

# Tenebrionidae (Coleoptera) Fauna of Chhattisgarh, India

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## Introduction

Chhattisgarh state occupying an area of about 1,35,000 sq.k.m., located in the central part of India is rich in forest covered area and biodiversity. According to Ramakrishna *et.al.*, (2006) 103 species of different groups of insects are reported from the region indicating the need for more extensive collections. However, there is no report on the Tenebrionidae fauna of this state. Hence, an attempt has been made to explore the Tenebrionidae (Darkling beetles) fauna of this state by studying the collections made during the recent surveys conducted by different parties of the Zoological Survey of India.

## Methodology

Present paper is based on the field work carried in mainly 5 districts of Chhattisgarh state lying in Deccan plateau viz; Raipur, Dhamtari, Durg, Kabirdham and Bastar (As depicted in the state map). The collections were done mainly in the forests, by hand picking and dusting and light traps were also used during night. The materials collected are sorted out, set, pinned, identified and classified as per Bouchard *et al* (2005). Since, most of the specimens are collected during night, habitats were not mentioned in the material examined column. 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. Species reported in earlier studies were also included in distribution. The images were taken with the help of Leica M 205A stereo-zoom microscope. Images of a more common species of each genus were given. All the identified collection is deposited in National Zoological Collection of Zoological Survey of India, Kolkata.

## Results

Paper contains details about 18 species of 16 genera of 9 tribes



*Gonocephalum bilineatum* (Walker, 1858)



*Gonocephalum helopioide* (Fairmaire, 1894)



*Cossyphus depressus* (Fab., 1781)



*Hyperops coromandelensis* Solier, 1835



*Scleron reitteri* Gebien, 1906



*Opatroides vicinus* (Fairm., 1896)

## Tene Plate 1

under 5 subfamilies collected mainly from 5 districts of Chhattisgarh state. All the species are reported for the first time from this state and the species *Amarygmus micans* Fabricius, 1823 collected from Raipur district is the first report from India also.

Further extensive study covering all the districts may also reveal more number of species, thereby richness of diversity of Tenebrionidae in Chhattisgarh state.

## Systematic Account

### Family: TENEBRIONIDAE

### Subfamily: Lagriinae Latreille, 1825 (1820)

### Tribe: Lupropini Ardoin, 1958

1) *Luprops rugosissimus* Kaszab,

1980

2) *Spinolyprops himalayicus* Kaszab, 1965

### Tribe: Cossyphini Latreille, 1802

3) *Cossyphus depressus* Oliver, 1975

### Subfamily: Pimelinae Latreille, 1802

### Tribe: Tentyriini Eschscholtz, 1831

4) *Hyperops coromandelensis* Solier, 1835

5) *Rhytinota subfossulata*, Solier, 1835

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*Strongylium aratum* Fairmaire, 1896



*Amarygmus micans* Fabricius, 1823



*Rhytinota subfossulata* Solier, 1835



*Platyburak nervosus* (Mulsant and Rey, 1853)



*Sphaenariopsis tristis* Kraatz, 1865



*Platynotus deyrollei* (Mulsant and Rey, 1853)

#### Tene Plate 2

- 6) *Sphaenariopsis tristis* Kraatz  
1865

#### Tribe: Erodini Billberg, 1820

- 7) *Himastimus fasciculatus*  
(Fabricius, 1798)

#### Subfamily: Diaperinae

##### Latreille, 1802

#### Tribe: Diaperini Latreille, 1802

- 8) *Ceropria induta* Wiedemann,  
1819

#### Tribe: Pedinini Eschscholtz, 1829

- 9) *Platynotus deyrollei* Mulsant  
and Rey, 1853  
10) *Platyburak nervosus*  
(Mulsant and Rey, 1853)

#### Subfamily: Tenebrioninae Latreille, 1802

#### Tribe: Amarygmini Gistel, 1856

- 11) *Amarygmus micans*  
Fabricius, 1823

#### Tribe: Opatrini Brulle, 1832

- 12) *Caedius malabaricus*  
Fairmaire, 1894  
13) *Gonocephalum abnormale*  
Kaszab, 1952  
14) *Gonocephalum bilineatum*  
(Walker, 1858)  
15) *Gonocephalum helopioide*  
(Fairmaire, 1894)  
16) *Opatroides vicinus*  
(Fairmaire, 1896)  
17) *Scleron reitteri* Gebien 1906

#### Subfamily: Stenochiinae Kirby, 1837

#### Tribe: Stenochiini Kirby, 1837

- 18) *Strongylium aratum*  
Fairmaire, 1896

#### Species Details

##### 1. *Luprops rugosissimus*

Kaszab, 1980

*Luprops rugosissimus* Kaszab,  
1980. Neue tenebrioniden  
(Coleoptera) Aus. Sri Lanka, I,  
*Acta Zoologica Academiae  
scientiarum Hungaricae*, XXVI  
(1-3): 123-196.

**Material examined:** 2 exs.,  
Dhamtari, Shaleybhat, 21.x.  
2011, Reg. no. 20022/H4A; coll.  
Sunil and Party.

**Distribution:** INDIA:

Chhattisgarh (Dhamtari),  
Puduchery. **Elsewhere:** Sri  
Lanka.

##### 2. *Spinolyprops himalayicus*

Kaszab, 1965

*Spinolyprops rufithorax* var.  
*laterallis*, pic. 1917, Descriptions  
abregees diverses *Melanges  
exotico entomologique*, 23:  
1-20.

*Spinolyprops himalayicus*  
Kaszab, 1965. *Miscelanea  
Zoologica Barcelona* 2:  
111-129.

**Material examined:** 2 exs.,  
Raipur, Barnwapara, 10.vii.  
2011, Reg. no. 20024/H4A; coll.  
Sunil and party.

**Distribution:** INDIA:

Chhattisgarh (Raipur), Andaman  
Island, Maharashtra, Meghalaya,  
Tamil Nadu, Uttarakhand and  
West Bengal, **Elsewhere:** Nepal,  
Thailand, Vietnam, Bhutan,  
Myanmar, Laos and Indonesia  
(Java).

##### 3. *Cossyphus depressus*

Oliver, 1975

2000. Scupola. *Cossyphus  
cossyphus depressus* (Fabricius,  
1781) *Atte del Museo Civico di  
Storia Naturale di Trieste* 48:  
185-249.

2000. Scupola. *Cossyphus  
cossyphus planus* Fabricius,  
1801. *Atte del Museo Civico di  
Storia Naturale di Trieste* 48:  
185-249.

**Material examined:** 7 ex.  
Dhamtari, Sankra rest house,  
21.x.2011, Reg. no. 20002/H4A;  
6exs., 22.x.2011, Reg. no.  
20003/H4A; 4 exs., 17.x.  
2011, Reg. no. 20004/H4A; 3  
exs., 15.x.2011, Reg. no. 20005/  
H4A; 3 exs., 9.xi.2011, all coll.  
Sunil and Party, Reg. no. 20006/  
H4A.

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

**4. *Hyperops coromandelensis*** Solier, 1835

*Hyperops coromandelensis* Solier, *Ann. Soc. Ent. Fr.* IV 1835, p.279, t.6, f. 14–Kraatz, *Revis* 1865, p.236.

**Material examined:** 12 exs., Raipur, Bar village, 14.vii.2011, coll. Sunil and Party, Reg. No: 20025/H4A.

**Distribution:** INDIA: Chhattisgarh (Raipur), Karnataka, Madhya Pradesh, Uttar Pradesh.

**5. *Rhytinota subfossulata***, Solier, 1835

*Rhytinota subfossulata*, Solier, 1835 *Ann. Soc. Ent. Fr.* IV, p.369 - Kraatz, 1865. *Revis*. P.172.

**Material examined:** 1 ex., Raipur. Mohda village, 05.x.2011, Reg. No. 20000 /H4A; 1 ex. Kabirdham, Jhalwala, 27.vii.2011, Reg. No. 20001/H4A; all coll. Sunil and party.

**Distribution:** INDIA: Chhattisgarh (Raipur, Kabirdham) and East India.

**6. *Sphaenariopsis tristis***

Kraatz, 1865

*Sphaenariopsis tristis* Kraatz 1865, p.176.

**Material examined:** 1 ex, Bastar, Jagadapur, Bakaband, 16.xi.2011, coll. R. P Gupta, Reg. no. 200026/H4A ZSI.

**Distribution:** India: Chhattisgarh (Bastar) and Uttarakhand.

**7. *Himastimus fasciculatus*** (Fabricius, 1798)

*Himastimus fasciculatus* Fabricius, 1798, *Entt. Syst.* Suppl. P.52. *Syst. El. I.*, 1801, p.160- Haag Mon. I. p. 88; Mon. II p. 275,278.

**Material examined:** 2ex. Raipur, Barnawapara, 06.x.2011, Reg. no. 20027/H4A ;1 ex. 11.xi.2011, Reg.,No. 20029/H4A; Chhattisgarh, Dhamtari, Sankra rest house, 14.x.2011, Reg. No. 20028/H4A; All coll. Sunil and Party, Deposited in Zoological Survey of India, Kolkata.

**Distribution:** INDIA: Chhattisgarh (Raipur, Dhamtari) and Uttarakhand.

**8. *Ceropria induta***

Wiedemann, 1819

*Helops indutus* Weidemann, 1819, *Zool. Mag.*, 1 (3): 164 (Java).A

*Ceropria subocellata* Castelnau et Brulle, 1831, *Annls. Soc. Nat. Paris*, 23: 398 (Java)

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

**Material examined:** 1 ex., Raipur, Hardifer, 10..viii. 2011, Reg. No. 19982/H4A; coll. Sunil and party.

**Distribution:** INDIA: Assam, Chhattisgarh (Raipur) and West Bengal. **Elsewhere:** Indonesia (Java), Taiwan, Indonesia (Sumatra), Philippines, Myanmar, Thailand, Indochina, China, Japan, Korea, United States of America (Florida, Washington D.C.)

**9. *Platynotus deyrollei***

Mulsant and Rey, 1853

*Platynotus Deyrollei* Mulsant and Rey, 1853a: 272. – Gemminger and de Harold 1870: 1912; Gebien 1910b: 273, 1938b: 293; Kaszab 1975b: 294; Iwan 1997a: 268, 2002: 91.

**Material examined:** 1 ex., Raipur, Guragarh, 23.vii. 2011, Reg. No. 19994/H4A; 1 ex. Barnawapara, 10.xi.2011, Reg. No. 19995/H4A; 1 ex. Barbarda pond, 23.vii.2011, Reg. No. 19996/H4A, all coll. Sunil and party.

**Distribution:** INDIA: Chhattisgarh (Raipur), North India, Uttar Pradesh, West Bengal.

**10. *Platyburak nervosus*** (Mulsant and Rey, 1853)

*Notocorax nervosus* Mulsant et Rey, 1853a: 275. – Kaszab 1975b: 306.

*Pseudoblaps nervosa*: Gemminger and de Harold 1870: 1913; Gebien 1910b: 274, 1938b: 293.

*Platyburak nevokus*: Iwan 1990a: 127, 1997a: 266, 2002: 86.

**Material examined:** 7 exs., Raipur, Tinsapathar, 03.vii.2011, coll. K. Chandra and party, Reg. No. 19997/H4A; 1 ex., Raipur, Nawapara, 6.vii.2011, Reg. No. 19998/H4A; 1 ex., Raipur, Guragarh, 23.vii. 2011, Reg. No. 19999/H4A, all Coll. Sunil and party.

**Distribution:** INDIA: Chhattisgarh (Raipur) and South India.

**11. *Amarygmus micans*** Fabricius, 1794

*Amarygmus micans* Fabricius, 1794. *Ent. Syst.* IV App. P. 447; *Syst. El.* I 1801, p.428.–Dalm. 1823, *Anal. entom.* p.60.- Geb,1906, *Deutsche Ent. Zeitschr.* P.225.

**Material examined:** 1 ex., Raipur, Devgaon, 18.vii. 2011, Reg. No. 20036/H4A; 1 ex., Raipur, Barnawapara, 27.xi.2011, Reg. No. 20037/H4A; 1 ex., Raipur, Hardifar, 10.viii.2011, Reg. No. 200038/H4A, all coll. Sunil and party.

**Distribution:** INDIA: Chhattisgarh (Raipur).

**Elsewhere:** Sunda Islands.

**12. *Caedius malabaricus*** Fairmaire, 1894

*Caedius malabaricus* Fairmaire. 1894, *Ann. Soc. Ent. Belg.* XXXVIII, p.22

**Material examined:** 1 ex., Raipur, Barnawapara, 08.vii.2011, Reg. No. 20068/H4A, 1 ex. 10.vii. 2011, Reg. No. 20069/H4A; all coll. Sunil and party.

**Distribution:** INDIA: Chhattisgarh (Raipur), Kerala and Uttarakhand.

**13. *Gonocephalum abnormale*** Kaszab, 1952

*Gonocephalum abnormale* Kaszab, 1952a: 634.

**Material examined:** 1 ex., Raipur, Barnawapara, 25.ix.2011, coll. Sunil and party, Reg. No. 20007/H4A.

**Distribution:** INDIA: Chhattisgarh (Raipur) and Uttarakhand.

**14. *Gonocephalum bilineatum***

(Walker, 1858)

*Opatrum bilineatum* Walker, 1858: 284.

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

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

*Gonocephalum Kamtschaticum* Motschulsky, 1860: 139.

*Hopatum kamtschaticum* Motschulsky, 1860. – Gemminger 1870:1932.

*Gonocephalum kamtschaticum* Motschulsky, 1860. – Reitter 1904:146;



*Blapstinus latifrons* LeConte, 1874: 70. – Casey 1890: 393.

*Gonocephalum latifrons* (LeConte, 1874). – Champion 1895: 115;

*Opatrum orarium* Lewis, 1894: 380. – Champion 1895: 117.

*Gonocephalum orarium* (Lewis, 1894). – Gebien 1910b:

**Material examined:** 1 ex. Chhattisgarh, 09.xi.2011, Reg. No. 20015/H4A; 4 exs., Bastar, Jagadapur, Makdi, (FRH), 10.xi.2011, Reg. No. 20020/H4A; 1 ex. Bastar, Jagadapur, Asna, 01.xi.2011, Reg. No. 20017/H4A, all Coll. R.P. Gupta and party; 16 exs., Kabirdham, Tura, 28.viii.2011, Reg. No. 20016/H4A; 16 exs., Kabirdham, Pagwali, 04.ix.2011, Reg. No. 20019/H4A; all coll. Sunil and party.

**Distribution:** INDIA: Chhattisgarh (Bastar, Kabirdham), Sikkim, Uttarakhand and West Bengal.

#### 15. *Gonocephalum helopioide* (Fairmaire, 1894)

*Hopatum helopioide* Fairmaire, 1894: 19.

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

*Gonocephalum helopioide* (Fairmaire, 1894). – Gebien 1910b: 323.

**Material examined:** 6 ex., Raipur, Lalbund pond, 14.vii.2011, Reg. No. 20008/H4A; 3 ex., Raipur, Balamdehi Riv. 01.x.2011, Reg. No. 20009/H4A; 1 ex., Raipur, Aamgarh, 06.x.2011, Reg. No. 20010/H4A :1 ex., Kabirdham, Tura, 28.viii.2011, Reg. No. 20011/H4A; 1 ex. Dhamtari, Gahausigar, 3..x.2011, Reg. No. 20012/H4A; all coll. Sunil and party, 1 ex., Raipur, Barnawapara, 1.vii.2011, coll. K. Chandra and party, Reg. No. 20013/H4A.

**Distribution:** INDIA: Chhattisgarh (Raipur, Kabirdham), Sikkim, Uttarakhand and West Bengal.

#### 16. *Opatroides vicinus* (Fairmaire, 1896)

*Opatroides vicinus* Fairmaire, 1896, *Ann. Soc. Ent. Belg.* XL. Kaszab 1930 *Ent. Arb. Mus. Frey*, 11: 157-159.

**Material examined:** 2 ex., Chhattisgarh, Durg, Bhilai, 23..viii.2011, Reg. No. 20067/H4A; coll. Sunil and party.

**Distribution:** INDIA: Chhattisgarh (Durg), Uttarakhand and West Bengal. **Elsewhere:** Nepal and Arabian region (Schawaller, 2006).

#### 17. *Scleron reitteri*

Gebien 1906

*Scleron reitteri* Gebien (1906) *Deutsche Ent. Zeitschr.* 234 (nom. Nov.)- KASZAB (1942): *Mitt. Munchn. Ent. Ges.*, 32 (1) 9. – *Scleron orientale* Reitter (1904): *Verh. Naturf. Ver. Brunn.* 42: 125 (nom. Preoccupy, nec. *Orientele* Fabricius, 1775)

**Material examined:** 2 ex., Durg, Jewra, Sirsa, 22..viii.2011, Reg. No. 20057/H4A; 6 exs., Durg, Bhilai, 21.viii.2011, Reg. No. 20058/H4A; 1 ex., Durg, Saja, 23..viii.2011, Reg. No. 20059/H4A; 1 ex., Kabirdham, Sitalpani, 19.xi.2011, Reg. No. 20061/H4A :1 ex., Raipur, Barnawapara, 22.viii.2011, Reg. No. 20060/H4A; 1 ex., Raipur, Rampur, 08.vx.2011, Reg. No. 20062/H4A, all coll. Sunil and party.

**Distribution:** INDIA: Chhattisgarh (Raipur, Durg) and Uttarakhand.

#### 18. *Strongylium aratum*

Fairmaire, 1896

*Strongylium aratum* Fairmaire, *Ann. Soc. Ent. Belg.* XL1896, p. 35

**Material examined:** 1 ex., Raipur. Turturia far, 24..vii.2011, Reg. No. 19991/H4A; 1 ex. Raipur, Barnawapara, 27.vii.2011, Reg. No. 199990/H4A; 1 ex., 01.viii.xi.2011, Reg. No. 199993/H4A :2 ex., 06.vii.2011, Reg. No. 19985/H4A; 1 ex., 07..vii.2011, Reg. No. 19983/H4A; 1 ex., 08.vii.2011, Reg. No. 19984/H4A; 1 ex., 04..vii.2011, Reg. No. 19989/H4A; 1 ex., 12.vii.2011, Reg. No. 19994/H4A, 1 ex., 18..vii.2011, Reg. No. 19986/H4A; 1 ex., 19.vii.2011, Reg. No. 19992/H4A all coll. Sunil and party.

**Distribution:** INDIA: Assam, Chhattisgarh (Raipur), Meghalaya, Uttarakhand, Sikkim, Uttar Pradesh and West Bengal. **Elsewhere:** China (Yunnan) and Nepal.

#### Discussion

Eventhough most species are more common to Indian mainland, the species *Amarygmus micans* Fabricius, 1823 collected from Raipur district is the first report from India. The species *Sphaenariopsis tristis* Kraatz 1865, *Himastimus fasciculatus* (Fabricius, 1798), *Gonocephalum abnormale* Kaszab, 1952, *Scleron reitteri*, Gebien 1906 are the new records from western Himalayan region and *Ceropria induta*, Wiedemann, 1819 is the new record outside eastern Himalayan region. Out of 18 species, reported from Chhattisgarh, 13 species are reported from the Raipur district, the reason being this district is spread over the different geographic regions like Central highlands and Deccan plateau.

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