

Distributional Notes and New Records for the Dung Beetles (Coleoptera: Scarabaeidae: Scarabaeinae) of Pakistan

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Abstract.- The composition of the scarab beetle fauna of Pakistan is virtually unknown and what is known is largely based on older taxonomic works and historic records. Recent sampling in Pakistan has revealed the presence of several species of Scarabaeinae previously unknown, and we include distributional and temporal data for ten species and two subspecies. The following species are believed to be new country records for Pakistan: *Copris fricator* (Fabricius 1787), *Gymnopleurus cyaneus* (Fabricius 1798), *Paragymnopleurus sinuatus* ssp. *assamensis* (Waterhouse 1890), *Garreta dejeanii* (Laporte 1840), *Garreta mundus* (Wiedemann 1819), *Onitis excavatus* Arrow 1931, *O. lama* Lansberge 1875, *O. punctatosriatus* Janssens 1937, *O. singhalensis* Lansberge, *O. virens* Lansberge 1875, *Sisyphus longipes* (Olivier 1789) and *Sisyphus crispatus* ssp. *hirtus* Wiedemann 1823.

Key Words: Scarabaeidae, Scarabaeinae, dung beetles.

INTRODUCTION

The Scarabaeidae fauna in Pakistan is poorly known. The first, perhaps only, serious attempt at cataloguing and describing Scarabaeidae beetles for this part of the world was Gilbert Arrow's three volumes on Lamellicornia in the series *The Fauna of British India* (Arrow, 1931), but this work was preliminary and is now outdated. Since then there have been five catalogues that cover the region, the first two being part of the last and most recent treaties the *Catalogue of Palaearctic Coleoptera* (Löbl and Smetana, 2006), in which (I.c., 2006:8) it is stated "The Palaearctic Region, as it is defined for the purpose of this Catalogue, includes some areas that are usually considered to the Afrotropical, Oriental, and Pacific Regions respectively, i.e. the south of the Arabian Peninsula and Suqutra, all of Pakistan. The Himalayan part of India including Arunachal Pradesh, Bhutan, and Nepal, the south of China, and the Pacific Island of Japan." There are also series of non-coprohagous scarab beetles publications from Pakistan (Abdullah and Roohi, 1968, 1969; Keith, 2003, 2004, 2005a,b, 2006, 2007a,b,c, 2010a,b; Keith and Sabatinelli, 2010; Keith and Saltin, 2012; Ratcliff and Ahmed, 2010). Siddiqui and

Kamaluddin (2011) provided the first inventory for the distribution of *Onthophagus* Latreille, 1802 of Pakistan including some new records of Pakistan. However, some inventory of new species, revisional work and distributional notes on Scarabaeinae from Iran (Kabakov, 2006; Ziani, 2006; Kabakov, 2008; Mowlavi *et al.*, 2008; Ziani and Gharakhloo, 2010) are published; but there have never been a contribution dedicated exclusively to elucidating the biodiversity of the Scarabaeinae of Pakistan. To our knowledge, there is no comprehensive species list of Scarabaeidae for the country. The Catalogue of Palaearctic Coleoptera (Löbl and Smetana, 2006) lists Pakistan for some of the species, but it is again not complete for listing the taxa occurring in Pakistan. We provide here an annotated list of scarabs collected in all possible localities of Pakistan with the hope of adding to the faunal composition of scarabs occurring in Pakistan. Some of these species are recorded from the country for the first time.

MATERIALS AND METHODS

The specimens were collected from different areas of Pakistan by hand picking and through light traps. All these specimens were identified through pertinent literature and respected experts including; Dr. Darren J. Mann, Dr. Stefano Ziani, Dr. Bruce Gill, Dr. Mashahiro Kon, Dr. Teruo Ochi, Dr. Fernando Vaz-De- Mello and Dr. Enrico Barbero.

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Some species are deposited in the private collection of Fernando Vaz-De-Mello, Brazil. Majority of specimens is deposited in the Natural History Museum University of Karachi, Karachi, Pakistan (NHMUK) and in the first author's collection (HSPC).

Systematic List of Dung Beetles

Family: Scarabaeidae
Subfamily: Scarabaeinae

Tribe Coprini Leach, 1851
Genus *Catharsius* Hope, 1837

1. *Catharsius molossus* (Linnaeus, 1758)

Material examined

Sindh Province: 4♂, 8♀ Tandojam (25° 26' 0'' N, 68° 32' 0'' E 23 m 75 ft elevation), 2♂, 1♀ Hyderabad district 8. I. 2009, 4♀ Chilhar 21.VI.2009. s: 2♂, 1♀ Fateh jung (33 ° 33' 57'' N, 72° 38' 57'' 494 m elevation) 13.VIII.2009, 2♂, 1♀ Kallar kahar (32°47'N 72°42'E 1500 ft elevation), 1♂ Chakwal 5.IX.2007, 12.VIII.2009, 2♂, 1♀ Fatehpur (29° 40' 4" North, 72° 8' 55" East, 381 m elevation) 13.IX.2009 cattle's dung. *Khyber Pakhtunkhwa Province*: 5♂, 6♀ Swat (35° 22' 42" North, 72° 10' 47" East , 649 m elevation) 12.VI.2005, 9.VII.2005, 2♂, 1♀ Dir (35° 12' 21" N, 71° 52' 32") 20.VII.2007, 1♂, 3♀ Swabi (34° 7' 12" North, 72° 28' 20" East, 352 m elevation), 5♂, 1♀ Mardan District 12.VIII.2007, 2♂ Kanju (34° 47' 60 N 72° 19' 60 E, 923 m elevation) 20.VIII.2008, 1♂, 4♀ Qabal Swat District (34° 55' 0 N 72° 10' 30 E, 1563 m elevation) 15.VII.2010. *Azad Kashmir*: 2♂, 1♀ Kashmir (34.22°N 73.28°E, 21.V.2009, 2♀ Palandri, (33° 43' 0" North, 73° 42' 0" East) 22.VI.2009, 2♂, 1♀ Rawla kot 10.VII.2010, 4♂ Poonch District (33°51'N 73°45'E, 1670 meters) 15.V.2009. *Gilgit-Baltistan*: 2♂, 3♀ Chikar, (36° 23' 0" North, 75° 47' 0" East) 5.IX.2007. *FATA*: 8♂ Waziristan (33° 0' 0 N, 70° 0' 0 E, 995 m elevation) 8.VII.2006, 12.VIII.2007, 13.VII.2010.

Remarks

The species was recorded from Pakistan by Hashmi and Tashfeen (1992). This species was

abundant in cattle dung and at light at Sindh Province.

Distribution

Ethiopian and Oriental (Löbl *et al.*, 2006).

2. *Catharsius pithecius* (Fabricius, 1775: 21)

Material examined

Sindh Province: 1♂, 3♀ Tandojam 8.I.2009, Tharparkar Chilhar (N25° 54' 47.3972"N, 69° 51' 35.0662") 19.VI.2006, 21.V.2009, 2♂ Karachi Malir (24°52'43"N 67°11'18"E) 19.III.2006. *Punjab Province*: 3♂, 1♀ Kallar kahar 5.IX.2007. *Khyber Pakhtunkhwa Province*: 2♂, 1♀ Dera Ismail Khan 18. VI.2009, Rangpur (32° 4' 0" N, 71° 2' 0"), 1♂, 1♀ Kanju 28.VII.2007, 18.V.2008. *Azad Kashmir*: 1♂, 2♀ Palandri 10.VIII.2010.

Remarks

This species was abundant in cattle in cattle dung at Sindh Province.

Distribution

Oriental (Löbl *et al.*, 2006).

3. *Catharsius platypus* Sharp 1875: 42

Material examined

Sindh Province: Tharparkar, 2♂, 1♀ Chilhar 19.VIII.2007 in cattle dung at open pasture. *Punjab Province*: 1♂, 3♀ Rahim yar khan (28°25'0"N, 70°18'0"E, 150 to 200 m elevation) 18. VIII.2010. *Khyber Pakhtunkhwa Province*: 4♂ Dir 20.VII.2005. *Balochistan Province*: 1♂, 1♀ Tomagh (30° 11' 60 N 68° 10' 0 E, average elevation of 1690 m) 27.V.2007. *Azad Kashmir*: 2♂, 5♀ Rawlakot 15.V.2009.

Remarks

The species was recorded from Pakistan by Arrow (1931). This species was abundant in cattle dung and at light at Azad Kashmir.

Distribution

Oriental (Löbl *et al.*, 2006)

Genus *Metacatharsius* Paulian, 19391. *Metacatharsius inermis* (Laporte 1840)*Material examined*

Sindh Province: 2♂, 1♀ Malir 5.V.2006, 1♂ Tharparkar (24° 10' to 25°45' N, 69° 04' to 71°06'E) 8.X.2006, 11.IX.2007, . ♂, ♀ Naukot (26°2' 40''N, 67° 7 '40''E, 14 m elevation) 23.VII.2007 light, 2♂, 1♀ Chilhar 19.VIII.2007, 21.VI.2009, 7♂, 2♀ Dhabeji (24°47'40"N 67°31'0"E) 12.III.2007, 1♂, 4♀ Tandojam 4.I.2009, Mirpur Khas (25° 32' 0'' N, 69° 0' 0''E 62 ft elevation). *Punjab Province*: 3♂, 2♀ Kalar Kahar 14.III.2007, 3.IX.2009, 2♂, 2♀ Rahim Yar Khan 22.VII.2009, Kamalia (30° 44' 0''N, 72° 79' 0'' E), 2♀ Faisalabad 27.VII.2007, 2♂, 3♀ Bhakar (30° 8' 15''N, 71° 0' 45'' E, 159 elevation) 20.V.2008, 5♂, 1♀ Dera Ghazi Khan (30° 3' 22''N, 70° 38' 4'' E) 25.V.2009. *Khyber Pakhtunkhwa Province*: 1♂, 4♀ Kanju 18.VI.2008. *Azad Kashmir*: 2♂, 1♀ Palandri 28.VI.2009.

Remarks

Previously from Pakistan recorded by Arrow (1931). This species was abundant in cattle dung in open pasture at Sindh Province.

Distribution

Ethopian, Palaearctic and West Oriental (Arrow, 1931; Balthasar, 1963a).

Genus *Copris* Geoffroy, 1762
Subgenus *Copris* Geoffroy 1762

1. *Copris (C.) fricator* (Fabricius, 1787) (Fig. 1A)
New record*Material examined*

Azad Kashmir: 1♂, 2♀ Bagh (33° 59' 00'' N, 73° 47' 00'' E, 1500 to 2500m elevation) 24.VI.2008 and 2♂, 2♀ Rawlakot 15.V.2009 open pasture dung.

Distribution

India and Sri Lanka (Sewak, 2003), Pakistan.

2. *Copris (C.) punjabensis* Gillet, 1921*Material examined*

Azad Kashmir: 1♂ Palandri, 21.VI.2009 cattle dung of open pasture.

Remarks

Previously from Pakistan recorded by Arrow (1931)

Distribution

West Oriental (Arrow, 1931).

3. *Copris (C.) sarpedon* Harold, 1868*Material examined*

Azad Kashmir: 2♂, 1♀ Rawlakot, 24.VII.2009 cattle dung of open pasture.

Remarks

Previously from Pakistan recorded by Arrow (1931)

Distribution

Oriental (Arrow, 1931).

Genus *Paracopris* Balthasar, 19391. *Paracopris excisus* (Waterhouse, 1891)*Material examined*

Azad Kashmir: Rawlakot, 24.VI.2008, 16.VII.2011 Cattle dung in open pasture.

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

Oriental (Arrow, 1931).

Genus *Heliocopris* Hope, 18371. *Heliocopris midas* (Fabricius, 1775)*Material examined*

Sindh Province: 2♂ Chilhar 18.VIII.2007, 15.VI.2008 dung in open pasture. *Punjab Province*:

1♂, 3♀ Kalar Kahar 5.IX.2006, 27.V.2007, 12.VIII.2007, 13.IX.2007. *Balochistan Province*: 2♂, 1♀ Quetta (30° 12' 38''N, 67°1' 8'' E, 1900m elevation) 25.V.2010.

Remarks

Previously from Pakistan recorded by Hashmi and Tashfeen (1992).

Distribution

Oriental (Pokorný *et al.*, 2009).

Tribe *Gymnopleurini* Lacordaire, 1856
Genus *Garreta* Janssens, 1940

1. *Garreta dejeanii* (Laporte, 1840) (Fig. 1B)
New record

Material examined

Khyber Pakhtunkhwa Province: 1♂, 3♀ Dir 13.VII.2009 in cattle dung at open pasture

Distribution

India (Arrow, 1931), Pakistan.

2. *Garreta mundus* (Wiedemann, 1819) (Fig. 1C).
New record

Material examined

Azad Kashmir: 1♂, 5♀ 21.VI.2009 in cattle dung at open pasture

Distribution

India, S.W. China (Arrow, 1931), Pakistan.

Genus *Gymnopleurus* Illiger, 1803

1. *Gymnopleurus bombayensis* Arrow, 1931

Material examined

Khyber Pakhtunkhwa Province: 2♂, 3♀ Dadar 7.VII.2006 in cattle dung at open pasture, *Azad Kashmir*: 2♂ Rawlakot 24.VII.2009, Palandri 21.VI.2010, 2♂, 1♀ Pir Chanasi (34° 23' 20 N, 73° 32' 55 E, 1812 m elevation).

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

Oriental (Arrow, 1931).

2. *Gymnopleurus cyaneus* (Fabricius, 1798) (Fig. 1D). New record

Material examined

Sindh Province: 1♂, 3♀ Karachi Bhains Colony 24.IV.2006 in cattle dung at open pasture.

Azad Kashmir: 1♂, 1♀ Palandri 21.VI.2009.

Remarks

Previously from Pakistan recorded by Hashmi and Tashfeen (1992).

Distribution

India, Bengal, Sri Lanka and Nepal (Arrow, 1931), Pakistan.

3. *Gymnopleurus flagellatus hornei* Waterhouse, 1890

Material examined

Khyber Pakhtunkhwa Province: 1♂, 3♀ Bajor agency (34° 9' 31" N, 71° 52' 34" E) 26.VIII.2009 in cattle dung at open pasture. *Azad Kashmir*: 3♂, 2♀ Palandri 21.VI.2010.

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

West Palaearctic and West Oriental (Arrow, 1931; Hashmi and Tashfeen, 1992; Bezděk, 2006a)

4. *Gymnopleurus miliaris* (Fabricius, 1875)

Material examined

Khyber Pakhtunkhwa Province: 2♂, 1♀ Dadar 7.VII.2006 in cattle dung at open pasture, 1♂, 1♀ Dera Ismail Khan 24.VII.2009, 12.VI.2010. *Azad Kashmir*: 1♂, 3♀ Pir Chanasi 24.VIII.2009, 24.VIII. 2010. *Sindh Province*: 2♂, 1♀ Tharparkar 25.VI.2007 at light.

Remarks

Gymnopleurus miliaris is a type species of

the subgenus *Metagymnopleurus* Kabakov, 2006. Previously from Pakistan recorded by Arrow (1931).

Distribution

West Palaearctic and Oriental (Arrow, 1931, Hashmi and Tashfeen, 1992; Sewak, 2003; Bezděk, 2006).

Genus *Paragymnopleurus* Shipp, 1897

1. *Paragymnopleurus sinuatus assamensis* (Waterhouse, 1890) New record

Material examined

Azad Kashmir: Pir Chanasi 23.VIII.2009 in cattle dung at open pasture.

Remarks

Previously from Pakistan Arrow (1931) recorded *Gymnopleurus sinuatus*, but subspecies *assamensis* has not been recorded from Pakistan.

Distribution

Pakistan, India, Nepal, New Caledonia, and Sudan (Arrow, 1931).

Tribe Oniticellini Kolbe, 1905
Genus *Euoniticellus* Janssens 1953

1. *Euoniticellus pallens* (Olivier, 1789)

Material examined

Sindh Province: 2♂, 2♀ Malir field 22.VI.2006 in cattle dung at open pasture, 1♂, 1♀ Bhains Colony 24.IV.2006, 1♂, 4♀ Khokhrapar 3.XI.2006. *Punjab Province*: Kamalia 17.VI.2006 at light.

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

Ethiopian, Oriental, S and W Palaearctic (Kabakov, 2006; Bezděk and Krell, 2006).

Genus *Tiniocellus* Péringuey, 1902

1. *Tiniocellous imbellis* (Bates, 1891)

Material examined

Punjab Province: 1♂, 3♀ Kalar Kahar 29.VII.2009, 3.IX.2009 in cattle dung at open pasture.

Remarks

Previously from Pakistan recorded by Branco (2010).

Distribution

Oriental (Branco, 2010).

Tribe Onitini Laporte, 1840
Genus *Cheironitis* Lansberge, 1875

1. *Cheironitis arrowi* Janssens, 1937

Material examined

Sindh Province: 1♂, 3♀ Gulzar-e-Hijri 26.IV.2006 in cattle dung at open pasture.

Remarks

Previously from Pakistan recorded by Balthasar (1963b).

Distribution

South and West palaearctic, Oriental (Balthasar 1963b).

Genus *Onitis* Fabricius, 1798

1. *Onitis crassus* Sharp 1875

Material examined

Punjab Province: 3♀ Murree, 22.VI.2008 in cattle dung at open pasture.

Remarks

Previously from Pakistan recorded by Arrow (1931)

Distribution

Oriental (Arrow, 1931; Balthasar, 1963b)

2. *Onitis excavatus* Arrow, 1931 (Fig. 1E)
New record

Material examined

Khyber Pakhtunkhwa Province: 3♂, 3♀ Abbottabad, (34°9'21"N 73°13'10"E) 20.VI.2008 in cattle dung at open pasture, 2♂ Dera Ismail Khan 18.VI.2010, Marghazar 15.V.2008 light, *Azad Kashmir*: Rawlakot 15.V.2009.

Distribution

India, China, Mynamar, Tenasserim, Vietnam (Arrow, 1931; Balthasar, 1963a).

3. *Onitis falcatus* (Wulfen, 1786)

Material examined

Sindh Province: 2♂, 1♀ Tharparkar 7.IX.2009 in cattle dung at light. *Khyber Pakhtunkhwa Province*: 1♂, 1♀ Dera Ismail Khan 18.VI.2010 in cattle dung at light. *Azad Kashmir*: 2♂, 1♀ Rawlakot 15.V.2009.

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

Oriental, Palaearctic (Arrow, 1931; Hashmi and Tashfeen, 1992).

4. *Onitis humerosus* (Pallas, 1875)

Material examined

Khyber Pakhtunkhwa Province: 2♂, 5♀ Bajor agency 15.V.2008.

Remarks

Previously from Pakistan recorded by Balthasar (1963b)

Distribution

Ethiopian, Neotropical, Oriental, Palaearctic (Balthasar, 1963b; Hashmi and Tashfeen, 1992; Bezděk and Krell, 2006).

5. *Onitis lama* Lansberge, 1875 (Fig. 1F)
New record

Material examined

Khyber Pakhtunkhwa Province: 4♂, 1♀ Kanju 20.V.2008 in cattle dung at open pasture.

Distribution

India (Sewak 2003), Pakistan.

6. *Onitis philemon* Fabricius, 1801

Material examined

Punjab Province: 3♀ Kamalia 9.VI.2005, 5.V.2008 in cattle dung at open pasture. *Azad Kashmir*: 5♂, 3♀ Rawlakot 15.V.2009.

Distribution

East Oriental, Northeast Ethiopian, South and West Palaearctic (Arrow, 1931; Balthasar, 1963b).

7. *Onitis punctatostriatus* Janssens, 1937 (Fig. 1G).
New record

Material examined

Sindh Province: 1♂, 3♀ Malir 15.V.2007 in cattle dung at open pasture. *Khyber Pakhtunkhwa Province*: 2♂, 1♀ Dera Ismail Khan 18.VI.2010, Abbottabad 20.VI.2008.

Distribution

Sikkim and Darjeeling (Bezděk and Krell 2006), Pakistan.

8. *Onitis singhalensis* Lansberge, 1875 (Fig. 1H)
New record

Material examined

Khyber Pakhtunkhwa Province: 2♂, 1♀ Bajor agency 15.VI.2008 in cattle dung at open pasture. *Azad Kashmir*: 3♂, 3♀ Rawlakot 15.V.2009.

Distribution

India (Balthasar 1963a), Pakistan.

9. *Onitis subopacus* Arrow, 1931

Material examined

Sindh Province: Malir 15.V.2004, 23.VI.2006

in cattle dung at open pasture, Chilhar 21.Vi.2009. *Punjab Province*: 1♂, 3♀ Kamalia 5.V.2008. *Khyber Pakhtunkhwa Province*: Marghazar 15.V.2008, Kanju 20.V.2008, 3♀ Abbottabad, 24.VI.2006, 20.V.2008 at light. *Azad Kashmir*: 2♂, 8♀ Palandri 17.III.2008, 1♂, 2♀ Rawlakot 15.V.2009. Gilgit-Baltistan: 2♂ Naltar 18.IX.2006.

Remarks

Previously from Pakistan recorded by Balthasar (1963b)

Distribution

Austro-Oriental, Oriental, South and West Palaearctic (Balthasar, 1963b; Kabakov and Napolov, 1999).

10. *Onitis virens* Lansberge, 1875 (Fig. 1I) New record

Material examined

Sindh Province: 1♂, 3♀ Tharparkar 20.VI.2008 at light. *Khyber Pakhtunkhwa Province*: 2♂, 1♀ Kanju 21.V.2009 in dung at open pasture.

Distribution

India, Myanmar, N. Vietnam, Laos, S. China, Bangladesh (Balthasar, 1963b; Kabakov and Napolov, 1999), Pakistan.

Tribe *Onthophagini* Burmeister, 1846

Genus *Onthophagus* Latreille, 1802

Subgenus *Colobonthophagus* Balthasar, 1963

1. *Onthophagus (Colobonthophagus) hindu* Arrow, 1931

Material examined

Sindh Province: Malir 22.VI.2006 in open pasture. *Punjab Province*: Murree 20.VII. 2009. *Khyber Pakhtunkhwa Province*: 1♂, 3♀ Paras (31° 18' 12" N, 74° 23' 52" E) 24.VII.2009, 6♂, 3♀ Dera Ismail Khan 20.VI.2010, Kanju 22.VI.2008, 2♂, 1♀ Punjkot, 2.IX.2009, 1♂ Malakand (34° 38' 26" North, 72° 4' 29" East, 893 m elevation), 1♂, 2♀ Islamabad 11.V.2008 at light. *Azad Kashmir*: 2♂, 4♀ Palandri 21.V.2009.

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

West palaeartic, Oriental (Arrow, 1931; Löbl *et al.*, 2006b).

2. *Onthophagus (Colobonthophagus) paliceps* Arrow, 1931

Material examined

Punjab Province: 1♂, 5♀ Kalar Kahar 3.IX.2007, Murree 23.VI.2008 in open pasture. *Khyber Pakhtunkhwa Province*: 3♀ Dera Ismail Khan 20.VI.2010. *Islamabad*: 3♀ 2.VIII.2008 at light, *Azad Kashmir*: 2♂, 1♀ Palandri 23.VI.2008, 21.V.2009.

Remarks

Previously from Pakistan recorded by Siddiqui and Kamaluddin (2011).

Distribution

Oriental (Balthasar, 1963b; Arrow, 1931; Siddiqui and Kamaluddin, 2011).

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

Material examined

Punjab Province: Kalar Kahar 2♂, 5♀ 14.IX.2007 in cattle dung at light, *Punjab Province*: 4♀ Kanju 23.IX.2009 in open pasture, 2♂, 1♀ Lahore (31° 32' 59" North, 74° 20' 37" East), *Azad Kashmir*: 1♂, 3♀ Bagh 24.V.2008.

Remarks

Previously from Pakistan recorded by Siddiqui and Kamaluddin (2011)

Distribution

Oriental (Arrow, 1931; Siddiqui and Kamaluddin, 2011).

Subgenus *Digitonthophagus* Balthasar, 1959b

1. *Onthophagus (Digitonthophagus) bonasus*
(Fabricius, 1775)

Material examined

Sindh Province: 1♂, 3♀ Islamkot (24° 42' 0" N, 70° 11' 0" E) 5.VI.2006 in cattle dung at light, 1♂, 2♀ Mirpur Khas 28.X.2006, Tharparkar Mithi (24° 20' 0" North, 69° 1' 0" East), 1♂ Naukot 12.VIII.2009, 3♀ Gulzar-e-Hijri, 5.Vi.2007 in open pasture, Bhains Colony 26.I.2007, 1♂, 1♀ Malir, 22.VI.2006, 2♂, 1♀ Nausheroferoz (26° 50' 0" N, 68° 7' 0" E) 18.VIII.2007, 1♂, 2♀ Nawab Shah district 3.V.2007. *Punjab Province*: 1♂, 3♀ Chakwal, (32° 56' 0" N, 72° 52' 0" E), 1♂, 8♀ Jehlum 27.VI.2006, Kalar Kahar 3.IX.2007, 2♂ Kamalia, 5.V.2008, 5♂, 3♀ Chilhar 19.VIII.2007. *Khyber Pakhtunkhwa Province*: 2♂, 1♀ Swat 13.V.2008, 1♂, 1♀ Kanju 15.VIII. 2009, Swabi, 12.VII.2006, 2♂, 1♀ Peshawar, (34° 0' 28" North, 71° 34' 24" East) 20.X.2007, 5♂, 4♀ Rangpur 18.V.2009. *Azad Kashmir*: 1♂, 3♀ Muzaffarabad (34° 22' 0" North, 73° 28' 0" East) 22.VII.2007, 7♂, 3♀ Pir Chanasi 5.IX.2007, 1♂, 1♀ Palandri 20.VI.2009, 2♂, 3♀ Chikar 5.III.2007.

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

Oriental, West palaeartic (Arrow, 1931; Sewak, 2003).

2. *Onthophagus (Digitonthophagus) gazella*
(Fabricius, 1787)

Material examined

Sindh Province: 7♂, 3♀ Islamkot 15.VI.2006 in cattle at light, 1♂, 3♀ Mirpur Khas 28.X.2006, 3♀ Tharparkar Naukot 12.VIII.2009, 1♂ Mithi 18.VIII.2007, 3♂, 3♀ Gulzar-e-Hijri, 5.Vi.2007 open pasture, 4♂, 9♀ Bhains Colony 26.I.2007, 2♂, 1♀ Malir, 22.VI.2006, 1♂ Chilhar 19.VIII.2007, 2♂ Naushero Feroz 3.V.2007, 1♂, 1♀ Kamalia 5.V.2008. *Khyber Pakhtunkhwa Province*: Swat 19.VIII.2006, 2♀ Kanju 15.VIII. 2009, 1♂, 3♀

Swabi 12.VII.2006, 1♂, 4♀ Peshawar 20.X.2007, 1♂, 2♀ Rangpur 18.V.2009. *Punjab Province*: 2♂, 3♀ Chakwal 22.VII.2006, 1♂, 3♀ Kalar Kahar 3.IX.2007. *Azad Kashmir*: 2♂, 1♀ Muzaffarabad 27.VII.2006, 1♂, 3♀ Pir Chanasi, 5.IX.2007, 2♂, 1♀ Palandri 20.VI.2009, 2♀ Chikar 5.III.2007.

Remarks

Previously from Pakistan recorded by Siddiqui and Kamaluddin (2011)

Distribution

Ethiopian, Oriental, South Palaeartic (Balthasar 1963b) and Pakistan (Siddiqui and Kamaluddin 2011)

Subgenus *Colobontophagus* Balthasar, 1963

1. *Onthophagus (O.) quadridentatus* (Fabricius, 1798)

Material examined

Sindh Province. 2♂, 12♀ Tharparkar 29.VI.2007 cattle dung at light, 5♂, 3♀ Gulzar-e-Hijri 22.VI.2006. *Khyber Pakhtunkhwa Province*: 2♂, 3♀ Kanju 29.IX.2010 open pasture.

Remarks

Previously from Pakistan recorded by Siddiqui and Kamaluddin (2011).

Distribution

Oriental (Arrow, 1931) and Pakistan (Siddiqui and Kamaluddin, 2011).

Subgenus *Eremonthophagus* Zunino 1979

1. *Onthophagus (E.) semicinctus* d'Orbigny 1897

Material examined

Punjab Province: 1♂, 4♀ Kalar Kahar 3.IX.2007 in dung at light.

Distribution

West palaeartic, Oriental (Arrow, 1931; Balthasar, 1963b; Löbl *et al.*, 2006b).

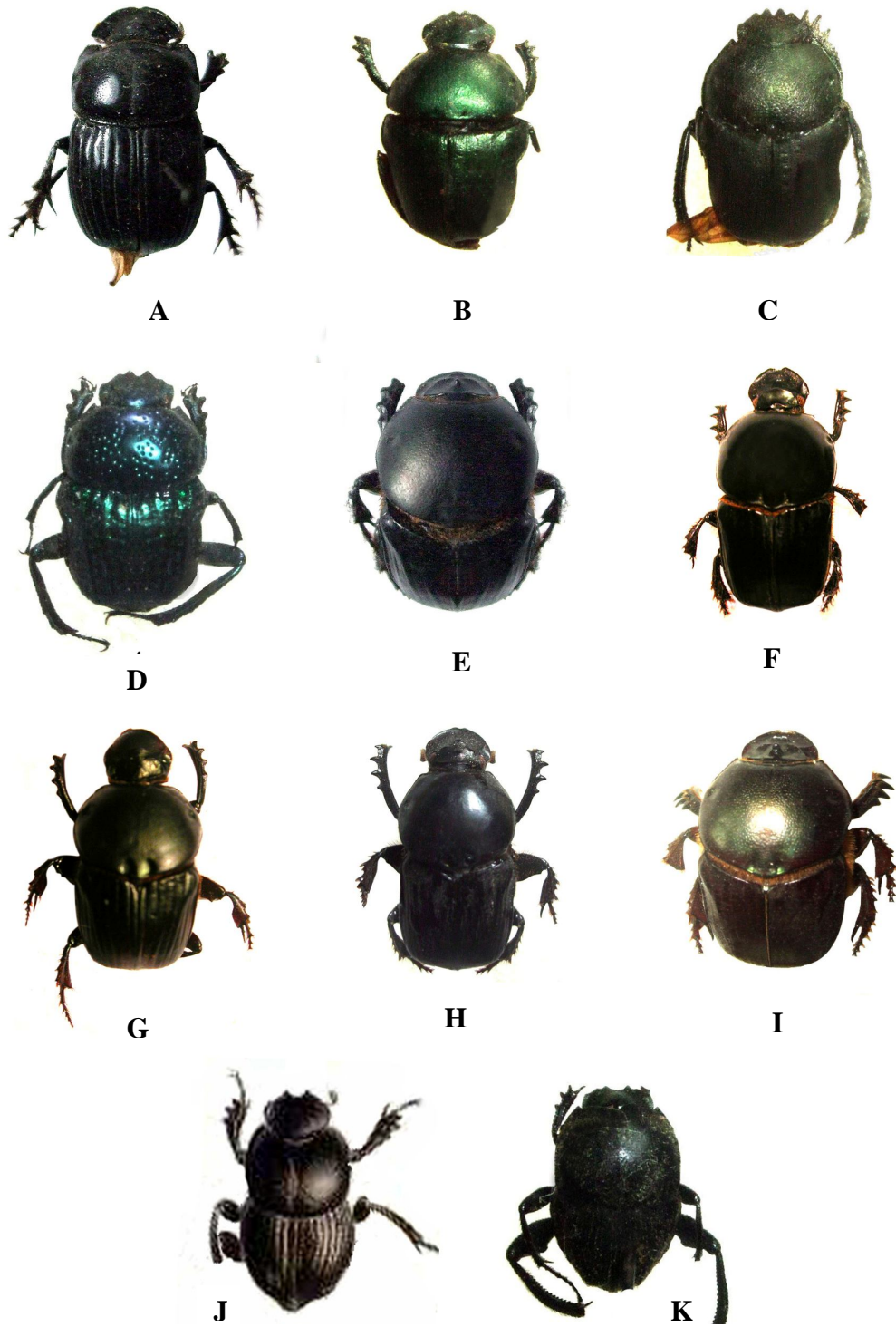


Fig. 1. Dung beetles; A, *Copris fricator*; B, *Garreta dejeanii*; C, *Garreta mundus*; D, *Gymnopleurus cyaneus*; E, *Onitis excavatus*; F, *Onitis lama*; G, *Onitis punctatostriatus*; H, *Onitis singhalensis*; I, *Onitis virens*; J, *Sisyphus crispatus hirtus*; K, *Sisyphus longipes*.

Subgenus *Furconthophagus* Zunino 19791. *Onthophagus (F.) variegatus* (Fabricius, 1798)*Material examined*

Sindh Province: 2♂, 1♀ Tharparkar 29.VII.2007 in dung at light.

Distribution

Ethiopian, South and Southeast Palaearctic (Arrow, 1931; Balthasar, 1963b).

2. *Onthophagus mopsus* (Fabricius, 1792)*Material examined*

Sindh Province: 2♂, 8♀ Tharparkar 5.V.2009 in cattle at light. *Punjab Province*: 5♂, 3♀ Kalar Kahar 3.IX.2007. *Khyber Pakhtunkhwa Province*: 2♂ Dadar, 18.VIII. 2008 at open pasture.

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

Oriental, West palaearctic (Arrow, 1931; Hashmi and Tashfeen, 1992) and Afghanistan (Löbl et al., 2006b)

3. *Onthophagus falsus* Gill, 1925*Material examined*

Sindh Province: 1♂, 1♀ Tharparkar Mithi 18.VII.2007 in cattle dung at light, 1♂ Chilhar 18.VIII.2007, 2♂, 1♀ Gulzar-e-Hijri 21.VI.2006, 1♂, 3♀ Malir field 22.VI.2006 at open pasture, 3♀ North Nazimabad 9.X.2006.

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

West Oriental (Arrow, 1931).

4. *Onthophagus ramosellus* Bates, 1891*Material examined*

Sindh Province: 2♂, 4♀ Tharparkar 15.V.2008, 11.IX.2007 cattle dung at light. *Punjab Province*: 1♂, 3♀ Bhakkar 15.V.2008, 1♂, 1♀ Chakwal 3.IX.2007, 2♂, 5♀ Fath-e-Pur 16.VIII.2007 at open pasture, 7♂, 2♀ Kalar Kahar 14.IX.2007, 2♂, 1♀ Punjkot 12.IX.2007, 2.IX.2009. *Khyber Pakhtunkhwa Province*: 4♀ Dera Ismail Khan 19.V.2009. *Azad Kashmir*: 2♂ Pir Chanasi 5.IX.2007, 1♂ Palandri 21.V.2009.

Remarks

Previously from Pakistan recorded by Arrow (1931)

Distribution

Austro-Oriental, Oriental, West Palaearctic (Arrow, 1931, Hashmi and Tashfeen, 1992).

Genus *Proagoderus* Lansberge, 18831. *Proagoderus amplexus* Sharp, 1875. New record*Material examined*

Khyber Pakhtunkhwa, 1♂, 2♀ Balakot 09.IX.2011.

Distribution

Indian subcontinent, S. China, Sumatra, Java and Pakistan (Arrow, 1931; Balthasar, 1963a).

Genus *Phalops* Erichson, 18481. *Phalops cyanescens* (d'Orbigny, 1897)*Material examined*

Sindh Province: 1♂, 1♀ Gulzar-e-Hijri, 26.IX.2007 in cattle dung at open pasture.

Remarks

Previously from Pakistan recorded by Arrow (1931)

Distribution

Oriental (Arrow, 1931; Sewak, 2003; Balthasar; 1963b).

Tribe Scarabaeini Latreille 1802
Genus *Scarabaeus* Linnaeus, 1758

1. *Scarabaeus andrewesi* Felsche, 1907

Material examined

Sindh Province: 2♂, 1♀ Tharparkar, 2♂, 5♀ Naukot 12.VIII.2009 in cattle dung at light, 2♀ Nangarparkar (24° 22' 0" North, 70° 45' 0" East) 15.IX.2010, 2♂ Tandojam 27.VII.2010. *Punjab Province*: 1♂ Bhakkar, 5.V.2008, 1♀ Cholistan, 17.V.2009: *Azad Kashmir*: 2♂, 3♀ Palandri 10.VIII.2010 in open pasture.

Remarks

Previously from Pakistan recorded by Arrow (1931)

Distribution

Oriental, W Oriental, West palaeartic (Arrow, 1931; Sewak, 2003; Zidek and Pokorny, 2008), Afghanistan and India (Löbl *et al.*, 2006).

2. *Scarabaeus brahminus* (Laporte, 1840)

Material examined

Sindh Province: 9♂, 3♀ Karachi 15.VIII.2009 in cattle dung at light, 2♂, 3♀ Tharparkar Naukot 12.VIII.2009, 16.VIII.2009, 6♂, 3♀ Tandojam 15.VIII.2010, 1♂ Nangarparkar 15.IX.2010. *Punjab Province*: 1♂, 3♀ Bhakkar 5.V.2008, 30.VII.2009.

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

Oriental (Arrow, 1931; Sewak, 2003; Zidek and Pokorný, 2008).

3. *Scarabaeus cristatus cristatus* Fabricius 1775

Material examined

Punjab Province: 2♂, 1♀ Bhakkar 05.V.2008 in cattle dung at light.

Remarks

Species is widely recorded from Pakistan (Arrow, 1931; Sewak, 2003; Zidek and Pokorný, 2008).

Remarks

Previously from Pakistan recorded by Arrow (1931).

Distribution

W Oriental (Arrow, 1931; Sewak, 2003; Zidek and Pokorný, 2008).

4. *Scarabaeus gangeticus* (Laporte 1840)

Material examined

Punjab Province: 1♂, 4♀ Bhakkar 05.V.2008

Remarks

Previously from Pakistan recorded by Arrow (1931)

Distribution

West Oriental (Arrow, 1931; Zidek and Pokorný, 2008).

5. *Scarabaeus sacer* Linnaeus, 1758

Material examined

Punjab Province: 2♂ Bhakkar 05.V.2008 in cattle dung at light.

Remarks

Previously from Pakistan recorded by Arrow (1931)

Distribution

Palaeartic, Ethiopian (Arrow, 1931).

6. *Sisyphus crispatus ssp. hirtus* Wiedemann, 1823 (Fig. 1J). New record

Material examined

Khyber Pakhtunkhwa: 2♂, 1♀ Dadar 20.VI.2006 in cattle dung at open pasture, Batrasi (34° 24' 40" North, 73° 19' 30" East), 1♂, 5♀ Mansehra 4.VIII.2007.

Distribution

India, Bengal, Sri Lanka (Arrow, 1931)
Pakistan.

7. *Sisyphus longipes* (Olivier, 1789) (Fig. 1K)
New record

Material examined

Azad Kashmir: 2♀ Punjkot 12.IX.2009 in
cattle dung at light. *Khyber Pakhtunkhwa Province*:
1♂, 3♀ Dera Ismail Khan. 8.VIII.2008 in open
pasture.

Distribution

India, Bengal, Sri Lanka, Myanmar (Arrow,
1931; Sewak, 2003), Pakistan.

8. *Sisyphus neglectus* Gory, 1833

Material examined

Khyber Pakhtunkhwa Province: 5♂, 3♀
Batrasi 4.VIII.2007.

Remarks

Previously from Pakistan recorded by Arrow
(1931)

Distribution

Oriental (Arrow, 1931; Bezděk, 2006b).

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