



**RESEARCH ARTICLE :**

## Biology and predatory behaviour of an assassin bug, *Sycanus collaris* (Fabricius) on rice meal moth, *Corcyra cephalonica* (Stainton) and leaf armyworm, *Spodoptera litura* (Fabricius)

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*Spodoptera litura* (F.)

**SUMMARY :** The effective utilization of any biological control agent relies upon its comprehensive knowledge on bioecology, ecophysiology and behaviour. Hence, in the present study, the biology and predatory behaviour of third, fourth and fifth nymphal instars and adults of an assassin bug, *Sycanus collaris* (Fabricius) to the larvae of rice meal moth, *Corcyra cephalonica* (Stainton) and leaf armyworm, *Spodoptera litura* (F.) was observed in the laboratory. The eggs were laid in clusters and cemented to each other and the surface of the plastic cylinder. The egg hatched after 11 to 15 days with each cluster having 15 to 70 eggs. Five nymphal instar stages were recorded. The mean longevity of each nymphal stage was  $11.38 \pm 0.55$ ,  $12.24 \pm 1.87$ ,  $12.58 \pm 1.24$ ,  $14.62 \pm 1.67$ ,  $15.42 \pm 1.14$  days when fed with *C. cephalonica* and  $12.54 \pm 0.57$ ,  $12.24 \pm 1.12$ ,  $13.26 \pm 1.16$ ,  $14.42 \pm 0.86$ ,  $16.58 \pm 1.70$  days when fed with *S. litura*. The mean longevity of male and female adult fed with *C. cephalonica* was  $73.58 \pm 2.12$  and  $80.64 \pm 3.40$  days, respectively. The mean longevity of male and female adult fed with *S. litura* was  $75.82 \pm 2.82$  and  $85.48 \pm 3.20$  days, respectively. The sequential acts of predatory behaviour and the time taken for each predatory act such as arousal, approach, capturing, paralysing, sucking and postpredatory behaviour and the number of piercing and sucking sites were observed. The predator took less time to predate upon the larvae of *S. litura* than that of *C. cephalonica*.

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