

Order Lepidoptera, family Tischeriidae

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INTRODUCTION

The Tischeriidae form a small family with about 120 known species, occurring in most continents, but currently not known from Australia (Diškus & Puplesis, 2003a). They are rather small moths, usually less than 10 mm wingspan, and with rather drab colours, ochreous, brown, black, uniform or with some spotting, sometimes metallic. The larvae are invariably leafminers, characterised by the habit of the larva to eject the frass from the mine. The family was recently reviewed and divided into three genera (Diškus & Puplesis, 2003b). Only one species has previously been known from the Arabian Peninsula, *Tischeria omani* Puplesis & Diškus, 2003 (Diškus & Puplesis, 2003b) from northern Oman. This species has not yet been found in the UAE, but could be expected. Here I report another species, new to the Arabian Peninsula and to the UAE.

MATERIALS AND METHODS

Specimens from the UAE are partially deposited in the collection of the National Museum of natural History, Naturalis in Leiden, The Netherlands and partially in the United Arab Emirates Invertebrate Collection. Dry pinned specimens were collected by C. Gielis at light, alcohol preserved specimens were collected in light traps by A. van Harten. Abbreviations and number in square brackets after the number of males and females refer to genitalia slide numbers.

Information on names and distribution of (potential) hostplants has been taken from Jongbloed (2003). Methods for preparation of genitalia, photographs of adults and genitalia and measurements follow those described in van Nieuwerkerken (2007).

SYSTEMATIC ACCOUNT

Tischeria ptarmica Meyrick, 1908

Plates 1–7

Specimens examined: Fujairah, sta 75, 10 m, 1♂ [EJvN3733], 19.iv.2006, leg. C. Gielis. Sharjah Desert Park, 11♂, 2♀ [ethanol material], 25.i–22.ii.2005, in light trap, leg. A. van Harten. Wadi Madaqa, sta 77, 460 m, 1♀ [EJvN3979], 20.iv.2006, leg. C. Gielis.

Diagnosis: Male forewing length 2.2 mm, wingspan ca 4.9 mm, antenna with 25 segments. Female forewing length 2.4 mm, wingspan ca 5.3 mm, antenna with 25 segments. Whole insect pale ochreous, forewing and thorax irrorate with few brown and yellow scales. Externally probably not separable from *T. omani*. The male genitalia are characterised by the plate-like extension of the valva, and also otherwise quite distinct from *T. omani*.

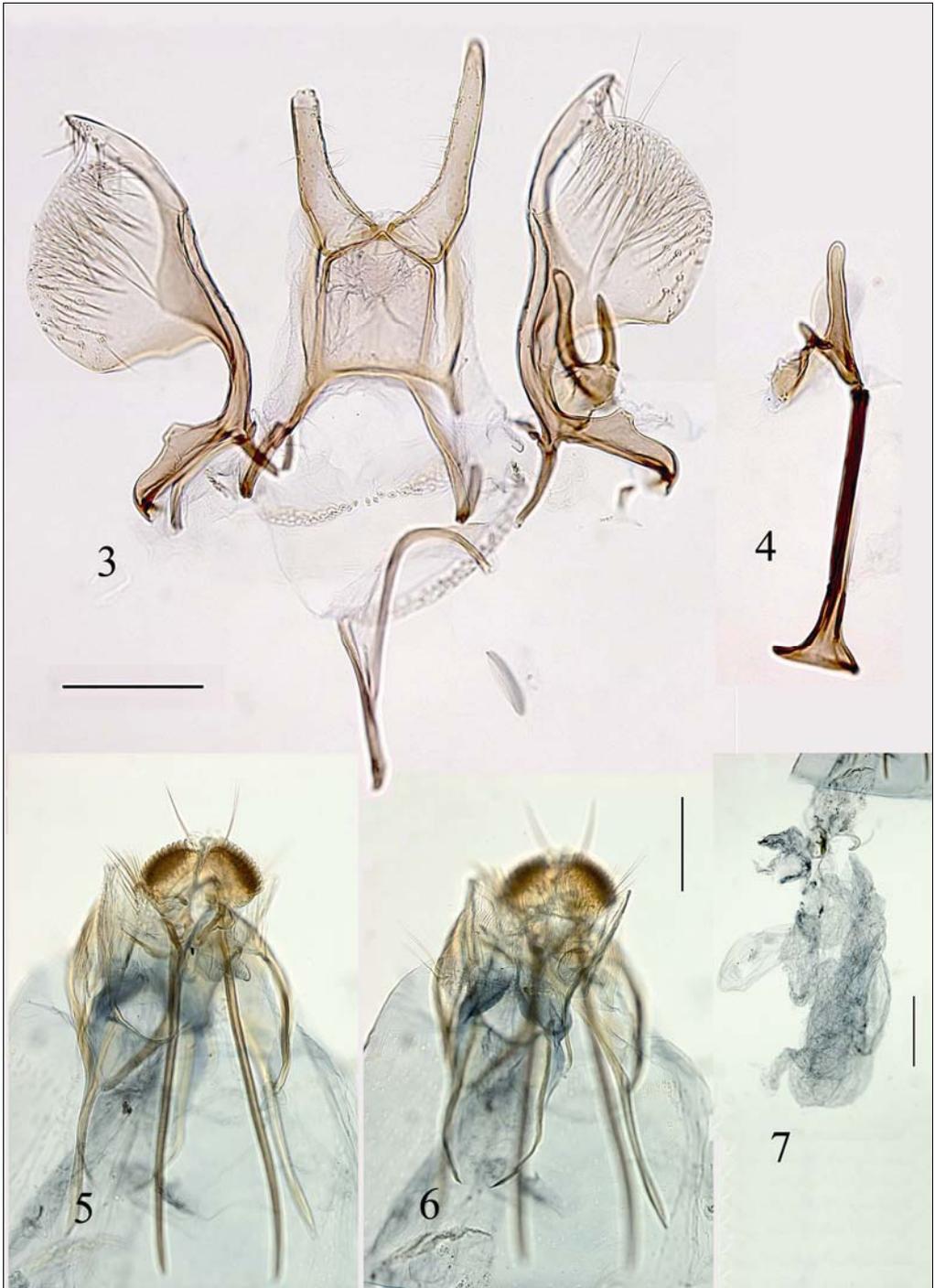
Biology: In India larvae making small elongate blotches on *Ziziphus jujuba*, In Puri, India, it occurred in great profusion (Meyrick, 1908: 399; Fletcher, 1920: 179). It is likely that in the UAE it also feeds on the widespread *Ziziphus spina-christi*.

Remarks: The male genitalia were compared with a drawing of the male lectotype, provided by Jonas R. Stonis (Vilnius). Conspicuity of the male and female of which the genitalia are here depicted is confirmed by the DNA barcode, see Nepticulidae (Pages 491–513 in this volume).

Distribution: Described from India, Orissa: Puri. Here for the first time recorded from the Palaearctic region, the Arabian Peninsula and the UAE.



Plates 1–2. *Tischeria ptarmica* Meyrick. 1: Male; 2: Female.



Plates 3–7. 3–4: *Tischeria ptarmica* Meyrick, male genitalia. 3: Unfolded genitalia; 4: Aedeagus (phallus). 5–7: Female genitalia. 5, 6: Abdominal tip in different focus; 7: Bursa copulatrix. Scale lines 100µm (3–6), 200µm (7).

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REFERENCES

- Diškus, A. & R. Puplesis (2003a): Catalogue of the world Nepticuloidea & Tischerioidea. Pp. 318–436 in: R. Puplesis & A. Diškus (eds), *Nepticuloidea ir Tischerioidea (Lepidoptera) pasaulio ir lietuvos faunoje. The Nepticuloidea & Tischerioidea (Lepidoptera) – a global review, with strategic regional revisions*. Lutute publishers, Kaunas.
- Diškus, A. & R. Puplesis (2003b): Nepticuloidea ir Tischerioidea pasaulio faunoje. Nepticuloidea and Tischerioidea – the world context. Pp. 38–175 in: R. Puplesis & A. Diškus (eds), *Nepticuloidea ir Tischerioidea (Lepidoptera) pasaulio ir lietuvos faunoje. The Nepticuloidea & Tischerioidea (Lepidoptera) – a global review, with strategic regional revisions*. Lutute publishers, Kaunas.
- Fletcher, T.B. (1920): Life-histories of Indian insects, Microlepidoptera, 7. Epermeniadae, Plutellidae and Lyonetiadae. *Memoirs of the Department of Agriculture in India, Entomological Series*, 6 (7): 169–180, pls. 149–152.
- Jongbloed, M. (2003): *The comprehensive guide to the wild flowers of the United Arab Emirates*. Abu Dhabi: Environmental Research and Wildlife Development Agency.
- Meyrick, E. (1908): New Microlepidoptera from India and Burma. *Records of the Indian Museum*, 2 (4): 395–400.
- Nieukerken, E.J. van (2007): *Acalyptiris* Meyrick: revision of the *platani* and *staticis* groups in Europe and the Mediterranean (Lepidoptera: Nepticulidae). *Zootaxa*, 1436: 1–48.

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