ORGANISM (ORGA)

BCH-ORGA-SCBD-260477-2

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Organism information

Scientific name

Anopheles coluzzii

Taxonomic Classification

Kingdom	Metazoa
Phylum	Arthropoda
Class	Insecta
Order	Diptera
Suborder	Nematocera
Family	Culicidae
Subfamily	Anophelinae
Genus	Anopheles
Species	Anopheles coluzzii

Alternate scientific name(s) (synonym(s))

Anopheles coluzzii Coetzee & Wilkerson, 2013
Anopheles gambiae M

Common name(s)

African malaria mosquito	EN
Malaria mosquito	EN
Mosquito	EN

Additional taxonomic classification information

? Catalogue of Life *[English]*

Type of organism

Insects

Domestication

Wild

Characteristics related to biosafety

Centre(s) of origin

Likely Western Africa	EN

Habitat range

There are two main sub-Saharan habitats; aquatic and terrestrial. Eggs are laid and develop in aquatic habitats; small pools of open shallow fresh or non-polluted water, irrigation areas, or in ephemeral bodies of standing water such as hoof prints, tyre tracks, exposed to sunlight. Adults are found in terrestrial habitats, close to and/or inside human habitations. The larval stages tolerate high levels of salinity and organic pollution in breeding habitats. Compared to other species in the *Anopheles gambiae* species complex, *An. coluzzii* prevails in larger, more permanent aquatic habitats associated with irrigation, and is more tolerant of aridity or dessication stress and is found closer to sea levels. The species is also predominant in urban environments.	EN

Geographical distribution

Found throughout tropical sub-Saharan Africa.	EN

Cross-compatible species

BCH-ORGA-SCBD-260392-1 ORGANISM | ANOPHELES GAMBIAE (AFRICAN MALARIA MOSQUITO, MOSQUITO, MALARIA MOSQUITO, ANOGA) | Insects

Known pathogenicity and/or allergenicity

Anopheles coluzzii (along with *An.gambiae and An.arabiensis*) is a main vector of malaria in sub-Saharan Africa.	EN

Common use(s)

Research

Additional Information

While hybrid males from most crosses between species of the *An. gambiae* complex are sterile, males from crosses between *An. gambiae* and *An. coluzzii* do not show signatures of genetic incompatibilities and are fully fertile, with no obvious loss in fitness under laboratory conditions. *Anopheles gambiae sensu lato* is a complex of biological siblings which are genetically and behaviourally distinct and vary in their importance as malaria vectors. The members of the complex are morphologically indistinguishable as adults and are identified using molecular methodologies. The *Anopheles gambiae* complex of sibling species (1974; Coetzee et al., 2013) comprises nine related but reproductively isolated species that are almost indistinguishable morphologically: *Anopheles amharicus* (Hunt et al., 2013), *Anopheles arabiensis* (Patton 1905), *Anopheles bwambae* (White 1985), *Anopheles gambiae* (Giles 1902), *Anopheles coluzzii* (Coetzee & Wikerson 2013), *Anopheles melas* (Theobald 1903),	EN

Anopheles merus (Dönitz 1902), and *Anopheles fontenillei* (Barron et al., 2018).

Additional information on the distribution of mosquito species that transmit malaria, can be found at the Malaria Atlas Project: https://malariaatlas.org.

Other relevant website addresses and/or attached documents

Malaria Atlas Project *[English]*

? NCBI Taxonomy Browser - Anopheles coluzzii *[English]*

? GenBank - Anopheles coluzzii genome *[English]*

? PLOS Pathogens - A New Chromosomal Phylogeny Supports the Repeated Origin of Vectorial Capacity in Malaria Mosquitoes of the Anopheles gambiae Complex *[English]*

? Scientific Reports - Analysis of natural female post-mating responses of Anopheles gambiae and Anopheles coluzzii unravels similarities and differences in their reproductive ecology *[English]*

? Parasites & Vectors - A global map of dominant malaria vectors *[English]*

? Evolutionary Applications - Tracing the origin of the early wet-season Anopheles coluzzii in the Sahel *[English]*

? Malaria Journal - Larval ecology of Anopheles coluzzii in Cape Coast, Ghana: water quality, nature of habitat and implication for larval control *[English]*

? Scientific Reports - Ecological plasticity to ions concentration determines genetic response and dominance of Anopheles coluzzii larvae in urban coastal habitats of Central Africa *[English]*

? Parasites & Vectors - Behavioural plasticity of Anopheles coluzzii and Anopheles arabiensis undermines LLIN community protective effect in a Sudanese-savannah village in Burkina Faso *[English]*

? Communications biology - The origin of island populations of the African malaria mosquito, Anopheles coluzzii *[English]*

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Further Information

Questions about the Cartagena Protocol on Biosafety or the operation of the Biosafety Clearing-House may be directed to the Secretariat of the Convention on Biological Diversity.

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