

New country records of darkling beetles (Tenebrionidae: Coleoptera) from India

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Abstract

Tenebrionidae are the versatile group of the order Coleoptera. While studying the darkling beetles from the earlier collections deposited in the North Eastern Regional Centre, Shillong, occurrence of *Cteniopinus milkyskai* Novak 2019 from Arunachal Pradesh and *Cerogria gozmanyi* Merkl, 2007 and *Catapiestus clavipes* Lang and Ren, 2009 from Meghalaya state constitutes the new records from India. The genitalia of *Cerogria gozmanyi* was dissected out and image was also given. *Cteniopinus milkyskai*, *Cerogria gozmanyi* and *Catapiestus clavipes* were confirmed by Novak (2019), Merkl (2007) and Lang and Ren (2009) respectively. Diagnostic characters, distribution and the images of each species were provided.

Keywords: tenebrionidae, new record, Meghalaya, Arunachal Pradesh

Introduction

The darkling beetles are mostly oblong or oval in form and have bead-like antennae, each with 11 segments; the eyes are notched; the mandibles are short, stout and each usually has a basal tooth; the coxae of the front legs are spherical, those of the hind legs are transverse; the tarsi of the front and middle legs each have 5 segments, while those of the hind legs have 4; and the 1st segment of each of the tarsi of the hind legs is always longer than the 2nd. The trochanter is of heteromerous type.

The Tenebrionidae fauna of Arunachal Pradesh (Hegde, 2019a) reported 63 species under 33 genera belonging to 16 tribes of five prominent sub-families and Meghalaya (Hegde, 2019b) reported 37 species under 20 genera belonging to nine tribe of four sub families. While studying the darkling beetles from the earlier collections deposited in the North Eastern Regional Centre, Shillong, occurrence of *Cteniopinus milkyskai* Novak 2019 from Arunachal Pradesh and *Cerogria gozmanyi* Merkl, 2007 and *Catapiestus clavipes* Lang and Ren, 2009 from Meghalaya state constitutes the new records from India.

Materials and Methods

Darkling beetles collection of North Eastern Regional Centre, (NERC) Shillong and recent collection by one of the authors were identified and classified as per Bouchard *et al* (2005). The identification is by morphological characters and sometimes by the study of the genitalia. The genitalia of *Cerogria gozmanyi* was dissected out and image was also given. *Cteniopinus milkyskai*, *Cerogria gozmanyi* and *Catapiestus clavipes* were confirmed by Novak (2019), Merkl (2007) and Lang and Ren (2009) respectively. The images were taken with the help of Leica M 205 A stereo-zoom microscope. All the material examined deposited and registered at NERC, Shillong, Meghalaya, India.



Fig 1: *Cerogria gozmanyi*- Female genitalia



Fig 2: *Catapietus clavipes*- Pronotum enlarged



Fig 3: *Cteniopinus milkyskai*- antenna



Fig 6: *Cteniopinus milkyskai*- combed claws



Fig 4: *Cerogria gozmanyi*- full habitus



Fig 7: *Cteniopinus milkyskai* - pronotum



Fig 5: *Catapiestus clavipes*- full habitus



Fig 8: *Cteniopinus milkyskai*- full habitus

Results

Cteniopinus milkyskai, *Cerogria gozmanyi* and *Catapiestus clavipes* identified by the NERC, Shillong deposition constitute the new records to India. Details are as follows.

Systematic Position

Sub family: Alleculinae

Tribe: Cteniopodini

Genus: *Cteniopinus* Seidlitz, 1896

Species: *milkyskai* Novak, 2019

Diagnostic characters: Body length: 11 mm.

Body widely elongate, from ochre yellow to pale brown, slightly shiny, dorsal surface with pale setation and punctuation. Head longer than wide, slightly longer than pronotal length. Antennae long, very small punctures, pale setation and fine microgranulation. Antennomeres 10 and 11 partly blackish, antennomere 2 shortest, antennomere 11 longest. Antennomeres 8-11 slightly longer than antennomere 3. Antennomeres 4-7 shorter than antennomere 3. Pronotum ochre yellow, widest in middle, distinctly narrower than base of elytra. Elytra ochre yellow, widely elongate with pale setation. Elytral striae with rows of small punctures. Elytral intervals with irregular punctuation, punctures small.

Material examined: 01 ex. Arunachal Pradesh, Shi-Yomi Dist. Meechuka, B.Saikia coll. 06.x.2019, Reg. No: I/COL/NERC-263.

Distribution: INDIA: Arunachal Pradesh (New India Record).

Elsewhere: China :Yunnan.

Sub family: Lagriinae

Tribe: Lagriini

Genus: *Cerogria* Borchmann, 1911

Species: *gozmanyi* Merkl, 2007

Diagnostic Characters: Body length: 20 mm.

Body elongate, rather broad, moderately convex, shiny, dark brown, last abdominal ventrite reddish; Head coarsely and densely punctate; frons and frontoclypeal suture deeply impressed; interocular distance half of eye diameter, Head coarsely and densely punctate; frons and frontoclypeal suture deeply impressed; interocular distance half of eye diameter. 9th antennomere is produced at inner side in males and not in females, Pronotum with two oblique impressions in posterior half.

Material examined: 01 ex. (♀), Meghalaya, East Khasi hills dist. Risa Colony, V.D. Hegde coll. 15.v. 2020, Reg. No: I/COL/NERC-196.

Distribution: INDIA: Meghalaya (New India Record).

Elsewhere: Sumatra and Peninsula Malaysia.

Sub family: Stenochinae

Tribe: Cnodalonini

Genus: *Catapiestus* Perty, 1831

Species: *clavipes* Lang and Ren, 2009

Diagnostic characters: Body length: 14 mm.

Pronotum transverse; base straight, bend lateral margins with distinct serrations; slightly semicircle Scutellum, with shallow, small punctures. Slender Legs with deep punctures; Profemur with 1 large tooth on front ridge, 1 small tooth on hinder; protibia bent. Elytra is with nearly parallel sides, epipleura reaching apex of elytra, sparsely carved.

Material examined: 01 ex. Meghalaya, Khasi hills dist. Kyrdemkulai, R. Mathew coll. 26.vi.1978, Reg. No: I/COL/NERC-262.

Distribution: INDIA: Meghalaya (New India Record).

Elsewhere: China: Hainan.

Discussion

At the confluence of two biodiversity hotspots – the Himalayas and Indo-Burma – North East India is among the least explored regions in terms of its biological wealth; more so when it comes to the lower groups of fauna. The knowledge about the Tenebrionidae fauna of Northeast India is largely known from the works of Hegde (2016), Hegde & Lal (2016), Hegde (2019 a&b) and Hegde & Yadav (2020) from the states of Arunachal Pradesh, Manipur, Meghalaya, Mizoram and Sikkim. The newly recorded species *Cteniopinus milkyskai* and *Catapiestus clavipes* from India were earlier reported from China. The occurrence of these species from Arunachal Pradesh is probably due to its proximity to the southern part of Tibet, China.

The genus *Cteniopinus* belongs to the subfamily Alleculinae and distributed only in West Bengal and Sikkim states of India which was represented by *Cteniopinus fossulatus* (Pic, 1913). The report of *Cteniopinus milkyskai* will raise the number of species of *Cteniopinus* in India to two. Four species already reported from various parts of India and out of four, three species namely, *Catapiestus subrufescens* Pic, 1911, *Catapiestus piciventris* Fairmaire, 1893 and *Catapiestus rugipiennis* Chujo, 1984 have been reported from Arunachal Pradesh, India. (Hegde and Yadav, 2021).

The species *Cerogria gozmanyi* was described from Sumatra and Malaysia and the same species from Meghalaya, India is the second report since its description. It is quite a large species, capable of active flight and available only in rainy season. It is probable that this species may be available in the intervening countries of Myanmar and Thailand, along its range of distribution.

With these new country records, it is possible that with further surveys in the region will definitely yield few more species new to the region and science.

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