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Research Note

Record of larval parasitoid of Bihar hairy caterpillar, *Spilosoma obliqua* Walker (Lepidoptera: Arctiidae) in jute ecosystem in India

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ABSTRACT: A survey on native natural enemies of jute hairy caterpillar**,** *Spilosoma obliqua* Walker was conducted during April-July 2012 at CRIJAF, Barrackpore, Kolkata, West Bengal, India. The survey revealed that *Meteorus spilosomae* Narendran& Rema is a potential larval parasitoid which was occurring naturally in the jute ecosystem. This report confirms the parasitization of *S. obliqua* larvae by *M. spilosomae* in jute ecosystem of West Bengal for the first time.

KEY WORDS: *Spilosoma obliqua, Meterous spilosomae,* larval parasitoid

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Bihar hairy caterpillar, *Spilosoma obliqua* Walker is a polyphagous pest which infests several crops including the bast fibre crops like jute (*Corchorus* spp) and mesta (*Hibiscus* spp). However, jute is a more preferred host than mesta. *Tossa* jute (*Corchorus olitorius*) is more susceptible to *S. obliqua* than the white jute (*C. capsularis*) (Pandit, 1985). *S. obliqua* earlier considered as a sporadic and irregular pest of jute. In recent years, outbreak of this pest was reported from jute growing areas causing substantial loss to the fibre.

The role of natural enemies for management of this pest needs to be explored. Information on spectrum and type of native natural enemies is a pre-requisite for large scale inoculative releases of biocontrol agents. Keeping this in view, a survey for natural enemies of jute pests was conducted in jute growing areas of North 24 Parganas district during *Kharif* 2012. During the survey, different stages of *S. obliqua* larvae were collected and reared in Biocontrol Laboratory at CRIJAF, Barrackpore. The larvae were grouped based on instars and further maintained in the laboratory in separate specimen jars (27cm dia x 24 cm h) provided with fresh jute leaves as food, covered with muslin cloth till pupation. The apodous grub that emerged from the host insect body (mostly 3-4th instar) followed by formation of pupal cocoons were immediately collected and placed in Petri dish (10 x 9 x 1.5 cm) inner lining with parafilm. On the basis of the specimen identification report from IARI, New Delhi, the parasitoid was identified as *Meteruos spilosomae* Narendran and Rema (Hymenoptera: Braconidae). It is a solitary, koinobiont, endoparasitoid, specific to *S. obliqua.* Earlier, Rahman *et al*. (2002) reported two species of hymenopteran parasitoids of the genus *Glyptapanteles* sp and *Meteorus* spp. on *S. obliqua* in jute from Bangladesh. In India, Geetha Bai and Marimadaiah (2006) recorded *M. spilosomae* on *S. obliqua* in mulberry from Karnataka.

The parasitization potential of *Meteorus* spp. on *S. obliqua* feeding on cultivated *Vigna mungo* and wild weeds, *Xanthium strumarium* and *Parthenium hysterophorus* was to the extent of 77% (Gupta and Narendran, 2007). Parasitization to the extent of 77% by *Meteorus* spp. on *S. obliqua* under field condition indicated the possibility of this parasitoid to be used as a potential biocontrol agent of Bihar hairy caterpillar of jute through conservation, augmentation and mass multiplication. This report confirms the parasitization by *M. spilosomae,* a larval parasitoid of *S. obliqua* in jute ecosystem of West Bengal for the first time.

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