

DESCRIPTION OF A NEW SPECIES OF GENUS *TRIDREPANA* FROM MISHMI HILLS, ARUNACHAL PRADESH, INDIA

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INTRODUCTION

The Oriental genus *Tridrepana* Swinhoe, 1895 occurs from India to China and Australia. At present, it comprises of 43 species (Song *et al.*, 2011) divided by Watson (1957) into 7 species groups. The *crocea* group is distinguished by the hind tibia bearing one pair of spurs, the upper forewing bearing a mid-cell spot, lacking an anterodistal spot, the postmedial band of upper hindwing being double, at least near inner margin and the underside forewing of male with a dark patch of scales at the base of cell.

The *crocea* group includes 8 species, that is, *T. crocea* (Leech, 1888) (China, Japan, Korea); *T. unispina* Watson, 1957 (China, Japan); *T. subunispina* Song, Xue & Han, 2011 (China); *T. hainana* Chu & Wang, 1988 (China); *T. bifurcata* Chen, 1985 (China); *T. bicuspidata* Song, Xue & Han, 2011 (China); *T. subtusmaculata* (Gaede, 1933)(Malaysia to Indonesia) and *T. septempunctata* (Warren, 1896) (N.E. India to Indonesia)(Watson,1957; Song *et al.*, 2011).

While surveying Drepanidae of North-Eastern India, an unusual *Tridrepana* specimen was recorded in the Mishmi Hills, Lower Dibang district, Arunachal Pradesh. It belongs to the *crocea* group

and the external features are so different from other members of this group that it is clearly undescribed. A single male was recorded and although differences between known species in this genus and species group are so slight that often an examination of the genitalia is the only way to ascertain specific identity, in the present case, there is nothing similar that is known and therefore the genitalia of the only known specimen was not dissected.

(Reviewer's note: The specimen was recorded in 2017. Further earnest attempts were made to locate the species in July 2019 in the type locality but were unsuccessful. Rather than have this species languish undescribed until further specimens are obtained, it seems better to describe it on the basis of existing material and the fascies, which will draw attention of future workers to it.)

Following is a description of the new species.

Tridrepana urvashi **nov. spec.**

Material Examined: 1 male, 23.vii.2017, Mayodia, Mishmi Hills, 2400m, (28° 13' 58.08"N, 95° 54' 32.70"E), Arunachal Pradesh, India.

Forewing length: 18 mm. Wingspan: 38mm.

Type Depository: Butterfly Research Centre, Bhimtal, Uttarakhand, India.

DESCRIPTION

(male) groundcolour of head, thorax, abdomen and wings ochreous yellow. Legs clothed with brown scales. Proximal half of forewing costa narrowly edged with dark brown suffused with silvery scales. Fuscous antemedial line not reaching costa and outwardly curved below cell to enclose an obscure fuscous ring dusted with silvery grey scales. A small white mid-cell spot surrounded with a ring of groundcolour which is edged with fuscous scales. An elongate white mark at end of cell ringed with an inverted comma shaped area of groundcolour edged with fuscous scales. Broken medial line originating in a fuscous spot on mid dorsum, proceeding upwards in a highly crenulate fuscous line between veins 1 and 3, reduced to a series of disconnected crescents in the upper half of wing, with a dark mark directly below end-cell white mark. A highly crenulate white postmedial band from apex to near tornus, proximally bordered with fuscous lunules in spaces 3, 4 and 5 (between veins Cu2 and M2). An indistinct dark submarginal crenulate line. The marginal area suffused with white. Cilia dark below apex between veins 3 to 7 (veins Cu1 to R5), of the groundcolour from below vein 3 (vein Cu1) to base of forewing.

Hindwing with a dentate dark antemedial line sharply angled towards base in the cell and not reaching costa. A white mark on an irregular fuscous patch at end of cell. A lunulate medial line becoming post medial between veins 2 (vein Cu2) and 7 (vein R5), distally suffused with white. An obscure fuscous submarginal line with some white suffusion. Cilia uniformly of the groundcolour.

Underside with paler groundcolour and sparsely marked. Basal half of forewing costa and cell suffused with fuscous. A prominent dark mark at end of cell. An irregular dark fuscous mark at lower end of cell, with a distinct dark spot below it. Postmedial line reduced to a series of four dark marks below the costa. Some dark marginal suffusion below apex corresponding to the dark cilia.

Hindwing with two irregular fuscous marks on discocellulars and a complete postmedial series of fuscous marks.

DIAGNOSIS

As mentioned, the *crocea* group is distinguished by the hind tibia bearing one pair of spurs, the upper forewing bearing a mid-cell spot, lacking an anterodistal spot, the postmedial band of upper hindwing being double, at least near inner margin and the underside forewing of male with a dark patch of scales at the base of cell. The *crocea* species group at present contains 8 species, i.e. *crocea*, *unispina*, *subunispina*, *hainana*, *bifurcata*, *bicuspidata*, *subtusmaculata* and *septempunctata*. *T. urvashi* is placed in this group because it conforms with the definition of this species group.

T. urvashi is easily distinguished from *T. crocea*, *T. unispina*, *T. subunispina*, *T. hainana*, *T. bifurcata* and *T. bicuspidata* by lacking, on both surfaces of the forewing, the brown crescent patch below apex with two brownish black ovate spots inside.

In *T. subtusmaculata*, on the underside forewing, the submarginal line is represented by a large, ovate, whitish spot between veins 5 and 6 (veins M1 and M2) and sometimes by similar but much smaller spots between veins 6 and 7 (veins R5 and M1) and between veins 4 and 5 (veins M2 and M3); all these markings are lacking in *T. urvashi*.

T. urvashi lacks the 4 white submarginal marks on upperside forewing below apex that distinguish *T. septempunctata*.

Distribution: Mayodia, Lower Dibang Valley district, Arunachal Pradesh, India.

Etymology: Named after Urvashi, the Hindu nymph/goddess known for her beauty.

REFERENCES

Song, W., D. Xue & H. Han, 2011. A taxonomic revision of *Tridrepana* Swinhoe, 1895 in China, with descriptions of three new species (Lepidoptera, Drepanidae). *Zootaxa* 3021: 39-62.

Watson, A. 1957. A revision of the genus *Tridrepana* Swinhoe (Lepidoptera: Drepanidae). *Bulletin of the British Museum (Natural History) (Entomology)* 4: 407-500, pls. 2-3.



Figure 1: Holotype male Upperside



Figure 2: Holotype male Underside