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New record of type species *Calymniops trapezata* (Moore) (Noctuidae: Lepidoptera) from India

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Abstract

The internal genitalic structures of species *Calymniops trapezata* (Moore) have been described and illustrated for the first time. The reporting of the species from Saho and Pukhri localities of district Chamba are its new record from India.

Keywords: Broad-nose pipefish, *Syngnathus typhle*, Breeding, Oocyte, Reproduction

1. Introduction

Hampson erected genus *Calymniops* and Moore designated *Calymniops trapezata* (Moore) as its type species. In the present communication, the diagnosis of the genus has been upgraded by incorporating internal male and female genitalic attributes. The study material i.e., representatives of *Calymniops trapezata* (Moore) Guenée were collected from far flung localities of Chamba.

2. Material and Methods

The adult Noctuid moth species were collected from the florescent lights fitted at different localities in various states of India. The collected moths were killed and preserved in air tight wooden boxes. The identification of captured specimens was done with the help of relevant literature. For the preparation of external male and female genitalia slides, abdomen of preserved specimens were detached and potashed in 10% solution, washed in 1% glacial acetic acid and dissected in 30% alcohol for taking out external male and female genitalia as per standard techniques given by Robinson.

3. Observation

Genus *Calymniops* Hampson

Calymniops Hampson, 1926, *Descr. Gen. Spec. Lepid. Phalaenae*, 1926: 205.

Type species: *Elydna trapezata* Moore.

Distribution: India; Sri Lanka; Japan; N. America; Wategama.

Calymniops trapezata (Moore)

Moore, 1887, *Lep. Ceyl.*, 3: 547.

Male reproductive system : Testis light yellowish, rounded; seminal vesicle-I originating from testis in fused state, parallel; seminal vesicle-II creamish, globular; vasa deferentia opaque, tubular, entering into ductus ejaculatorius duplex in middle; ductus ejaculatorius duplex creamish, X-shaped; primary simplex divided into two sections, section-I translucent, highly curved, section-II opaque, straight; constrictor muscular area with cuticular simplex creamish, loop-like; cuticular tube opaque, entering into aedeagus apically, not modified into bulbous ejaculatorius; accessory gland divided into two sections, section-I translucent, free, curved, section-II opaque, free, straight.

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Table 1: Morphometry of internal male reproductive organs of *Calymniops trapezata* (Moore).

S. No.	Organ	Length (mm)	Intraspecific range in length (mm)	Width (mm)	Intraspecific range in width (mm)
1.	Testis	0.40	0.38-0.42	0.51	0.49-0.53
2.	Seminal Vesicle - I	0.46	0.44-0.48	0.13	0.11-0.14
3.	Seminal Vesicle - II	0.41	0.39-0.43	0.21	0.19-0.23
4.	Vasa deferentia	1.43	1.41-1.46	0.05	0.04-0.07
5.	Ductus ejaculatorius duplex	1.58	1.56-1.60	0.17	0.16-0.18
6.	Primary simplex	16.46	16.42-16.50	-	-
	Section – I	2.41	2.39-2.43	0.05	0.04-0.07
	Section – II	14.05	14.03-14.07	0.14	0.13-0.15
7.	Constrictor muscular area	1.58	1.56-1.60	0.30	0.29-0.32
8.	Cuticular tube	3.02	3.00-3.04	0.11	0.10-0.13
9.	Accessory gland	17.06	17.03-17.09	0.12	0.11-0.13

Female reproductive system : Common terminal filament creamish, curved; ovaries creamish, comprising four egg tubes on each side; eggs creamish, rounded; pedicel opaque; lateral oviduct creamish, possessing an egg; common oviduct creamish, without eggs; infundibulum rounded; spermathecal duct creamish straight; spermatheca bilobed i.e. utriculus creamish, V-shaped; lagena translucent, pear shaped; spermathecal gland creamish brown, curved, not bifurcated at tip; corpus bursae brownish cream, oval, marked with dark

brown, translucent sclerotised canal, membranous; ductus bursae translucent, membranous; ostium bursae brownish, sclerotised; ductus seminalis opaque, heavily coiled, arising from the junction of corpus bursae and ductus bursae; bulla seminalis absent; accessory gland reservoir duct translucent, straight; common reservoir translucent, globular; lateral accessory gland reservoir translucent, comma shaped; accessory gland brownish translucent, originating from tip of reservoir; vestibulum creamish; vagina creamish.

Table 2: Morphometry of internal female reproductive organs of *Calymniops trapezata* (Moore).

S. No.	Organ	Length (mm)	Intraspecific range in length (mm)	Width (mm)	Intraspecific range in width (mm)
1.	Common terminal filament	0.59	0.57-0.61	0.03	0.02-0.05
2.	Egg tube	10.21	10.19-10.24	0.17	0.15-0.18
3.	Pedicel	2.38	2.36-2.40	0.14	0.13-0.15
4.	Lateral oviduct	0.45	0.43-0.47	0.17	0.16-0.18
5.	Common oviduct	0.35	0.33-0.37	0.13	0.12-0.15
6.	Infundibulum	0.04	0.03-0.05	0.04	0.03-0.05
7.	Spermathecal duct	0.28	0.26-0.30	0.05	0.04-0.06
8.	Utriculus	0.87	0.85-0.89	0.14	0.12-0.16
9.	Lagena	0.63	0.61-0.65	0.15	0.13-0.17
10.	Spermathecal gland	4.80	4.78-4.83	0.05	0.04-0.06
11.	Corpus bursae (diameter)	4.10	4.08-4.12	-	-
12.	Ostium bursae (diameter)	0.38	0.36-0.40		
13.	Ductus bursae	0.80	0.78-0.82	0.09	0.08-0.11
14.	Ductus seminalis	1.82	1.80-1.85	0.04	0.03-0.06
15.	Bulla seminalis	-	-	-	-
16.	Accessory gland reservoir duct	0.17	0.16-0.18	0.09	0.08-0.10
17.	Common Accessory gland reservoir	0.28	0.26-0.30	0.28	0.26-0.30
18.	Lateral Accessory gland reservoir	0.94	0.92-0.96	0.14	0.12-0.15
19.	Accessory gland	5.64	5.62-5.67	0.09	0.08-0.12
20.	Vestibulum	0.14	0.12-0.16	0.28	0.26-0.30
21.	Vagina	0.12	0.10-0.14	0.42	0.40-0.44

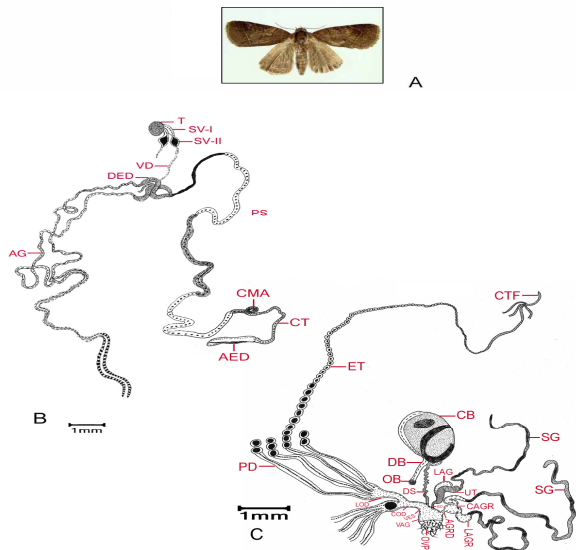
4. Wing expanse: 32 mm.

5. Old distribution: Sri Lanka.

6. Material Examined: Chamba : Saho, 12.ix.06, 1♀; Pukhri, 14.ix.06, 1♂.

7. Results

This species is new record from Chamba. This species is the type species of genus *Calymniops* Hampson. The internal male and female reproductive organs of this species can be included in the diagnosis of genus to update its characterization.



A. *Calymniops trapezata* (Moore)
 B. Male reproductive system
 C. Female reproductive system

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