



### Research Note

## Record of *Nipponaetus haeussleri* (Uchida) (Hymenoptera: Ichneumonidae) as an egg parasitoid of sugarcane top shoot borer, *Scirpophaga excerptalis* Walker from India

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**ABSTRACT:** During routine surveys for egg parasitoids of sugarcane borers in the Cauvery Delta zone of Tamil Nadu, *Nipponaetus haeussleri* (Uchida) (Hymenoptera: Ichneumonidae) was recovered from an egg mass of sugarcane top shoot borer, *Scirpophaga excerptalis*. This is the first report of an ichneumonid from a lepidopteran egg mass.

**KEY WORDS:** *Scirpophaga excerptalis*, *Nipponaetus haeussleri*, biological control

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The top shoot borer, *Scirpophaga excerptalis* Walker (Lepidoptera: Pyralidae), is unique among the moth borers of cane in that it infests at all stages of crop growth. It is one of the most destructive pests of cane in India (as a regular and major pest in subtropics) and Pakistan, though distributed in Myanmar, Sri Lanka, China, Formosa, Japan, Philippines and Thailand (Atwal and Dhaliwal, 2007).

Egg parasitoids *Trichogramma chilonis* Ishii (= *T. australicum* Girault & Viggiani = *T. confusum*), *T. chilostraeae* Nagaraja and Nagarkatti (Sallam, 2005), *T. evanescens minutum* Riley (Mukunthan, 1986), *T. fasciatum* (Perkins) (Pandya, 1997), *T. japonicum* Ashmead (Raghupathy, 1997), *Telenomus beneficiens* Nixon, *T. dignoides* Nixon, *T. dignus* Gahan, *T. rowani* (Gahan) (Rajmohana, 2006), *Tetrastichus* sp. (Dorges and Murthy, 1967) and *Trissolcus* sp. (Mukunthan, 1986) have been reported on *S. excerptalis*.

During our routine surveys for egg parasitoids of cane borers (Sivaraman, 2007), we collected 95 egg masses of *S. excerptalis* from Cauvery Delta region of Tamil Nadu, out of which 12 were parasitized by *Telenomus beneficiens*. From another egg mass collected from Pudhuthurai village, Sirkazhi taluk, Nagapattinam district, a pair of *Nipponaetus haeussleri* (Uchida) (Hymenoptera: Ichneumonidae: Cryptinae) was recovered and this is the first report of an ichneumonid from a lepidopteran egg mass.

*Nipponaetus* is a small genus of the Old World tropics and is recorded from Thailand, Madagascar, China, India,

Korea, Philippines and Japan (Uchida, 1933). Earlier host records of *Nipponaetus* including *Cydia molesta* from Japan (Busck, 1916 as quoted by Broad et al. 2004) and tortricid fruit moths as (*Phaeogenes haeussleri*) (Garman, 1940) are doubtful as reported by Broad et al. (2004). They further mentioned that the specimens of *N. haeussleri* at The Natural History Museum, London were all females from Cuttack, Orissa, India submitted by the Commonwealth Institute of Entomology ex spider eggs.

After the emergence of *N. haeussleri*, the egg mass was dissected and there were two pupal cases inside, with faecal pellets embedded within the fibrous matrix of the egg mass. The two larvae might have fed on all the eggs within the egg mass, thus in the strict sense it may be a predator just like *Tetrastichus* sp. (Eulophidae) from *Scirpophaga incertulas* (Walker) on rice. However, our attempts to recover more number of *N. haeussleri* from the same area and nearby areas in the Cauvery Delta failed indicating that its occurrence might be less frequent. Further, a pair of parasitoids from an egg mass clearly indicates family planning by the mother so that the emerging pair can take care of the next generation, unaffected by the number. However, further attempts are necessary to confirm their efficiency in the biological control of *S. excerptalis*.

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