



First report of male maize webworm moth (*Cnaphalocrocis trapezalis* Guenée, 1854) from Rajasthan, India

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Abstract

Maize webworm moth (*Cnaphalocrocis trapezalis* Guenée, 1854) belong to Lepidoptera order, Pyraloidea superfamily, Crambidae family and Spilomelinae subfamily. Maize webworm moth occurrence previously observed from different region of country including the Karnataka, Tamil Nadu, West Bengal, Kerala, and Gujarat. Therefore, the present observed report first time a male of Maize webworm moth from the Rajasthan state, India.

Keywords: *Cnaphalocrocis trapezalis*, Crambidae, Male, Rajasthan

Introduction

Butterflies and moth species belong to Lepidoptera orders. According to current study, total 1,57,424 Lepidopteran species have been identified and documented at global level (Van-Nieukereken *et al.*, 2011) [12]. Among these, total 13500 species documented from the different region of India (Chandra, 2011) [1]. Koli and Prajapati (2021) [5] documented total 154 moth species belonging to 18 families from the different district of southern Rajasthan namely Rajsamand, Udaipur, Dungarpur and Banswara. Additionally, Savita and Trigunayat (2023) [8] observed 65 moth species belonging to 13 families from the city area of the Jaipur district, Rajasthan and Jain and Verma (2023) [4] observed 43 species from 9 families in the Jhalawar district of Rajasthan. Moths are widely recognized as bio indicators of ecosystems and environmental quality (Thomas, 2005; Wirooks, 2005) [10,13]. They play a crucial role in ecosystem services by acting as agricultural pests, serving as food for various organisms, and pollinating agents for various plant species (Macgregor *et al.*, 2015) [6]. The decline in moth populations is believed to have several adverse impacts on the flora and faunal composition of the ecosystem, and months play a crucial role in the ecosystem (Dar and Jamal, 2021b; New, 2023) [2,7]. Present study provides first time newly reported species *Cnaphalocrocis trapezalis* Guenée, 1854 (Lepidoptera: Pyraloidea: Crambidae: Spilomelinae) from Rajasthan, specifically in Tilak Nagar, Bhilwara district.

Materials and Methods

Bhilwara district situated in Rajasthan State shows varied topography characterized by differing weather conditions and forest distribution. Due to varied topographical and forest types, conditions create numerous microhabitats and favour a high biodiversity of floral and faunal. Study was carried out Random and Opportunistic sampling methods were used in the Bhilwara City area. Further species identification and distribution were confirmed with the help of the Moth of India (www.mothsofindia.org) and iNaturalist (www.inaturalist.org/) online databases. To

confirm the presence of this species in this region, photographs of this species were captured using Nikon P500 cameras.

Results and Discussion

During the field survey, moth species (maize webworm moth-*Cnaphalocrocis trapezalis* Guenée, 1854) were observed in the Tilak nagar area (25°21'43.41' 'N and 74°38'4.96 ' ' E) of Bhilwara district. On 7 September 2024, we saw the male of this species in Rajasthan (Tilak Nagar, Bhilwara) (Figure 1). During the observation, this species fed on different species of plants, including *Zea mays*, *Sorghum* species, *Penicum trichocladum*, and *Oryza* species. Adult males are medium-sized with a wingspan of 16-18 mm. Both males and females are generally yellowish-brown with brown wavy markings on their wings. In males, Dark brown and roconial scales on the midcostal vein of the forewings, a thick black hair tuft on the foretibiae, and a thin but long longitudinal black band on the dorsal portion of the abdominal tip. Previously distribution of this species was observed from Africa to the Pacific region, including Australia as well as in the Dominican Republic, Mexico and Peru. It has been observed in different states of India, including Karnataka, Tamil Nadu, West Bengal, Kerala, and Gujarat (Table 1) (Sondhi *et al.*, 2025) [9]. However, a recent study provided first-time species records from Rajasthan state, especially in the Bhilwara district of Rajasthan. Moreover, Tripathi *et al.* (2025) [11] recently recorded the first sightings of waterlily leafcutter moth (*Elophila responsalis*) species from the Bhilwara district of Rajasthan State.

Table 1: First reporting of *Cnaphalocrocis trapezalis* species in different region of India

S.no	State	Date of observation	Species observed by
1.	Karnataka	30.10.2005	Karthikeyan S.
2.	Tamil Nadu	25.05.2019	Vikas Madhav Nagarajan
3.	West Bengal	30.07.2019	Subhajit Roy
4.	Kerala	09.03.2022	Arun Lal
5.	Gujarat	28.02.2024	Anne Giry Balaram

Source: <http://www.mothsofindia.org>



Fig 1: Male of Maize webworm moth (*Cnaphalocrocis trapezalis*)

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