlerotatus japonicus japonicus* (Japan)  
*Ochlerotatus caspius* (Caspian Sea)  
*Ochlerotatus cataphylla* (Fallen Leaf, California)  
*Ochlerotatus hungaricus* (Hungary)  
*Ochlerotatus phoeniciae* (ancient Phoenicia)  
*Ochlerotatus krymmontanus* (Crimean mountains)

**Habitat (6 species)**

*Culex torrentium* (rapid/ torrent)

*Culex deserticola* (desert)  
*Culex hortensis* (garden)  
*Culiseta litorea* (sea shore)  
*Ochlerotatus riparius* (river bank)  
*Ochlerotatus rusticus* (rural)

#### Nuisance (5 species)

genus/ subgenus *Anopheles* (troublesome)  
genus/ subgenus *Aedes* (troublesome)  
*Aedes vexans* (annoying)  
*Culex pipiens* behavioural form (*molestus*) (annoying)  
*Culex territans* (alarming)  
*Culiseta morsitans* (biting)  
genus/ subgenus *Ochlerotatus* (most troublesome)  
*Ochlerotatus excrucians* (tormenting)  
*Ochlerotatus punctor* (stinger)

#### Sound (2 species)

*Culex pipiens* (piping)  
*Ochlerotatus cantans* (singing)

#### Abundance (2 species)

*Culex vagans* (widespread)  
*Ochlerotatus communis* (common)

#### Behaviour (2 species)

*Ochlerotatus impiger* (active)  
*Ochlerotatus intrudens* (intrudes into dwellings)

#### Gnat

genus/ subgenus *Culex* (gnat, midge)

#### References

- Linton, Y-M., Smith L. & Harbach, R.E.(2002) Observations on the taxonomic status of *Anopheles subalpinus* Hackett & Lewis and *An. melanoon* Hackett. *European Mosquito Bulletin* 13, 1-7.
- Snow, K.R. (1999-2002) The names of European mosquitoes. Parts 1-11. *European Mosquito Bulletin* 3, 12-13 (1999); 4, 11-13 (1999); 5, 18-20 (1999); 6, 12-14 (2000); 7, 34-37 (2000); 8, 19-21 (2000); 9, 4-8 (2001); 10, 32-33 (2001); 11, 27-30 (2001); 12, 17-20 (2002); 13, 27-28 (2002).