



Report of a new host plant for *Eligma narcissus* Cramer (Lepidoptera: Nolidae)

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ABSTRACT: *Oroxylum indicum* (L.) Benth. ex Kurz is reported as a new host plant for *Eligma narcissus* (Cramer) from Kerala, India. This is the first record of Bignoniaceae as host plant for the genus *Eligma* Hubner. © 2020 Association for Advancement of Entomology

KEYWORDS: Bignoniaceae, host plant, India, Nolidae

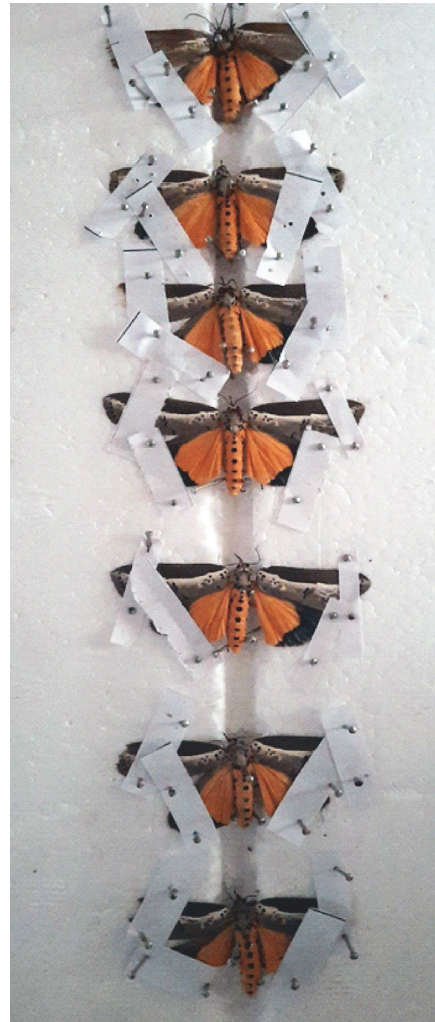
Family Nolidae (Lepidoptera) includes moths that are widely distributed with 1879 living species under 206 genera (Catalogue of Life, 2020). Though occurring worldwide, Nolidae shows primarily palaeotropical distribution (Kitching and Rawlins, 1998). Several species of this group are agricultural pests. Family Nolidae includes 8 subfamilies viz., Diphtherinae, Risobinae, Collomeninae, Beaninae, Eligminae, Westermanniinae, Nolinae and Chloephorinae (Zehari *et al.*, 2012b). Earlier, Nolinae was either treated as subfamily of Arctiidae or Noctuidae by many workers (Gardener, 1941, 1943, 1948, Holloway and Miller, 1995, Poole 1989). Later molecular and phylogenetic studies of Zehari *et al.* (2011, 2012a) revised the status of Nolinae and treated as a subfamily of Nolidae.

Adult moths of family Nolidae are small in size, mostly dull coloured with tufts of scales on forewings. Moths of this group are easily identified from their morphological characters like elongation of the forewing retinaculum in a bar-like or digitate

condition and possession of a post spiracular counter-tympanal hood (Zehari *et al.*, 2012b). Another interesting feature of the larva of many genera of Nolidae is the presence of swollen, bulbous-like structure on the head which is nothing but the stack of moulted old caterpillar head capsules for defense (Petah *et al.*, 2016). The cocoons of this moth family are boat-shaped and pupae lack cremasters. Larvae feed leaves, stem, pods and seeds.

Genus *Eligma* Hubner belongs to the subfamily Nolinae of superfamily Noctuoidea. A total of 9 species are known globally. Only one species is known from India (Catalogue of Life, 2020). Though phytophagous, biology of many species of *Eligma* is still unknown. *Eligma narcissus* (Cramer) 1775 is a serious pest of *Ailanthus* in Southern India (Roonwal, 1982). The life cycle consists of egg, larva, pupa and adult. Eggs pale white, larva bright sulphur yellow with black and red patches, pupa dark brown. Moths oviposit in clusters,

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Figures. 1-3 *Eligma narcissus* (Cramer) and host plant *Oroxyllum indicum* (L.) Benth. ex Kurz. 1 & 2) Caterpillar and host plant; 3) Adult moths

incubation period 3-4 days, larval period 22-23 days and pupal period 15-17 days. There are 8-9 generations a year (Chatterjee *et al.*, 1969).

Live specimens of larvae were collected on 3rd January 2020. They were found feeding on the leaves of a young plant, *Oroxyllum indicum* (L.) Benth. ex Kurz. Larvae were reared in the laboratory at room temperature. In the lab, larvae were provided with fresh leaves of *O. indicum* (Bignoniaceae). Additional specimens were collected and reared in separate rearing cages and all the instars were fed with leaves. Larva stopped feeding and pupated on 23rd January 2020. Out of

the 12 larvae collected and reared, 11 emerged out as adults (10th February 2020) and one was found dead. Four adult male moths were dissected according to standard procedures to study the genitalia (Robinson, 1976). The genitalia study is important to confirm the species identity. Adult specimens (2 males and 5 females) were mounted, dried and identified as *E. narcissus* based on the morphological and genital features available in published literatures (Chatterjee *et al.*, 1969; Ueda and Saigusa, 1982).

Host record for *E. narcissus* in India shows preference to plants of Simaroubaceae. Other

previous host records included are flora of Rosaceae and Meliaceae from China (Shao *et al.*, 2012). *O. indicum* is an ornamental plant widely distributed in India and South East Asia, commonly known as midnight horror, broken bones, Indian caper, or tree of Damocles. It is also a medicinal plant locally known as Bhatghila, Tona, Bhut-vriksha, Shyonaka, and Hanyu pinyin. Roots, leaves and stems of *O. indicum* have been used as a single drug or as a component of certain compound drug preparations in the Indian Ayurvedic system of medicine for treatment of various disorders as well as used as a tonic and Rasayana drug (Lawania *et al.*, 2010). This is the first report of an additional host plant for *E. narcissus* and also the first record of Bignoniaceae as host plant for the genus *Eligma*. This finding widens the host range of *E. narcissus*, commonly known as ailanthus defoliator in India.

Preserved specimens will be deposited in the Zoological Survey of India, Kozhikode, Kerala, India. Material Examined: 2 Males, 5 Females, India, Kerala, Nilambur, October 2006, reared from larva on *Ailanthus excelsa*, Coll. Abhilash (ZSI); 1 Male, 3 Females, India, Kerala, Peechi, July 1986, reared from larva on *Ailanthus excelsa*, Coll. Varma (KFRI).

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