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Research Note

First report of *Beauveria bassiana* (Balsamo) Vuillemin on *Amsacta albistriga* Walker (Lepidoptera: Arctiidae) from Karnataka, India

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ABSTRACT: ***Beauveria bassiana*** **(Balsamo) Vuillemin, a fungal pathogen was for the first time found infecting the red hairy caterpillar, *Amsacta albistriga* Walker in the groundnut crop at Pavagada taluk in Tumkur district, Karnataka. This opens up the scope for utilizing this pathogen as a component of IPM of this pest.**

KEY WORDS: *Amsacta albistriga*, *Beauveria bassiana*, groundnut crop

The red hairy caterpillar, *Amsacta albistriga* Walker is one of the most important pests of agricultural crops such as groundnut, cotton, sorghum, ragi, cowpea, horsegram, castor, etc. in addition to several non-cultivated crops. It causes severe losses in many crops especially in the groundnut growing tracts of southern India (Rao *et al.*, 1977; Balasubramanian *et al.*, 1996).

Groundnut crop was surveyed for the larvae of *A. albistriga* and its natural enemies during the months of August to November, 2003 in Pavagada taluk of Karnataka. The caterpillars of *A. albistriga* were found dead due to fungal infection to the extent of 2.75 per cent. A total of 400 larvae were collected from 0 .4 hectare of groundnut crop, out of which 11 of them showed fungal infection. These diseased larvae were mummified and covered with dense white cottony fungal growth over the entire surface of the body. Isolation and purification of the fungus was carried out on potato dextrose agar medium by streak plate method. The purified fungus required eight days for sporulation at 28°C.

Pathogenicity test was conducted by inoculating 30 third instar larvae of *A. albistriga*

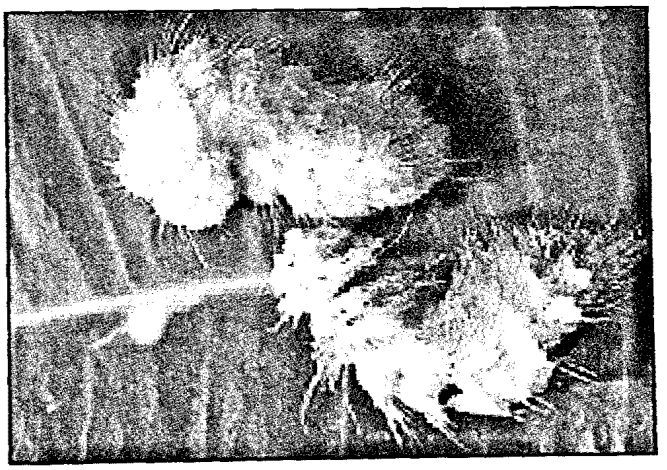

Fig. 1. *Amsacta albistriga* larvae infected with *B. bassiana*

through larval dip method with aqueous spore suspension of fungus containing 10^9 spores/ml. The larvae were incubated in an environmental growth chamber at 25±1°C and 80±1 per cent relative humidity for 10 days. Mortality was observed four days after inoculation, extending up to 10th day resulting in 100 per cent mortality. Treated larvae developed the typical symptoms of fungal infection, such as loss of sensitivity, hardening and mummification along with white mycelial growth. Microscopic examination of the fungal mass revealed branched conidiophores arising from vegetative hyphae bearing a group of clustered conidiogenous cells. Conidia were borne on thread-like apex of the phialide on a series of zigzag branchlets. These morphological characters indicate that the fungus is *Beauveria bassiana*. The fungus was re-isolated from such infected caterpillars and found to conform to the characteristics of *B. bassiana*, thus satisfying the Koch's postulates.

This is the first record of *B. bassiana* on *A. albistriga* from India. Earlier, natural infections of *B. bassiana* to arctiids have been reported on *Spilosoma obliqua* (Pandit and Samanta, 1995), *Pericallia ricini* (Gloriana *et al.*, 2000) and *Hyphantria cunea* (Deseo *et al.*, 1986). The potential of *B. bassiana* as a biocontrol agent against the red headed hairy caterpillar has to be tested under field conditions.

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