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MANTIS RELIGIOSA L. (MANTODEA: MANTIDAE) A NEW HOST FOR PODAGRION PACHYMERUM WALKER (HYMENOPTERA: TORYMIDAE) IN TURKEY

SUMMARY

The present survey was carried out in Şanlıurfa province in rice fields during 2013-2014 on Xanthium strumarium L. and Cyperus glomeratus L. infested with the ootheca of European mantid Mantis religiosa L. (Mantodea: Mantidae). Torymid parasitoid, Podagrion pachymerum (Walker) (Hymenoptera: Torymidae) was obtained from M. religiosa ootheca collected from X. strumarium and C. glomeratus species in Şanlıurfa province. M. religiosa is a new host record for P. pachymerum in Turkey. In addition, P. pachymerum is a new record for the insect fauna of Turkey.

Keywords: Mantis religiosa, Podagrion pachymerum, new host, new record, Turkey

INTRODUCTION

Mantis religiosa with the common name praying mantis or the European mantis belongs to order Mantodea, family Mantidae. It is one of the most well-known and widespread species within this family and genus Mantis. The European mantis is usually 5–7.5 cm in length and has shades of bright green to tan. It can be distinguished easily by a black-ringed spot beneath the fore coxae (Anonymous, 2014a).

Although a carnivore and an impressive predator, M. religiosa is harmless to humans and beneficial as well, because eats many pest species such as aphids, grasshoppers, the gypsy moth caterpillar, flies, mites. The European mantis is solitary species coming together only when mate, once per year. Females are known to eat the males after mating. Additionally, when an individual comes upon another mantis, cannibalistic behavior is performed. Females lay about 100 eggs in a white hardened foam ootheca is cemented to a tree branch or leaf. The larvae hatches in early spring and could be wind dispersed, or serves as nourishment for their siblings (Anonymous 2014b).

The family Torymidae with 986 described species (Noyes 2012) placed in about 70 genera are found worldwide. With wide range of hosts it is considered as important family of the superfamily Chalcidoidea from the biological and morphological perspective. The family contains two subfamilies, Toryminae with

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55 genera and Megastigminae with 12. Members of this family are both entomophagous and phytophagous (Grissell 1995).

The Torymidae wasps are recognized by attractive metallic coloured species with enlarged hind legs and generally long ovipositors. They are also recognized as one of the few groups of Chalcidoidea in which the cerci are visible (Anonymous 2014c). Many species are parasitoids on gall-forming insects and some are phytophagous sometimes usurping the galls formed by other insects.

The aim of this study was to determine the natural enemies of an impressive predator Mantis religiosa in Şanlıurfa.

**MATERIAL AND METHODS**

The oothecae of M. religiosa were collected from weeds (Xanthium strumarium L. and Cyperus glomeratus L.) in rice field in the provinces of Şanlıurfa (Siverek-Karacadağ) during October and November 2013, and were brought to the laboratory for rearing. During the course of the study, a total of 2 oothecae were collected.

The oothecae were reared in boxes containing X. strumarium and C. glomeratus branches from the same rice field. Distilled water was provided. The oothecae were reared at a temperature of 26±1°C, relative humidity of 65±5 %, and illumination of 3500 lux for 16 hours per day. The boxes were checked daily. The last mantis nymph and torymid wasp emerged.

Material examined: Şanlıurfa (Siverek-Karacadağ) (37°42′N, 40°11′E at altitude of about 1084 m.). Total: 31♀, 6♂ from oothecae of European mantid Mantis religiosa.

**RESULTS AND DISCUSSION**

As a result of this survey, a parasitoid P. pachymerum (Fig. 1) was recorded from oothecae of M. religiosa (Fig. 2).

![Figure 1. Podagrion pachymerum male (a) and female (b)](image-url)
**Mantis religiosa** L. (Mantodea: Mantidae) a new host for *Podagrion pachymerum*


**Distribution in Turkey**: New record to Turkey.

**Host plants**: *Xanthium strumarium* L. and *Cyperus glomeratus* L.


**New record host**: In the present study *Mantis religiosa* was recorded as a new host of *Podagrion pachymerum* for Turkey.

**CONCLUSION**

The family Torymidae is an important group because of its role as agricultural pests or biocontrol agent pests in many ecosystems. *Mantis religiosa* is a new host record for *Podagra pachymerium* in Turkey which was first determined in this study. In addition, *P. pachymerum* is a new record for the insect fauna of Turkey.

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REFERENCES


