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## The genus *Sitothrips* (Thysanoptera: Thripidae) with a new grass-living species from southern Iran

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One of the generic characters given by zur Strassen (2003) for species of the genus *Sitothrips* Priesner (1931) is the presence of 2-segmented maxillary palps. In contrast, a new species of this genus is described below from Iran in which the maxillary palps are clearly 3-segmented (Fig. 5). The genus was erected for *arabicus* Priesner from Egypt, a species now recorded widely among countries around the Mediterranean, from Morocco to southern Russia. Three further species are listed in *Sitothrips*: *almargeniensis* Titschack from Spain and Portugal, *lindbergi* zur Strassen from the Canary Islands and Morocco, and *calcaratus* (Savenko) from southern Russia. The identity of the latter species remains in some doubt as, in contrast to the other species, it was described as wingless and lacking ocelli (Savenko 1944), but zur Strassen (2003) provided an illustrated key to the other three species.

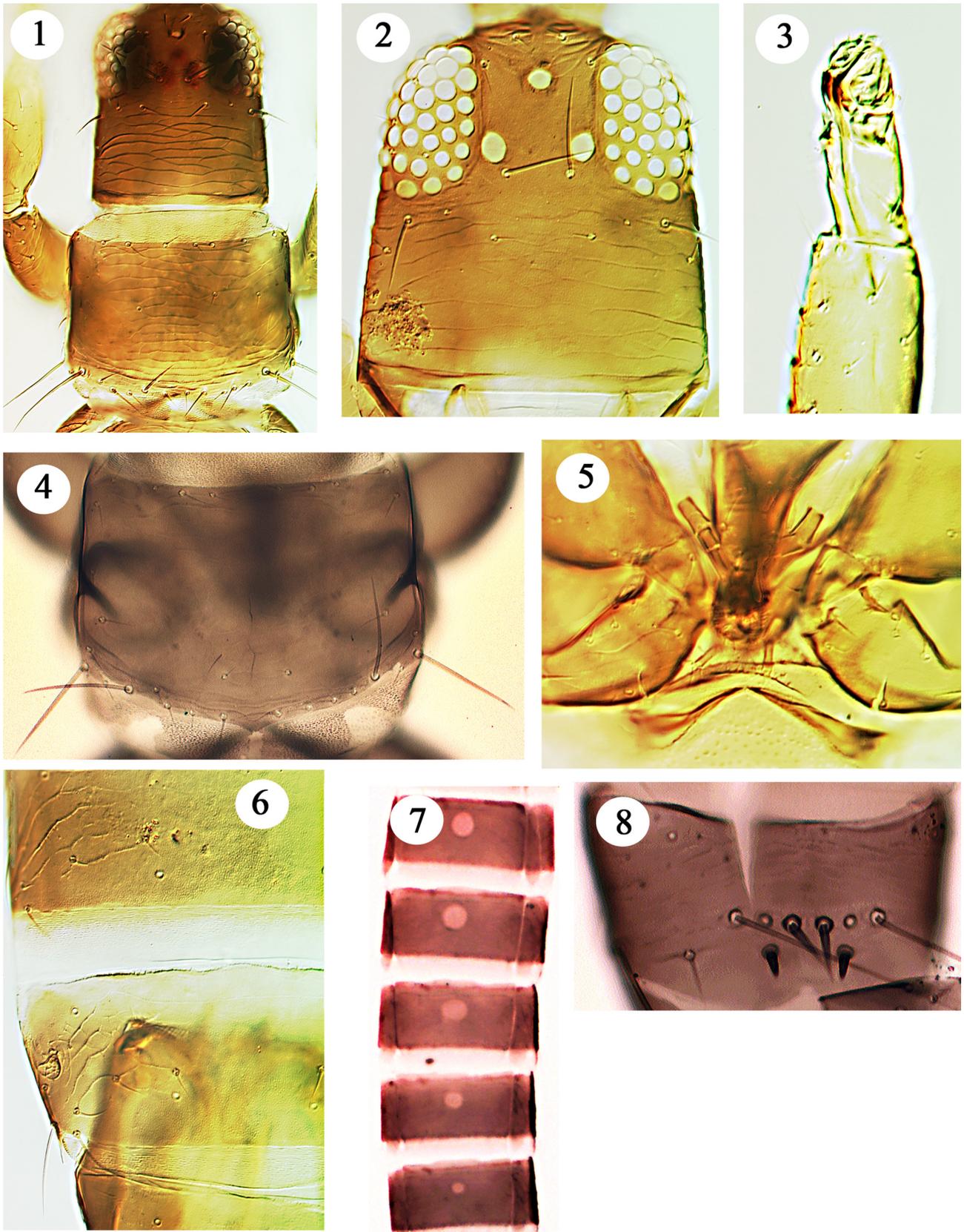
Within the Thripinae, *Sitothrips* is considered a member of the *Frankliniella* genus-group (Mound 2002). The genus is distinguished on the following character states: presence of a small tubercle ventrally at the apex of the fore tarsus (Fig. 3); position of ocellar setae pair III on or posterior to a line joining the posterior margins of the hind ocelli (Figs 1, 2); tergites VI–VII with discal setae S2 smaller than setae S1 (Fig. 6); posterior tergites with very weakly developed ctenidia (Fig. 6), on VII terminating anterior to setal pair S3, on VIII anterolateral to spiracle. These character states are discussed and illustrated in Mound (2002). Full nomenclatural information about Thysanoptera is available at ThripsWiki (2014).

### *Sitothrips izadpanahi* sp. n.

*Female macroptera*. Body generally brown, antennal segment III pale, shaded at margin, IV light brown, all tarsi pale, fore tibia yellow at apex; major setae on pronotum light brown, other setae brown; fore wings shaded.

Antennae 8-segmented; segment I without dorsal apical setae, segments III–IV with forked sense cone; microtrichia present on III–V. Head longer than wide, slightly produced in front of eyes, transversely weakly reticulate (Fig. 2); three pairs of ocellar setae present, ocellar setae III on tangent joining posterior margins of hind ocelli, about three times as long as ocellar setae I and II (Fig. 2); four pairs of postocular setae present, post ocular setae III long, longer than antennal segment II. Eyes without pigmented facets. Maxillary palps 3-segmented (Fig. 5). Pronotum with irregular transverse sculpture lines; two pairs of posteroangular setae, posterior margin with 3–4 pairs of setae (Fig. 4). Fema meeting medially (Fig. 5). Fore tarsus with a small ventro-apical tubercle (Fig. 3). Metanotal sculpture longitudinally linear on anterior half, median setae near anterior margin, closer to lateral pair than to each other; campaniform sensilla absent. Mesosternum with spinula, metasternum without. Fore wing narrow, first vein with about 10 widely spaced setae, second vein with 7–11; clavus with 5–6 veinal and 1 discal seta. Tarsi 2-segmented. Abdominal tergites with transverse reticulation medially; tergites II–VIII with median setae (S1) small and wide apart but nearly twice as long as setae S2; IV–VII with paired very weak ctenidia laterally terminating just anterolateral to setae S3; tergite VIII with weak paired ctenidia anterolateral to spiracle but also with irregular microtrichia on sculpture lines mesad of the spiracle, posteromarginal comb not developed (Fig. 6); IX with two pairs of campaniform sensilla, tergite X divided. Sternite II with 2 pairs of posteromarginal setae, III–VII with 3 pairs, median pair on VII arising submarginally; discal setae absent.

**Measurements** (holotype in microns). Body length distended 1715. Head length (width) 167 (133); postocular setae 37. Pronotum length (width) 128 (185); posteroangular setae 56. Fore wing length (median width) [taken from one female paratype] 800 (40). Tergite IX S1 setae 100, S2 setae 120. Antennal segments I–VIII length 26, 34, 42, 40, 36, 45, 9, 13.



**FIGURES 1–8.** *Sitothrips* from Iran. (1) *arabicus*, head and pronotum. 2–8 *izadpanahi*: (2) head (3) fore tarsus (4) pronotum (5) prosternum (6) abdominal tergites VII–VIII (7) male abdominal sternites III–VII (8) male abdominal tergite IX.

*Male*. Similar to female; abdominal tergite IX with two pairs of stout setae (Fig. 8); sternites III–VII with oval pore plate, smaller on VI and VII (Fig. 7).

**Measurements** (paratype in microns). Body length distended 1275. Head length (width) 145 (124); postocular setae 30. Pronotum length (width) 106 (154); posteroangular setae 37. Fore wing length (median width) 733 (33). Antennal segments I–VIII length 20, 30, 34, 35, 33, 43, 7, 11.

**Specimens examined**. Holotype female: **IRAN, Fars Province, Shiraz**, from leaves of grasses (Poaceae), 25.iv.2014 (KM 1167), in the Natural History Museum, London.

Paratypes: 6 females, 2 males, same data as holotype, in Department of Plant Protection, College of Agriculture, Shiraz University, Shiraz; 1 female paratype in the Natural History Museum, London, and one in the Australian National Insect Collection, Canberra.

**Comments**. Differing from the other species in *Sitothrips* by the presence of 3-segmented, rather than 2-segmented, maxillary palps, *S. izadpanahi* is superficially close to *arabicus*. They differ in that in *arabicus* the apex of the fore tarsus bears a curved hook-like projection that appears to be associated with the arolium in the available slide-mounted specimens; this structure is absent in the new species (Fig. 3). Moreover, *arabicus* has strong sculpture on the head and pronotum but the new species lacks such sculpture (Figs 1, 2, 4).

### Etymology and acknowledgements

The species is named in honor of Professor Keramat Izadpanah. He has been working as a Plant Pathologist in Department of Plant Protection, Shiraz University for more than 40 years. In his scientific career he has established a center for plant virus research in Iran. Most important, he trained many graduate students in the field of Plant Protection around Iran.

We are grateful to two anonymous referees for their help and advice on character states of the *Frankliniella* genus-group.

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