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# BIONOTES

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**On Any Aspect Related with Life Forms**



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

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# EGG CANNIBALISM BY CATERPILLARS OF THE TAWNY COSTER BUTTERFLY, *ACRAEA TERPSICORE* (LEPIDOPTERA: NYMPHALIDAE) IN INDIA

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*Reviewer: Peter Smetacek*

The first author (RR) has developed a small butterfly garden on his private land in Khar area in Mumbai, Maharashtra. Here he has planted many larval host plants and nectar plants of butterflies. There are a few Passion Flower vines also (*Passiflora* spp.) which is a known larval host plant of Tawny Coster *Acraea terpsicore* (Linnaeus, 1758).

On 30.vii.2020 a Tawny Coster was seen laying a batch of eggs on the underside of a Passion Flower vine leaf. Further observations revealed that there were already two batches of eggs on the same leaf. These eggs started hatching during the ensuing days.

After feeding on the egg shells, the newly hatched caterpillars (more than 50) started feeding on the leaves by skimming the leaf surface. After some time, these caterpillars crawled around and found a batch of more than 70 freshly laid eggs. Surprisingly, they started feeding on these fresh eggs. After a few hours, it was seen that the entire batch of freshly laid eggs was finished by the already hatched caterpillars.

On 25.x.2021, RK found two batches of eggs on one leaf of Passion Flower at the butterfly garden in BNHS Nature Reserve, which is nestled between the Film City and Sanjay Gandhi National Park, in Goregaon, Mumbai. The two batches were on the upper and under sides of one single leaf. The eggs from one batch (of more than 70 eggs) started hatching at around 11 a.m. and started feeding on the shells of eggs from which they had emerged. As the emergence and feeding on the upper surface of the leaf was being observed and video recorded, it was discovered that there was another batch of eggs on the underside of the same leaf. After finishing the egg shells, the caterpillars started crawling around and reached these eggs. As RK was aware of the above incident, he watched the behaviour of these caterpillars. However, although they discovered the eggs, they did not eat them and moved on to feeding on leaves of the larval host plant. Observations were discontinued as most of the caterpillars dispersed to nearby leaves, leaving the egg unharmed. Also on 29.x.2021, RK observed another batch of more than 70 eggs hatching. The caterpillars did not eat each other, at least on that day. In that case, there was no other batch of unhatched eggs.

It has been reported for many lepidopteran caterpillars that they exhibited cannibalism as caterpillars feeding on caterpillars (de Niceville, 1901; Moore, 1912; Brues,1920; Dethier, V. G., 1937) or even as caterpillars feeding on eggs of the species as reported in two species of *Pieris* butterflies, viz., *Pieris rapae* and *P. melete* (Watanabe & Yamaguchi, 1993).

In a recent research paper, Orrock *et al*. (2017) proposed that induced defenses in plants (the plant making itself low quality or toxic) reduce herbivory by increasing cannibalism among the caterpillars.

We could not find any reference of egg cannibalism in any butterfly species from India. Hence the report assumes importance.

**Acknowledgements**

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Fig.1: Leaf of Passion Flower showing hatching and fresh eggs of Tawny Coster

Fig.2: Tawny Coster caterpillars feeding on fresh eggs

Fig.3: Tawny Coster caterpillars feeding on fresh eggs

Fig.4: Tawny Coster caterpillar feeding egg shells

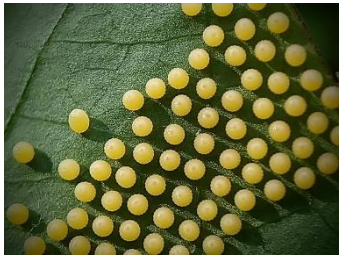

Fig.5: Tawny Coster fresh eggs