

A new species of the genus *Callidrepana* FELDER, 1861 from Laos (Lepidoptera, Drepanidae)

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Abstract

The new species *Callidrepana heinzhuebneri* **sp. n.** is described from Central Laos. The differential features from the next similar species are presented. This is the first record of this genus from Laos. *C. gelidata*, *C. nana*, *C. splendens* and *C. heinzhuebneri* **sp. n.** are comparatively treated.

Keywords: Lepidoptera, Drepanidae, *Callidrepana heinzhuebneri* sp. n., Laos, distribution

Zusammenfassung

Die neue Art *Callidrepana heinzhuebneri* **sp. n.** wird aus Zentral Laos beschrieben. Die Unterscheidungsmerkmale zu den nächsten ähnlichen Arten werden erläutert. Es ist der erste Nachweis einer Art dieser Gattung aus Laos. Die ähnlichen Arten dieser Gattung *C. gelidata*, *C. nana*, *C. splendens* und *C. heinzhuebneri* **sp. n.** werden vergleichend abgehandelt.

Introduction

Drepanidae (hook tip moths) are a relatively small, and well known family. Most of the species occur in South-East Asia with about 400 species in the Oriental region (BUCHSBAUM 2000, 2003, BUCHSBAUM & MILLER 2002, HEPPNER 1991).

The Siamese Subregion, also called Indo-Burmese or Indo-Chinese region is one of the biodiversity hotspots in the world (BROOKS et. al. 2002, MITTERMEIER et al. 1998, MYERS et al. 2000, SEDLAG 1984, 1995). In the last decade many new Bombyces s.l. species were recorded and described from there (e. g. BUCHSBAUM 2010, BUCHSBAUM & CHEN 2010, BUCHSBAUM et al. 2010, 2012, SCHINTLMEISTER 1997, SCHINTLMEISTER & PINRATANA 2007, ZOLOTUHN & WITT 2000).

Methods and Locality

During a collecting trip in Central Laos the first author used a 160 W mixed mercury light from dawn at about 7 p. m. to the morning time about 5 a. m. The light trap was placed on a terrace of a Bungalow within a rainforest (Figs 5-8).

The collection site was in a small temporary rainforest beside the Nam Ngung River (Fig. 6), which is a tributary of the river Mekong. The locality is situated about 30 km north-north-east (NNE) of Vientiane, the capital of Laos, close to the small village Nathe. The weather was dry and hot. Daytime temperatures raised to about 30–35°C dropping to about 20°C at night. Nights were almost cloudless except for one night with little rain.

The genus *Callidrepana* FELDER, 1861

The genus was erected by FELDER (1861) with the type species *C. saucia* FELDER, 1861. Species of this genus are known from the Indo-Australian region to the Himalayas, China, Taiwan and Japan (BUCHSBAUM 2003, HOLLOWAY 1998, INOUE ET AL. 1982, WANG 1995, YAMAMOTO 1960), with 26 species and some subspecies listed by WATSON (1968). Three species occur in Central Africa (WATSON 1965). Hostplants are recorded by SUGI (1987), HOLLOWAY (1998) and SEN & LIN (2002): *Rhus*, *Magnifera* (Anacardiaceae) and *Bruguiera* (Rhizophoraceae).

Callidrepana heinzhuebneri sp. n. (Fig. 1)

Material: Holotype ♂, Central Laos, near Vientiane, ca. 150 m NN, Nathe, Rivertime Lodge, 18°09'33 N / 102°44'30E, 23. February 2010, LF, leg U. Buchsbaum.

Paratypes: 1 ♀ same data as Holotype, 21. February 2010, and 1 ♂ and 1 ♀ same place but 23. October 2011 and 1 ♂ 26. October 2012. All types are in Zoologische Staatssammlung München (Germany).

Description and differential diagnosis: ♂ wingspan: 20-22 mm, Ø 21,3, forewing length: 12-13 mm, Ø 12,3; ♀ wingspan: 25-27 mm, Ø 26 mm, Forewing length: 14-16 mm, Ø 15 mm.

Body and wings have a greyish yellow ground colour. Forewings with dark brown line at costa and termen. Discal mark dark brown. Submarginal line brown, with silver shining tinge. A brown silver shining line along the costa through the discal zone from basis to apex. Hindwings with brown markings, silver shining postdiscal fascia from outer margin to the centre. This line on the hindwing is more conspicuous, wider and shorter in *C. gelidata* (WALKER, 1862).

Male genitalia: (Fig. 3) Valvae short and squat. Digitus strongly sclerotized. Sacculus long, thin and fully sclerotized. Sacculus of *C. gelidata* shorter and sclerotized only at the tip. Uncus of *C. gelidata* much longer than in *C. heinzhuebneri* **sp. n.**

Female genitalia: (Fig. 4) Papillae anales with scattered hairs. Apophyses thin and long. Ductus bursae less sclerotized. Corpus bursae membranous, in the single present slide disrupted.

Similar species: *C. nana* WARREN, 1922 (distribution: Malaysia, Singapore, Indonesia (Sumatra, Borneo): Larger, ground colour darker, with dark dots in the centre of forewings. Apex more rounded.

C. gelidata (WALKER, 1862) (distribution: Borneo, Malaysia, Singapore, Indonesia (Sumatra, Java), Burma and India): Larger (largest species in this species group), ground colour paler. In the centre of the forewing a shadow-like, diffuse line from the costa to dorsum. In *C. heinzhuebneri* **sp. n.** markings clearer.

C. splendens (WARREN, 1897) (distribution: Malaysia, Borneo, Indonesia (Sulawesi, Sula Islands)): Smaller, darker. Forewings with dark brown costa. Reniform stigma dark with line to costa. Dark brown line from apex to basis. Hindwings with brown diffuse line from dorsum to costa.

Distribution: Until now only known from the type locality (Figs 5-8). So far, no *Callidrepana* species was known from Laos.

Etymology: The species is dedicated to our friend and former chemistry teacher in the basic school “Karl-Marx Oberschule” Kranichfeld. The authors would like to say thanks for many excursions together and for the long and deep friendship.

Discussion

The new species *C. heinzhuebneri* must be included in the subgenus *Damna* WALKER, 1872 as suggested by HOLLOWAY (1998) together with *C. gelidata*, *C. splendens*, and *C. nana* as a group of similar species. They are well characterized by the presence of distinct silvery lines, whereas other species in the genus *Callidrepana* lack these lines. Beside their morphological characteristics, these four species are the smallest in the genus *Callidrepana*.

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Fig. 1: *Callidrepana heinzhuebneri* sp. n. Holotype life at the sheet.



Fig. 2: *Callidrepana heinzhuebneri* sp. n., holotype. Forewing length 12 mm.



Fig. 3: Male genitalia, holotype.



Fig. 4: Female genitalia, paratype.

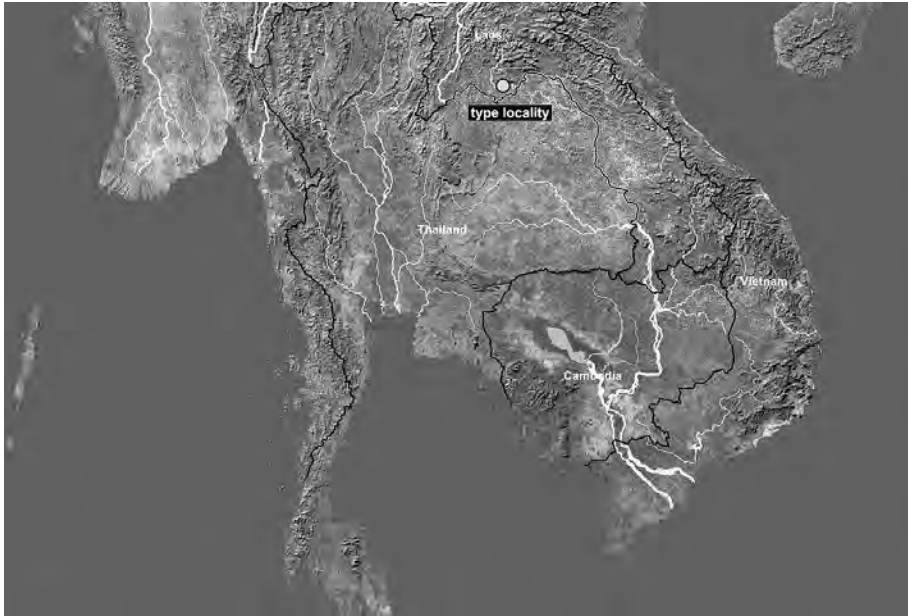


Fig. 5: Map of type locality.



Fig. 6: Google earth map with the exact collecting site.



Figs 7- 8: Habitat and vegetation structure at the collection site.

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