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Population Dynamics of Lacebugs (Heteroptera: Tingidae) and its Natural Enemies in Almond Orchards of Turkey

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ABSTRACT

A study of the natural enemies of Tingidae species populations, in almond orchard located in the Diyarbakir, Elazig and Mardin areas of Turkey, was carried out during 2002-2003. *Monosteira* spp. is economically the most important tingid species of almond in Turkey and causes considerable damage. As a result of the study, three tingid species were found. Those species were *Monosteira lobulifera* Reuter, 1888, *M. unicostata* (Mulsant & Rey, 1852) and *Stephanitis pyri* (Fabricius, 1775). Their natural enemies, 24 predators' coccinellid species and 5 heteropter species were indicated in the almond areas.

Key words: Lacebugs, natural enemies, Almond, Turkey.

INTRODUCTION

Almond culture is considered to be of great economic importance in Turkey. Approximately 13% of total almond production of Turkey is obtained from Diyarbakır, Elazığ and Mardin (Anonymous, 1999). Over recent years, improvements have been continually introduced into its culture, concerning both the varieties grown and the agricultural techniques, to guarantee a high quality and quantity of produce, according to the principles of integrated pest management.

They are very small bugs, generally less than 4 mm long, and are all phytophagous (plant feeders). They usually feed on higher plants such as trees, shrubs and grasses or on other animals. There are about 1800 species of Lacebugs in the world (Ramel, 2005).

The current survey is the follow-up of a previous one which aims to increase the knowledge on the biodiversity of tingid species associated with almond orchards, and to analyse the role of beneficial arthropods in the control of the tingid population.