

Notes on some Cixiidae from Malta (Auchenorrhyncha: Fulgoromorpha)

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Summary: Two species of the Cixiidae tribe Pentastirini are recorded from Malta for the first time. *Reptalus panzeri* (Löw, 1883) was previously only recorded as *Reptalus* cf. *panzeri* based on female specimens; the presence of this species is now confirmed based on a single male specimen. *Pentastiridius leporinus* (Linnaeus, 1761) is recorded from Malta for the first time. *Tachycixius pilosus* (Olivier, 1791) is removed from the list of Maltese Auchenorrhyncha. The identity of some *Tachycixius* specimens is discussed; their true identity remains unclear.

Keywords: *Pentastiridius leporinus*, *Reptalus panzeri*, *Tachycixius*, faunistics

1. Introduction

The Auchenorrhyncha fauna of Malta has in recent years received some attention by local and international entomologists. In 2012, a first list of Auchenorrhyncha was published, listing 46 species from the Maltese islands (D'Urso & Mifsud 2012). Subsequent publications on the Maltese Auchenorrhyncha listed several new species and corrected the identity of the single Cicadidae species from Malta, which was previously misidentified as *Cicada orni* Linnaeus, 1758. This brings the total number of published Auchenorrhyncha to 77 species (D'Urso 2016; D'Urso et al. 2019; Gjonov et al. 2020; Mifsud et al. 2020; Gjonov & Mifsud 2024). Besides these 77 species, three species have been published as records of uncertain identity: *Euscelis ohausi* Wagner, 1939, *Reptalus panzeri* (Löw, 1883) and *Tachycixius osellai* (Dlabola, 1980). The genus *Hecalus* Stål, 1864 has only been published at genus-level.

This work presents new records for the family Cixiidae from Malta, including the first certain record of *Reptalus panzeri* and the first record of *Pentastiridius leporinus* (Linnaeus, 1761). *Tachycixius pilosus* (Olivier, 1791) is removed from the Maltese fauna-list and a short discussion on the identity of specimens belonging to the *Tachycixius pilosus*-group from Malta is given. Photos of habitus and aedeagus of all discussed species are given for reference.

2. Material and Methods

The author studied Cixiidae collected on the Maltese archipelago between 1976 and 2001 by Martin J. Ebejer (Honorary Research Fellow, National Museum of Wales, Cardiff.). This material is currently deposited in his personal collection and will eventually be deposited in the Oxford University Museum of Natural History (Oxford, United Kingdom). In order to clarify the identity of the record of *Tachycixius pilosus* from Malta, photos of the specimen were requested, and the provided photos were studied. Label data of the studied specimens is given.

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3. Results

Pentastiridius leporinus (Linnaeus, 1761) (Fig. 1)

Studied material. Malta – Salina, 16 June 1977, 1 ♂ 1 ♀, leg. & col. M.J. Ebejer.

Distribution. A widespread species throughout Europe, North-Africa and into Central-Asia, Mongolia and China (Nast 1972).

Reptalus panzeri (Löw, 1883) (Fig. 2)

Studied material. Malta – St. Maria Comino, 12 July 1976, 1 ♂, leg. & col. M.J. Ebejer.

Distribution. A widespread species, distributed throughout central and southern Europe, west towards Spain, France and the United Kingdom, east towards the Caucasus (Nast 1972).

Tachycixius sp. (Figs. 3-4)

Studied material. Malta – Mistra, mixed garigue vegetation, 19 March 1993, 1 ♀, leg & col. M.J. Ebejer; Malta – Mtahleb, 4 March 2001, 1 ♂ 1 ♀, leg. & col. M.J. Ebejer. Studied from photos: Malta – Ghadira Nature Reserve, 8 June 2019, 1 ♂, leg. I. Gjonov (publ. in Gjonov et al. 2020).

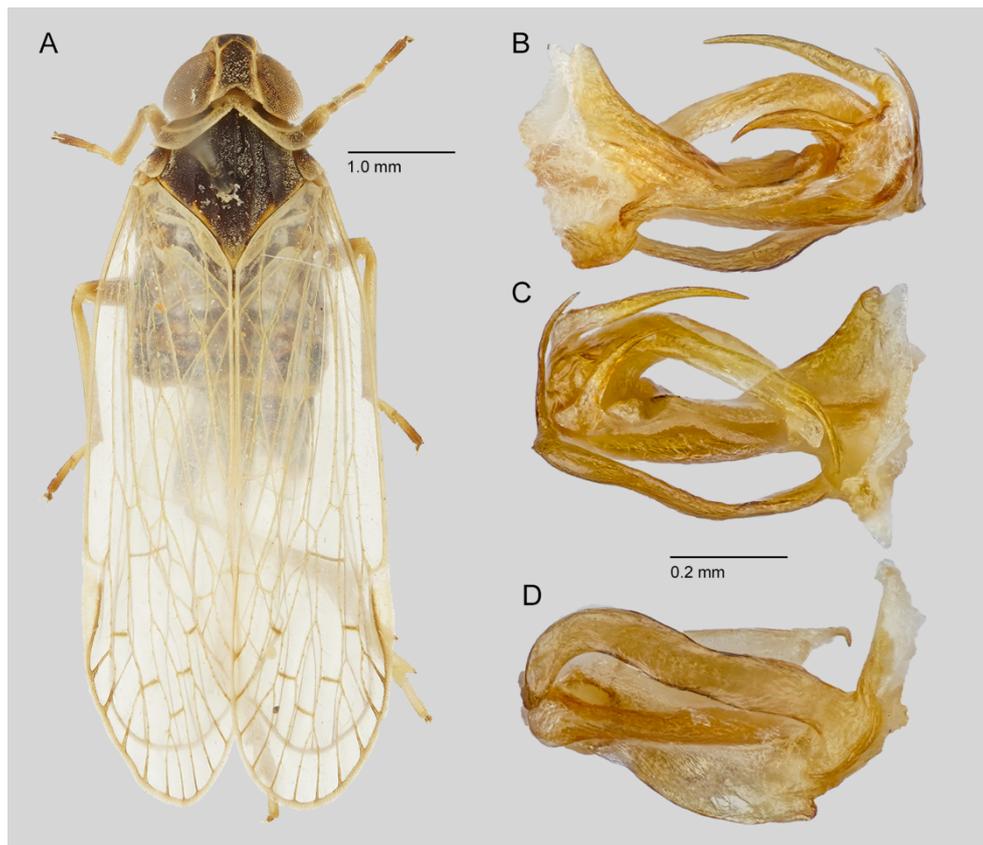


Fig. 1: *Pentastiridius leporinus* ♂, Malta. A: habitus, dorsal view; B: aedeagus, dorsal view; C: aedeagus, ventral view; D: aedeagus, right lateral view (photo: M. de Haas).

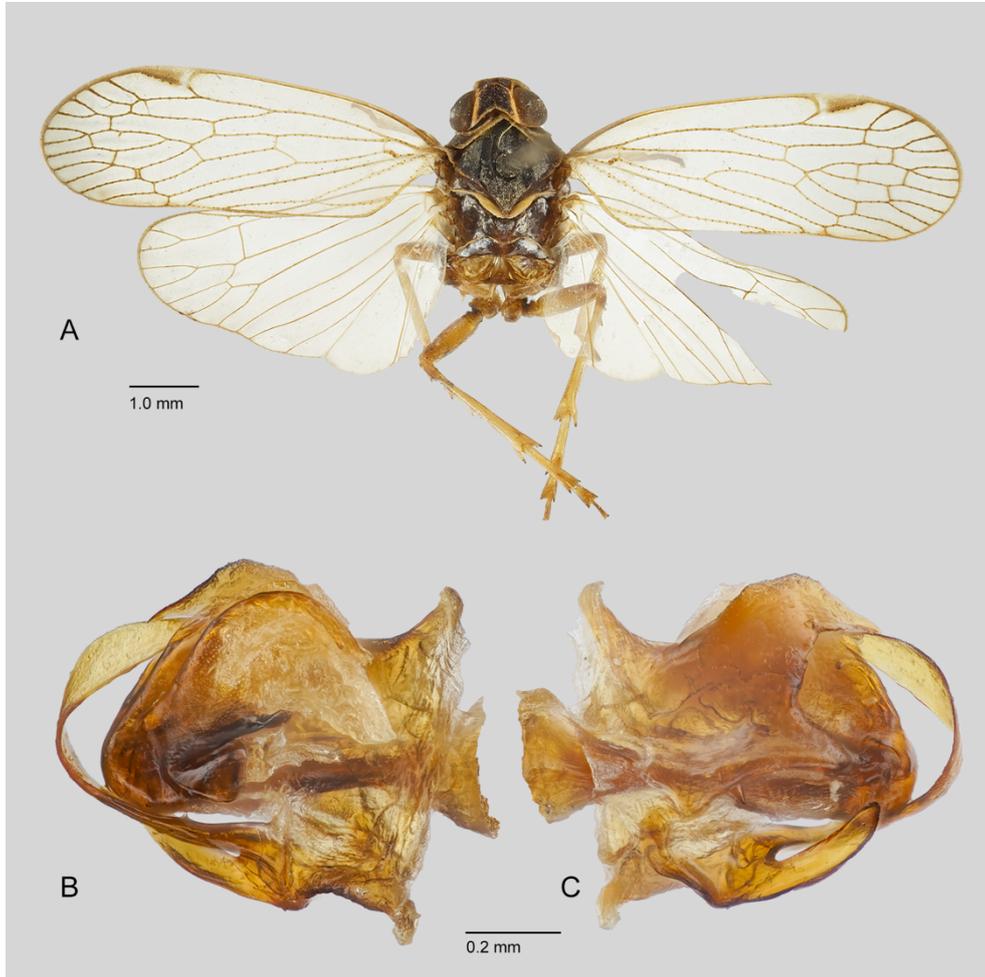


Fig. 2: *Reptalus panzeri* ♂, Malta. A: habitus, dorsal view; B: aedeagus, ventral view; C: aedeagus, dorsal view (photo: M. de Haas).

Note. Two species in the *Tachycixius pilosus*-group (sensu Holzinger 2000) are recorded from Malta: *Tachycixius remanei* D'Urso, 1999 by D'Urso & Mifsud (2012) and *Tachycixius pilosus* (Olivier, 1791) by Gjonov et al. (2020). The only published Maltese specimen of *T. pilosus* has been compared with figures 3-4 by I. Gjonov and the author and no notable differences have been found. *Tachycixius pilosus* should thus be removed from the list of Maltese Auchenorrhyncha.

The true identity of specimens in the *Tachycixius pilosus*-group from Malta remains unclear. When compared to *Tachycixius pilosus*, the genitalia differ in shape of spines on the phallosome: left apical spine (strongly curved in Maltese specimens vs. nearly straight in *T. pilosus*), right apical spine (long, medially more or less straight in Maltese specimens vs. shorter, more or less evenly curved in *T. pilosus*). Compared to *Tachycixius remanei* from Sicily the fol-

lowing differences are found: length of vertex (short in Maltese specimens vs. long in *T. remanei*), ventral spine of phallotheca (more or less straight ventrally and larger in Maltese specimens vs. directed to the left and smaller in *T. remanei*), right apical spine of phallotheca (longer and more curved in *T. remanei* compared to Maltese specimens). The taxonomic implications of the mentioned differences are not yet clear and need further study.

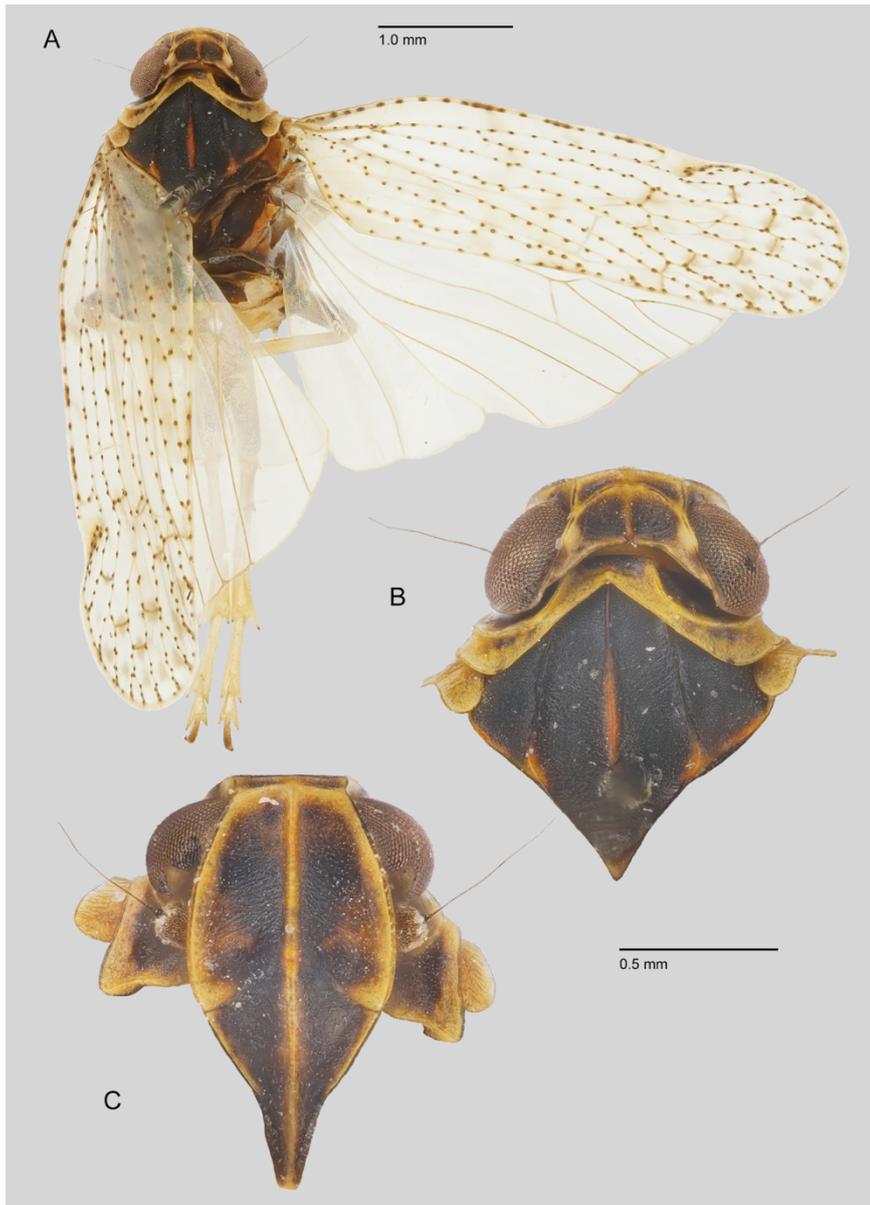


Fig. 3: *Tachycixius* sp. ♂, Malta. A: habitus, dorsal view; B: head, dorsal view; C: head, frontal view (photo: M. de Haas).

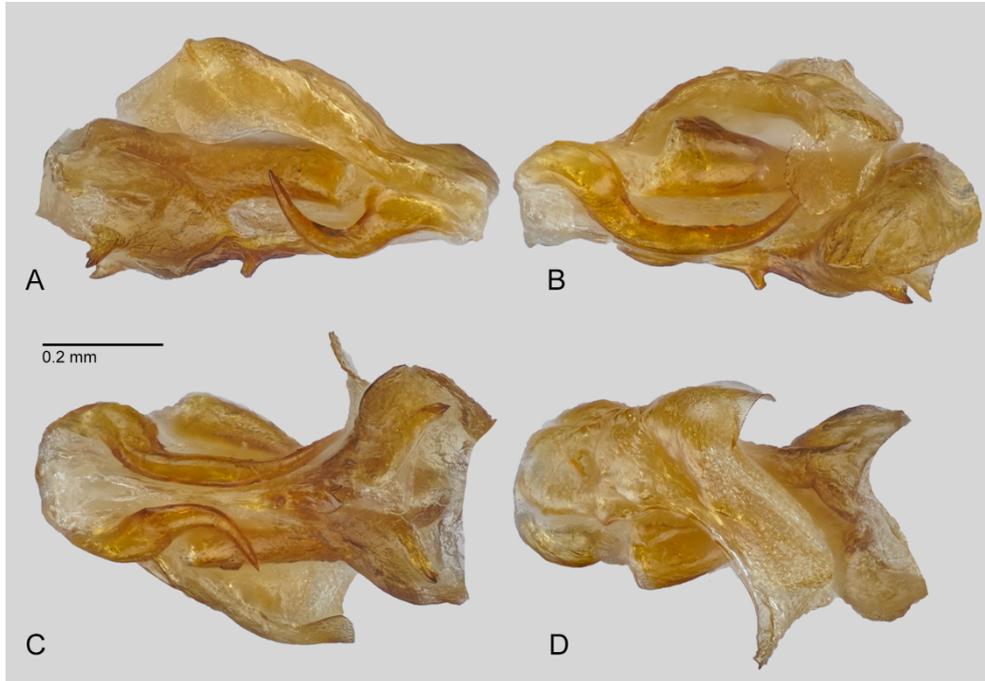


Fig. 4: *Tachycixius* sp. ♂ aedeagus, ventral spine damaged, Malta. A: aedeagus, left lateral view; B: aedeagus, right lateral view; C: aedeagus, ventral view; D: aedeagus, dorsal view (photo: M. de Haas).

4. Discussion

With the new records of *Reptalus panzeri* and *Pentastiridius leporinus* and the removal of *Tachycixius pilosus*, 78 Auchenorrhyncha species have now been identified from Malta, with two additional species of uncertain identity and one taxon only identified to genus-level. With ongoing efforts to study Auchenorrhyncha from Malta, both in the field as well as through existing collections, more species are to be expected from the islands.

For further clarification of the *Tachycixius* species from Malta, a larger material, including previous published specimens of *T. remanei* from Malta and *Tachycixius* specimens in a wider geographical area, need to be studied.

5. Zusammenfassung

Bemerkungen zu einigen Cixiidae von Malta. – Zwei Arten des Cixiiden-Tribus Pentastirini werden von Malta das erste Mal berichtet. *Reptalus panzeri* (Löw, 1883) wurde zuvor nur als *Reptalus* cf. *panzeri* anhand von weiblichen Exemplaren nachgewiesen; nun konnte das Vorkommen dieser Art auf Basis eines männlichen Exemplares bestätigt werden. *Pentastiridius leporinus* (Linnaeus, 1761) wird ebenfalls zum ersten Mal für Malta nachgewiesen. *Tachycixius pilosus* (Olivier, 1791) wird aus der Liste der Zikaden Maltas entfernt. Die Identität einiger *Tachycixius*-Exemplaren von Malta wird diskutiert; ihre wahre Identität bleibt allerdings unklar.

6. Acknowledgements

Martin J. Ebejer is thanked for kindly providing the specimens upon which this publication is based. Ilia Gjonov is thanked for providing photos of his *Tachycixius* material from Malta and for his direct comparison of this material with specimens of *T. remanei* from Sicily.

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