



## Darkling Beetles (Tenebrionidae: Coleoptera) of Manipur with one new Record from India

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**ABSTRACT:** The present paper is based on the identification of the material present in the National Zoological Collection of Zoological survey of India. It contains the report of 13 species under 07 genera and 05 tribes of 03 sub families of the family Tenebrionidae from Manipur. It is interesting to note that, out of 13 species, 11 species are reported for the first time from Manipur and 01 species is reported for the first time from India.

**Keywords:** Darkling Beetles, Tenebrionidae, Manipur

### INTRODUCTION

Manipur state, also called as the Jeweled land and often described as the Switzerland of the Eastern India due to its unique ecological diversity of natural beauty such as tripping rivers, carpet of flowers and lakes etc. This state constitutes about 90% of the hill surroundings and rest by valleys. Loktak lake is the largest lake of the state which exhibits good biological diversity. Although there is a report on the some families of Coleoptera fauna of the state as depicted in the State Fauna series, there is no report on the Tenebrionidae (Darkling Beetles) of the state. Hence, an attempt has been made to throw some light on the Darkling beetles of this state based on the material present in National Zoological Collection.

### METHODOLOGY

The present paper is based on the identification of the material present in the National Zoological Collection, collected by different survey parties of Zoological survey of India. The material was sorted out, set pinned, identified and classified as per Bouchard *et al* (2005). The synonyms and distribution of *Gonocephalum* species were taken from Iwan *et al* (2010). Distribution of some species were corrected as per present scenario. The identification is mainly based on the differences in the morphological characters and the structure of the genitalia. To make the study comprehensive, earlier scattered reports were also taken in to account. The species reported elsewhere (other than India) are also included in distribution.

### RESULTS

The paper contains the report of 13 species under 07 genera and 05 tribes of 03 sub families from Manipur. It is interesting to note that, out of 13 species, 11 species are reported for the first time from Manipur and 01 species is reported for the first time from India.

#### Systematic Account:

Subfamily: LAGRIINAE Latreille, 1825 (1820)

Tribe: Lupronini Ardoin, 1958

*Luprops indicus* Wiedemann 1823

*Luprops rugosissimus* Kaszab, 1980

Tribe: Cossyphini Latreille, 1802

*Cossyphus (Cossyphus) depressus* (Fabricius, 1781)

*Upis nigra* Wiedemann, 1819

Subfamily: TENEBRIONINAE Latreille, 1802

Tribe: Toxicini Lacordaire, 1859

*Cryphaeus punctipennis* Gravelly, 1915

Tribe: Opatrini Brulle, 1832

*Gonocephalum bilineatum* (Walker, 1858)

*Gonocephalum chinense* Gebien, 1910

*Gonocephalum depressum* (Fabricius, 1801)

*Gonocephalum helopioide* (Fairmaire, 1894)

*Gonocephalum tuberculatum* (Hope, 1831)

Subfamily: DIAPERINAE Latreille, 1802

Tribe : Leiochrinini Lewis, 1894

*Derispia manipurensis* Kaszab, 1946

*Leiochrinus sauteri* Kaszab, 1946

*Leiochrinus nigromarginatus* Kaszab, 1946

**Species details**

***Luprops indicus*** Wiedemann 1823

*Lyprops indicus* Wiedemann *Zool. mag.* II, 1, 1823. P. 42

**Material examined:** 1 ex., New Heaven, Manipur, 27.i.1977, S.G. Patil colln. Reg. No: 19968/H4A. Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: Uttarakhand, West Bengal, Uttar Pradesh and Manipur (New Heaven).

***Luprops rugosissimus*** Kaszab, 1980

*Luprops rugosissimus* Kaszab, 1980, *Acta zoologica Acad. Sci. Hungaricae*, XXVI (I): 195.

Material examined: 3 ex., Sankal, Manipur, 25.i.1977, S.G. Patil Colln. Reg. No: 19969/H4A; 1 ex., Forest Rest House, Imphal, Manipur, 03.x.1975, M.S. Sishodia colln. Reg. No. 19970/H4A; 1 ex., Bungmual Manipur, 29.ix.1975, M.S. Sishodia colln. Reg. No. 19971/H4A Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: Pondicherry and Manipur (Sankal, Imphal, Bungmual).

***Cossyphus (Cossyphus) depressus*** (Fabricius, 1781)

*Cossyphus cossyphus depressus* (Fabricius, 1781) Scupola (2000): 231.

*Cossyphus cossyphus planus* Fabricius, 1801.Scupola (2000): 231.

**Material examined:** 1 ex., New Heaven, Manipur, 27.i.1977, S.G. Patil colln. Reg. No. 19972/H4A; Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: Karnataka, Tamil Nadu, West Bengal and Uttar Pradesh (Hegde *et al* 2013) and Manipur (New Heaven).

***Upis nigra*** Wiedemann, 1819

*Encyalesthus nigra* Wiedemann, 1819, *Zool. Mag.* 1,3 p.164.

**Material examined:** 2ex., Loktak Lake, Manipur, 17.iii.1974, K.R. Rao colln. Reg. No. 19973/H4A. Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: West Bengal and Manipur (Loktak Lake).

***Cryphaeus punctipennis*** Gravely, 1915

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

Material examined: 1 ex. New Heaven, Manipur, 27.i.1977, S.G. Patil colln. Reg. No: 19974/H4A. Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: West Bengal, Uttar Pradesh and Manipur (New Heaven).

***Gonocephalum bilineatum*** (Walker, 1858)

*Opatrum bilineatum* Walker, 1858: 284.

*Hopatum bilineatum* Walker, 1858. – Gemminger 1870: 1931.

*Gonocephalum bilineatum* (Walker, 1858). – Gebien 1910b: 322.

*Gonocephalum latifrons* (LeConte, 1874). – Champion 1895: 115; Gebien 1910b: 323, 1939: 452; Kaszab 1952a: 682; Ferrer 2000: 129.

*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:** 2ex., Loktak Lake, Manipur, 17.iii.1974, K.R. Rao colln. Reg. No. 19975/H4A; 1 ex. New Heaven, Manipur, 27.i.1977, S.G. Patil colln. Reg. No: 19976/H4A; 1 ex. Gulezang, Manipur, 25.iii.1975, M. Dutta colln. Reg. No: 19977/H4A. Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: Andaman Isl., Sikkim, West Bengal, Uttarakhand and Manipur (Loktak Lake, New Heaven, Gulezang).

Elsewhere: Borneo, Indonesia, Malaysia, Philippines, Sri Lanka, Bhutan, Nepal, Japan, Korea.

***Gonocephalum chinense*** Gebien, 1910

*Ginocephalum chinense* Gebien, 1910b: 322 (replaced name).– Schuster 1928: 989; Reichardt 1936: 109; Gebien 1939: 446

*Gonocephalum subsetosum* Reitter, 1904: 147. – Gebien 1910b: 322(nom. preoccup., nec *Gonocephalum subsetosum* Kolbe, 1883), Schuster 1928: 989; Hua Li 2002: 139

(= *Gonocephalum subspinosum* (Fairmaire, 1894).

**Material examined:** 1 ex., Kongkpil, Manipur, 16.i.1976, A.K. Ghosh colln. Reg. No. 19978/H4A. Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: Assam and Manipur (Kongkpil).

Elsewhere: China, Hainan, Yunnan.

***Gonocephalum depressum*** (Fabricius, 1801)

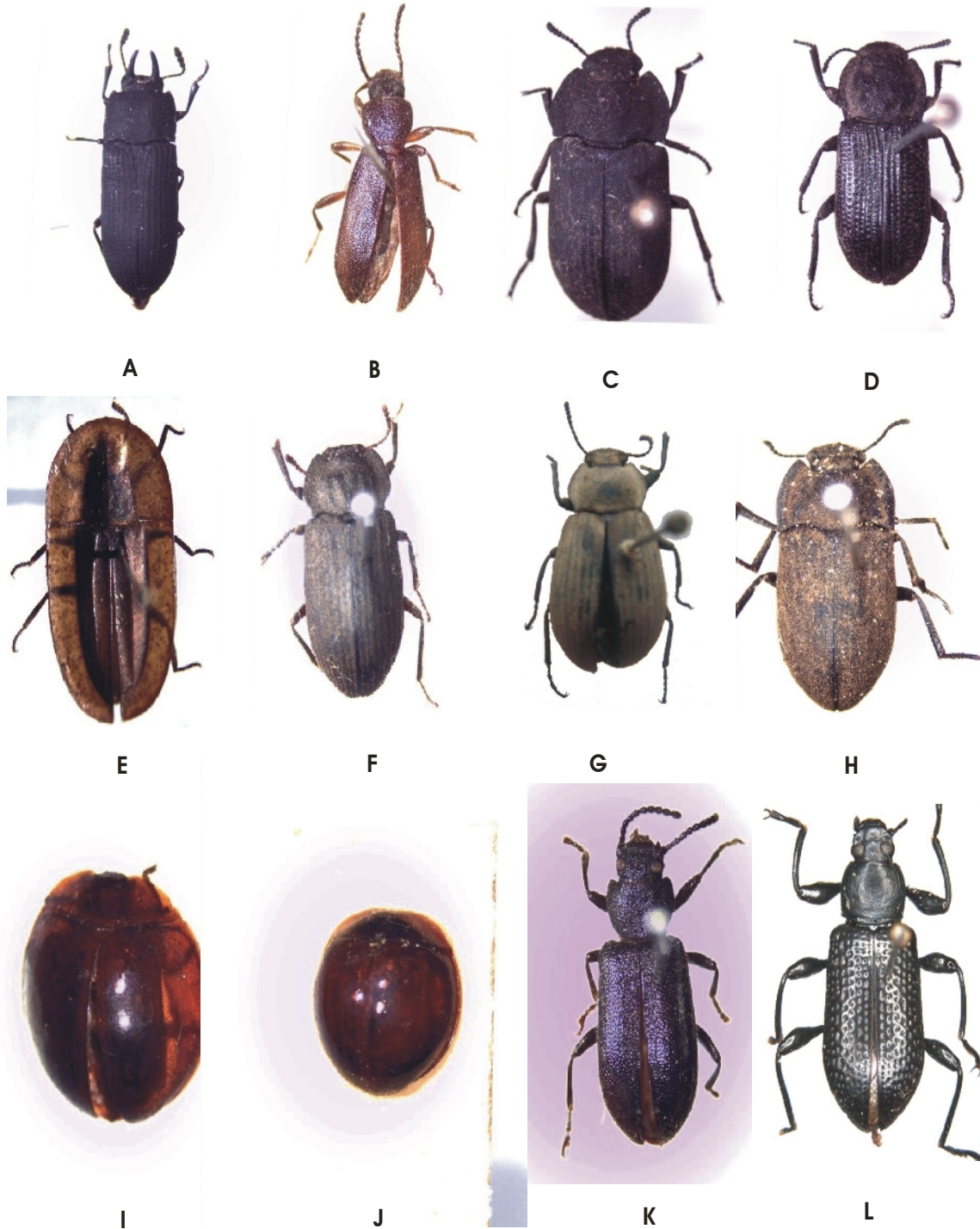
*Opatrum depressum* Fabricius, 1801: 117. – Steven 1829: 95.

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

*Gonocephalum depressum* (Fabricius, 1801). – Gebien 1906: 213.

*Opatrum contrahens* Walker, 1858: 284. – Blair 1921: 269.

*Hopatum contrahens* Walker, 1858. – Gemminger 1870: 1931.



A. *Anthraxias punctipennis*, B. *Luprops indicus*, C. *Gonocephalum bilineatum*, D. *Gonocephalum tuberculatum*, E. *Cossyphus depressus* F. *Gonocephalum depressum* G. *Gonocephalum helopioide* H. *Gonocephalum chinense* I. *Leiochrinus sauteri* J. *Leiochrinus nigromarginatus* K. *Luprops rugosissimus* L. *Upis nigra*.

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

**Material examined:** 6 ex., Imphal Valley, Manipur M.L. Roonwal Coll. 11.x.1945, Reg. no. 8249-8254/H4A, Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: Sikkim, Arunachal Pradesh, Assam, Meghalaya, West Bengal, Himachal Pradesh, Kashmir and Manipur (Imphal Valley).

Elsewhere: Nepal; Pakistan; Bhutan, Indonesia (Mollukes), Laos, Philippines, Sri Lanka, Myanmar, Taiwan (Formosa), Afghanistan and China (Guandong, Kwantung),

*Gonocephalum helopioide* (Fairmaire, 1894)

*Hopatum helopioide* Fairmaire, 1894: 19.

*Opatrum helopioides* (Fairmaire, 1894): 19. – Champion 1895: 116.

*Gonocephalum helopioide* (Fairmaire, 1894). – Gebien 1910b: 323, 1939: 448; Kaszab 1952a: 574; Schawaller 1997a: 7; Iwan and Löbl 2008: 264.

Material examined: 1 ex., New Heaven, Manipur, S.G. Patil Colln. 27.i.1977, Reg.no.19979/H4A. Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: West Bengal, Uttar Pradesh and Manipur (New Heaven).

Elsewhere: Myanmar, Nepal.

*Gonocephalum tuberculatum* (Hope, 1831)

*Opatrum tuberculatum* Hope, 1831: 31.

*Gonocephalum tuberculatum* (Hope, 1831). – Chatanay 1917: 243.

*Hopatum elongatum* Guérin-Méneville, 1834. – Fairmaire 1894: 17; Gemminger, 1870: 1931.

*Opatrum elongatum* Guérin-Méneville, 1834: 32.

*Gonocephalum elongatum* (Guérin-Méneville, 1834) – Gebien 1910b: 323, 1913: 4; Schuster 1928: 989; Reichardt 1936: 108; Kaszab 1952a: 672.

*Gonocephalum quadrinodosum* Reitter, 1904: 146. – Gebien 1910b: 325, 1939: 446; Schuster 1928: 989 (= *Opatrum elongatum* Guérin-Méneville, 1834); Reichardt 1936: 108 (= *Opatrum elongatum* Guérin-Méneville, 1834); Kaszab 1952a: 672.

Material examined: 2 ex., Kongpkpil, Manipur, 16.i.1976, A.K. Ghosh colln. Reg. No. 19980/H4A. Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: Kashmir, Himachal Pradesh, West Bengal, Uttarakhand, Manipur (Kongpkpil).

Elsewhere: Nepal; Pakistan; Taiwan (Formosa), Bangladesh, Myanmar, Philippines, Vietnam, Afghanistan; China, Hainan, Hongkong, Hubei (Hupeh), Sichuan (Szechwan), Yunnan.

*Derispia manipurensis* Kaszab, 1946

**Material examined :** Nil.

**Distribution:** INDIA: Manipur. (Kaszab, 1946)

*Leiochrinus sauteri* Kaszab, 1946

Material examined: 1 ex., Chingsao, Manipur, F. Schmid Coll. 14.vi.1966, Reg. no. 6832/ H4A. Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: Assam, Sikkim, Arunachal Pradesh, Uttarakhand and Manipur (Chingsao).

Elsewhere: Bangladesh, Nepal, Indochina and Taiwan.

*Leiochrinus nigromarginatus* Kaszab, 1946

Material examined: 1 ex., Chingsao, Manipur, F. Schmid Coll. 14.vi.1966, Reg. no. 6827/

H4A, Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: Manipur (Chingsao).

**Remark: This species is recorded for the first time from India.**

## SUMMARY

It is for the first time, a systematic study of darkling beetles from one of the states of North East has been documented. The paper contains the report of 13 species under 07 genera and 05 tribes of 03 subfamilies from Manipur. It is interesting to note that, out of 13 species, 11 species are reported for the first time from Manipur and 01 species *Leiochrinus nigromarginatus* Kaszab, 1946 is reported for the first time from India. The species *Derispia manipurensis* Kaszab, 1946 recorded earlier from this state has not been found in National zoological collection. The photographs of all the other 12 species were also provided.

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