

## ***Culex (Culex) perexiguus* Theobald (Diptera: Culicidae), a mosquito species new to the Maltese fauna**

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### **Abstract**

*Culex (Culex) perexiguus* Theobald, 1903 is newly added to the mosquito fauna of Malta, which now numbers nine species, all in the subfamily Culicinae.

### **Keywords**

Mosquito, *Culex perexiguus*, Malta, new record

### **Introduction**

Eight mosquito species, all in the subfamily Culicinae, are currently reliably known from the central Mediterranean islands of Malta (da Cunha Ramos, 1992; Gatt, 1996). The islands, which lie 93 km south of Sicily and 288 km east of Tunisia, are semi-arid with a climate that is characterised by a mild, short wet season, and a protracted, dry summer. The average annual rainfall is 530 mm (Cassar *et al.*, 2008) and few bodies of permanent freshwater exist.

### **Materials and Methods**

A single male specimen of *Culex (Culex) perexiguus* Theobald, 1903 was swept by the author from emergent vegetation at the valley system of Wied Qannotta, Malta, N 35°56'19", E 14°24'43", 25 m above mean sea level, on 5 November 1998. The specimen was identified using the keys to the subgenus *Culex* in Harbach (1988), and confirmed by comparison of the dissected genitalia with figures given by Harbach (1988). It was in good condition and is preserved in the author's collection.

### **Discussion**

*Culex perexiguus* is widely distributed in northern Africa and southwestern Asia, from where it extends eastward to India. In Europe, it has been recorded from Albania, Bulgaria, Greece, Italy and its islands, Portugal and Spain (Snow & Ramsdale, 2004). The status of this species in southern Europe has been clarified by Harbach (1999) and previous records of *Cx. univittatus* Theobald, 1901 from this region should be regarded as *Cx. perexiguus*.

The immature stages are known to develop in a wide variety of standing water bodies, including container habitats, generally away from human habitations, and can tolerate some salinity (Harbach, 1988). Wied Qannotta is a largely human-altered watercourse, characterised by a terrace-dominated rural landscape, mostly in active cultivation. The valley bed floral community

constitutes a mosaic comprising mostly ruderal, riparian and steppic assemblages, interspersed by archaeophytic trees like the carob (*Ceratonia siliqua*) and the fig (*Ficus carica*). The general gradient of the valley system is not too acute and water run-off during the wet season flows gently. During the initial weeks of the dry season, as precipitation progressively decreases, ponding occurs, as a result of which a number of small isolated 'wetlands' develop, primarily on the flatter regions of this run-off water conduit. This creates a micro-habitat which, in an otherwise arid environment, is somewhat rare in the Maltese Islands and therefore of immense importance to species whose development is dependent on humid conditions. The presence of fertilizers and pesticides in water run-off, together with the accumulation of discarded farm produce following the harvesting of crops, results in an abundance of nitrophilous vegetation (Cassar, *pers. comm.*).

Believed to feed mainly on birds, females of *Cx. perexiguus* have recently been discovered to take bovine blood (Gad *et al.*, 1999). Occasionally, females will enter houses and bite humans (Kirkpatrick, 1925). West Nile virus and Sindbis virus (Samina *et al.*, 1986), as well as Rift Valley fever virus (Turell *et al.*, 1996) have been isolated from this species.

*Culex perexiguus* would appear to be a rare species in Malta, where it is known only from the single record reported here. For this reason, it is unlikely to be of significant medical importance.

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