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Cover Photo of founder of BIONOTES *Late* Dr. R.K. Varshney

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***DIOSCOREA ESCULENTA* (LOUR.) BURKILL AS A LARVAL HOST PLANT OF *TAGIADES JAPETUS* (STOLL, [1781]) (INSECTA: LEPIDOPTERA: HESPERIIDAE)**

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Reviewer: Peter Smetacek

Abstract

Dioscorea esculenta (Lour.) Burkill is observed as a new larval host plant of *Tagiades japetus*.

Keywords: Larval host plant, immature stages, HesperIIDae, Assam, India.

Introduction

Egg laying choices in herbivorous insects have consequences for offspring growth (Gripenberg *et al.*, 2010), defense (Denno *et al.*, 1990) and competition (Anderson *et al.*, 2010). Bell (1909-1927), Wynter-Blyth (1957), Sevastopulo (1973), Kunte (2000; 2006), Kiruba *et al.* (2008); Kalesh & Prakash (2007, 2015), Smetacek & Smetacek (2011), Tiple *et al.* (2011), Sengupta *et al.* (2014), Ghosh & Saha, (2016), Nitin *et al.* (2018), Karmakar *et al.* (2018), Kafley (2019), Naik & Mustak (2020) and Dey (2020) have reported the larval host plants of butterflies in India.

Materials and Methods

An opportunistic field survey was carried out at SB's backyard garden at Bongal Gaon (26.678° N and 93.979° E, 92 m above asl) near Dergaon town, situated beside Dergaon-Golaghat Road in Assam in India. The place is overgrown with different grasses and other plant such as *Dioscorea alata*, *Dioscorea esculenta*, *Citrus* spp., *Litchi chinensis*, *Cocos nucifera*, *Areca catechu*, *Curcuma* spp., etc.

On 29.iv.2020, a female *Tagiades japetus* was sighted ovipositing on the upper surface of a leaf of *Dioscorea esculenta* (Lour.) Burkill. After 5 days, the orange-brownish egg successfully hatched into a pale yellowish 1st instar larva *in situ* and started to feed on the plant. SB regularly observed it during that

period and collected the yellowish-brown, bilobed headed 2nd instar larva and put it into a clay pot along with the same plant. SB noted the feeding and shelter pattern of all early stages. The caterpillar continued its life cycle by feeding on the *D. esculenta* leaves provided. The life history of this species for India has already been illustrated in detail (Bhakare & Ogale, 2018). The eclosed butterfly was identified using Kehimkar (2016). Additionally, immature stages were also observed in the natural environment.

Dioscorea esculenta is a climber plant which stem twiggling to the left, all leaves are simple, capsules broader than longer, round seeds winged leaves pubescent, reniform or orbicular-cordate with sharp stipular thorns and numerous tubers (Prain, 1903). The Plant List (2013) is followed for the updated scientific name of the host plant.

Result

Tagiades japetus has been recorded from India to Myanmar, Thailand, Laos, Cambodia and Vietnam (Inayoshi, 2021). *Dioscorea alata*, *Dioscorea wallichii* and *Dioscorea oppositifolia* were earlier reported as larval host plants for this species (Sevastopulo, 1973; Robinson *et al.*, 2010). The successful rearing and emergence of *Tagiades japetus* on

Dioscorea esculenta confirms the latter as a hitherto unreported larval host plant.

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Fig: (1). Cultivated plant (edible) of *Dioscorea esculenta* (2). *Tagiades japetus* laying egg (3). Larva making leaf shelters (4). 5th instar larva (5). Pupa (6). Freshly eclosed adult.