



## SCARAB BEETLES (COLEOPTERA: SCARABAEIDAE) OF BADALKHOL WILDLIFE SANCTUARY, CHHATTISGARH, INDIA

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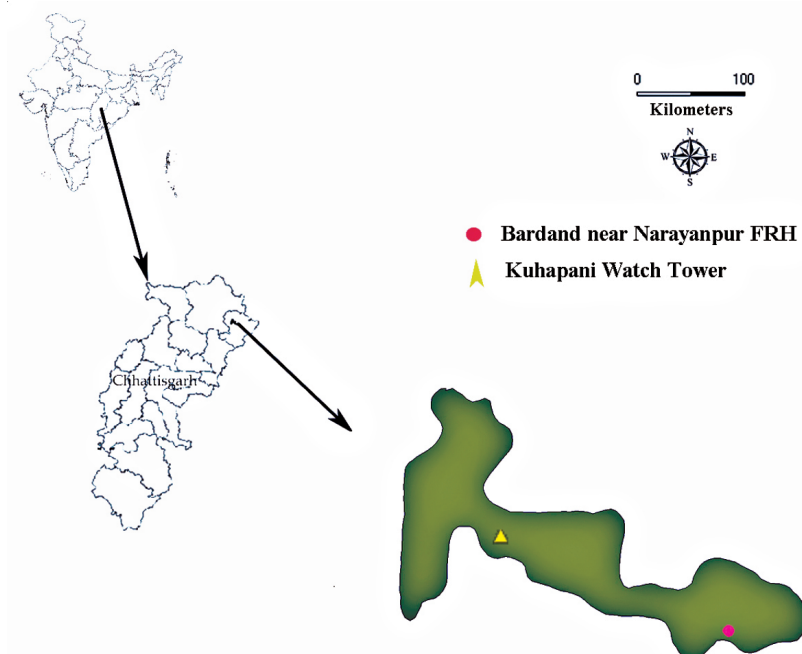
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### INTRODUCTION

The diversified habitats, climatic conditions, available food resources provide a shelter for various insect groups in tropical and sub-tropical regions of Globe. With their highly diverse niche range the beetles in the order Coleoptera represent around 387,100 species globally (Zhang 2011) and are highly diverse so far as their species richness. The scarab beetles belong to family Scarabaeidae under superfamily Scarabaeoidea. The relatively large and stout body, conspicuous colour pattern, elaborate ornamentation and 10 antennal segments with 3-7 segmented club distinguish them from

other beetle families. They show an extensive range of assortment in their habitat according to their food preference and life forms. Sometimes dead matters and fungi are chosen as food by them. Often vegetables, fruits, pollens etc. are also preferable food stuff for these beetles. Many of them employed themselves to clean the ground by feeding on detritus matters. More predominantly the beetles belonging to the subfamilies, Scarabaeinae and Aphodiinae are associated with dung. They play important roles in nutrient cycling, soil aeration (Mittal, 1993), regulation of dung breeding dipteran pests (Borenmissza,



**Fig. 1.** Map showing collection localities in Badalkhol Wildlife Sanctuary

1970; Fincher 1981). Being phytophagous the subfamilies namely, Melolonthinae, Euchirinae, Rutelinae, Hoplinae, Dynastinae, Valginae, Cetoniinae and Trichiinae belong to the group Pleurosticti (chafers).

The pioneer work from Oriental region predominantly from India was initiated by Arrow (1910, 1917, and 1931), later on Balthasar (1963a, 1963b), Miksic (1977), Endrödi (1985), Chandra (1986), Gupta (1986), worked and contributed significantly. Major works in this group from Central India were carried out by Chandra (2000, 2003), Chandra & Ahirwar (2007), Chandra & Singh (2010), Chandra & Gupta (2011, 2012a, 2012b, 2012c). Chandra & Ahirwar (2007) published an account of the scarab beetles of about 124 species/subspecies belonging to 45 genera in 11 subfamilies from Madhya Pradesh and Chhattisgarh states. Recent works from Achanakmar Wildlife Sanctuary of Chhattisgarh has revealed its scarab beetle fauna with 22 species belonging to 11 genera by Chandra & Singh (2010). Chandra & Gupta (2013) published a report on 43 species of the scarab beetles from Barnawapara Wildlife Sanctuary, Chhattisgarh. The inventory on this group from Badalkhol Wildlife Sanctuary, Chhattisgarh state has not been documented yet. Thus the aim of the present study is to document 20 species of the scarab beetles from this protected area.

#### MATERIAL AND METHODS

**Study Area:** The sanctuary is situated in the North-western part of Jashpur district of Chhattisgarh between 22°51' North latitudes and 83°54' East longitudes and covers a total area of 104.35 sq. km. with an average altitude of 450 m asl. Biogeographically the sanctuary is situated in the Chotta Nagpur (6B) province of the Deccan Peninsula Zone of India (Rodgers *et al.*, 2002) [Fig. 1]. The sanctuary is divided into 5 circles under single range, Narayanpur. The forests fall under two major forest types i.e. Tropical Moist Deciduous Forest and Tropical Dry Deciduous Forest, dominated by sal trees.

**Collection and identification:** The scarab beetles

were collected using light trap at night and hand collecting from dung, decayed matters, ground and sometimes from foliage in case of chafers during daytime. The beetles were preserved, dry pinned and deposited at the museum of Zoological Survey of India, Kolkata. They were later studied with Leica stereozoom microscope.

### RESULTS

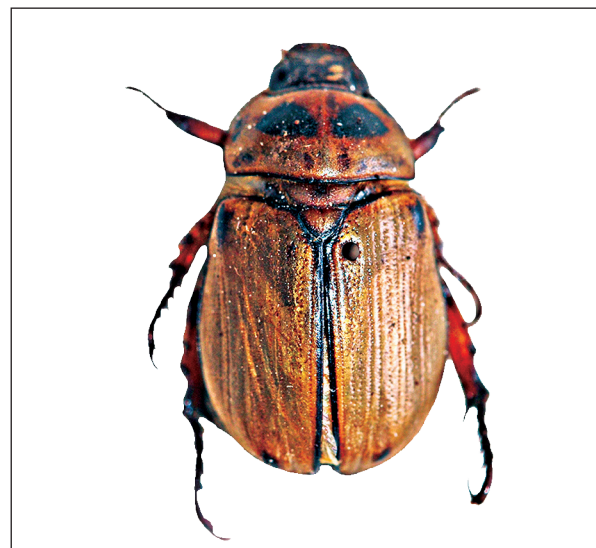
#### Family SCARABAEIDAE

#### Subfamily RUTELINAE

#### Tribe ANOMALINI

#### 1. *Anomala varicolor* (Gyllenhal, 1817)

1817. *Melolontha varicolor* Gyllenhal, *Schönh. Syn. Ins.*, I, 3, App. p. 114.
1844. *Anomala varicolor*, Burmeister, *Handb. Ent.*, iv, 1: 250.
1911. *Anomala varicolor*, Arrow, *Ann. Mag. Nat. Hist.* (8): 487.
1917. *Anomala varicolor*, Arrow, *Fauna Brit. India* (Lamellicornia: Rutelinae), 2: 152-153.
1959. *Anomala varicolor*, Paulian, *Ann. Soc. ent. France*, LXXVIII.: 43, 48, f. 101-103.



*Anomala varicolor* (Gyllenhal)

**Material examined:** Badalkhol Wildlife Sanctuary (BWLS): Bardand near Narayanpur FRH, 23.vi.2015 (9 exs.), Kuhapani Watch Tower, 24.vi.2015 (2 exs.), coll. A. Majumder & Party.

**Diagnostic characters:** Testaceous, head, extremities of tibia, tarsi dark red, variable patch

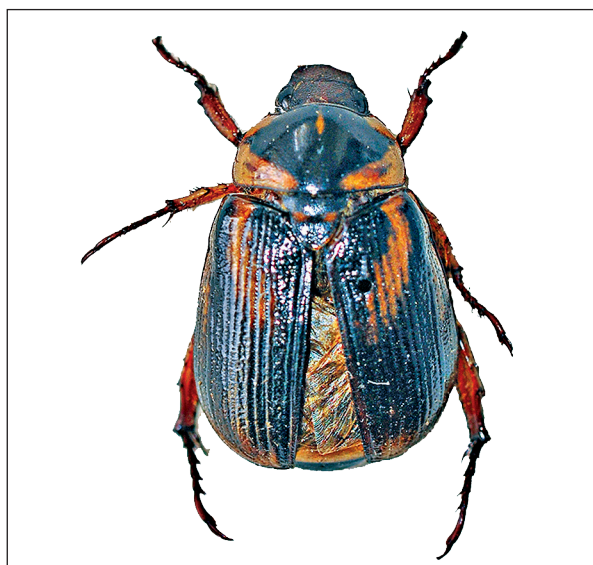
on each side of pronotum, spot on each shoulder which run obliquely to apical angle, sometimes partly or entirely fused with lateral margin; head densely rugose, clypeus broadly semicircular. Pronotum finely punctured; elytra deeply, finely punctured having broad subsutural interval, closely punctured. Pygidium closely transverse rugose. Front tibia with two well marked teeth upper one feeble, hind tibia inflated before middle, contracted before extremity. Longer claw cleft in front and middle feet.

*Distribution:* India: Assam, Bihar, Chhattisgarh, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Sikkim, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal.

## 2. *Anomala ruficapilla* Burmeister, 1855

1855. *Anomala ruficapilla* Burmeister, *Handb. Ent.*, IV, 2: 49.

1917. *Anomala ruficapilla*, Arrow, *Faun. Brit. India* (Lamellicornia : Rutelinae), 2: 153.



*A. ruficapilla* Burmeister

*Material examined:* BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (2exs.), Kuhapani watch tower, 24.vi.2015 (3 exs.), coll. A. Majumder & Party.

*Diagnostic characters:* Testaceous, with head, extremities of tibia, tarsi dark red, large patch on each side of pronotum, extreme edges of elytra, broad sutural line, another extending obliquely

from shoulder almost to sutural angle, partly or entirely fused with lateral margin, black. Head finely, densely rugose, broad semicircular clypeus. Pronotum finely punctured, with sides evenly rounded, base finely, completely margined. Elytra deeply, finely punctate striate with broad sub sutural interval. Pygidium transversely strigose. Front tibia with two strong teeth, third tooth feeble, hind tibia inflated before middle, longer claw cleft in front and middle feet.

*Distribution:* India: Chhattisgarh, Haryana, Madhya Pradesh, Maharashtra, Karnataka and Uttar Pradesh. *Elsewhere:* Sri Lanka.

## 3. *Anomala dorsalis* (Fabricius, 1775)

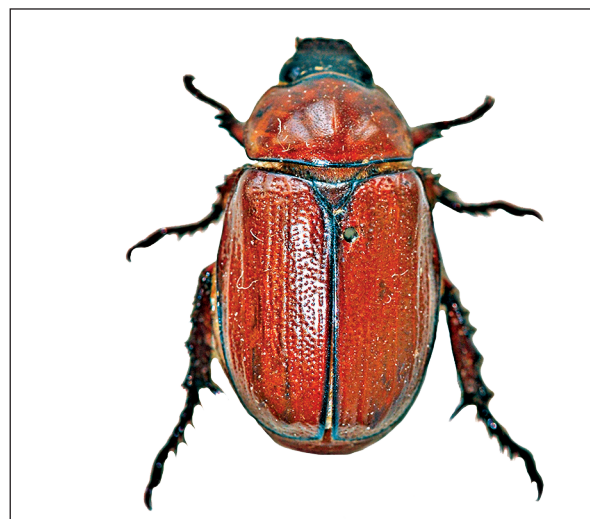
1775. *Melolontha dorsalis* Fabricius, *Syst. Ent.*, : 35.

1789. *Melolontha pallida*, Olivier, *Entom.*, I, 5: 25, pl. 9, fig. 103.

1893. *Anomala dorsalis* var. *centralis*, Nonfried, *Berl. Ent. Zeits.*, : 335.

1894. *Anomala imitatrix*, Nonfried, *Ent. Nachr.*, XX: 12.

1917. *Anomala dorsalis*, Arrow, *Faun. Brit. India*, (Lamellicornia: Rutelinae), 2: 136.



*A. dorsalis* (Fabricius)

*Material examined:* BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (2 exs.), Kuhapani watch tower, 24.vi.2015 (5 exs.), coll. A. Majumder & Party.

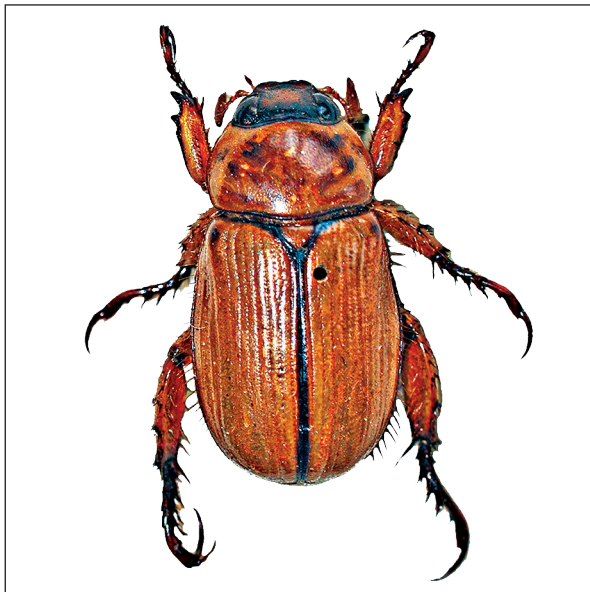
*Diagnostic characters:* Testaceous or reddish with moderately elongate body which neither convex, nor very shining with scanty clothing of

short yellow hairs beneath. Clypeus and forehead densely rugose, punctured. Scutellum with few line punctures, elytra strongly irregularly punctured with juxta sutural line, four or five double rows of regular punctures. Pygidium minutely punctured. Metasternum finely, not closely, ventral segments having transverse row of punctures.

*Distribution:* India: Andaman Island, Assam, Bihar, Chhattisgarh, Haryana, Karnataka and Madhya Pradesh.

#### 4. *Anomala biharensis* Arrow, 1917

1917. *Anomala biharensis* Arrow, *Faun. Brit. India* (Lamellicornia : Rutelinae), 2: 166.



*A. biharensis* Arrow

*Material examined:* BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (3exs.), Kuhapani watch tower, 24.vi.2015 (1ex.), coll. A. Majumder & Party.

*Diagnostic characters:* Pale, testaceous yellow, with extremities of the tibia, tarsi, extreme margins of clypeus, pronotum, scutellum, elytra brown. Body smooth, shining and elongate. eyes large, clypeus small, densely rugosely punctured, forehead finely, closely punctured. Scutellum minutely punctured, elytra with seven rows of finely punctured, not very deeply impressed dorsal stria.

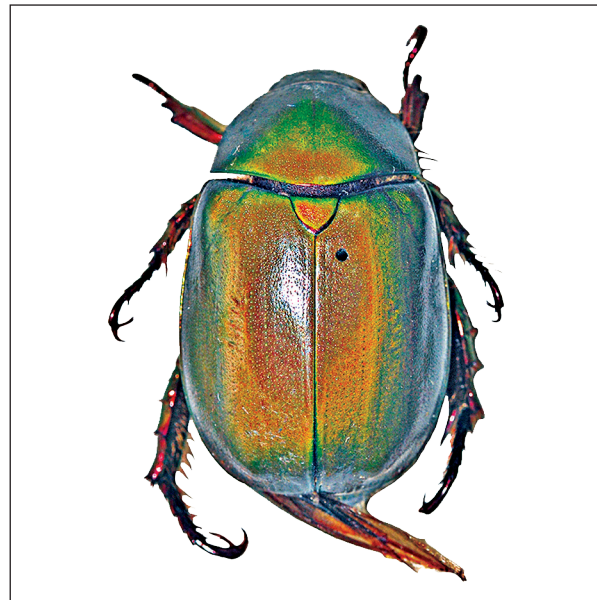
*Distribution:* India: Bihar, Chhattisgarh,

Haryana, Madhya Pradesh, Uttar Pradesh and Uttarakhand.

#### 5. *Anomala dimidiata* (Hope 1831)\*

1831. *Euchlora dimidiata* Hope, in Gray, *Zool. Misc.*,: 23.

1917. *Anomala dimidiata*, Arrow, *Faun. Brit. India* (Lamellicornia : Rutelinae), 2: 232.



*A. dimidiata* (Hope)

*Material examined:* BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (2exs.), coll. A. Majumder & Party.

*Diagnostic characters:* Oval, dorsal surface deep metallic green with lower surface and legs blue-black or blue-green. Clypeus densely and frons less densely punctate, pronotum moderately closely punctate; scutellum finely punctate, elytra finely closely punctate, with slight traces of longitudinal lines, broad behind middle, pygidium moderately finely and transversely rugose.

*Distribution:* India: Kashmir, Uttar Pradesh, Himachal Pradesh, Chhattisgarh, Meghalaya, Manipur and West Bengal. *Elsewhere:* Nepal.

#### 6. *Mimela macleayana* (Vigors, 1840)

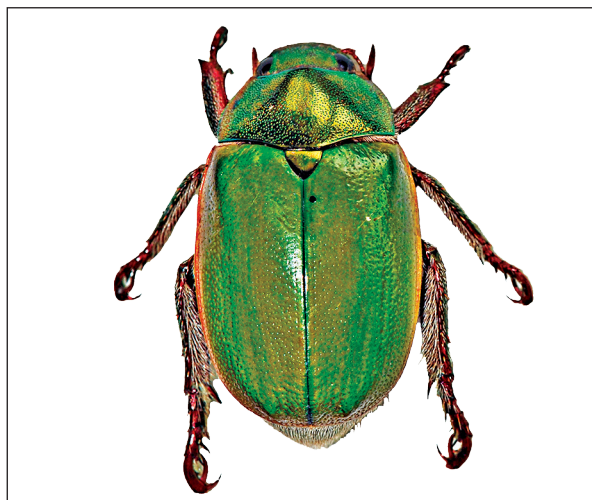
1825. *Euchlora macleayana* Vigors, *Zool. Journ.*, I: 540

1840. *Euchlora macleayana* Hope, *Mag. Nat. Hist*, iv: 346

1844. *Mimela macleayana*, Burmeister, *Handb. Ent.* iv, 1: 291.



1910. *Mimela macleayana*, Arrow, *Faun. Brit. India* (Lamellicornia: Rutelinae), 2: 105.



*Mimela macleayana* (Vigors)

*Material examined:* BWLS: Bardand near Narayanpur, FRH 23.vi.2015 (2exs.), Kuhapani watch tower 24.vi.2015 (1ex.), coll. A. Majumder & Party.

*Diagnostic characters:* Bright coppery red, with head, pronotum, scutellum golden green, elytra grass green, outer margin yellowish. Eyes large, prominent, clypeus small, coarsely rugose, forehead strongly punctured. Pronotum strongly, closely punctured, which are least close in the middle, rugose at the sides, lateral margins rounded. Long scutellum with only few fine punctures. Elytra strongly, moderately closely punctured, feeble in the region adjacent to scutellum. Pygidium rugosely punctured, metasternum smooth in the middle, finely rugose at sides. Prosternal process small. Front tibia with no lateral tooth.

*Distribution:* India: Andhra Pradesh, Chhattisgarh, Karnataka, Madhya Pradesh and Maharashtra. *Elsewhere:* Myanmar.

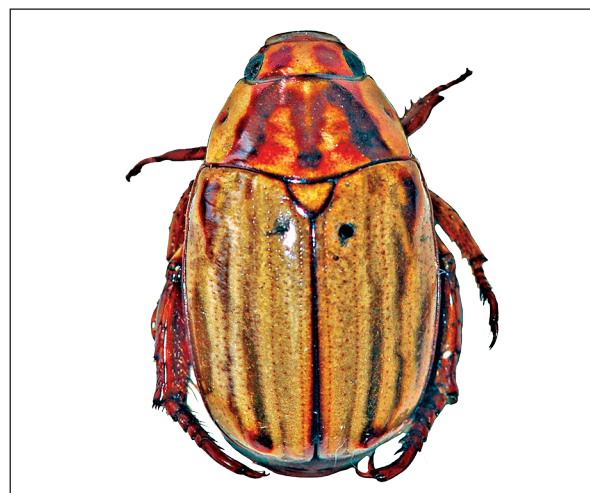
#### 7. *Mimela inscripta* (Nonfried, 1892)

1892. *Anomala inscripta* Nonfried, *Berl. Ent. Zeits.*, xxxvi, p. 236.

1902. *Mimela crocea*, Ohaus, *Deutsche Ent. Zeits.*, : 55.

1917. *Mimela inscripta*, Arrow, *Faun. Brit. India*, (Lamellicornia: Rutelinae), 2: 124.

*Material examined:* BWLS: Bardand near Narayanpur FRH 23.vi.2015 (1ex.), coll. A. Majumder & Party.



*M. inscripta* (Nonfried)

*Diagnostic characters:* Straw coloured, clypeus, tarsi fiery crimson; round spot on each side of the forehead having reddish mahogany colour and a M-shaped mark upon pronotum. Larger part of ventral surface of body, large patch upon each of middle and hind femora, hind tibia crimson red. Pronotum lightly punctured in middle, smooth at sides. Elytra lightly, scanty punctured, some of which forming longitudinal rows, deeply impressed behind. Pygidium pointed with fine scattered punctures. Metasternum smooth in middle, closely punctured at sides. Mesosternum sharply pointed, minutely produced. Hind femur short and rounded.

*Distribution:* India: Chhattisgarh, Madhya Pradesh, Sikkim and West Bengal. *Elsewhere:* Myanmar.

#### Tribe ADORETINI

#### 8. *Adoretus stoliczkae* Ohaus, 1914\*

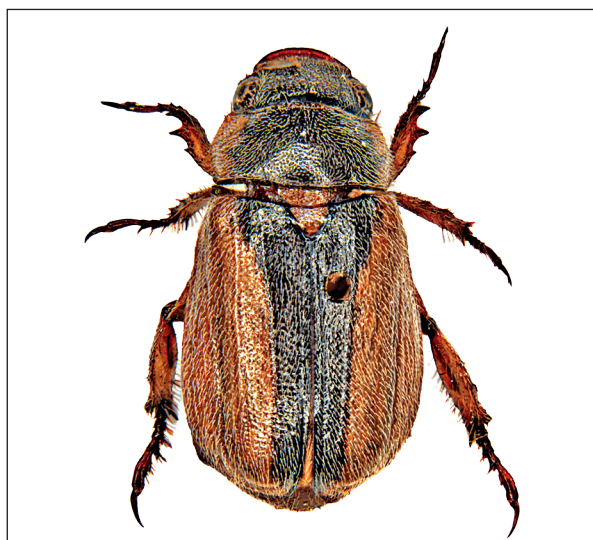
1914. *Adoretus stoliczkae*, Ohaus, *Deutsche Ent. Zeits.*: 490.

1917. *Anomala stoliczkae*, Arrow, *Faun. Brit. India* (Lamellicornia: Rutelinae), 2: 336.

*Material examined:* BWLS: Kuhapani watch tower, 24.vi.2015 (3ex.), coll. A. Majumder & Party.

*Diagnostic characters:* Tawny yellow, with

fore head, vertex and pronotum (except two lateral sides which is yellow), sutural stripe brown or reddish brown. Clypeus granulated, semi circular, having clothed with grey setae. Scutellum pale coloured, rugosely punctured. Elytra granulated, fully clothed with grey hair. Pygidium covered with grey hair. Front tibia armed with sharp, equidistant teeth, of which longer front and middle claw minutely cleft.



*Adoretus stoliczkae* Ohaus

**Distribution:** India: Chhattisgarh, Uttar Pradesh, Punjab and West Bengal.

Subfamily SCARABAEINAE

Tribe COPRINI

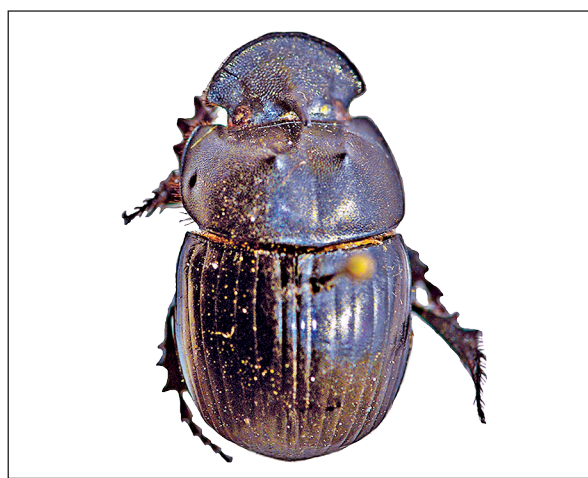
9. *Catharsius pithecius* (Fabricius, 1775)

1775. *Scarabaeus pithecius* Fabricius, *Syst. Ent.*, : 21.  
 1781. *Scarabaeus sabaeus*, Fabricius, *Spec. Ins.*, I: 23.  
 1792. *Scarabaeus nanus*, Fabricius, *Ent. Syst.*, I: 42.  
 1842. *Copris sinensis*, Hope, *Proc. Ent. Soc. Lond.*, : 60  
 1858. *Copris cribricollis*, Walker, *Ann. Mag. Nat. Hist* (3) II: 208.  
 1931. *Catharsius pithecius*, Arrow, *Faun. Brit. India*, (Lamellicornia: Coprinae), 3: 100.

**Material examined:** BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (1ex.), Kuhapani watch tower, 24.vi.2015 (1ex.), coll. A.Majumder & Party.

**Diagnostic characters:** Black, shining, pronotum partly or entirely opaque, antennae,

mouth organs, legs hairy, reddish ventral surface. Head semi circular, with feebly excised clypeus in middle of front margin. Sides of pronotum strongly uniformly rounded. Elytra finely but distinctly striate, scarcely punctured in the striae, intervals shining, except near base. Pygidium finely, not closely punctured. Metasternal shield acutely angular in front part, smooth, shining. Pronotum of male having two tubercles.



*Catharsius pithecius* (Fabricius)

**Distribution:** India: Andhra Pradesh, Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu and Uttar Pradesh. **Elsewhere:** China, Nepal, Pakistan and Sri Lanka.

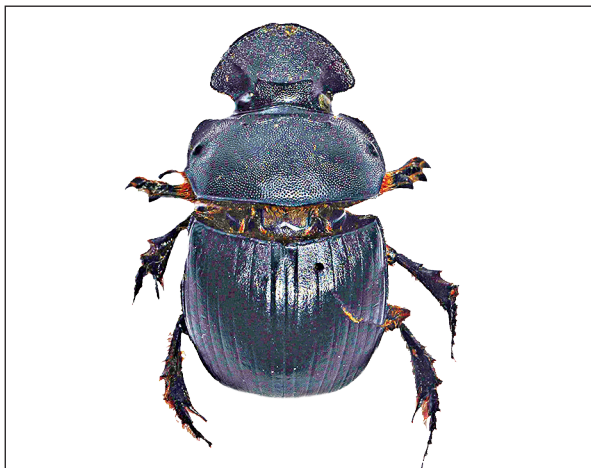
10. *Catharsius molossus* (Linnaeus, 1758)

1758. *Scarabaeus molossus* Linnaeus, *Syst. Nat. ed.* 10: 347.  
 1789. *Scarabaeus molossus*, Olivier, *Ent. I*, 3: 100.  
 1801. *Copris ursus*, Fabricius, *Syst. Eleuth. I*: 43.  
 1931. *Catharsis molossus*, Arrow, *Faun. Brit. India*, (Lamellicornia: Coprinae), 3: 95-96.

**Material examined:** BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (1ex.), coll. A. Majumder & Party.

**Diagnostic characters:** Black, opaque, partly clothed with reddish hair beneath. Head broad with front margin imperceptibly excised in middle. Clypeus closely rugose, ocular lobes densely coarsely granular with smooth shining area adjacent inner margin of each eye. Pronotum densely covered with fine round granules. Elytra

finely, lightly striate, intervals flat, microscopically coracious. Metasternal shield acutely angular in front with longitudinal grooved in hinder part. Terminal spur of hind tibia truncate.

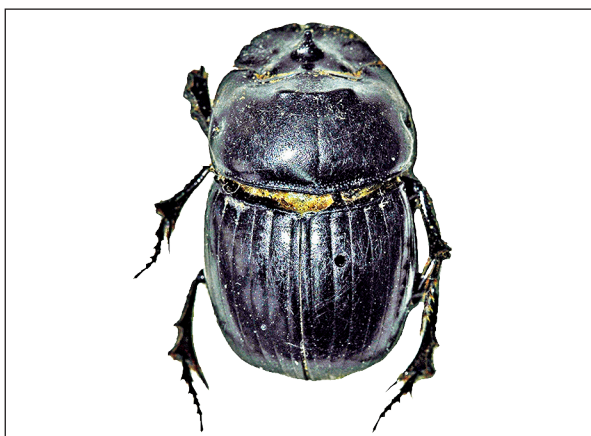


*C. molossus* (Linneaus)

**Distribution:** India: Andaman island, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Meghalaya, Odisha, Sikkim, Uttar Pradesh, Uttarakhand and West Bengal. **Elsewhere:** Afghanistan, Cambodia, China, Laos, Malaysia, Nepal, Pakistan, Sri Lanka, Thailand and Vietnam,

#### 11. *Copris carinicus* Gillet, 1910

1910. *Copris carinicus* Gillet, *Notes Leyd. Mus.* xxxii: 8.  
1931. *Copris carinicus*, Arrow, *Faun. Brit. India*, (Lamellicornia: Coprinae), 3: 109-110.



*Copris carinicus* Gillet 1910

**Material examined:** BWLS: Bardand near

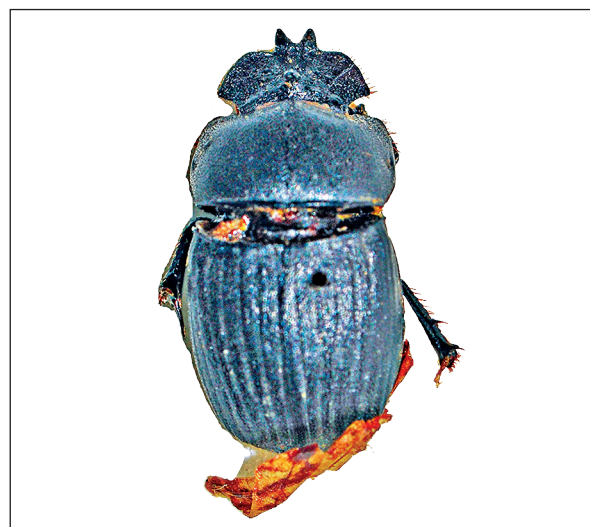
Narayanpur FRH, 23.vi.2015 (1ex.), coll. A. Majumder & Party.

**Diagnostic characters:** Black, shining, with antennae, mouth organs, scanty hairs. Head closely, rugosely punctured with narrowly notched clypeus in middle and feebly bilobed. Pronotum strongly, closely punctured, middle of base feebly punctured. Deep median longitudinal groove posteriorly. Elytra deeply striate, striae finely, closely punctured, intervals convex, minutely punctured. Pygidium strongly and closely punctured. Metasternal shield smooth with sides of metasternum punctured, not closely.

**Distribution:** India: Assam, Chhattisgarh, Madhya Pradesh, Manipur and Meghalaya. **Elsewhere:** Myanmar.

#### 12. *Paracopris surdus* (Arrow 1931)

1931. *Copris surdus* Arrow, *Faun. Brit. India*, (Lamellicornia: Coprinae), 3: 132.



*Paracopris surdus* (Arrow)

**Material examined:** BWLS: Kuhapani watch tower, 24.vi.2015 (1ex.), coll. A. Majumder & Party.

**Diagnostic characters:** Black, opaque elongated. Clypeus bidentated in front, middle smooth, sides lightly punctured with punctate ocular lobes. Head having a deep transverse depression at back and a short conical horn. Pronotum finely and closely punctate. Elytra finely striate, intervals flat, densely punctate.



Metasternum smooth with few punctures in front, sides punctate.

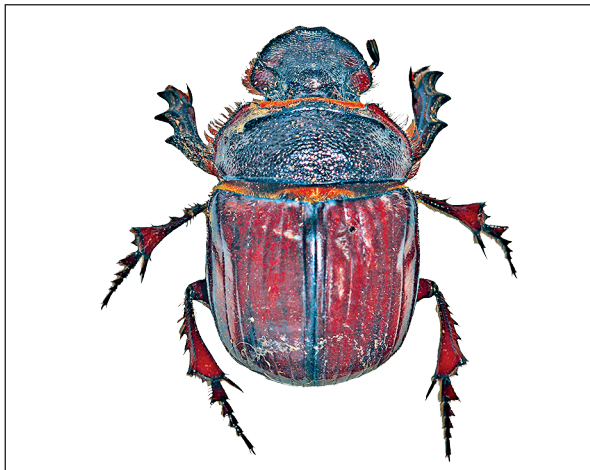
*Distribution:* India: Chhattisgarh, Madhya Pradesh, Rajasthan and Uttarakhand.

13. *Helicopris bucephalus* (Fabricius, 1775)

1775. *Scarabaeus bucephalus* Fabricius, *Syst. Ent.*,: 24.

1789. *Scarabaeus bucephalus*, Olivier, *Ent. i*, 3: 99.

1931. *Helicopris bucephalus*, Arrow, *Faun. Brit. India* (Lamellicornia: Coprinae), 3: 88.



*Helicopris bucephalus* (Fabricius)

*Material examined:* BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (1ex.) Kuhapani watch tower 24.vi.2015 (2ex.), coll. A. Majumder & Party.

*Diagnostic characters:* Broad, nearly quadrate. Head with a slender pointed, slightly curved, nearly erect horn at center in male, with a cephalic carina in female. Pronotum not evenly rugose, vertical in front with a sharp straight carina, feebly touched at each end with anterior angles smooth, sharply produced in male; in female, anterior carina sharp, gently curved with blunt front angles.

*Distribution:* India: Bihar, Chhattisgarh, Haryana, Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh and West Bengal. *Elsewhere:* Java, Malay Peninsula and Myanmar.

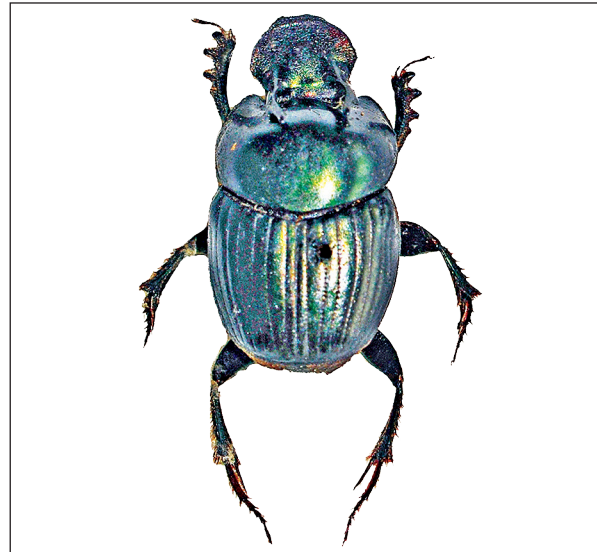
Tribe ONTHOPHAGINI

14. *Onthophagus (Colobonthophagus) dama* (Fabricius, 1798)

1798. *Copris dama* Fabricius, *Ent. Syst. Suppl.*: 32.

1898. *Onthophagus dama* d'Orbigny, L'Abeille, xxix :217.

1931. *Onthophagus dama*, Arrow, *Faun. Brit. India* (Lamellicornia: Coprinae), 3: 280.



*Onthophagus (Colobonthophagus) dama* (Fabricius)

*Material examined:* BWLS: Kuhapani watch tower, 24.vi.2015 (12exs.), coll. A. Majumder & Party.

*Diagnostic characters:* Dark greenish, shining without hairs. Clypeus semicircular with strongly raised margin. Pronotum finely, sparsely punctate. Elytra striae distantly punctate with flat intervals. Vertex of male having a pair of horns, each having an external tooth beyond middle, while in female an erect, flattened truncate tubercle lies upon the vertex.

*Distribution:* India: Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Uttar Pradesh and Uttarakhand. *Elsewhere:* Bhutan and Sri Lanka.

15. *Onthophagus (Colobonthophagus) ramosus* (Wiedemann, 1823)

1823. *Copris ramosus*, Wiedemann, *Zool.Mag.* II, 1: 13.

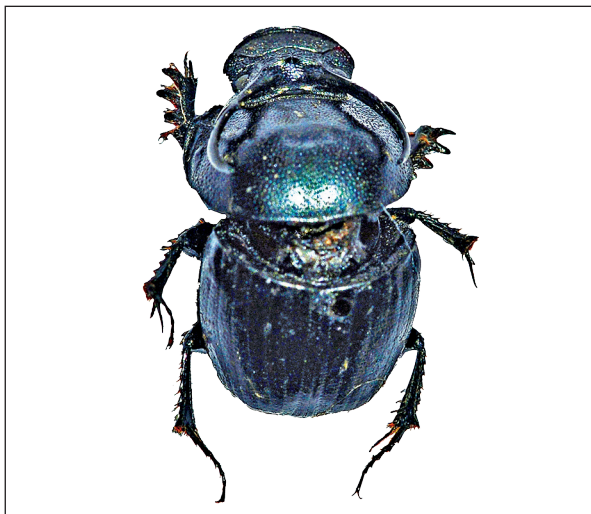
1931. *Onthophagus ramosus*, Arrow, *Faun. Brit. India*, (Lamellicornia: Coprinae), 3: 236-237

*Material examined:* BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (10 exs.), Kuhapani watch tower, 24.vi.2015 (3exs.), coll. A. Majumder & Party.

*Diagnostic characters:* Broadly oval, convex,



opaque or indigo black. Head rugose, semicircular and separated from clypeal margin by a rounded carina, vertex with a pair of backwardly inclined horns, united by straight carina and a sharp tubercle in middle.

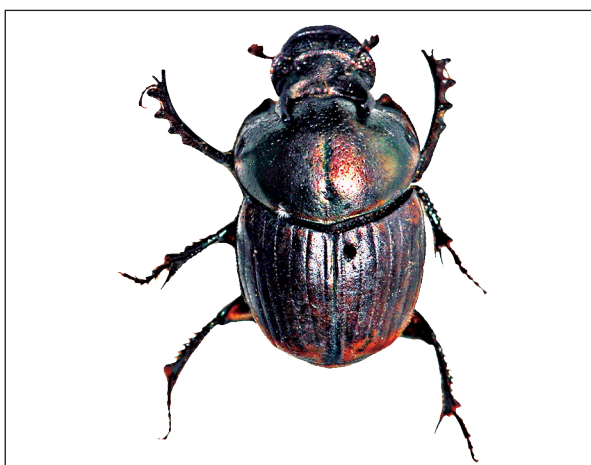


*O. (C.) ramosus* (Wiedemann)

**Distribution:** India: Chhattisgarh, Bihar, Haryana, Himachal Pradesh, Karnataka, Kashmir, Madhya Pradesh, Maharashtra, Odisha, Punjab, Uttarakhand, Uttar Pradesh and Tamil Nadu. *Elsewhere:* Thailand.

**16. *Digitonthophagus gazella*** (Fabricius, 1787)

1787. *Scarabaeus gazella* Fabricius, *Mant. Ins.*, II: 377.  
 1787. *Scarabaeus catta* Fabricius, *Mant., Ins.*, I: 12.  
 1798. *Copris metallicus* Fabricius, *Knt. Syst., Suppl.* : 28.  
 1931. *Onthophagus catta*, Arrow, *Faun. Brit. India* (Lamellicornia: Coprinae), 3: 230.



*Digitonthophagus gazella* (Fabricius)

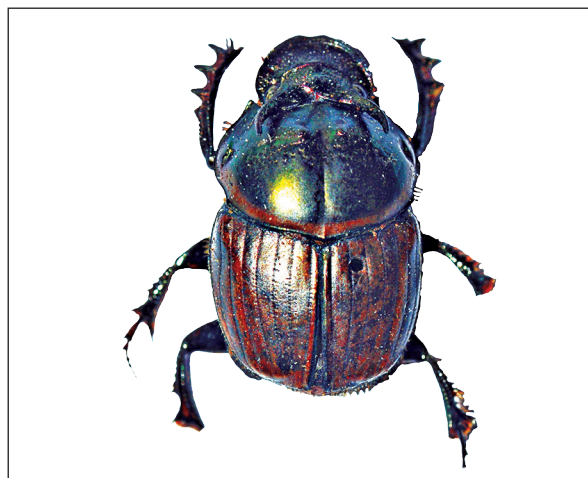
**Material examined:** BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (12 exs.), Kuhapani watch tower, 24.vi.2015 (24 exs.), coll. A. Majumder & Party

**Diagnostic characters:** Testaceous yellow with broad, oval convex smooth shining body, pronotum having few granules in middle, fine scattered punctures behind. Finely striate elytra with flat intervals and not punctate. Median part of the metasternum, front tibia, greater part of the middle and hind tibia, large oval spot upon the lower surface of the middle and hind femora greenish or coppery black. Head semi circular, front margin strongly reflexed and feebly sinuate behind in the middle. Vertex in males with a slender horn, curved outward and inclined backwardly, base little flattened and not united.

**Distribution:** India: Chhattisgarh, Andhra Pradesh, Delhi, Gujarat, Haryana, Arunachal Pradesh, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Punjab, Rajasthan, Tamil Nadu and Tripura. *Elsewhere:* Africa, Arabia, Madagascar, Nepal, Pakistan and Sri Lanka.

**17. *Digitonthophagus bonasus*** (Fabricius, 1775)

1775. *Scarabaeus bonasus* Fabricius, *Syst. Ent.* : 23  
 1931. *Onthophagus bonasus*, Arrow, *Faun. Brit. India* (Lamellicornia: Coprinae), 3: 231-232.



*D. bonasus* (Fabricius)

**Material examined:** BWLS: Kuhapani watch tower, 24.vi.2015 (1ex.), coll. A. Majumder & Party.

*Diagnostic characters:* Body broadly oval, convex. Testaceous yellow body with head and pronotum more dark greenish. Head having a backwardly directed horns with a tubercle in middle. Pronotum smooth in middle with few scattered granules having a slight tubercle on either side in anterior part.

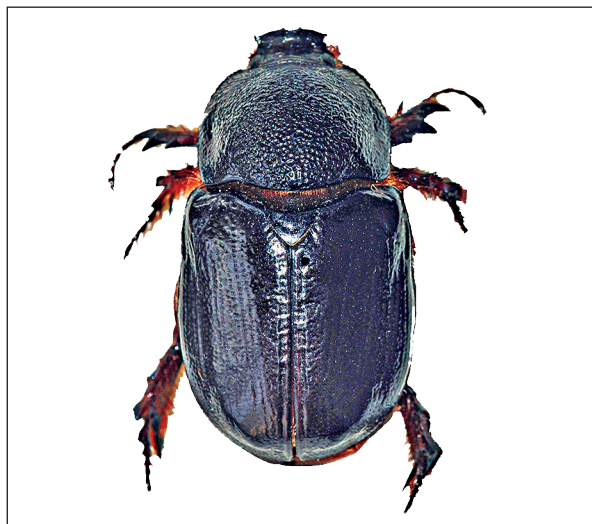
*Distribution:* India: Chhattisgarh, Bihar, Himachal Pradesh, Karnataka, Odisha, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal. *Elsewhere:* Myanmar, Pakistan, Thailand and Vietnam.

#### Subfamily DYNASTINAE

##### Tribe PENTODONTINI

#### 18. *Dipelicus bidens* Arrow, 1910\*

1910. *Dipelicus bidens* Arrow, *Fauna Brit. India*, (Lamellicornia : Cetoniinae & Dynastinae), **1**: 313.



*Dipelicus bidens* Arrow

*Material examined:* BWLS: Kuhapani watch tower, 24.vi.2015 (1ex.), coll. A. Majumder & Party

*Diagnostic characters:* Body chestnut red, dorsally black, legs, ventrally clothed with tawny hairs. Clypeus bidentate, head scarcely punctured, with a strong transverse carina at middle. Pronotum closely, coarsely pitted, lateral margins strongly curved, base strongly trisinate. Elytra closely, shallowly punctured with moderately fine pits, some forming four double rows. Propygidium with

stridulatory ridges, coarse at anterior. Pygidium smooth, shining in middle, rugose at sides.

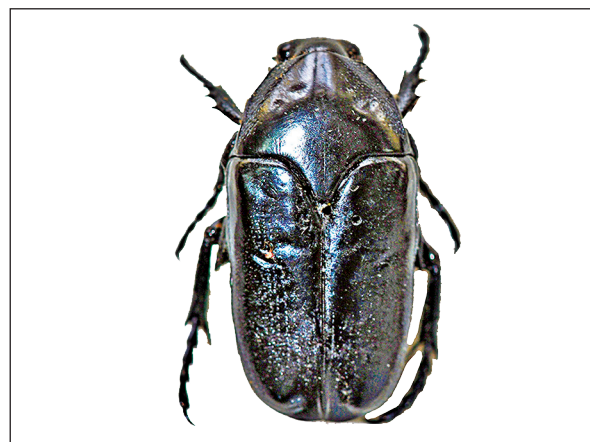
*Distribution:* India: Chhattisgarh and Madhya Pradesh. *Elsewhere:* Sri Lanka.

#### Subfamily CETONIINAE

##### Tribe CETONIINI

#### 19. *Thaumastopeus nigritus* (Fröhlich, 1792)\*

1792. *Cetonia nigruta* Fröhlich, *Naturf. Gesells. Halle*, **XXVI**: 110.
1817. *Cetonia pulla*, Billberg, in *Schönh. Syn. Insect.* I (3) Append., : 46.
1823. *Macronota anthracina*, Wiedemann, *Zool. Mag.*, II, **1**: 83.
1833. *Lomaptera viridiaenea*, Gory & Percheron, *Monogr. Cet.*: 309, tab. 60, fig. 5.
1898. *Taumastopeus simillimus*, Schoch, *Mith. Schweiz. ent. Ges.* **X**: 157.
1899. *Thaumastopaeus nigruta* (Fröhlich), Heller, *Deutsche Ent. Zeitschr.*, : 355.
1910. *Thaumastopeus pullus* (Billberg), Arrow, *Faun. Brit. India*, (Lamellicornia: Cetoniinae), **I**: 195.
- 1959/1961. *Thaumastopeus pullus* (Billberg), Paulian, *Col. Scarab. Indochine*, **II**: 86 (222).
1977. *Thaumastopeus nigritus*, Mikšić, *Mon. Ceto. Palä. Ori. Reg.* (Coleoptera: Lamellicornia), **2**: 7.



*Thaumastopeus nigritus* Fröhlich

*Material examined:* BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (1ex.), coll. A. Majumder & Party

*Diagnostic characters:* Black, shining, more or less tinged with blue, metallic green or coppery, flat above, tapering from shoulders to apex. Clypeus strongly rounded at sides. Pronotum

unpunctured, except at the sides. Elytra smooth at inner part, rugose at sides. Pygidium moderately finely transversely strigose, feebly impressed in middle, metasternum and abdomen smooth in middle. Sternal process slender, and curved.

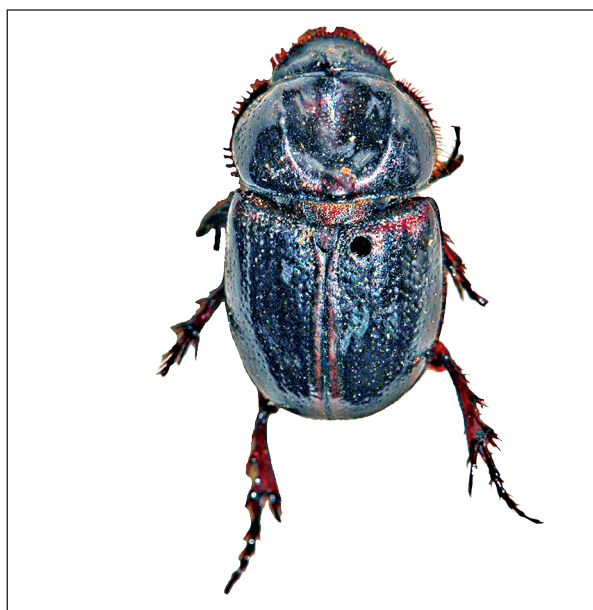
*Distribution:* India: Chhattisgarh, Punjab, West Bengal, Assam, Manipur, Sikkim, Darjeeling and Andaman Island. *Elsewhere:* Bhutan, Java, Malay Peninsula, Sri Lanka, and Tenasserim (Myanmar).

#### Subfamily ORPHNINAE

#### Tribe ORPHNINI

#### 20. *Orphnus parvus* Wiedemann, 1823

1823. *Orphnus parvus* Wiedemann, *Zool., Mag.*, 6(1): 6.



*Orphnus parvus* Wiedemann

*Material examined:* BWLS: Bardand near Narayanpur FRH, 23.vi.2015 (1ex.), coll. A. Majumder & Party.

*Diagnostic characters:* Brown black body, smooth and shining. Males with a long horn, pronotum three-fourth anterior part excavated while in female, head with a small tubercle in

middle, pronotum having weak depression in middle of anterior part. Scutellum smooth, broad. Elytra strongly sparsely, irregularly punctured in longitudinal rows with distinct striae.

*Distribution:* India: Chhattisgarh, Madhya Pradesh, Odisha and West Bengal.

#### DISCUSSION

The present study revealed 20 species of the scarab beetles belonging to 12 genera and 5 subfamilies of family Scarabaeidae from Badalkhol Wildlife Sanctuary for the first time. The species belonging to the genera, *Onthophagus*, *Catharsius*, *Heliocoprins* and *Coprini* (Scarabaeinae) were dung feeders while the rest others, *Anomala*, *Adoretus*, and *Mimela* [Rutelinae], *Dipelicus* [Dynastinae], *Thaumastopeus* [Cetoniinae] and *Orphnus* [Orphninae] were recorded to feed on flowers, leaves or other tender portions of plants. Out of these 20 species, *Anomala dimidiata*, *Adoretus stoliczkae*, *Dipelicus bidens*, *Thaumastopeus nigritus* were recorded for the first time from the state of Chhattisgarh.

#### SUMMARY

Present communication reports 20 species of scarab beetles belonging to family Scarabaeidae under 5 subfamilies and 12 genera from Badalkhol Wildlife Sanctuary, Chhattisgarh. Among them 4 species are new additions to the state fauna of Chhattisgarh.

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