

A new *Eucalyptus* pest in Malta: *Thaumastocoris peregrinus* Carpintero & Dellapé, 2006 (Hemiptera: Heteroptera: Thaumastocoridae)

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ABSTRACT. *Thaumastocoris peregrinus* Carpintero & Dellapé (Hemiptera: Thaumastocoridae) is here recorded for the first time from the Maltese Islands. It represents an alien invasive species originating from Australia which is now almost cosmopolitan in distribution.

KEY WORDS. Mediterranean, alien, invasive, bronze bug.

INTRODUCTION

In these last 25 years, several insects strictly associated with *Eucalyptus* have been recorded from the Maltese Islands. The first records were those of the longhorn beetles, *Phoracantha semipunctata* (Fabricius, 1775) (MIFSUD & BOOTH, 1997) and *P. recurva* Newman, 1840 (MIFSUD, 2002). In 2006, two gall-inducing eulophids were also found in Malta, *Leptocybe invasa* Fisher & La Salle, 2004 and *Ophelimus maskelli* Haliday, 1844 (MIFSUD, 2012). Around 2013, two jumping plant-lice were also locally found, *Blastopsylla occidentalis* Taylor, 1985 and *Glycaspis brimblecombei* Moore, 1964 (MIFSUD, 2020). All of the above-mentioned insects originate in Australia and are now considered as alien invasive species not only in the Maltese Islands but in many territories around the world. In December 2020, the bronze bug, *Thaumastocoris peregrinus* Carpintero & Dellapé (Hemiptera: Thaumastocoridae) was found in Malta and information related to this species is reported here under.

MATERIALS AND METHODS

Specimens were collected by using a sweeping net and beating *Eucalyptus* branches in several localities in Malta. Specimens were either dry mounted or preserved in 70% ethanol and are housed in the private collection of both authors. The specimen in figure 1 was photographed using an Olympus TG-5 on macro mode with focus stacking in conjunction with a Leica M80 stereomicroscope.

Thaumastocoris peregrinus Carpintero & Dellapé, 2006

(Fig. 1)

Material examined. MALTA: Msida, 26.xii.2020, numerous adults and larvae on *Eucalyptus* leg. D. Mifsud; Zejtun, 27.xii.2020, numerous adults and larvae on *Eucalyptus* leg. D. Mifsud; Valletta, 27.xii.2020, numerous adults and larvae on *Eucalyptus* leg. D. Mifsud; Qormi, 27.xii.2020, numerous adults and larvae on *Eucalyptus* leg. D. Mifsud.

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Figure 1: *Thaumastocoris peregrinus* (specimen from Msida).

Thaumastocoris peregrinus belongs to a small family of phytophagous sap-feeding hemipteran bugs, the Thaumastocoridae. This family, with around 20 described species, was originally restricted to the southern hemisphere. The genus *Thaumastocoris*, currently accommodates 14 described species (NOACK *et al.*, 2011) and all species are native and occur in Australia with the exception of *T. peregrinus* which in these last 20 years became a major pest of *Eucalyptus* plantations worldwide. The species was first detected outside its native range in South Africa (JACOBS & NESER, 2005) and soon afterwards it was also found in South America (Argentina) (CARPINTERO & DELLAPÉ, 2006). The bronze bug was then recorded in other South American territories (including Uruguay, Paraguay, Brazil and Chile) (NOACK & COVIELLA, 2006; MARTÍNEZ & BIANCHI, 2010; WILCKEN *et al.*, 2010; SOLIMAN *et al.*, 2012), Mexico (JIMÉNEZ-QUIROZ *et al.*, 2016) and the United States of America (HODEL *et al.*, 2016), in other parts of Africa (Malawi, Kenya and Zimbabwe) (HURLEY *et al.*, 2011), Reunion Island (STREITO *et al.*, 2016) and in New Zealand (SOPOW *et al.*, 2012). In the Palaearctic, *T. peregrinus* was first detected on mainland Italy (LAUDONIA & SASSO, 2012) followed by Portugal (GARCIA *et al.*, 2013), Spain (VIVAS *et al.*, 2015), Sicily (CARAPEZZA, 2014; SUMA *et al.*, 2014), Sardinia (DEIANA *et al.*, 2018), Israel (NOVOSELSKY & FREIDEBERG, 2016), Albania (HEYDEN, 2017) and Greece (PETRAKIS, 2018).

The bronze bug is known to attack more than 30 different species of *Eucalyptus* spp. Adults are light brown in colour with darker spots, approximately 3 mm long, with a flattened body. It is easily distinguished from other species of hemipteran bugs by the tubercle on the anterolateral angles of the anterior lobe of pronotum. Eggs are black, elliptical in shape and can be found individually or

in patches on leaves and twigs. Nymphs develop through five instars to the adult stage. The bronze bug completes multiple generations per year. The damage is caused by the feeding punctures of adults and larvae on leaves causing silvery chlorosis that evolves to leaf bronzing and drying. The canopy may progressively turn into a brown-reddish discoloration.

Thaumastocoris peregrinus can be considered as being well established in Malta since more than 100 specimens were collected from each of the four mentioned localities in Malta. The sampling effort was also minimal, with less than 10 minutes of beating *Eucalyptus* branches in each location. Most likely, its accidental introduction in Malta must have taken place sometime after it was introduced in Sicily in 2014. The distribution range of *T. peregrinus* is now almost cosmopolitan, and this is mainly due to human activities providing new introductory pathways to the bug (e.g. world trade of *Eucalyptus* plantations) and to its capacity of natural dispersal over long distances.

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