

A CASE STUDY

A study on *Aeolesthes holosericea* Fabricius, an important pest of apple plantations (*Malus domestica* Borkh.) in Jammu region

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Besides various ethno medical uses, apple fruit is a rich source of iron, vitamin A and vitamin C. Therefore, keeping in view the medical, dietary and economical importance of apples, the damage caused by *Aeolesthes holosericea* Fabricius, the work was initiated in district Doda of Jammu to study the biology after being recognized as an important insect pest causing serious damage to apple trees. Adults do not cause much damage to the trees and are nocturnal in habit. Eggs are laid in clusters of 4-6 in the cracks or crevices under the bark. On hatching, small grubs start feeding on the inner layers of the bark. Mature larvae enter the wood for pupation which is plugged with coarse fibres. Larval stage is the most harmful stage of this pest.

Apple (*Malus domestica* Borkh.) occupies an important place among the fruits grown in Jammu and Kashmir State. It has attained the distinction of being the most important fruit crop of the north-western Himalayan region of India. In spite of the extensive importance of apple plantations in horticulture industry, not much entomological work has been done on *Aeolesthes holosericea* in Jammu region. The insect is cosmopolitan in distribution and is found in different parts of the country viz. Andaman and Nicobar Islands, Arunachal Pradesh, Assam, Bengal, Uttarakhand, Himachal Pradesh, Andhra Pradesh, Madhya Pradesh, Punjab, Tamil Nadu, Rajasthan and Jammu and Kashmir. It is reported as a polyphagous pest infesting wide variety of forest trees and fruit plants include apple, apricot, cherry, crabapple, guava, mango, mulberry, peach, pear, plum and walnut. Ahmed *et al.*, 2004; Ahmed *et al.*, 1977;

Stebbing, 1914; Khan and Maiti, 1983; Ambethgar, 2003; Bhalla, 1968; Butani and Jotwani, 1975; Tiwari *et al.*, 1982 and Rahman and Khan, 1942. Since the State of Jammu has remained virgin with regard to the entomology of the area, taking account of this, the present investigation was inspired to initiate the work on the distribution, host plants, morphology and biology of *Aeolesthes holosericea* Fabricius, an important emerging pest of apple plantations from Jammu region. The present communication forms a part of findings so far made regarding *Aeolesthes holosericea* Fabricius in Jammu region of J&K State

MATERIALS AND METHODS

The present work is the result of studies carried both in the field as well as in the laboratory on different cultivars of viz. Red delicious, Mollies delicious, Starkrimson, Americal apiroque, Ambri, Hybrid-1, Khatni, Red gold, Golden Delicious etc irrespective of their ages.

Aeolesthes holosericea Fabricius, was collected from both young and old apple trees growing in different localities in district Doda of J&K State. Specimens (eggs, larvae, pupae and adults) were collected and preserved by traditional methods.

RESULTS AND DISCUSSION

Aeolesthes holosericea Fabricius, commonly known as apple stem borer and cherry stem borer has been observed as an important pest of apple plantations in Jammu region. The insect is cosmopolitan in distribution and is found in different parts of the country viz. Andaman and Nicobar Islands, Arunachal Pradesh, Assam, Bengal, Uttarakhand, Himachal Pradesh,