

ON THE TAXONOMY AND APPEARANCE OF *MIXOLOPHIA*
OCHROLAUTA WARREN (LEPIDOPTERA: GEOMETRIDAE) IN THE
KUMAON HIMALAYA

Mixolophia ochrolauta Warren is a rare Emerald moth (Subfamily Geometrinae) known from a male specimen from Bhutan, which is the type, and a female from Nepal. The early stages are unknown. A single female has been recorded in Jones Estate in the Bhimtal Valley of the Kumaon Himalaya, extending the known distribution of this taxon westwards. The specimen is in my collection and is described below.

***Mixolophia* Warren**

1894. Nov. Zool.: 391.

Mixolophia ochrolauta Warren

1894. Nov. Zool. 391.

Material Examined: 1 ex.: 30.ix.1977 (female).

Forewing Length: 14 mm.

Distribution: Nepal, Bhutan (Prout 1934); Bhutan (Hampson 1895).

Remarks: A new record for the Kumaon Himalaya.

According to Hampson (1895), the antennae of the male are ciliated. The antennae of the specimen examined are simple, hence it is a female. The specimen is not in perfect condition for, although the wings are intact, the scales have been rubbed off in parts, especially around the tornal area of the forewings.

The groundcolour is dull yellowish-green, agreeing with Hampson's (1895) and Prout's (1934) descriptions, but not matching the illustration in Seitz (1915), where the groundcolour is a much brighter green. The specimen examined differs in another important aspect, that is the area between the postmedial line and the margin of the forewing *recto* is not striated with white above vein Cu1a, as in the illustration. Hampson (1895) also noted that the veins of the outer area are white. Rather, this area is plain green with a white marginal line in the specimen examined. The specimen matches the descriptions and illustration in other respects.

The legs of the specimen are intact and all the spurs on the hind tibiae are developed.

DISCUSSION

The specimen was recorded at the end of the SW monsoon. In the subfamily Geometrinae, there are very few univoltine species in the area and it is unlikely that this is one of them. It is more likely that there is an earlier generation in spring or at the beginning of the monsoon.

Not much can be inferred about the habitat preferences of this species. It is very rare in the Bhimtal valley and the specimen recorded was probably a straggler from higher or lower elevation. It is certainly very local as well as a

Himalayan endemic, but whether its rarity in collections is due to its scarcity in nature or its retiring habits will only be clarified by an understanding of its life history. It is probably commoner in biotypes that have not been thoroughly surveyed so far.

The specimen examined differs somewhat from the other two known specimens. This appears to be a case of infraspecific variation, as commonly occurs in *Episothalma robustaria* ~~XHQ~~ e and *Spaniocentra lyra* Swinhoe of the same subfamily.

Warren (1894) and Hampson (1895) described the male, since the female was unknown at the time. Prout (1934) described both sexes. Differences between the sexes appear to be restricted to the structure of the legs and antennae.

According to Prout (1934), the hind legs of the male type specimen are lacking. Hence it is not possible to decide whether the species should remain in the monobasic genus *Mixolophia* or be transferred to a section of *Metallochlora* Warren. The main difference between the genera rests on the development of spurs on the hind tibiae of the male. If these are all fully developed, as in *Metallochlora*, then there is little justification for the continuance of *Mixolophia*, since the only remaining differences are details of form and colour.

Hampson (1895) placed *ochrolauta* in the genus *Hemithea* Duponchel, under the section in which the antennae of the male are ciliated and the hind tibiae lack medial spurs. Since Hampson stated that he examined the specimens of the species described in his work, and the only known specimen of *ochrolauta* at that time was the male type, it is evident that the type specimen had its hind legs in 1895. By the time Prout examined the specimen during the 1930s, the legs were broken off, perhaps due to careless handling.

Proceeding on Hampson's (1895) statement that the male's hind tibiae lack medial spurs, it follows that *Mixolophia* differs from *Metallochlora* sufficiently to be a valid genus and that *ochrolauta* is correctly separated from *Metallochlora*.

February 14, 2003
SMETACEK

PETER

Jones

Estate, Bhimtal, Nainital

Uttaranchal 263 136, India

REFERENCES

Hampson, G.F. (1895): The Fauna of British India including Ceylon and Burma. Moths, Vol. 3. Taylor & Francis, London.

Prout, L.B. (1934): *In*: A Seitz (Ed.): Der Gross Schmetterlinge der Erde. Die Indoaustralischen Spanner (text). Alfred Kernen, Stuttgart.

Seitz, A. (Ed.) (1915): Der Gross Schmetterlinge der Erde. Die Indoaustralischen Spanner (Plates). Alfred Kernen, Stuttgart.

Warren, W. (1894): Novitates Zoologicae. London.

(2005) Journal, Bombay Natural History Society, 102 (1) : 130 – 131.