

Darkling Beetles of Andaman Islands with Some New Records (Tenebrionidae: Coleoptera)

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Introduction

Tenebrionidae is one of the largest family containing more than 18,000 species in the world which exhibits an extraordinary wide range of superficial dissimilarity: the larvae on the other hand are strikingly uniform in character. 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, each usually with 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. These are usually black or brown, though some are grey and a few are marked with different bright colors. Tenebrionidae is the versatile group, found almost in all habitats throughout the world viz; in rotten wood, under bark, stones and logs, feeding on decaying vegetation, in dung, seeds, cereals, fungi, roots and dead animal matter etc. They are varied in shape and size measuring 2-35 mm in length. These forms are very often apterous, or have vestigial wings, and the elytra are frequently immovable. Many of the wood feeding species have ample wings.

A perusal of literature reveals that, no comprehensive work has been done by any researcher on Darkling Beetles (Tenebrionidae) of Andaman Islands. Hence, an attempt has been made to throw light on the Darkling Beetles (Tenebrionidae) fauna of the Andaman Islands.

Materials and methods

The present work is a taxonomic account of the Tenebrionidae fauna of Andaman Islands based on the earlier scattered references (Iwan, 2002, Iwan *et al*, 2010 and the material present in National Zoological Collection, Zoological survey of India, Kolkata are also taken in to account. The materials collected are sorted

out, set pinned, identified and classified as per Bouchard *et al*. (2005). The identification is mainly based on the differences in the morphological characters and the structure of the genitalia. The synonyms in the genus *Gonocephalum* are given based on the recent catalogue (Iwan *et al*, 2010). The species reported elsewhere are also included in distribution.

Systematic account

Sub Family: Pimelinae Latreille, 1802

Tribe: Stenosini Lacordaire, 1859/ Schaum, 1859 (1834)

1. *Indochillus andamanicus* Kaszab, 1981
1981. *Indochillus andamanicus* Kaszab: 43
Distribution: INDIA: Andaman islands.

Subfamily: Tenebrioninae Latreille, 1802

Tribe: Toxicini Lacordaire, 1859

2. *Cryphaeus punctipennis* Gravely, 1915
1915. *Anthracias punctipennis* Gravely, *Redt. Fn. Austr. Ed.*, 2: 617.

Material examined: 1 ex. Port Blair, Chidia tappu, Andaman 03.xi.1977, S.K. Mondal collection.

Distribution: INDIA: West Bengal (Medinipur) and Uttar Pradesh {Lakhimpur Kheri (Hegde *et al* 2013)} and Andaman Island.

Remark: This constitutes the new record from Andaman island.

Tribe: Alphitobini Reitter, 1917

3. *Alphitobius laevigatus* (Fabricius, 1781)
1781. *Opatrum laevigatus* Fabricius *Spec. Ins.* 1: 90.
1964. *Alphitobius laevigatus* (Fabricius) *Tijdschr. V. Ent. C. VII* (5): 295.

Distribution: INDIA : West Bengal (Calcutta), Assam, Uttar Pradesh (Etawah, Lakhimpur Kheri), Rajasthan, and Andaman islands.

Elsewhere: Cosmopolitan.

Tribe : Ulomini Blanchard, 1845

4. *Uloma orientalis* Cast. 1840

1840, *Uloma orientalis* Cast. *Hist. Nat.* 2: 220.

Material examined: 1 ex. Wrightmyo, Kalalong forest, base of Mount Harriet, South Andaman 28.ii.1975, G.K. Srivastava collection.

Distribution: INDIA: West Bengal (Darjeeling, Sureil), Uttar Pradesh (Azamgarh) and Andaman Island.

Remark: This constitutes the new record from Andaman island.

Tribe: Opatrini Brulle, 1832

5. *Gonocephalum andamanese*, Kaszab, 1952

1952. *Gonocephalum andamanense* Kaszab : 539.

Distribution: INDIA: Andaman island.

6. *Gonocephalum bilineatum* (Walker, 1858)

1858. *Opatrum bilineatum* Walker: 284.

1858. *Hopatum bilineatum* Walker - Gemminger 1870: 1931.

Gonocephalum bilineatum (Walker, 1858). - Gebien 1910b: 322, 1921: 269, 1939: 446; Chatanay 1917: 238; Blair 1921: 269; Schuster 1928: 989; Reichardt 1936: 109; Kaszab 1952a: 641, 1954: 75, 1965a: 114, 1965d: 287, 1970a: 424, 1977: 257, 1979a: 260, 1979b: 65, 1980b: 171; Boddy 1965: 171; Kwon and Choi 1986: 106; Schawaller 1997a: 3; Hua Li 2002: 138; Iwan and Löbl 2008: 263.

Opatrum orarium Lewis, 1894: 380. - Champion 1895: 117.

Gonocephalum orarium (Lewis, 1894). - Gebien 1910b: 324; Reichardt 1936: 109; Schuster 1928: 989; Kaszab 1952a: 682.

Material examined: 3 ex. Wrightmyo, Kalalong forest, base of Mount Harriet, South Andaman, 28. ii.1975, G.K. Srivastava collection.

Distribution: INDIA: Andaman island, Sikkim, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere: Borneo, Indonesia, Malaysia, Philippines, Sri Lanka, Bhutan, Nepal, Japan, Korea, Russia, Yunnan, China, Vietnam, Vancouver Isl., Carolinen Isl., Fiji, Hawaii, New Caledonia.

7. *Gonocephalum depressum* (Fabricius, 1801)

Opatrum depressum Fabricius, 1801: 117. - Steven 1829: 95.

Hopatum depressum Fabricius, 1801. Gemminger 1870: 1931; Fairmaire 1893: 20, 1894: 17.

Gonocephalum depressum (Fabricius, 1801). - Gebien 1906: 213; 1910b: 323, 1913: 376, 1939: 447; Gravely 1913: 520; Blair 1922: 292; Kaszab 1952a: 635, 1974a: 193, 1979a: 260, 1979b: 65; Kwieton

1981: 17; Schawaller 1997a: 5; Hua Li 2002: 138; Iwan and Löbl 2008: 263.

Opatrum contrahens Walker, 1858: 284. - Blair 1921: 269.

Hopatum contrahens Walker, 1858. - Gemminger 1870: 1931.

Gonocephalum contrahens (Walker, 1858). - Gebien 1910b: 322, 1939: 447; Kaszab 1952a: 681.

Distribution: INDIA: Arunachal Pradesh, Himachal Pradesh, Kashmir, Sikkim, West Bengal and Andaman island.

Elsewhere: Nepal, Pakistan, Bhutan, Indonesia (Mollukes), Laos, Philippines, Sri Lanka, Burma, Taiwan (Formosa), Afghanistan, China, New Guinea, Vietnam and Yunnan.

Remark: This constitutes the new record from Andaman island.

Sub Family : Diaperinae Latreille, 1802

Tribe : Diaperini Latreille, 1802

8. *Ceropria induta* Wiedemann, 1819

1819. *Helops indutus* Wiedemann, *Zool. Mag.*, 1(3): 164.

1831. *Ceropria subocellata* Castelnau et Brulle, *Anns. Soc. Nat. Paris*, 23: 398.

1982. *Ceropria kinugasai* Masumoto, *Ent. Rev. Japan*, 36: 151.

Distribution: INDIA: West Bengal (Darjeeling), Assam and Andaman islands.

Elsewhere: Java, Sumatra, Philippines, Myanmar, Thailand, Indichina, China, Japan, Korea, Nia Is., Engano Is., Sunda Is., Simalur Is., Borneo, Sulawesi, Halmahera, Malaya Peninsula, Taiwan and Ryuku Is..

Tribe : Leiochrinini Lewis, 1894

9. *Platydema subfascia* Walker, 1858
1818. *Alphitophagus subfascia* Walker: *Ann. Mag. Nat. Hist.*, (3) 2: 284.
1925. *Platydem asubfascia*, *Gebien Phil. J. Sci.* 27(4) : 543, 563, Taf.1, Fig. 10, 11.
Distribution: INDIA: Uttarkhand and Andaman islands.
Elsewhere: Sri Lanka, Nepal, Thailand, Laos, Malaysia, Vietnam, Japan, Philippines, Sunda islands and Madagascar.
- Subfamily: Stenochiinae Kirby, 1837**
Tribe: Cnodalonini Gistel, 1855
10. *Bradymerus andamanus* Gebein, 1914
1914. *Bradymerus andamanus* Gebein.
Distribution: INDIA: Andaman islands.
11. *Bradymerus clathratus* Schaufuss, 1887
1887. *Bradymerus aequecostatus* Fairmaire, syn.
1980. *Bradymerus junctus* Shibata, n.syn.
Distribution: INDIA: Andaman islands (Havelock Islands) and Assam.
Elsewhere: Thailand, Malaysia, Japan, Taiwan, Sunda Islands, Sulawesi, Philippines, Borneo, Bali and Sumatra.
12. *Bradymerus crenulicollis* Fairmaire, 1882
1914. *Bradymerus denticeps* Gebien, syn.
Distribution: INDIA: Andaman islands (Havelock Islands).
Elsewhere: Malaysia, Sunda islands, Sulawesi, Borneo, Sumatra and Java.
13. *Bradymerus majeri* Schwaller, 2006
2006. *Bradymerus majeri* Schwaller : 23
Distribution: INDIA: Andaman islands (Havelock Island, Cinque Island).
14. *Bradymerus nodicollis* Gebien, 1925
1925. *Bradymerus nodicollis* Gebien: 36.
Distribution: INDIA: Andaman islands.
Elsewhere: Sulawesi, Borneo, Sumatra and Java.
15. *Catapiestus piceiventris* Fairmaire, 1893
1893. *Catapiestus piceiventris* Fairmaire: 29
Distribution: INDIA: Andaman islands.
16. *Promethis andamanica* (Kaszab, 1988)
1988. *Promethis andamanica* (Kaszab) *Acta zoologica Hungarica* 34(2-3), p.84
Distribution : INDIA: Andaman islands.
17. *Promethis haagi* (Kaszab, 1988)
1988. *Promethis haagi* (Kaszab), *Acta zoologica Hungarica* 34(2-3), p.86
Distribution : - INDIA: Andaman islands and South India (Walajasnagar).
18. *Promethis oceanica* (Kaszab, 1988)
1988. *Promethis oceanic* Kaszab,: *Katalog and Bestimmungst Der Gattung Promethis. Acta zoologica Hungarica* 34(2-3), p.77.
Distribution : INDIA: Andaman islands.
19. *Promethis sanguinicrus* (Kaszab, 1988)
1988. *Promethis sanguinicrus* Kaszab, *Acta zoologica Hungarica* 34(2-3) : 78
Distribution : INDIA: Andaman islands.
20. *Promethis sulcatipennis* (Kaszab, 1988)
1988. *Promethis sulcatipennis* (Kaszab), *Acta zoologica Hungarica* 34(2-3) : 78
Distribution : - INDIA: Andaman islands.

Conclusion

The paper contains 20 species under 10 genera of 08 tribes belonging to 04 subfamilies. Among the 04 subfamilies the species belonging to Stenichiinae are more abundant in Andaman island. Three species viz; *Cryphaeus punctipennis* Gravelly, 1915, *Uloma orientalis* Cast. 1840 and *Gonocephalum depressum* Fabricius, 1801 are new records from Andaman island.



Uloma orientalis
Cast. 1840



Cryphaeus punctipennis
Gravelly, 1915



Gonocephalum depressum
(Fabricius, 1801)

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