

Study of life history of the butterfly *Talicauda nyseus* (Lepidoptera: Lycaenidae)

S Kathirgamanathar¹, A Wijesekera², D S A Wijesundara³ and V Karunaratne^{1*}, V Kumar¹ and A Wickramasinghe¹

¹ Department of Chemistry, University of Peradeniya, Peradeniya

² Department of Agriculture, HORDI, Gannoruwa

³ Royal Botanical Gardens, Peradeniya

Lycaenidae is the most specious family of butterflies in Sri Lanka. Among these genus *Talicauda* is represented by a single species *Talicauda nyseus* Guerin 1893. This species distributed from Sri Lanka to Indo-China is a common butterfly found every where in the island below 4000 ft. It has been recorded that the life cycle could be one year at the longest and 36 days at the shortest. One of our previous studies revealed that the adults of *T. nyseus* which frequent the lichen *Leproloma sipmanianum* has lichen compounds in its body, showing the possibility that larvae or adults using the lichen as an alternative food source.

In the present study, we conducted a series of experiments to find out whether they feed on lichen as larvae and also to find out the life history details of the butterflies. In the experiments we used *Bryophyllum calycinum* and *B. laciniata* as larval food. Wild-caught adults (from RBG, Peradeniya) and the adults of the resulting generation (reared in the green house) were used in the following experiments: (1) Adults reared on potted *B. calycinum* (supplied with sugar solution and honey), (2) Adults reared on potted *B. calycinum* (supplied with water only) and (3) Adults reared on potted *B. laciniata* (supplied with sugar solution and honey). Number of eggs laid, days taken for eggs to hatch, larval period, pupal period and the life span of resulting adults were recorded.

The results revealed that the average time taken for oviposition was 4-5 days; eggs hatched between 2-8 days; larval development took an average of 3-16 days; larvae pupated in 5-12 days and the average life span of the adult was 4-16 days. The total life cycle of *T. nyseus* is 21-57 days. The ovipositing ability of the female in experiment (2) is less when compared with the others because the adults could survive for a very short period without any supplementary food. The viability of the larvae of *T. nyseus* on the second species of *Bryophyllum* (*B. laciniata*) indicates that *T. nyseus*' host shifts may occur among chemically similar plants. The larvae do not come out of the *Bryophyllum* leaf. However, if the leaf food supply is inadequate they come out and re-enter a fresh leaf. When ready for pupation they came out of the leaves and crawl around to find a suitable place for pupation. During the experiments we did not observe larvae feeding on the lichen. Although adults were found to rest on lichen we couldn't confirm they obtain any food from lichen.

Authors thank the NSF, NRC, Sri Lanka; IFS, SAREC, Sweden and HORDI for the assistance in the laboratory experiments.

*veranjak@yahoo.com

Tel: 081 2389151

Ext: 4211