

Phenology of *Latrodectus tredecimguttatus* (Rossi, 1790) (Araneae: Theridiidae) in Gaziantep Province, Turkey

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Abstract: Phenology of venomous spider *Latrodectus tredecimguttatus* collected in Gaziantep Province was studied. A female individual formed two cocoons on 8 and 17 September and died on 7 October, i.e. 13 days after releasing eggs. Totally, 683 offspring individuals were released. The duration of the egg stage was estimated at 197 days. The maturation period was 100-110 days for males and 215-225 days for females.

Keywords: Phenology, Spider, Theridiidae, *Latrodectus tredecimguttatus*

Introduction

Mediterranean Black Widow, *Latrodectus tredecimguttatus* (Rossi, 1790) is a poisonous spider (Yan *et al.*, 2007, Duan *et al.*, 2009) distributed in Mediterranean Region, including in Turkey and neighbouring countries such as Greece, Bulgaria, Moldova and Ukraine. In medical practice, the intoxication as a result of sticking by this species is known as latrodectism (Dzelalija & Medic, 2003) and is characterised by symptoms as anxiety, tachycardia, hypertension, sweating, nausea and vomiting (Erdur *et al.*, 2007). The phenology of this spider species is important in view of identifying periods of risk for human health.

The aim of the present study is to describe the phenology of *L. tredecimguttatus* in the climatic conditions of southern central Turkey.

Materials and Methods

We sampled a female individual of *L. tredecimguttatus* at the south-eastern edge of the pine forest at the campus of the Gaziantep University (37°02'02"N, 37°18'36"E, altitude 899 m) on 28 August 2002. The habitat was characterised by scarce vegetation. In laboratory conditions, it was transferred to a wooden vivarium with dimensions 60 x 60 x 60 cm and fed

with locusts and bug. This female individual left two cocoons. Offspring individuals were transferred to plastic cups (Velp, FOC 225 I model), kept in climate cabinet (average temperature 20±1°C, ventilated every day between 10:00 and 16:00) and fed with *Drosophila* sp. every sixth day.

The identification of the spider was confirmed by comparison with characters presented by Nentwig (2012). Distribution data are presented according to catalogue by Platnick (2012) and several other publications (Varol, 2003, Topçu *et al.*, 2005, Bayram *et al.*, 2012).

Results

Two cocoons were produced by the female spider on 8 September 2002 and 17 September 2002. The female died on 7 October 2002, i.e. 13 days after releasing eggs. On 24 March 2003, cocoons started to produce offspring individuals; thus, the duration of egg stage was determined as 197 days. The two cocoons released a total of 683 offspring individuals. These were fed with *Drosophila* sp. Offspring individuals moulted twice in the climate chamber. The maturation periods of males and females were 100-110 and 215-225 days, respectively.

Discussion

L. tredecimguttatus is distributed in Turkey in Eastern Anatolia, South-eastern Anatolia Region, Eastern Mediterranean Region, Central Anatolia and

Marmara region (Varol, 2003). These spiders occur in agricultural ecosystems, especially in fields of organic agriculture. The present study provides the first phonological data on this species.

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