

NOTES ON THE HABITS OF THE NORTHERN JEZABEL BUTTERFLY

Delias argenthona fragalactea

by Alan Wade

Abstract

The larvae of the north-western subspecies of the Northern Jezabel *Delias argenthona fragalactea* (Butler, 1869) feed on the mistletoe *Decaisnina signata*. This mistletoe is parasitic on the Northern Milkwood *Alstonia actinophylla*. During the late wet season (March - May 1977) adults of both sexes of the Northern Jezabel were seen feeding on the nectar of the flowers of the Darwin Stringybark *Eucalyptus tetradonta*, but not on the flowers of the mistletoe. However, the mistletoe flowers were a nectar source during the dry season when there were few other flowers.

Introduction

Larvae of the *Delias* butterfly genus feed almost exclusively on parasitic plants, including the mistletoes. The larvae of the Australian east-coast subspecies of the Northern Jezabel *Delias argenthona argenthona* are known to feed on several species of mistletoe including *Muellerina celastroides* and *Amyema bifurcatum* (Common and Waterhouse, 1972). *A. bifurcatum* occurs in the Northern Territory (Harmer, 1976) and *D. argenthona fragalactea* may well feed on this mistletoe species.

Discussion

The study was made on the Esplanade Reserve in the Darwin town area. Adults of the Northern Jezabel were first observed in gardens along the Esplanade and were subsequently seen in the canopies of some thirty Northern Milkwoods *Alstonia actinophylla* which were located on the Reserve. The butterflies were also observed in the canopy of a large solitary Darwin Stringybark *Eucalyptus tetradonta* where they were more common than elsewhere. At the time of these observations in March 1977, the eucalypt was in full flower and there were usually from two to four individuals on the wing or feeding from flowers at any one time. From observations made over a period of several weeks, I concluded that there were usually more individuals, up to eight or ten, active in the eucalypt canopy around dusk than at any other time of the day. Similar habits were observed with the adult male Wood White butterflies *Delias aganippe* feeding from mistletoe flowers at Kambah in the Australian Capital Territory at dusk in February 1977. While there are some notable exceptions, most butterflies settle at least an hour before sunset.

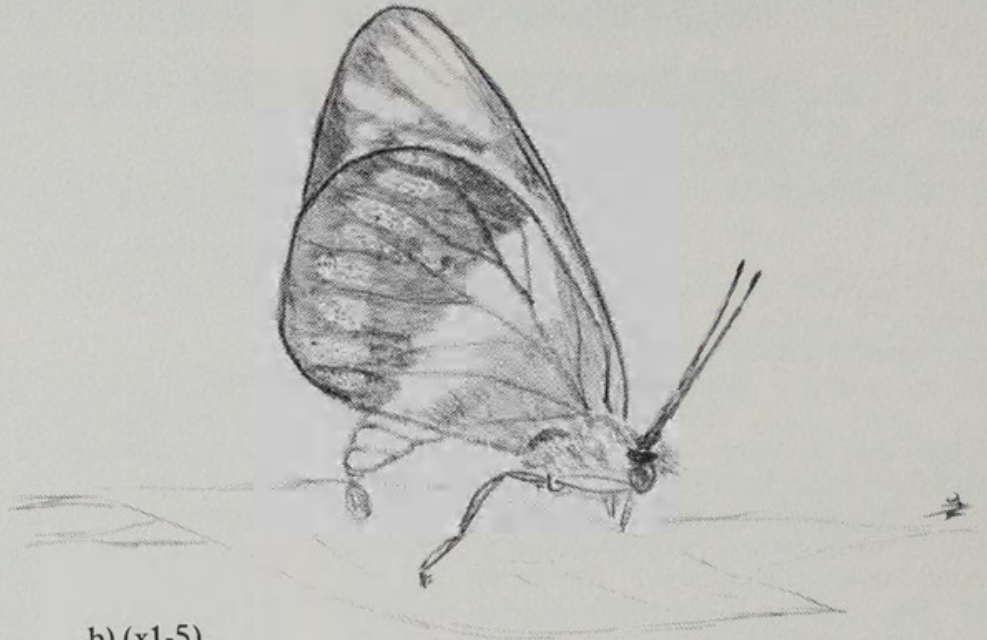
The association of the butterfly with the canopy of the milkwoods was almost certainly because of the presence of the mistletoe *Decaisnina signata* in 90% of all milkwood trees on the Reserve. The Northern Jezabel lays yellow eggs in clusters on the undersides of young mistletoe leaves. In each of the three separate colonies I studied during April 1977, there were nineteen or more one or two day old larvae and up to sixty eggs. Yet natural survival is low. In the colony of nineteen young larvae, I observed the number surviving after two or three days to be about one half of the number seen at last count. Within a fortnight no larvae could be seen. The larvae have a gregarious feeding habit and availability of very young shoots on a single branch appears to be the critical factor in determining the survival of larvae. Attempts to rear larvae seem to support this. While nearly all eggs hatched, larvae survived only on young mistletoe and were reluctant to move onto fresh mistletoe supplied daily. Only two of the original larvae, totalling about one hundred individuals, survived to pupate after approximately twenty-eight days. In a new finding (18 February 1978), twenty two to three day old larvae, were found feeding on young tips of mistletoe on which larvae had been found feeding in early March 1977. Four days later there were only eight surviving larvae, and within eight days, no larvae could be seen.

The eastern subspecies of the Northern Jezabel is on the wing throughout the year (McCubbin 1971). The north-western subspecies was common in late September, but by late December, no individuals could be sighted on the wing. Whereas during the wet season the Northern Jezabel was rarely seen near mistletoe flowers, by September they were freely feeding at the conspicuous red flowers. The mistletoe flowers throughout the wet season and almost until the end of the dry season. Lack of suitable flowers towards the end of the dry season may be a factor in limiting numbers of adults.

The life cycle of the Northern Jezabel appears to be confined almost entirely to the canopies of trees. Other members of the genus favour hilly areas. The close proximity of a small escarpment and the ready availability of food appears to make the reserve a suitable habitat for the Northern Jezabel.



a) (x3)



b) (x1-5)

Delias argenthona fragalactea

a) Mature larva

b) Adult

Line drawing courtesy of W. Loh Choy

REFERENCES

- Common, I.F.B. and Waterhouse, D.F. (1972) "BUTTERFLIES OF AUSTRALIA". pp. 205-206. Angus & Robertson.
- Harmer, J. (1976) "NORTHERN AUSTRALIAN PLANTS. P. 1, Top End Wildflowers" p. 64. Surrey Beatty and Sons, N.S.W.
- McCubbin, C. (1971) "AUSTRALIAN BUTTERFLIES". p. 122. Thomas Nelson Ltd.



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