

# Culex modestus

Family **Culicidae**

Subfamily **Culicinae**



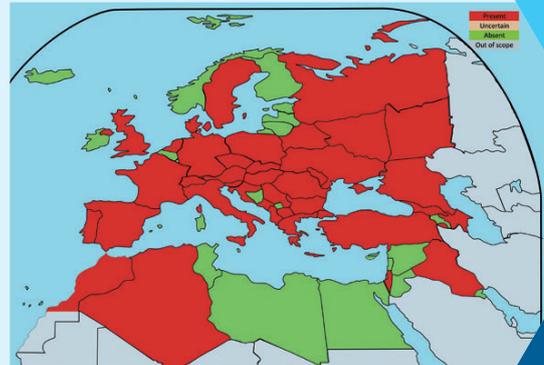
*Culex modestus* is a widespread mosquito throughout the Palaearctic region. This mosquito is considered in some parts of Europe as the main bridge vector of West Nile virus between birds and humans (southern France, Danube delta, Caspian and Asov sea deltas, and the Volga region).

*Culex modestus* belongs to the small subgenus *Barraudius* which includes only one other species in the Palaearctic region: *Cx. pusillus*.



## Distribution around the Mediterranean Basin

*Culex modestus* is widely distributed in the Palaearctic region from England to southern Siberia. It is considered as a common species in southern and central Europe. *Culex modestus* has been reported throughout the Maghreb but its presence is always limited.



Distribution of *Culex modestus*  
2018 / MosKeyTool



## Vector surveillance

*Cx. modestus* is an exophagous and exophilic species. The species can represent locally a nuisance. Adults appear in July and can be abundant until the end of August; they disappear in late September.

## Vector control

- Environmental management
- Personal protection against mosquito bites

## Transmission

### Vector of:

**West Nile Virus**

**Tahyna virus**

**Myxomatosis virus**

**Lednice virus**

### Found naturally infected with:

**Tularemia**



## References, tools

**The mosquitoes of Europe.** An identification and training programme. Schaffner F, Angel G, Geoffroy B, Hery JP, Rhaïem A, Brunhes J. Montpellier: IRD Éditions. 2001.

**Les Culicidae d'Afrique Méditerranéenne.** Brunhes J, Rhaïem A, Geoffroy B, Angel G, Hery JP. IRD éditions. 2000.

**Mosquitoes and Their Control**, 2<sup>nd</sup> ed. Norbert Becker, Dusan Petric, Marija Zgomba, Clive Boase, Madon Minoo, Christine Dahl, Achim Kaiser, Springer, 2010.

# Culex (*Barraudius*) *modestus*

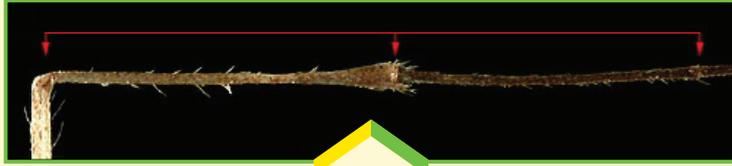


## MORPHOLOGICAL DESCRIPTION



This species has only dark scales on the abdominal targa

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Leg III: the tibia is clearly longer than the tarsomere 1

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Prespiracular and postspiracular setae are absent

Presence of a patch of pale scales on the postspiracular area

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**Body length:** 6 mm



**Biting behaviour:** Adult do not enter buildings and feed outdoors mainly at dusk.



**Immature habitats:** Larvae inhabit fresh to slightly saline water and breed in irrigation channels, marshes with rich vegetation, reedbeds and rice fields. Larvae express a preference for shallow and sunlit breeding sites and are often associated with those of the *Anopheles* species.



**Host preference:** Feed predominantly on birds but can also feed on a wide variety of mammals including humans.



## EASILY CONFUSED SPECIES

*Culex modestus* can be confused with *Cx. adairi*, *Cx. pusillus* and *Cx. martinii*. The four species have abdominal terga with dark scales only. However, the three latter species do not have any patch of pale scales on the postspiracular area. The tibia of leg III is clearly longer than the tarsomere 1 in *Cx. modestus*, *Cx. adairi* and *Cx. pusillus*, but not in *Cx. martinii*.

*Cx. pusillus* is mainly a halophilic species. It is not a very common species. In the Mediterranean area, it is reported only from Eastern Mediterranean (from eastern Algeria to Egypt) and from eastern and southern Greece.

*Culex adairi* is a rare species only reported from Egypt. Larvae are found in clear and non-permanent water from rock holes. Larvae can be associated with *Culiseta longiareolata* and *Cx. deserticola*.



*Culex pusillus* presents a characteristic thin line of pale scales at the base of costal vein

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Leg III of *Cx. martinii* has tibia nearly as long as tarsomere 1

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