

***PUERARIA PHASEOLOIDES* (FABACEAE), A NEW LARVAL HOST PLANT FOR THE COMMON CERULEAN BUTTERFLY *JAMIDES CELENO* (LEPIDOPTERA: LYCAENIDAE)**

C. SUSANTH¹* & ARYA MEHER B.S.²

¹ Prakriti, SNRA-20, Souhrida Nagar, Indira Nagar, Peroorkada.P.O, Thiruvananthapuram-695005,

Kerala.

² Centre for Ecology, Environment and Sustainable Development, Tata Institute of Social Sciences, Tetelia Road, Jalukbari, Guwahati, Assam 781013

* Corresponding author: c.susanth@gmail.com

Reviewer: P. Smetacek

ABSTRACT

The life cycle of *J. celeno* was observed on *Pueraria phaseoloides*, a new larval host plant.

INTRODUCTION

Jamides celeno (Cramer, (1775)) (Lycaenidae) which is also known as the Common Cerulean butterfly, occurs from Gujarat south to Kerala and eastward to West Bengal; Uttarakhand to N.E. India (Varshney & Smetacek, 2015; Bhakare & Ogale, 2018). It is common along fringes of forests, grasslands, plains and gardens of urban areas. In Kerala, this butterfly can be found throughout the year in forest clearings, fringes of hilly/mountain grasslands, open country in the plains and in urban gardens.

STUDY AREA, MATERIALS AND METHODS

The present study was undertaken in the residential area of Souhrida Nagar, Peroorkada (8.5347250°N 76.9727765°E) in Thiruvananthapuram city limits, Kerala. The study area has many coconut trees and banana plantations along with wild creepers and low growing plants. This was originally a marshy place until a few years ago and has been

reclaimed for housing development. A small canal flows near the boundary of this land. The undergrowth comprises of *Pueraria phaseoloides* creepers, *Desmodium heterocarpon* and *Abrus precatorius*. Trees include Golden Shower tree (*Cassia fistula*), Mahogany tree (*Swietenia macrophylla*), Sour sop (*Annona muricata*) and False Ashoka (*Polyalthia longifolia*).

On December 2021 in our routine butterfly observation in this area we saw a female *J. celeno* laying eggs on flower buds of an inflorescence of *Pueraria phaseoloides* growing in the undergrowth (Fig.1). The tiny spherical white eggs were immediately surrounded by Yellow Crazy Ant (*Anoplolepis gracilipes*) (Fig.2). We collected the flowerbuds with eggs for observing the biology of *J. celeno* for confirming the new larval host cplant. We put the flower buds with eggs in a plastic jar for observation. The eggs hatched on third day. Fresh flower buds and flower stalk were kept in the container for larvae to feed on. First instar larvae were transparent, then the colour changed to pale green, whitish green, pale brown or reddish green, making it very difficult to locate (Fig.3). Final instar larvae were observed resting on the bottom of the jar

and fixed the tail there. Pupa was attached tightly by the tail and a silk body girdle (Fig.4).

We observed the biology in natural surroundings too. The larvae were seen on the tender stalks and occasionally entering into the flower bud for feeding. The larvae were attended by ants during the whole day. The presence of ants helped us to find the caterpillar resting underneath the stalk and buds. In natural surroundings final instar larvae were observed leaving flower buds and pupating on the stem close to the ground. Pupa is pale brown or pale green. The pupation period observed was ten to fourteen days.

The observation was carried out from December 2021 to March 2022. During this period, we could also observe *Jamides bochus* (Stoll, [1782]), commonly known as the Dark Cerulean, laying eggs on the same flowering buds as that of *J. celeno* (Fig.5). Both were seen ovipositing on the same bud. The early instar larvae of *J. bochus* were seen piercing the flower bud and living inside while *J. celeno* larvae were seen near the flower buds attended by ants (Fig.6). We observed the biology/life cycle of *J. celeno* on *Pueraria phaseoloides* during the flowering season of the plant from December to March end. During December, the eggs and larvae were seen on flower buds and tender stalks. Later the eggs were laid on tender pods and dry pods. Larvae were seen piercing the dry pods and living inside them. The colour of the larvae changed to brownish green.

In the existing literature *Pueraria phaseoloides* is not reported as a larval host plant of *J. celeno*. *P. phaseoloides*, a plant in the pea family (Leguminosae), subfamily Faboideae, is a forage crop and cover crop used in the tropics.

Saraca asoca, *Xylia xylocarpa*, *Abrus precatorius*, *Pongamia pinnata*, *Trichilia connaroides*, *Theobroma cacao* and *Elettari cardamomum* are the recorded larval host plants of *J. celeno* according to Robinson *et al.* (2001). First author has also observed the life cycle of *J. celeno* on *Pongamia pinnata* and

Abrus precatorius during 1993 (unpublished record). Nitin *et al.* (2018) record many larval host plants for the species namely *Cajanus albicans*, *Butea monosperma*, *Phaseolus adenanthus*, *Heynea trijuga*, *Trichilia trijuga* and *Trichilia hirta*. The *Pueraria phaseoloides* has not been reported as a larval host plant for *J. celeno* and hence it is a new record.

ACKNOWLEDGMENT

We are grateful to Mr. J.M. Garg, efloraofindia for helping us to confirm the identification of the plant.

REFERENCES

- Bhakare M. & H. Ogale. 2018. *A Guide to Butterflies of Western Ghats (India)*. Includes Butterflies of Kerala, Tamilnadu, Karnataka, Goa, Maharashtra and Gujarat state. Privately published, Satara. 349pp.
- Nitin, R., V. C. Balakrishnan, P. V. Churi, S. Kalesh, S. Prakash, & K. Kunte. 2018. Larval host plants of the butterflies of the Western Ghats, India. *Journal of Threatened Taxa* 10:11495–11550.
- Robinson, G.S., P.R. Ackery, I.J. Kitching, G.W. Beccaloni & L.M. Hernandez. 2001. *Hostplants of the moth and butterfly caterpillars of the Oriental Region*. The Natural History Museum, London and Southdene Sdn. Bhd., Kuala Lumpur. 744 pp
- Varshney, R.K. & P. Smetacek (eds). 2015. *A Synoptic Catalogue of the Butterflies of India*. Butterfly Research Centre, Bhimtal and Indinov Publishing, New Delhi, ii+261 pp. 8 pl.

Figures

1. Egg laying *Jamides celeno*

2. The eggs surrounded by Weaver ants
3. Final instar larva
4. Pupa

5. Egg laying *Jamides bochus*
6. Larvae of *J. celeno* and *J. bochus* on same flower bud.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6