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NOTE

FIRST RECORD OF THE MICROMOTH

***ETHMIA LINEATONOTELLA* (MOORE, 1867)**

(LEPIDOPTERA: DEPRESSARIIDAE: ETHMIINAE) FROM BHUTAN

Jatishwor Singh Irungbam & Meenakshi Jatishwor Irungbam

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FIRST RECORD OF THE MICROMOTH *ETHMIA LINEATONOTELLA* (MOORE, 1867) (LEPIDOPTERA: DEPRESSARIIDAE: ETHMIINAE) FROM BHUTAN

Jatishwor Singh Irungbam¹  & Meenakshi Jatishwor Irungbam² 

^{1,2} Faculty of Science, University of South Bohemia, Ceske Budejovice 37005, Czech Republic.

^{1,2} Institute of Entomology, Czech Academy of Science, Ceske Budejovice 37005, Czech Republic.

¹ jatishwor.irungbam@gmail.com (corresponding author), ² meenakshi.irungbam@gmail.com

Ethmia lineatonotella (Moore, 1867) is a micromoth that belongs to the family Depressariidae Meyrick, 1883, subfamily Ethmiinae Busck, 1909. The genus *Ethmia* has a cosmopolitan distribution with about 231 described species from the Palearctic region (Sattler 1967), New World (Powell 1973), southeastern Asia (Robinson et al. 1994), and Australia (Nielsen et al. 1996). In the Himalayan region, only 13 species are reported which shows that the genus is poorly studied and the data on the distribution and biology is lacking in the region (Kun 2004; Yen et al. 2009; Savelle 2018). Table 1 shows the species recorded from Himalayan regions along with their range of distribution. Recent surveys in Bhutan have recorded 825 moth species but none of the *Ethmia* species were reported from Bhutan (Gielis & Wangdi

2017). The members of the genus are nocturnal and distributed at low elevation and the larvae are defoliator, skeletonizer or flower-eater on Boraginaceae (Yen et al. 2009), while some European and American species feed on plants of family Rosaceae (Powell 1973) or family Ranunculaceae (Sattler 1967). In the present paper, we report the sighting of *E. lineatonotella* (Moore, 1867) for the first time from Mendrelgang Village in Tsirang District, Bhutan.

The *E. lineatonotella* moth was recorded during the survey conducted at Mendrelgang Village (26.950°N & 90.113°E), Tsirang District, Bhutan as part of the moth documentation project initiated by the National Biodiversity Centre (NBC), Serbithang, Bhutan on the night of 6 May 2015, at around 20.30h. Two individuals (Image 1 & 2) were attracted to the light trap (4 x 5 m white cloth sheet hanging facing north and south directions) fitted with fluorescent bulbs (Irungbam et al. 2016). The moth was photographed and collected as voucher materials; later the specimens were curated and identified using the keys of the species provided by Robinson et al. (1994) and Kun (2004). The materials are currently stored at Invertebrate Referral Centre, NBC, Thimphu.



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***Ethmia lineatonotella* (Moore, 1867) (Image 1)**

Hyponomeuta lineatonotella Moore, 1867, Proceedings of Zoological Society London 1867: 669, pl. 33, fig. 18.

Psecadia vitattopunctata Matsumura, 6000, Illustrated insects of the Japanese empire: 831.

Ethmia lineatonotella Sattler, 1967, *Microlepidoptera Palaearctica* 2: 124, pl. 8, 61, 103, fig. 63; Kun & Szabóky, 2000, *Acta Zoologica Academiae Scientiarum Hungaricae* 46: 55, fig. 2–3, 26, 42; Yen, Wei, & Kun, 2009. *Biota Taiwanica*, 17, fig. 10.

Specimens examined: BM-208, BM-209, 2 males, 05.v.2015, Bhutan, Tsirang, Mendrelgang Village, Mendrelgang Central School, 26.950°N & 90.113°E,

1,233m, coll. J.S. Irungbam.

Diagnosis: Wingspan with 45mm. Head with filiform antenna, scape with yellow scales, yellowish flagellum, with brown scales distally. Maxillary palp consisting of four segments and yellow in colour and Labial palp yellow in colour with a black ring on medial segment. Frons and vertex yellowish with black scales apically. Thorax yellowish with six black spots; tegulae white with a pair of black spots at base. Forewing longer than abdomen, covered with black marking on yellowish background. Basal part consists of seven spots, four characteristic long striae; two larger spots at outer edge of cell between veins Cu₂ and M₂. Hindwing with strong costal brushes and yellow cilia; Forelegs and midlegs



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Image 1. Wingspan 45mm. An adult of *Ethmia lineatonotella* (Moore, [1868]) recorded from Mendrelgang Village, Tsirang showing the presence of four number of striae on the forewing.



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Image 2. An adult of *Ethmia lineatonotella* (Moore, [1868]) recorded from Mendrelgang Village, Tsirang during light trapping on 6 May 2015.

Table 1. The checklist of Genus *Ethmia* reported from the Himalayan region.

	Species	Global distribution
1	<i>Ethmia ermineella</i> (Walsingham, 1880)	Northern India, Nepal, Myanmar, Tibet, western China.
2	<i>Ethmia assamensis</i> (Butler, 1879)	Bhutan, India, Nepal, China, Sri Lanka, Pakistan.
3	<i>Ethmia lineatonotella</i> (Moore, [1868]) *	Bhutan, India, Myanmar, Vietnam, Taiwan.
4	<i>Ethmia trifida</i> Kun, 2004	India, Myanmar, Thailand, Malaysia, Borneo, Brunei, Sabah, Brunei, Philippines, Indonesia, Sumatra.
5	<i>Ethmia nigroapicella</i> (Saalmüller, 1880)	India, Myanmar, Hawaii, Taiwan, Seychelle Islands, Kei Island, Samoa, Madagascar.
6	<i>Ethmia szaboky</i> Kun, 2001	India, Nepal.
7	<i>Ethmia lapidella</i> (Walsingham, 1880)	India, China, Japan, Taiwan.
8	<i>Ethmia didyma</i> Kun, 2002	Nepal.
9	<i>Ethmia acontias</i> Meyrick, 1906	India, Sri Lanka.
10	<i>Ethmia hilarella</i> (Walker, 1863)	Southern India, Sri Lanka, Taiwan.
11	<i>Ethmia anatifformis</i> Kun, 2001	Nepal.
12	<i>Ethmia crocosoma</i> Meyrick, 1914	India, Nepal
13	<i>Ethmia pingxiangensis</i> Liu, 1980	Northeastern India, Myanmar, Thailand.

faint yellow with black rings; and orange coloured abdomen. Tarsus black with light tip. Hindleg orange; abdomen similarly orange-coloured. Unfortunately, the genitalia had been destroyed due to a fungal infection and so we could not examine the genitals.

Ethmia lineatonotella can be easily distinguished from other similar species group by the presence of four striae on the forewing (Image 1) whereas *E. trifida* has three, *E. palawana* has only one while they are reduced to a single dot in *E. thomasi* and is lacking in *E. galactarcha* (Kun 2004). Sattler (1967) placed *E. lineatonotella* in the *E. assamensis* species group which

consist of five species. Later, Kun (2004) transferred *E. lineatonotella* to *E. lineatonotella* species group which contains five species (*E. lineatonotella* Moore, 1867; *E. galactarcha* Meyrick, 1928; *E. palawana* Schultze, 1925; *E. trifida* Kun, 2004; *E. thomasi* Kun, 2004). *E. lineatonotella* is distributed through India (Darjeeling, Assam), Myanmar, Vietnam, and Taiwan (Kun & Szabóky 2000). Geilis & Wangdi (2017) who have surveyed moths in different localities of Bhutan also have not recorded *E. lineatonotella*. The present record of the species from Mendrelgang village, Tsirang District is a new record for Bhutan.

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