

***DIOSCOREA BULBIFERA* L. (DIOSCOREACEAE) AS A NEW
LARVAL HOST PLANT OF *TAGIADES MENAKA* (MOORE, [1866])
(INSECTA: LEPIDOPTERA: HESPERIIDAE)**

DILIP SHARMA¹, SONAM WANGCHUK LEPCHA² & MONISH KUMAR THAPA^{3*}

¹Ralak village, Mangshila Tibuk GPU, Dzongu, Mangan District-737116, Sikkim, India.

²Noom Panang Village, GPU Passingdang Saffo, Upper Dzongu, North Sikkim, 737116

³Wildlife Science Course, Department of Zoology, Gauhati University, Guwahati-781014, Assam, India

*Corresponding author: monish.awrro@gmail.com

Reviewer: Peter Smetacek

ABSTRACT

Dioscorea bulbifera L. (Dioscoreaceae) is reported as a new larval host plant of *Tagiades menaka*.

Keywords: Larval host plant, life cycle, *Dioscorea*, *Tagiades menaka*, HesperIIDae, Sikkim, India.

INTRODUCTION

The presence and population of insect herbivores are shaped by the prevalence of host plants (Knops *et al.*, 1999). Larval host plants play an important role in the lifecycle of butterflies, as caterpillars are usually herbivorous and often depend on a specific range of plants to meet their nutritional and chemical needs (Nitin *et al.*, 2018). Karmakar *et al.* (2018) reported the larval host plants of northeastern Indian butterflies. Recent research has highlighted the diversity and spatial distribution of butterflies in the region, yet knowledge about their larval host plants

and early life stages was scarce (Robinson *et al.*, 2001).

Dioscorea bulbifera L. (Family: Dioscoreaceae) is a climber plant, commonly referred to as air yam, aerial yam, bitter yam, cheeky yam, potato yam, and parsnip yam. This traditional medicinal plant is indigenous to Asia, Northern Australia, the Americas, and tropical Africa (Kundu *et al.*, 2021).

MATERIALS AND METHODS

An opportunistic field survey was conducted in DS's backyard garden at Ralak village, located at 27.427° N and 88.527° E, with an elevation of 1150 m above sea level, near Dzongu in the Mangan District of Sikkim, India. On 09.vii.2023, a female *Tagiades menaka* was observed laying 2-3 eggs on the stem and upper surface of a leaf of *Dioscorea bulbifera* L. Five days later, the orange-brownish eggs successfully hatched into pale greenish 1st instar larvae with black heads, which began to feed on the leaves

of the same plant. DS closely monitored the caterpillar during this period, noting its feeding and shelter patterns. He observed that after consuming the leaves, the caterpillar completely covered its body with them. DS collected a yellowish-brown, orange-colored bilobed-headed 5th instar larva and placed it in a plastic basket along with some leaves of the same plant. The caterpillar continued its life cycle by feeding on the leaves of *D. bulbifera*. After 25 days, the caterpillar transformed into a white-brownish pupa. Ten days after pupating, an adult *T. menaka* emerged from the chrysalis. The life history and larval host plants of this species in India have not been previously illustrated or recorded. The identification of the eclosed butterfly was based on Kehimkar (2016), and observations of immature stages were also made in the natural environment.

RESULT AND DISCUSSION

Tagiades menaka has been reported from Kashmir to North East India (Varshney & Smetacek, 2015). The host plant of *T. menaka* was observed to be *Dioscorea bulbifera*, which had not been recorded before. It took a total of 35 days to emerge as an adult butterfly from the egg stage. The life cycle and larval host plant of this species in India have not been illustrated or recorded to date. Possibly, this will be the first record of the larval host plant and illustration of the life cycle of *T. menaka*.

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LEGENDS TO FIGURES

Figures: (a) Host plant *Dioscorea bulbifera* L., (b) *T. menaka* laying eggs, (c) Eggs of *T. menaka*, (d) Egg shells, (e) 1st instar larva, (f) 3rd instar larva, (g) Larva making leaf shelter, (h) 5th instar larva, (i) Pupa, (j) Freshly emerged adult *T. menaka*

