



New record of a monotypic genus *Teinoloba* Yazaki (Insecta: Geometridae: Larentiinae) from India

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Abstract

In the present paper, we report the genus *Teinoloba* Yazaki, 1995 for the first time from India by recording its only known species, *T. perspicillata* Yazaki from Tawang district of Arunachal Pradesh. Thus, the current record fills the gap in its geographic range hitherto from Nepal, China and Taiwan to India. Here we provide detailed species description including female genitalia illustrations and a global distribution map of the genus.

Keywords: Arunachal Pradesh, Distribution Map, New Record, *Teinoloba perspicillata*, Trichopterygini

Abbreviations

Lat.= Latitude; Long.=Longitude; leg.= Legit; NZCZSI= National Zoological Collection, Zoological Survey of India.

Introduction

The monotypic genus *Teinoloba* Yazaki, 1995, belonging to the tribe Trichopterygini of the subfamily Larentiinae of family Geometridae, was erected for its type species *T. perspicillata* Yazaki, 1995 described from Godavari (Lat. 27.6015°N Long. 85.3652°E) and Mt. Phulchouki regions (Lat. 27.5709°N Long. 85.4055°E) of Eastern Nepal situated at an altitude range of 1,600-2,800 m (Yazaki, 1995). The genus is characterized by the absence of vein CuA₁ in the hindwing of males (Yazaki, 1995). So far, the genus is reported to be distributed in Eastern Nepal, Hunan and Guangdong provinces of South and Southeast China, and Taiwan (Yazaki, 1995; Xue & Zhu, 1999; Yazaki & Wang, 2011; Wu, 2015).

During a faunistic survey in the Tawang district of Arunachal Pradesh, a single female specimen of *T. perspicillata* species was recorded from Jang (Figure II) in March, 2019 from an altitude of 2,128 m, a first-time reporting of the species as well as the genus *Teinoloba* from India. We provided its detailed description including genitalia illustration and a global distribution map.

Materials and Methods

The adult specimen was collected from a vertical sheet light trap fitted with a 160W mercury vapour lamp (Figure III) and curated following standard methodology in Lepidopterology (Singh *et al.*, 2024). Identification is confirmed from published literature (Yazaki, 1995; Xue & Zhu, 1999; Yazaki & Wang, 2011). The geographic coordinates of the sampling locality were recorded using Garmin eTrex 20X GPS device which was further used to prepare a distribution map in the programme ArcGIS, version 10.5 (Figure I). For the genitalia study, the whole abdomen of the specimen was removed and immersed overnight in a 10% potassium hydroxide (KOH) solution, followed by dehydration and photographed under the Leica S8AP0 HD binocular microscope. Terminology of the male genitalia mainly follows Klots (1970). After examination, the genitalia were stored in vials containing a 1:3 ratio of glycerol and alcohol.

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Systematic Account

Order Lepidoptera Linnaeus, 1758

Family Geometridae Leach, 1815

Subfamily Larentiinae Duponchel, 1845

Tribe Trichopterygini Warren, 1894

Genus *Teinoloba* Yazaki, 1995: 14

Type-species: *Teinoloba perspicillata* Yazaki, 1995

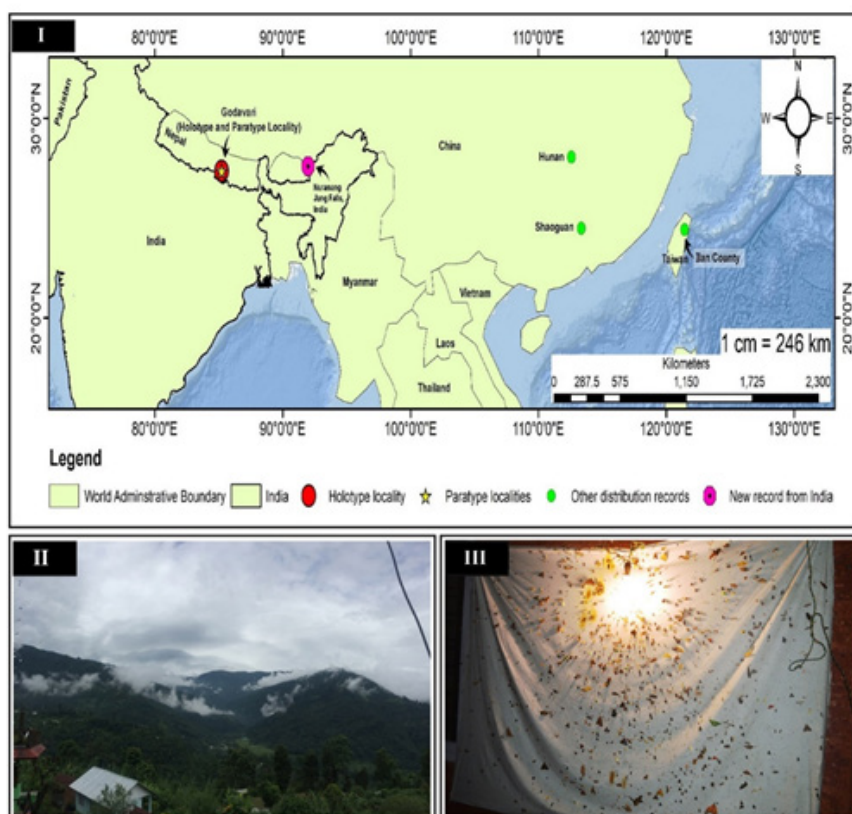
Teinoloba perspicillata Yazaki, 1995 (Figures. IV-VI)

Teinoloba perspicillata Yazaki, 1995, In Haruta (Ed.), *Tinea*, 14 (Suppl. 2): 14, pl. 97, f. 16. (Type-locality: Godavari, Nepal)

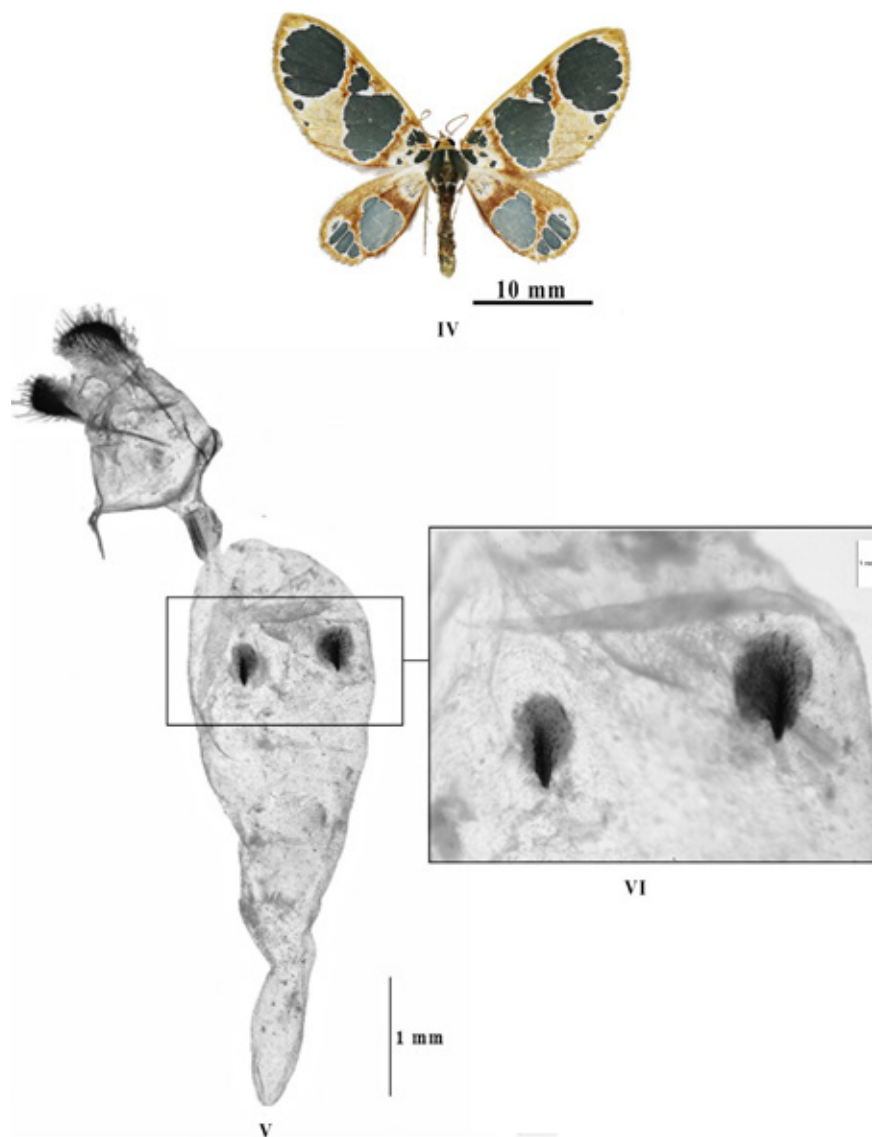
Material examined: India: Arunachal Pradesh, Tawang dist.: 1 ♀, Nuranang fall, (Lat. 27.3515°N, Long. 91.5844°E, Alt. 2128 m), 17.iii.2019, leg. M. Singh, deposited at NZCZSI.

Description: Forewing length: ♀ 22 mm. Antennae ciliate, dorsally covered with white scales; head ochreous brown, palpi porrect & brown; thorax greyish blue with a line of white scales vertically running in the middle; hind tibia with two pairs of spurs. Both wings are ochreous brown color having large shiny, greyish blue patches which are bordered by whitish layer. Forewing with tiny basal patch with sub-basal transverse row of small spots; a median quadrate patch conjoined by a small, subcostal patch; a sub-apical large patch, nearly spherical, with two tiny spots posteriorly; cilia brown. Hindwing with a tiny, smudged basal patch; a large, more or less triangular median patch; three elliptical terminal patches with one small speck in the anterior side. Abdomen ochreous brown, except the first segment which is greyish blue with a whitish line in the middle.

Female genitalia with club-shaped anal papillae; anterior apophyses half the length of posterior apophyses. Ductus



Figures I-III. Distribution map, collection locality and method of collection. **I.** Map showing global distribution of *T. perspicillata* Yazaki; **II.** Collection locality (Jang, Tawang dist., Arunachal Pradesh); **III.** Method of collections (Vertical sheet light trap).



Figures IV-VI. IV. Habitus of *T. perspicillata*; V. Female genitalia of *T. perspicillata*; VI. Signa (Magnified).

bursae short, weakly sclerotized; proximal half of the corpus bursae membranous, bulbous with two signa: each bearing a downwardly, incurved robust central spine.

Distribution: India: Arunachal Pradesh (Jang) (Present Study). *Elsewhere:* Nepal (Godavari) (Yazaki, 1995), China (Hunan) (Xue & Zhu, 1999), Taiwan (Wu, 2015).

Remarks: The current record of this species fills the gap in its distribution range between Nepal in the West to Taiwan in the East. Being an early spring flyer, the species is collected from high altitude (2,128 m) wet temperate

forest in India, whereas in Taiwan and China, the adult flies in lowland broad-leaved and moss forests i.e., 700-1,050 m (Wu, 2015).

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