

RECORD OF *STUENINGERIA NEPALENSIS* LEHMANN, 2019 (INSECTA: LEPIDOPTERA: METARBELIDAE) IN BHUTAN

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Abstract

The present paper reports and confirms the easternmost known range of the newly described species *Stueningeria nepalensis* from Bhutan. The species was previously only known from Central Nepal and the Kumaon Himalaya.

Key words: Metarbelidae, Cossioidea, new record, range extension, *Stueningeria nepalensis*.

Introduction

The genus *Stueningeria* Lehman, 2019 (Metarbelidae) was recently erected with *Stueningeria nepalensis* as the type species (Nepal, Kathmandu Valley, Godavari) (Lehman, 2019). The genus currently includes nine species (Table 1) distributed along the southern slopes of the Himalaya in India and Nepal and throughout Indochina (Myanmar, Thailand, and Vietnam) and southern China (Yunnan Province) (Yakovlev & Zolotuhin, 2021).

In this note, we report the sighting of *S. nepalensis* from Mendrelgang, Bhutan. Mendrelgang (26.950°N & 90.114°E, 1247 m elevation) is a block in Tsirang district, Bhutan. The region has a temperate climate with the annual temperature ranging between 20°C and 35°C. The winter season extends from October to March, followed by summer season from April to June and rainy season from June to September (NSB, 2010). The region is covered with subtropical broadleaf forest in the lower valley and mixed Chir Pine (*Pinus roxburghii* Sarg.) forest at higher altitude. The area is disturbed due to anthropogenic activities such as seasonal cultivation and grazing by domesticated animals.

During observation of moths in Mendrelgang, an individual of a moth belonging to Metarbelidae was collected on the night of 16 July 2013. The moth was attracted to the fluorescent lamp fitted on the science laboratory building of Mendrelgang Central School, Tsirang. The specimen was collected, mounted on a pin and photographed (Figure 1). The photograph was shared to many researchers and online portals for identification confirmation but remained unidentified until recently, when Dr. Roman V. Yakovlev, professor of Ecology Department at Altai State University, Russia identified it as *Stueningeria nepalensis* in an email communication (dated 9 June 2021).

The adult of the species can be identified based on the characters provided by Lehmann (2019). The head is with rough-scaled, light grey with brown tips on scales, light grey with black patches on the eyes, bipectinated antennae. Forewing with a pure white ground color, towards termen light grey, not glossy, coastal margin with brown patches, termen with brown lunules, a rectangular brown patch at the end of discal cell, below discal cell and above 1A+2A some pure white very long scales,

rectangular grey patches forming almost a slightly oblique subterminal band that continues below 1A+2A, not distinctly marked is CuA2; ciliae short, alternating brown and light grey, glossy. Underside of forewing light grey, glossy, costal margin with brown patches. Hindwing grey, glossy; underside as in forewing. Abdomen dark brown with a short abdominal tuft.

S. nepalensis is known from the Sub-Himalaya in the Central and Eastern regions of Nepal and Bhimtal (Uttarakhand) of Kumaon Himalaya (Yakovlev & Zolotuhin, 2021). The present record is the first confirmed record of the species from Bhutan and marks the easternmost known range of the species. In Nepal, the species is associated with “Subtropical broadleaved evergreen forest” (Below an elevation of ca. 1600 m) and “Lower temperate mixed broad-leaved forest” (Above ca. 1800 m) sensu Stainton (1972) (Lehman, 2019). In contrast, the specimen collected from India (Bhimtal (Uttarakhand), ca. 1500 m) and Bhutan (Mendrelgang, 1247 m) is associated with “Sub tropical broad-leaved evergreen forest” or the “Sub tropical belt” (> 1000m–2000m) sensu Dobremez (1972).

The larval foodplant of the species is unknown but like some other *Metarbelidae* species, probably on the bark and/or in the wood of conifers (Lehman, 2019).

References

Dobremez, J.F. 1972. Les grandes divisions phytogéographiques du Népal et de l'Himalaya. *Bulletin dela Société Botanique de France* 119 (1–2): 111–120.

Lehmann, I. 2019. Description of two new genera and two new species of *Metarbelidae* (Lepidoptera, Cossioidea) from Nepal and Sumatra (Indonesia), Oriental Region. *Heterocera Sumatrana* 13 (2): 47–72.

NSB 2010. *Annual Dzongkhag Statistics, Dzongkhag Administration, Tsirang*. National Statistics Bureau, Thimphu. Issue 1, Catalogue No. 104, 1–33 pp.

Stainton, J. D. A. 1972. *Forests of Nepal*. John Murray Publishers Ltd., London, xvi + 181 pp. + 156 colour photographs.

Yakovlev, R.V. & V.V. Zolotuhin. 2021. Revision of the family *Metarbelidae* (Lepidoptera) of the Oriental Region. III. Genus *Stueningeria* Lehmann, 2019. *Ecologica Montenegrina* 43: 16-29

Appendix 1. Checklist of Genus *Stueningeria* Lehmann, 2019 (* recently recorded from Bhutan)

Sr No.	Species	Distribution
1	<i>S. nepalensis</i> Lehmann, 2019*	Nepal, India (Uttarakhand), Bhutan (Mendrelgang)
2	<i>S. campbelli</i> (Hampson, 1910)	India (Andhra Pradesh)
3	<i>S. phaga</i> (Swinhoe, 1894)	India (Meghalaya and Assam)
4	<i>S. htetae</i> Yakovlev & Zolotuhin, 2021	Northern Myanmar (Kachin State)
5	<i>S. csovarii</i> Yakovlev & Zolotuhin, 2021	Thailand (Nan Province)
6	<i>S. loeffleri</i> Yakovlev & Zolotuhin, 2021	Thailand (Sakhon Nakhon Province)
7	<i>S. ihlei</i> Yakovlev & Zolotuhin, 2021	Vietnam (Thua-Thien-Hue Province)
8	<i>S. murzini</i> Yakovlev & Zolotuhin, 2021	China (Yunnan Province, south-western part)
9	<i>S. pinratanai</i> Yakovlev & Zolotuhin, 2021	Thailand (Chiangmai Province)



Fig 1. Adult of *Stueningeria nepalensis* Lehmann, 2019