



***Astrotischeria neotropicana* sp. nov.—a leaf-miner on *Sida*, Malvaceae, currently with the broadest distribution range in the Neotropics (Lepidoptera, Tischeriidae)**

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**Abstract**

This paper describes *Astrotischeria neotropicana* Diškus & Stonis, **sp. nov.** (Lepidoptera: Tischeriidae), a new leaf-miner on *Sida* (Malvaceae) with a broad distribution range in tropical Central & South America. The new species is currently recorded from the Amazon Basin in Peru and Ecuador to tropical lowlands in Guatemala and Belize (including the Caribbean Archipelago). The new species is illustrated with photographs of the adults, male and female genitalia, and the leaf-mines; distribution map is also provided.

**Key words:** *Astrotischeria*, Central America, new species, *Sida* L., South America, Tischeriidae

**Introduction**

At present 115 Tischeriidae species are recognized, including the species described by Meyrick from tropical regions (Meyrick 1908, 1911, 1915a, 1915b, 1934, 1936). Nineteen, mostly exotic, species have been described by Puplesis & Diškus (2003), of which three left unnamed. Two new species from the Galapagos were described by Landry & Roque-Albelo (2004). Three new species from the Neotropics were described by Stonis & Diškus 2007, 2008. A new species has also been recognized from Madagascar (Lees & Stonis 2007), one species from Equatorial Africa was transferred from Gracillariidae and redescribed as a tischeriid (Puplesis & Diškus 2005). Later two new species were described from East Africa (Mey 2010). Most recently two other new tischeriid species were published on the material from East Asia (Stonis *et al.* 2014). Most of the currently known species (i.e. except the species described after 2003) are listed in the world catalogue (Diškus & Puplesis 2003). Additionally, other fifty four new Neotropical species from Belize (11 species), Guatemala (19 species), Honduras (5 species), Ecuador (7 species), Peru (9 species) and Bolivia (3 species) and nine new Oriental species have been recognized, dissected and prepared to be published separately by J. R. Stonis and A. Diškus (with co-authors).

Currently the family Tischeriidae comprises three genera (Puplesis & Diškus 2003). For a long period of time, all the Tischeriidae were combined in the genus *Tischeria* Zeller, 1839. The genus *Astrotischeria* was erected by Puplesis & Diškus (2003) from North and South America for the tischeriid species with striking apomorphies in genitalia and larval host-plant preference on Asteraceae and Malvaceae. The genus *Tischeria* (s. stricto) is characterized by the development of a juxta in the male genitalia and an antrum in the female genitalia. *Coptotriche* Walsingham 1890, re-instated to generic status by Puplesis & Diškus (2003), bears multiple synapomorphies in both the male and female genitalia.

Adult tischeriids are very small, with forewing length ranging from 2.4 to 5.1 mm. The female ovipositor is not of the piercing type. Nonetheless, all the tischeriid larvae are leaf-miners through all instars. They usually appear to be oligophagous or monophagous. Most records for *Tischeria* and *Coptotriche* are from woody members of the angiosperm clade fabids, in particular Fagaceae and Rosaceae (Robinson *et al.* 2001) and, with a lesser extent, Rhamnaceae and Tiliaceae (now considered to be included in Malvaceae) (Puplesis & Diškus 2003). By contrast,