

DUNG BEETLES FAUNA (COLEOPTERA : SCARABAEIDAE :  
SCARABAEINAE) OF PALAMOU TIGER RESERVE,  
BIHAR, WITH DESCRIPTION OF A  
NEW SPECIES.

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(With Fig. 1)

INTRODUCTION

Dung beetles play an important role in enriching forest habitat as these insects regularly collect and bury dungs of various animals into soils. In tropical environment this behaviour is immensely important as it saves thousands of tons of valuable plant nutrient from destruction and makes them available to plant community. Dung beetles, therefore occupy an important link in transformation and recycling of energy resources in terrestrial ecosystem. As no comprehensive account is available of these insects from any of the wild life sanctuaries, tiger reserves and national parks in India, an attempt is made here to make a beginning towards that end. Altogether 27 species including a new species under 8 genera have been recorded in this paper. Data on material studied, distribution and important synonymies have also been incorporated. Types are deposited in the Zoological Survey of India, Calcutta.

LIST OF SPECIES COLLECTED

Subfamily SCARABAEINAE

1. Genus *Gymnopleurus* Illiger

1. *Gymnopleurus cyaneus* (Fabricius)
2. *G. gemmatus* Harold
3. *G. sinuatus* (Oliver)

2. Genus *Catharsius* Hope

4. *Catharsius pithecius* (Fabricius)

3. Genus **Copris** Geoffroy

5. *Copris magicus* Harold
6. *C. repertus* Walker

4. Genus **Caccobius** Thomson

7. *Caccobius vulcanus* (Fabricius)
8. *C. meridionalis* Boucamont
9. *C. inermis* Arrow

5. Genus **Onthophagus** Latreille

10. *Onthophagus bonasus* (Fabricius)
11. *O. quadridentatus* (Fabricius)
12. *O. dama* (Fabricius)
13. *O. ramosellus* Bates
14. *O. catta* (Fabricius)
15. *O. furcillifer* Bates
16. *O. ramosus* (Wiedemann)
17. *O. sagittarius* (Fabricius)
18. *O. spinifex* (Fabricius)
19. *O. ensifer* Boucamont
20. *O. centricornis* (Fabricius)
21. *O. cervus* (Fabricius)
22. *O. palamoui* sp. nov.

6. Genus **Oniticellus** Servelle

23. *Oniticellus pallipes* Fabricius
24. *O. spinipes* Roth
25. *O. cinctus* (Fabricius)

7. Genus **Drepanocerus** Kirby

26. *Drepanocerus setosus* (Wiedemann)

8. Genus **Onitis** Fabricius

27. *Onitis subopacus* Arrow

SYSTEMATIC ACCOUNT

Family SCARABAEIDAE

Subfamily SCARABAEINAE

1. Genus *Gymnopleurus* Illiger

1. *Gymnopleurus cyaneus* (Fabricius)

1798. *Copriscyaneus* Fabricius, *Ent. Syst.*, Suppl., P. 34.

1981. *Gymnopleurus cyaneus*, Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia),  
3 : 49-50.

*Material examined* : 1 ex., Kemaldaha, 11.vi.1983 ; 2 ex., Kujrun, 16.vi.1983 ; 2 ex., Rud, 19.iv.1983 ; 1 ex., Parsa Nullah, Barwand, 22.vi.1983 ; 1 ex., Garu, 22.vi.1983, all collected by *S. M. Ali* (Z.S.I. Coll.).

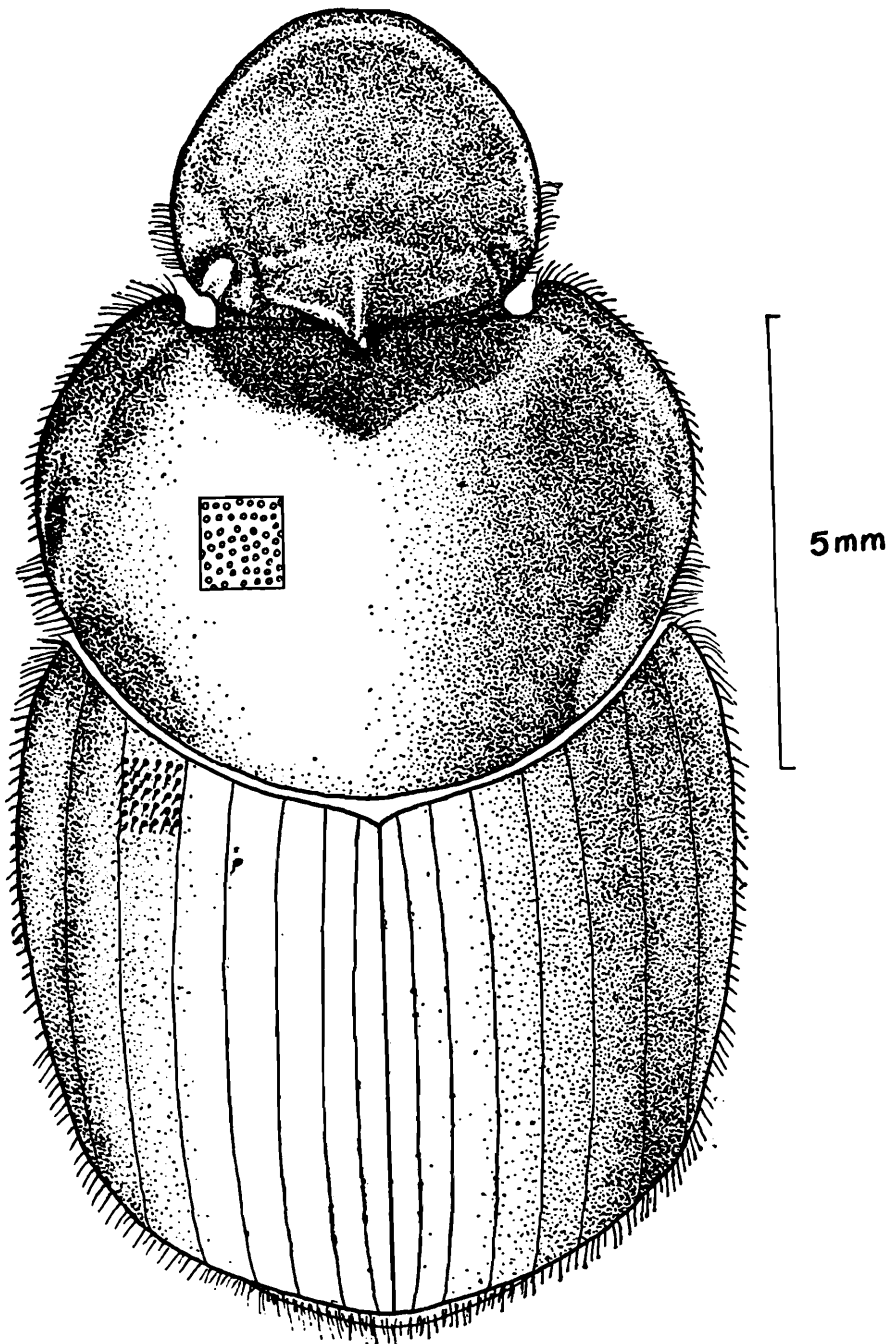


Fig. 1. Dorsal view of *Onthophagus palamoui* sp. nov.

*Habitat* : Gaur dung, Elephant dung and from dead Chicken.

*Distribution* : INDIA : West Bengal, Uttar Pradesh, Maharashtra, Tamil Nadu and Bihar (Palamou). BANGLADESH : Dacca, SRI LANKA : Kanthalai.

## 2. *Gymnopleurus gemmatus* Harold

1871. *Gymnopleurus gemmatus* Harold, *Col. Hefte*, 8 : 117.

*Material examined* : 1 ex., Kujurun, 16.vi.1983, S. M. Ali (Z.S.I. Coll.).

*Habitat* : Cowdung.

*Distribution* : INDIA : West Bengal, Uttar Pradesh, Madhya Pradesh, Mysore, Kerala, Tamil Nadu, Bihar (Palamou). SRI LANKA : Kanthalai.

## 3. *Gymnopleurus sinuatus* (Oliver)

1789. *Scarabaeus sinuatus* Oliver, *Entomologiae*, 1 (3) : 160, Pl. x, fig. 93.

1931. *Gymnopleurus sinuatus*, Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 62-63, Pt. III, fig. 12.

*Material examined* : 1 ex., Rud, 19.vi.1983, S. M. Ali (Z.S.I. Coll.).

*Distribution* : INDIA : Tamil Nadu, Maharashtra, Bihar (Palamou).

## 2. Genus *Catharsius* Hope

### 4. *Catharsius pithecius* (Fabricius)

1775. *Scarabaeus pithecius* Fabricius, *Syst. Ent.*, P. 21.

1931. *Catharsius pithecius* Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 100-101, Pt. VII, fig. 1, 2.

*Material examined* : 3 exs., Maromar, 17.vi.1983, S. M. Ali (Z.S.I. Coll.).

*Distribution* : INDIA : Uttar Pradesh, Maharashtra, Mysore, Andhra Pradesh, Kerala, Tamil Nadu, Bihar (Palamou), SRI LANKA.

## 3. Genus *Copris* Geoffroy

### 5. *Copris magicus* Harold

1881. *Copris magicus* Harold, *Mitth. Munch. Ent. Ver.*, 5 : 88.

*Material examined* : 2 ex. Kujurun, 16.vi.1983, S. M. Ali (Z.S.I. Coll.).

*Distribution* : INDIA : West Bengal, Assam, Manipur and Bihar (Palamou). BURMA, TONKIN, YUNNAN.

## 6. *Copris repertus* Walker

1858. *Copris repertus* Walker, *Ann. Mag Nat. Hist.*, (3) 2 : 208.

*Material examined* : 2 ex., Munder, 20.vi.1983, all collected by S. M. Ali. (Z.S.I. Coll.).

*Distribution* : INDIA : Madhya Pradesh, Maharashtra, Mysore, Tamil Nadu, Bihar (Palamou). SRI LANKA, BURMA.

## 4. Genus *Caccobius* Thomson

### 7. *Caccobius vulcanus* (Fabricius)

1801. *Copris vulcanus* Fabricius, *Syst. Eleut.*, 1 : 41.

1931. *Caccobius vulcanus*, Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 151-152.

*Material examined* : 8 ex., Betla, 11 and 12.vi.1983 ; 7 ex., Maromar, 17.vi.1983, all collected by S. M. Ali (Z.S.I. Coll.).

*Habitat* : Elephant dung.

*Distribution* : INDIA : Maharashtra, Mysore, Bihar (Palamou). SRI LANKA : Colombo.

### 8. *Caccobius meridionalis* Boucamont

1914. *Caccobius meridionalis* Boucamont, *Ann. Mus. Civ. Stor. Nat. Genova*, 47 : 239.

*Material examined* : 8 ex., Kujrun, 16.vi.1983 ; 12 ex., Maromar, 17.vi.1983, all collected by S. M. Ali (Z.S.I. Coll.).

*Habitat* : Elephant dung and Gaur dung.

*Distribution* : INDIA : Maharashtra, Mysore, Tamil Nadu, and Bihar (Palamou).

### 9. *Caccobius inermis* Arrow

1931. *Caccobius inermis* Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 147.

*Material examined* : 7 ex., Maromar, 17.vi.1983, S. M. Ali (Z.S.I. Coll.).

*Distribution* : INDIA : West Bengal, Sikkim, Uttar Pradesh, Maharashtra and Bihar (Palamou). SRI LANKA : Wirawila.

5. Genus *Onthophagus* Latreille10. *Onthophagus bonasus* (Fabricius)

1775. *Scarabaeus bonasus* Fabricius, *Syst. Ent.*, P. 23.

1931. *Onthophagus bonasus*, Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 231-232, pl. XIII, fig. 5, 6.

*Material examined* : 6 ex., Kujrun, 16.vi.1983, S. M. Ali (Z.S.I. Coll.)

*Habitat* : Grur dung.

*Distribution* : INDIA : West Bengal, Uttar Pradesh, Punjab, Maharashtra, Madhya Pradesh, Mysore, Tamil Nadu and Bihar (Palamou). PAKISTHAN, SRI LANKA, BURMA, CAMPUCHIA, THAILAND, VIETNAM.

11. *Onthophaqus quadridentatus* (Fabricius)

1798. *Copris quadridentatus* Fabricius, *Ent. Syst. Suppl.*, p. 34.

1931. *Onthophagus quadridentatus* Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 282-283.

*Material examined* : 155 ex., Betla, 11 and 12.vi.1983 ; 28 ex., Kunjrun, 16.vi.1983, all collected by S. M. Ali (Z.S.I. Coll.).

*Habitat* : Elephant dung and Gaur dung.

*Distribution* : INDIA : West Bengal, Assam, Madha Pradesh, Maharashtra, Tamil Nadu and Bihar (Palamou). SRI LANKA : Colombo.

12. *Onthophagus dama* (Fabricius)

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

1931. *Orthophagus dama*, Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 280-281.

*Material examined* : 2 ex., Betla, 11 and 12. vi. 1983 ; 5 ex., Kujrun, 16.vi.1983 ; 2 ex., Maromar, 17.vi.1983 ; 1 ex., Rud, 18.vi.1983, all collected by S. M. Ali (Z. S. I. Coll.).

*Habitat* : Elephant dung, Gaur dung.

*Distribution* : INDIA : West Bengal, Sikkim, Uttar Pradesh, Maharashtra, Mysore, Tamil Nadu and Bihar (Palamou).

SRI LANKA : Colombo, Bettaramulla.

13. *Onthophagus ramosellus* Bates

1891. *Onthophagus ramosellus* Bates, *Entom.*, p. 11.

*Material examined* : 6 ex., Barasand, 15.vi.1983 ; 4 ex., Kujrun, 16.vi.1983 ; 7 ex., Maromar, 17.vi.1983 ; 1 ex., Rud, 19.vi.1983, all collected by S. M. Ali (Z. S. I. Coll.).

*Habitat* : Elephant dung and Gaur dung.

*Distribution* : INDIA : West Bengal, Assam, Uttar Pradesh, Himachal Pradesh, Madhya Pradesh, Mysore and Bihar (Palamou). PAKISTAN, BURMA.

#### 14. *Onthophagus catta* (Fabricius)

1787. *Scarabaeus catta* Fabricius, *Mant. Ins.*, 1 : 12.

1787. *Scarabaeus gazella* Fabricius, *Mant. Ins.*, 2 : 377.

1931. *Onthophagus catta* Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 230-231.

*Material examined* : 16 ex., Betla, 10-13.vi.1983 ; 7 ex., Kujrun, 16.vi.1983, all collected by *S. M. Ali* (Z. S. I. Coll.).

*Habitat* : Elephant dung and Gaur dung.

*Distribution* : INDIA : Himachal Pradesh, Maharashtra, Madhya Pradesh, Tamil Nadu and Bihar (Palamou). PAKISTAN, ARABIA, AFRICA, MADAGASCAR.

#### 15. *Onthophagus furcillifer* Bates

1891. *Onthophagus furcillifer* Bates, *Entom.*, 24, Suppl. p. II.

*Material examined* : 30 ex., Maromar, 17.vi.1983, *S. M. Ali* (Z. S. I. Coll.).

*Habitat* : Elephant dung.

*Distribution* : INDIA : Assam, Uttar Pradesh, Himachal Pradesh, Madhya Pradesh, Kashmir and Bihar (Palamou).

#### 16. *Onthophagus ramosus* (Wiedemann)

1823. *Copris ramosus* Wiedemann, *Zool. mag.*, 2, 1 : 13.

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

*Material examined* : 1 ex., Kujrun, 16.vi.1983 ; 5 ex., Maromar, 17.vi.1983, all collected by *S. M. Ali* (Z. S. I. Coll.).

*Habitat* : Elephant dung.

*Distribution* : INDIA : Madhya Pradesh, Uttar Pradesh, Himachal Pradesh, Punjab, Kashmir, Maharashtra, Mysore, Tamil Nadu and Bihar (Palamou). SHYAM.

### 17. *Onthophagus sagittarius* (Fabricius)

1775. *Scarabaeus sagittarius* Fabricius, *Syst. Ent.*, p. 24.

1931. *Onthophagus sagittarius*, Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 304-306, pl. XII, figs. 4 & 5.

*Material examined* : 1 ex., Kujrun, 16.vi.1983, *S. M. Ali* (Z. S. I. Coll.).

*Habitat* : Gaur dung.

*Distribution* : INDIA : West Bengal, Assam, Uttar Pradesh and Bihar (Palamou). BURMA, MALAYA PENINSULA, JAVA, SOUTH CHINA.

### 18. *Onthophagus spinifex* (Fabricius)

1781. *Scarabaeus spinifex* Fabricius, *Spec. Ins.*, 1 : 29.

1931. *Onthophagus spinifex* Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 200-201, fig. 3. a, b, c.

*Material examined* : 1 ex., Barasand, 15.vi.1983 ; 2 ex., Kujrun, 16.vi.1983 ; 2 ex., Maromar, 17.vi.1983, all collected by *S. M. Ali* (Z. S. I. Coll.).

*Habitat* : Cow dung, Elephant dung and Gaur dung.

*Distribution* : INDIA : West Bengal, Maharashtra, Tamil Nadu and Bihar (Palamou). SRI LANKA.

### 19. *Onthophagus ensifer* Boucamont

1941. *Onthophagus ensifer* Boucamont, *Ann. Mus. Civ. Stor. Nat. Genova*, 46 : 220.

*Material examined* : 7 ex., Maromar, 17.vi.1983, *S. M. Ali* (Z. S. I. Coll.).

*Habitat* : Elephant dung.

*Distribution* : INDIA : Tamil Nadu, Kerala and Bihar (Palamou).

### 20. *Onthophagus centricornis* (Fabricius)

1798. *Copris centricornis* Fabricius, *Ent. Syst. Suppl.*, p. 33.

1931. *Onthophagus centricornis* Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 343-344.

*Material examined* : 2 ex., Betla, 12.vi.1983 ; 1 ex., Kujrun, 16.vi.1983, all collected by *S. M. Ali* (Z. S. I. Coll.).

*Habitat* : Elephant dung.

*Distribution* : INDIA : Madhya Pradesh, Maharashtra, Tamil Nadu and Bihar (Palamou). SRI LANKA.



21. *Onthophagus cervus* (Fabricius)

1798. *Copris cervus* Fabricius, *Ent. Syst. Suppl.*, p. 31.

1931. *Onthophagus cervus* Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 348-350.

*Material examined* : 6 ex., Betla, 12.vi.1983 ; 9 ex., Kujrun, 16.vi.1983 ; 1 ex., Maromar, 17.vi.1983, all collected by S. M. Ali (Z. S. I. Coll.).

*Habitat* : Elephant dung and Gaur dung.

*Distribution* : INDIA : West Bengal, Uttar Pradesh, Madhya Pradesh, Maharashtra, Tamil Nadu, Bihar (Palamou) Andaman, SRI LANKA.

22. *Onthophagus palamuui* sp. nov.

Black, moderately shining, the antennal club yellowish, upper surface covered with short and lower surface and pygidium covered with long reddish brown hairs. Head little produced in front, clypeal margin rounded, moderately strongly reflexed, clypeal disc transversely rugosely punctured, clypeofrontal carina feebly rounded, moderately prominent, vertex with a conical projection in the middle.

Pronotum strongly, rugosely punctured, front angle moderately strongly produced, lateral margin almost straight in front, sinuate behind, margined at sides and at base. Pronotum little sloping in front of hind angle.

Elytra covered with broad but shallow striae, striae sparsely punctured, interval microscopically sculptured, and covered with small tubercles.

Pygidium margined at base and moderately strongly covered with setigerous punctures.

*Length* : 13-14.5 mm. *Breadth* : 6-7 mm. ;

♂. Clypeus almost smooth in the middle, behind clypeal margin and ocular lobe covered with moderately strong punctures, clypeofrontal carina vertex absent with broad triangular plate narrowing towards apex, last abdominal sternite emarginate in the middle.

♀. Clypeus strongly punctured, vertex with small conical projection, clypeofrontal carina present. Last abdominal sternite with equal breadth throughout.

The species resembles *O. aencseens* (Wied.) but can be easily separated by cephalic armature and pronotal front angles moderately

produced. Holotype : ♂, Betla, 11.vi.1983 (Z. S. I. Reg. No. 10126/H<sub>4</sub>A) and paratype ♀, Betla, 11.vi.1983 (Z. S. I. Reg. No. 10127/H<sub>4</sub>A) all collected by *S. M. Ali*.

## 6. Genus *Oniticellus* Servelle

### 23. *Oniticellus pallipes* Fabricius

1781. *Scarabaeus pallipes* Fabricius, *Spec. Ins.*, 1 : 33.

1931. *Oniticellus pallipes*, Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 375-377.

*Material examined* : 5 ex., Kujrun, 16.vi.1983, *S. M. Ali* (Z. S. I. Coll.).

*Habitat* : Cow dung and Gaur dung.

*Distribution* : INDIA : West Bengal, Uttar Pradesh, Kashmir, Maharashtra, Tamil Nadu and Bihar (Palamou). BANGLADESH.

### 24. *Oniticellus spinipes* Roth

1851. *Oniticellus spinipes* Roth, *Arch. f. Nat.*, 7 : 128.

*Material examined* : 21 ex., Betla, 12 & 13.vi.1983 ; 1 ex., Barasand, 15.vi.1983 ; 3 ex., Kujrun, 16.vi.1983 ; 4 ex., Maroma, 17.vi.1983, all collected by *S. M. Ali* (Z.S.I. Coll.)

*Habitat* : Cow dung, Elephant dung.

*Distribution* : INDIA : Uttar Pradesh, Madhya Pradesh, Maharashtra, Tamil Nadu and Bihar (Palamou). AFRICA, ABYSSINIA, UGANDA, RHODESIA, TRANSVAL.

### 25. *Oniticellus cinctus* (Fabricius)

1775. *Scarabaeus cinctus* Fabricius, *Syst. Ent.*, p. 30.

1931. *Oniticellus cinctus* Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 379-380.

*Material examined* : 1 ex., Kujrun, 15.vi.1983 ; 1 ex., Marwar, 17.vi.1983, all collected by *S. M. Ali* (Z.S.I. Coll.).

*Habitat* : Elephant dung and Gaur dung.

*Distribution* : INDIA : West Bengal, Assam, Uttar Pradesh, Madhya Pradesh, Mysore, Tamil Nadu and Bihar (Palamou). BANGLADESH, BURMA, MALAYA PENINSULA, SHYAM, SOUTH CHINA.

7. Genus *Drepanocerus* Kirby26. *Drepanocerus setosus* (Wiedemann)

1823. *Copris setosa* Wiedemann, *Zool. Mag.*, 2 (1) : 19.

1931. *Drepanocerus setosus* Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 381-382.

*Material examined* : 15 ex., Betla, 12 & 13.vi.1983 ; 12 ex., Kujrun, 16.vi.1983 ; 6 ex., Maromar, 17.vi.1983, all collected by S. M. Ali (Z.S.I. Coll.).

*Habitat* : Cow dung, Elephant dung and Gaur dung.

*Distribution* : INDIA : Uttar Pradesh, Madhya Pradesh, Tamil Nadu and Bihar (palamou). SRI LANKA.

8. Genus *Onitis* Fabricius27. *Onitis subopacus* Arrow

1875. *Onitis philemon* Lansberge, *Ann. Soc. ent. Belg.* p. 133.

1931. *Onitis subopacus* Arrow, *Fauna Brit. India* (Coleoptera : Lamellicornia), 3 : 395-396.

*Material examined* : 1 ex., Betla, 11 & 13.vi.1983, S. M. Ali (Z.S.I. Coll.).

*Distribution* : INDIA : West Bengal, Assam, Uttar Pradesh, Kashmir, Madhya Pradesh, Tamil Nadu and Bihar (palamou). SRI LANKA, PAKISTAN, BURMA, SIAM, TENASSERIM, MALAYA PENINSULA.

## SUMMARY

The present paper deals with 27 species under 8 genera of subfamily Scarabaeinae from Palamou National Park. *Onthophagus palamoui* sp. nov. is described.

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## REFERENCES

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