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First record of *Mycterothrips albidicornis* (Thysanoptera: Thripidae) from Iran

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ABSTRACT. *Mycterothrips albidicornis* as fourteen *Mycterothrips* species in Iran is recorded from Fars province, south of Iran. This is the first record of this species outside Europe. Morphological characterization of the species, comparison with its close species and its illustrations is provided. The color and structure variation of *M. albidicornis* in comparison with literature are discussed.

Key words: Fars province, Iran, leaf, new record

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Introduction

The species of *Mycterothrips* feed and breed on leaves. In recent years there are several studies on members of this genus around the world. An identification key to 27 species known up to that date was provided by Masumoto & Okajima (2006). Two other species were described from western Iran (Mirab-balou et al., 2011). Afterward, Alavi et al. (2013) described three species from the same country in Khorasan-e Shomali province together with a key for nine species from Iran. Recently, five further new species were described from Iran and China (Minaei et al., 2017; Li et al., 2017; Alichy & Minaei, 2019). Consequently, 37 and 13 species of *Mycterothrips* were recorded from the world and Iran respectively so far.

In this study another species of *Mycterothrips* is collected on leaves of *Ligustrum vulgare* from Fars province, Iran.

Material and methods

Materials discussed in this paper were collected, mounted onto slides in Hoyer's medium. Photomicrographs and measurements were made using an Olympus BX51 phase-contrast microscope with DP27 digital camera and cellSens software. All slides have been deposited in the Department of Plant Protection, College of Agriculture, Shiraz University, Shiraz, Iran. Terminology follows Masumoto & Okajima (2006).

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Results

Mycterothrips albidicornis (Knechtel)

Taeniothrips albidicornis Knechtel, 1923: 73.

Material examined: Fars province, Shiraz, Badjgah, 1♀, collected on leaves of *Ligustrum vulgare* (Oleaceae), 2.V.2016; 2♀♀, same data, 23.V.2016, leg. Afsaneh Afsharizadeh Bami.

Diagnosis. Body, legs and wings pale (Fig. 1), distal part of antennal segment IV as well as V–VIII brown (Fig. 7). Major body setae shaded. Three pairs of ocellar setae present, pair III arising between hind ocelli; postocular setae I a little longer than others (Fig. 2). Antennae 8-segmented (Fig. 7), segment II with two microtrichial rows, III and IV with forked sense-cones a little shorter than segment V (Fig. 8). Mesonotal sculpture weak, anteromedial campaniform sensilla absent; median pair of setae situated far from posterior margin (Fig. 3). Metascutum weakly sculptured with longitudinal anastomosing striae medially; median pair of setae situated near anterior margin (Fig. 3). Abdominal tergites smooth medially but regular ciliate microtrichia along lines of sculpture are present on laterotergites (Fig. 5); tergite II with three lateral marginal setae (Fig. 4); tergite IX without campaniform sensilla (Fig. 6); sternites without discal setae.

Measurements of one female in microns. Body length 1390. Head length (width) 122 (140), ocellar setae III length 48, postocular setae I length 19. Pronotum length (width) 122 (175), posteroangular setae I length 50, setae II length 40. Fore wings length 825 (Fig. 9). Tergite IX S1 setae length 67. Antennal segments I to VIII length: 25, 38, 54, 46, 34, 53, 8, 15.

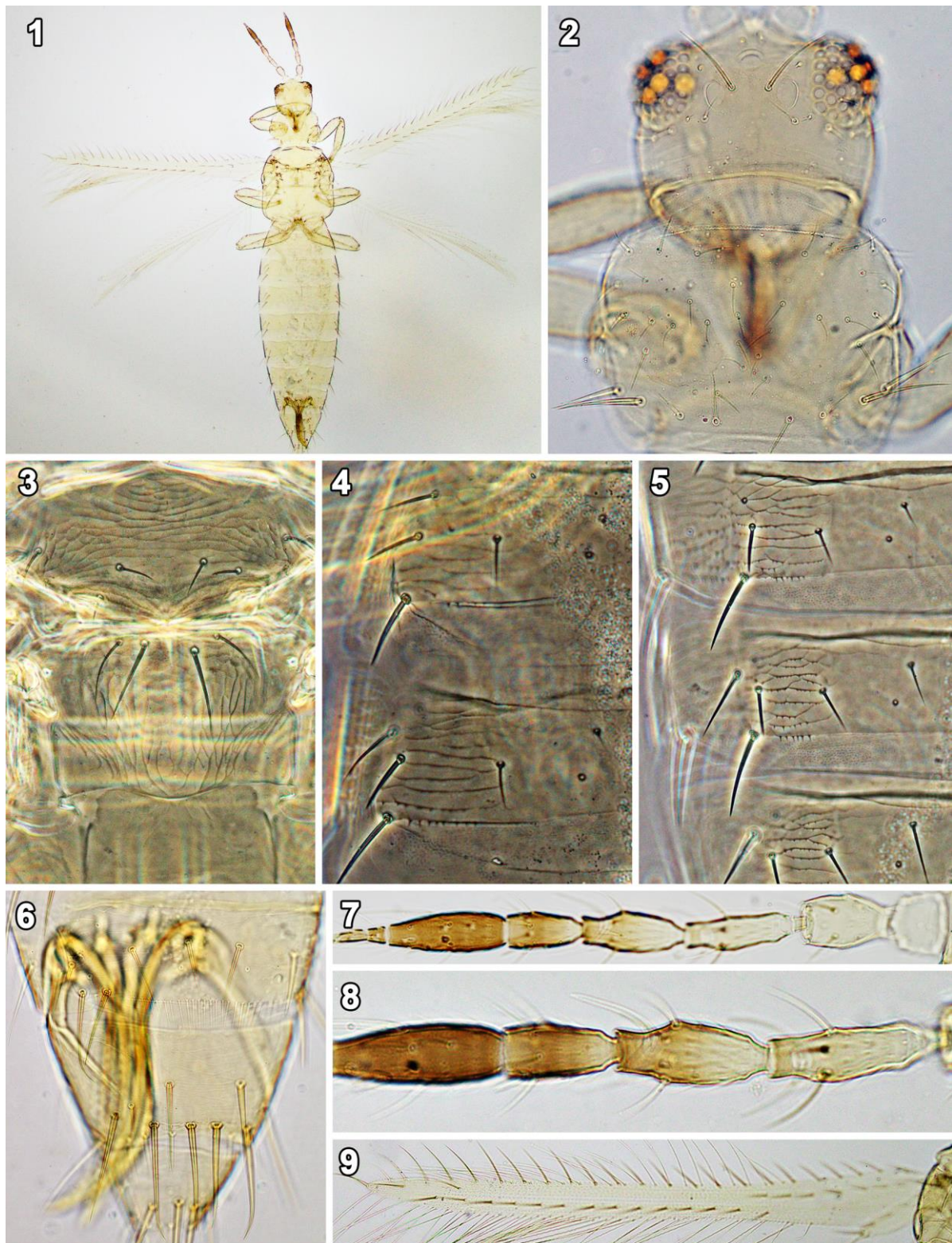
Distribution in Iran: Fars province (this study).

Distribution in the world: Iran (this study), Europe (except Scandinavia) (zur Strassen, 2003).

Comments: *M. albidicornis* is very close to *M. tschirkunae* (Yakhontov) and *M. weii* Mirabalou, Shi & Chen that both species occur in Iran. *M. albidicornis* is different from *M. tschirkunae* by the length of forked sense-cones on antennal segments III and IV (about as long as length of V in *M. albidicornis* versus 1.4 times as long as length of V in *M. tschirkunae*). Moreover, in *M. albidicornis*, antennal segment III is uniformly yellow while this is slightly shaded at the apex in *M. tschirkunae*. *M. albidicornis* distinguished from *M. weii* by the absence of campaniform sensilla on mesonotum while paired campaniform sensilla are present in *M. weii*. They are also different in irregular microtrichia rows on laterotergites which are present in *M. albidicornis* but are absent in *M. weii*.

Discussion

zur Strassen (2003) claimed that *M. albidicornis* is found on leaves of various deciduous plants. The data provided by Masumoto & Okajima (2006) and current study confirm this finding. There are less than 300 thrips species are described or recorded in Iran (Mirabalou, 2018). Judging the occurrence of 6288 extant thrips species in the world (ThripsWiki, 2020) the fauna of Iran comprises less than 0.5% of thrips species. However, this proportion is not true for a few genera. With the species recorded here, there are 14 species of *Mycterothrips* in Iran. In comparison to 37 species in world, 38% of *Mycterothrips* species are occur in Iran. Thus, as Alavi et al (2013) claimed more species of *Mycterothrips* are likely to be discovered in this country in the future (see also Minaei, 2014).



Figures 1-9. *Mycterothrips albidicornis*, female: (1) Body; (2) Head and pronotum; (3) Meso and metanotum; (4) Abdominal tergites II-III (left side); (5) Abdominal tergites V-VII (left side); (6) Abdominal tergites VIII-X. (7) Antennal segments I-VIII; (8) Antennal segments III-VI; (9) Fore wing.

The materials studied here are generally in accordance with the diagnosis by zur Strassen (2003) as well as Masumoto & Okajima (2006) in following characters: body generally yellow, antennal segment III uniformly pale, forked sense cones on antennal segment III and IV are almost as much as length of antennal segment V, campaniform sensilla absent on mesonotum, abdominal tergite II with 3 lateral setae and tergite IX without campaniform sensilla. However, antennal segment III is about 3 times as long as width in Iranian materials while according to Masumoto & Okajima (2006) this ratio should be 2.1–2.3. Moreover, irregular microtrichia present on laterotergites in specimens studied here, in contrast to materials examined by Masumoto & Okajima (2006). Masumoto (personal communication, April 2020) emphasis that the ratio of Length/Width of antennal segments is often various within a single species. Furthermore, according to the same communication, Masumoto clarify that *M. albidicornis* examined by him was not treated by KOH. So, there is a possibility that Masumoto & Okajima (2006) fail to observe microtrichia on the abdominal tergites of this species.

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Conflict of Interests

The author declares that there is no conflict of interest regarding the publication of this paper.

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اولین گزارش *Mycterothrips albidicornis* (Thysanoptera: Thripidae) از ایران

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چکیده: گونه *Mycterothrips albidicornis* (Knechtel) به عنوان چهاردهمین گونه *Mycterothrips* در ایران از استان فارس، جنوب ایران گزارش شد. این اولین گزارش از این گونه در خارج از اروپا است. ویژگی‌های ریختی گونه، همراه با تصاویر آن و مقایسه با گونه‌های نزدیک ارایه شد. تنوع رنگ و ساختار ریختی گونه *M. albidicornis* در مقایسه با آنچه در منابع آمده است مورد بحث قرار گرفت.

واژگان کلیدی: استان فارس، ایران، برگ، گزارش جدید