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Larval Characters of Taxonomic Significance of New Zealand  
Ennomines (Lepidoptera: Geometridae)

By J. S. DUGDALE

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*Summary*

THE general external larval morphology of New Zealand Ennomines is described and briefly compared with that of Indian and Nearctic species. The abdominal chaetotaxy is compared with that of other Geometrid sub-families, and the published homologies of the SV and subprimary L setae are compared. Thirty species of Ennomines from six genera were examined, and the characters were considered so consistent that they are taxonomically valid. Reasons are given, based on larval and genitalic characters to show that *Selidosema dejectaria* (Walker) is incorrectly placed in the genus *Selidosema*. This paper places New Zealand Ennomines into the Ennomini (*Sestra*, *Azelina*, *Gargaphia*, *Declana*), Erannini (*Hybernia*) and Boarmiini (*Selidosema*). The larval and genitalic characters of these genera are outlined. In erecting taxonomic groups on larval structure, the structure of all instars must be used, and this grouping must be correlated to grouping on adult structures.

INTRODUCTION

THIS study arose out of the need for a sound basis on which to erect field guides for the identification of arboreal defoliators by the Forest Biology Survey. Of the 56 New Zealand Ennomines, eight species, previously restricted to indigenous hosts, now defoliate exotic conifer species; other Ennomine species are also found in exotic plantations, associated with relict areas of indigenous forest or scrub, or with the invading understorey of indigenous shrubs and ferns. Recognition of these latter species is important as they may act as alternate or alternative hosts for parasites and disease organisms affecting the conifer-feeding species.

Previous descriptions of Ennomine larvae by Purdie (1884), Hudson (1928, 1939, 1950), Clark (1936) and Chappell (1920) are confined to descriptions of colour pattern, occasionally illustrated, and sometimes with a brief mention of outstanding structures. Recent work on Indian Geometrid larvae by Singh (1953, 1956) and Nearctic larvae by McGuffin (1950, 1956, 1958 a, b) has taken into account the morphology of the larva rather than colour pattern. Singh (1953) showed that identification by colour alone is impracticable. This paper is part of an attempt to bring knowledge of New Zealand Ennomines up to the level of current work on Indian and Nearctic Geometrids and on Nearctic Noctuids (Hard-