



A new scale insect genus, *Torosaspis* (Hemiptera: Sternorrhyncha: Coccoidea: Diaspididae), with a new species, *Torosaspis turcica*, from Turkey

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Abstract

On the basis of morphological differences between *Acanthomytilus* species feeding on woody plants and those feeding on Poaceae, a new genus, *Torosaspis*, is introduced to take a new species, *Torosaspis turcica*, off *Pinus brutia*, and two species of *Acanthomytilus* that feed on coniferous plants. The adult female of the new species is described and illustrated. In addition, an identification key is provided to separate the three species now in *Torosaspis*.

Key words: new genus, new species, new combinations, *Torosaspis*, *Torosaspis turcica*, *Acanthomytilus*, *Pinus brutia*

Introduction

In 2009 and again in 2010, armoured scale insects were collected from the needles of *Pinus brutia* Tenore (Pinaceae) in the Mediterranean Region of Burdur, Turkey. Many species of armoured scale insects can be found on conifers, mostly oligophagous species, but also some that specialise on coniferous trees (Zahradnik, 1990). At the present time, 31 species of Coccoidea have been recorded on conifers in Turkey (Ülgentürk *et al.*, 2004; Akkuzu *et al.*, 2006; Kaydan *et al.*, 2007). The genus *Acanthomytilus* was described by Borchsenius (1950) and currently includes 14 species worldwide. Of these, only 3 species live on woody plants whereas the remainder live mostly on poaceous plants. Takagi (1970) remarked that “All these species associated with woody plants may have nothing to do with real members of the genus. *A. cedricola* and *A. farsianus* are similar to *Pallulaspis ephedrae* Ferris; *bicuspis* is a member of *Nilotaspis* Ferris; and *kurdicus* is rather similar to *Lepidosaphes* species”. The 14 species in *Acanthomytilus*, therefore, belong to more than one natural group separated by morphology and biology (Borchsenius, 1966; Danzig, 1993; Miller & Gimpel, 2009; Ben-Dov *et al.*, 2010).

In the Middle East, 5 *Acanthomytilus* species are currently known, of which two are linked to conifers, one lives on woody plants and two on Poaceae (Bodenheimer, 1943; Balachowsky, 1954; Balachowsky & Kaussari, 1955; Balachowsky & Alkan, 1956; Kozár *et al.*, 1996; Doğanlar *et al.*, 2010). Of them, *A. cedricola* Balachowsky & Alkan, is known on *Cedrus libani* in Turkey and on *Cupressus* in Iran (Moghaddam, 2004); *A. farsianus* Balachowsky & Kaussari, is known on *Cupressus sempervirens* in Iran; and *A. kurdicus* Bodenheimer feeds on *Acer cinerascens*, *A. insigne*, *A. monspessulanum*, *A. pseudoplatanus*, *Platanus orientalis* and *Prosopis spicigera* in Iraq and Iran (Balachowsky, 1954; Moghaddam, 2004; Ben-Dov, *et al.*, 2010). Of the species only known on Poaceae, *Acanthomytilus intermittens* (Hall) is known on *Erianthus ravennae* in Iran (Balachowsky, 1954), on *Eragrostis* sp. in Iraq (Bodenheimer, 1943), on *Imperata cylindrica* in Israel and on *Pennisetum dichotomum* in Egypt (Hall, 1924), and *A. sacchari* (Hall) feeds on *Arundo donax*, *Imperata cylindrica*, *Phragmites communis*, *Saccharum biflorum*, and *S. officinarum* in Egypt (Hall, 1923; Ezzat & Afifi 1966), and on *Sorghum halepense* in Turkey (Doğanlar *et al.* 2010). The two species that live on coniferous plants have: (a) marginal macroducts all single on abdominal segments IV–VII (formula 1,1,1,1). (b) glandular tubercles near the posterior spiracles and (c) the L₁ lobes closer together than on the species on Poaceae. Because of the heterogeneous composition of *Acan-*