

## **LILIUM LONGIFLORUM AND LILIUM BULBIFERUM (LILIACAE):**

### **NEW LARVAL HOST PLANTS FOR *KANISKA CANACE* (LEPIDOPTERA: NYMPHALDAE) FROM ARUNACHAL PRADESH, INDIA**

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#### **ABSTRACT**

*Lilium longiflorum* and *Lilium bulbiferum* are reported as hitherto unrecorded larval host plants of *Kaniska canace* (Blue Admiral) from Arunachal Pradesh.

**Key words:** *Lilium longiflorum*, *Lilium bulbiferum*, Arunachal Pradesh

#### **INTRODUCION**

*Kaniska* Moore, 1899 is a monotypic genus of Nymphalidae, represented in India by two subspecies, *K. canace canace* (Linnaeus, 1763) distributed throughout the Himalayan region to N.E. India and *K. c. viridis* Evans, 1924, which is restricted to the Western Ghats (Varshney & Smetacek, 2015; Kehimkar, 2016). However, this species was also reported from the plain of Punjab (Singh et al., 2016) and Rajasthan (Sengupta, 2021). It is on the wing from March to December between an elevation of 1000m to 3000m in the Himalayan region and between 1,000m to 2,200m in

the southern hills of India (Kehimkar, 2016).

#### **OBSERVATION**

On 09.iv.2021, an adult female of *K. canace* was encountered laying six greenish spherical eggs on the lower surface of the leaves and stem of *Lilium longiflorum* and *Lilium bulbiferum* plants in a private garden of village Gaherigaon (27°11'53.9592" N; 96°57'49.6548" E) of Vijaynagar, district Changlang, Arunachal Pradesh. The eggs had longitudinal ribs and were laid singly.

The plants with the eggs were shifted to flower pots and placed inside the insectarium box made up of netting. The insectarium box was placed in the garden to rear the caterpillars under natural conditions. The caterpillars were monitored regularly and frass was cleaned every day. The different instars of the caterpillars were photographed using a

Canon DSLR camera with 90mm macro lens (figures 1-12).

All the six eggs hatched successfully on 16.iv.2021. The second instar caterpillars started feeding on leaves voraciously. On 16.v.2021 all the six larvae stop feeding and were observed moving away from the host plant to the bamboo branches which were kept in the insectarium to give support to the host plants; no frass was observed on that day. On 17.v.2021, all the six caterpillars were observed hanging vertically upside down on the bamboos from a silk pad and all the caterpillars pupated successfully between 12 pm to 1 pm. On 29.v.2021 all the pupae turned black and become wet. On 30.v.2021 adults of *Kaniska canace* emerged between 11am to 2 pm from all the six pupae. After expanding and drying their wings for 30 to 35 minutes each, the butterflies flew away.

Previously *Smilax* species have been reported as larval host plants of *K. canace* from India, notably *Smilax zeylanica* (Wynter-Blyth, 1957; Karmakar et al., 2018; Nitin et al., 2018). Robinson et al. (2001) recorded *Trycirtis hyrta* (Convallariaceae), *Lilium lancifolium* (Liliceae) and *Smilax china* (Smilacaceae) from China, and *Heterosmilax japonica*, *Smilax perfoliata*, *Smilax aspersa*, *S. arisanensis*, *S. aspericaulis*, *S. bracteata*, *S. lanceifolia*, and *S. riparia* (Smilacaceae) from other parts of the range of *K. canace*. Thus, the present study confirmed *Lilium longiflorum* and *Lilium bulbiferum* (Liliaceae) as previously unreported larval host plants for *K. canace*.

## ACKNOWLEDGEMENT

The authors are thankful to Mrs. Dew Kumari Rai and Mr. Chandra Kumar Limbu for identifying the larval host plants.

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Figure 1



Figure 2

Figure 1 & 2: *Lilium bulbiferum*



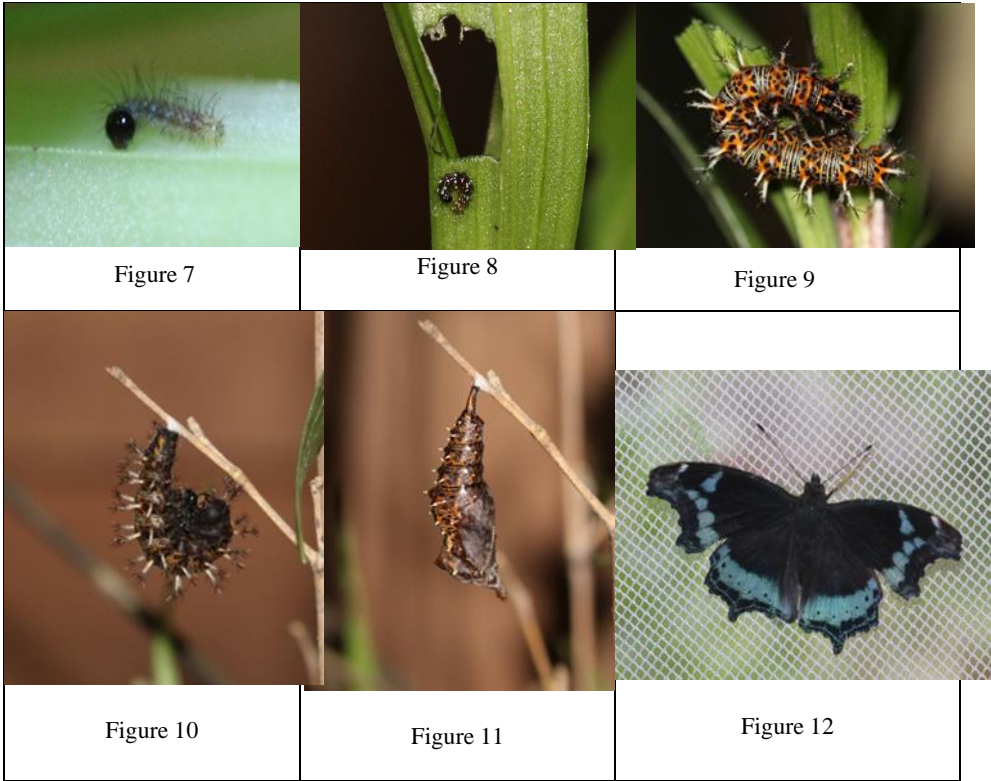
Figure 3 & 4: *Lilium longiflorum*



Figure 5: Larval host plant voraciously eaten by *Kaniska canace* caterpillars



Figure 6: Egg hatching out



Figs. 7 -12: Early stages of *Kaniska canace*. 7: newly hatched larva. 8: larva resting after feeding. 9: Final instar. 10: larva pupating. 11: pupa. 12: adult ready to take flight