



Occurrence of males among Aeolothripidae (Thysanoptera), with description of the male of *Aeolothrips afghanus*

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A natural population of thrips, the insect order Thysanoptera, rarely comprises more than 30% males (Mound 2005), and this situation is particularly obvious in the family Aeolothripidae (Mound 1992). Thus for 46% of species of Aeolothripidae in Britain the male is not known (Mound *et al.* 1976). *Aeolothrips* is the most species-rich genus in this family, and males are not described for many species. For example, according to Bailey (1951), 13 out of 33 species of *Aeolothrips* in North America are known only from females, and males are not known for 9 out of 38 *Aeolothrips* species recorded from Europe (zur Strassen 2003). Species of Aeolothripidae are often collected in low numbers (Mound 1992), thus reducing the probability of a male being collected. So it is predictable that if a good series of specimens of a species can be collected, then a male is more likely to be found, even for those species of *Aeolothrips* in which the male is not yet known.

Aeolothrips afghanus was described from two females collected at Kandahar, Afghanistan, in a semi desert area with sparse vegetation (Jenser 1984). Subsequently, the species was reported from Iran, but without any data on the number, or sex of the specimens collected (Kheyrandish Koshkoei *et al.* 2000). Moreover, one female of this species has been reported from United Arab Emirates (zur Strassen & van Harten 2008). The male of *A. afghanus* has recently been collected on a species of *Suaeda* at Isfahan, in central Iran (see also Minaei 2013; Minaei *et al.* 2012). The purpose of this paper is to describe this male, and to discuss the relationship of this species with other species of *Aeolothrips*.

The specimens discussed here are deposited in Department of Plant Protection, College of Agriculture, Shiraz University, Shiraz, with one male in the Australian National Insect Collection, Canberra. Full nomenclatural information about Thysanoptera is available on the web at ThripsWiki (2013).

Aeolothrips afghanus Jenser

Female macroptera. Body brown, antennal segment III yellow but brown at the tip, IV–IX yellowish-brown (Fig. 1); all tarsi and distal part of tibiae pale; fore wings with a dark band along posterior margin, this does not include either the clavus or the wing apex and has two partial cross bands (Fig. 2). Antennal segment III with linear sensorium 0.3–0.4 as long as segment, IV with linear sensorium 0.5–0.6 as long as segment and a little curved and wider at the apex (cf. Fig. 4). Abdominal sternite VII with 2 pairs of supernumerary setae, arranged one in front of the other and arising well in front of margin.

Measurements (female, in microns). Body distended length 1970. Head length (width) 180 (196). Pronotum length (width) 160 (250). Fore wing length (median width) 790 (117). Tergite IX S1 setae 126. Antennal segments I–IX length (width) 31 (33); 51 (27); 77 (21); 69 (23); 45 (22); 15 (16); 12 (15), 19 (10), 14 (5).

Male macroptera. Colour and structure generally similar to female but paler and smaller. Antennal segments I–II pale; III pale at the basal third, IV–IX yellowish brown (Fig. 3); all legs pale but coxae and basal part of tibiae of mid and hind legs are brown (Fig. 5). Abdominal tergite I with two longitudinal ridges, tergites without tubercles (Fig. 6); tergite IX without claspers or stout curved setae (Fig. 7). Sternite VII without sub-median accessory setae.

Measurements (male, in microns). Body distended length 1345. Head length (width) 141 (162). Pronotum length (width) 120 (200). Fore wing length (median width) 600 (90). Antennal segments I–IX length (width) 29 (30); 40 (25); 57 (19); 56 (21); 40 (21); 13 (15); 8 (13); 11 (8); 10 (5).

Material studied. IRAN, Isfahan Province, Isfahan, 2 females, 2 males, from flowers of *Suaeda* sp. (Chenopodiaceae), 26.vii.2012 (Farinaz Haftbaradarn).