



Darkling beetles (Tenebrionidae: Coleoptera) of Dudhwa National Park, Uttar Pradesh, India

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ABSTRACT

This paper contains the report of 24 species under 17 genera and 10 tribes of 04 Sub families from Dudhwa National Park. It is interesting to note that all the species are reported for the first time from DNP and 22 species are reported for the first time from Uttar Pradesh state.

Key Words: Darkling beetles, Dudhwa National Park.

INTRODUCTION

The darkling beetles are mostly oblong or oval in form and have bead-like antennae, each with 11 segments; the eyes are notched; the mandibles are short, stout and each usually has a basal tooth; the coxae of the front legs are spherical, those of the hind legs are transverse; the tarsi of the front and middle legs each have 5 segments, while those of the hind legs have 4; and the 1st segment of each of the tarsi of the hind legs is always longer than the 2nd. The trochanter is of heteromerous type.

Sarkar and Tiwari (2006) studied the faunal diversity of Dudhwa Tiger Reserve, Uttar Pradesh and reported 47 species of mammals, 418 species of birds, 35 species of reptiles, 6 species of amphibians and 66 species of fishes. Recently Ghosh and Hegde communicated a paper on aquatic beetles of DNP. So far, no study has been made on the Tenebrionidae fauna of DNP. Hence an attempt has been made to explore the Tenebrionidae fauna of DNP based on the materials collected recently in different parts of DNP and the materials present in National Zoological Collection, Kolkata. Present study deals with 24 species under 17 genera and 10 tribes belonging to 04 sub families having all the species reported for the first time from Dudhwa National Park.

STUDY AREA

Dudhwa National Park (DNP) is located adjoining Indo-Nepal border of Lakhimpur-Kheri district, which comes under Terai ecosystem of Uttar Pradesh. DNP is of 680 sq. km. area and along with Krishnapur Wildlife sanctuary (204 sq. km.) and Katernia Ghat Wildlife sanctuary (440 sq. km) constitutes the Dudhwa Tiger Reserve. There are a number of shallow lakes or pools (Taals), there are diverse perennial sources of fresh water in the park and the Suheli and Mohana streams flow in the DNP will provide the best possible habitats for luxuriant growth of forests and diverse fauna. The most important lakes of the park include Bankey taal and Bhadi taal. This park contains natural forests of moist deciduous type and grass lands, finest quality of woodland and marshes. The wood land in the park is dominated by Sal (*Shorea robusta*) and Teak (*Tectona grandis*). DNP is divided into six ranges namely Dudhwa, Bankati, North Sonaripur, South Sonaripur, Sathiyana and Belarayan.

METHODOLOGY

The present paper is based on the field work carried out in different parts of the National park viz; Sathiyana (near Suheli river), Belarayan, Gauriphanta (near Bankati R.H), Salukapur, Chandan Chauki (on the Nepal border) (As depicted in the map of DNP) and few collections near Dudhwa Rest House and Dudhwa railway

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Fig. 1 Dudhwa National Park (DNP) with Kishanpur Wild Life Sanctuary

station at light. The material present in National Zoological Collection, Kolkata are also taken in to account. The materials collected are sorted out, set pinned, identified and classified as per Bouchard et al (2005). The identification is mainly based on the differences in the morphological characters and the structure of the genitalia. The species reported elsewhere are also included in distribution.

RESULTS

The paper contains the report of 24 species under 17 genera and 10 tribes of 04 Sub families from Dudhwa National Park. It is interesting to note that all the species were reported for the first time from DNP and 22 species were reported first time from Uttar Pradesh state. During the faunistic survey, it was observed that a large number of the species *Mesomorpha villiger* (Fig.1& 2) were of Sal

(*Shorea robusta*) tree which shows the phenomenon of congregation of darkling beetles in certain habitat.

Subfamily Lagriinae Latreille, 1825 (1820)

Tribe: Lupropini Ardoin, 1958

Luprops indicus Wiedemann 1823

Tribe: Cossyphini Latreille, 1802

Cossyphus (Cossyphus) depressus (Fabricius, 1781)

Sub Family: Pimelinae Latreille, 1802

Tribe: Tentyriini Eschscholtz, 1831

Hyperops coromandelensis Solier, 1835

Stenocida striatopunctatus Wiedemann, 1821

Subfamily: Tenebrioninae Latreille, 1802

Tribe: Ulomini Blanchard, 1845

Uloma polita (Wiedemann, 1821)

Tribe: Alphitobini Reitter, 1917
Alphitobius laevigatus (Fabricius, 1781)
Tribe: Amarygmini Gistel, 1856
Hoplobrachium asperipenne Fairmaire, 1886
Tribe: Tenebrionini Latreille, 1802
Anthracias punctipennis Gravely, 1915
Tribe: Opatrini Brulle, 1832
Caedius indicus Fairmaire, 1896
Gonocephalum abnormale Kaszab, 1952
Gonocephalum bilineatum (Walker, 1858)
Gonocephalum depressum (Fabricius, 1801)
Gonocephalum helopioide (Fairmaire, 1894)
Gonocephalum tuberculatum (Hope, 1831)
Gonocephalum vagum (Steven, 1829)
Mesomorphus rugulosus Chatanay, 1917
Mesomorphus villiger Blanch, 1853
Opatroides vicinus (Fairmaire, 1896)
Scleron ferrugineum Fabricius, 1801
Scleron reitteri Gebien 1906
Scleropatrum arenarium Fabricius, 1755

Subfamily: Stenochiinae Kirby, 1837
Tribe: Cnodalonini Gistel, 1855
Catapiestus subrufescens Pic, 1831
Derosphaerus rugosus Gravely, 1915 S-13
Tribe: Stenochiini Kirby, 1837
Strongylium aratum Fairmaire, 1896

Details of the species examined

Luprops indicus Wiedemann 1823 (Fig. 4B)

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

Material examined: 1 ex., Dudhwa Rest House (DNP), Lakhimpur Kheri 13.i.2009 G.P. Mondal colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19875/H4A.

Distribution: INDIA: Uttarakhand (Harrawala, Dehradun), West Bengal (Darjeeling, Pashok) and Uttar Pradesh (Dudhwa National Park)

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Cossyphus (Cossyphus) depressus (Fabricius, 1781) (Fig. 4C)

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

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

Material examined: 5 ex., Chandan Chauki (DNP), Lakhimpur Kheri, 27.ii.2013, V.D. Hegde Colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19876/H4A.

Distribution: INDIA: Karnataka (Shimoga), Tamil Nadu, West Bengal and Uttar Pradesh (Hardoi and Sitapur districts (Hegde, 2012), Dudhwa National Park).

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

Hyperops coromandelensis Solier, 1835 (Fig. 5B)

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

Material examined: 3 ex., Sathiyana (DNP), Lakhimpur Kheri, 1.iii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19877/H4A.

Distribution: INDIA: Uttar Pradesh (Dudhwa National Park).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Stenocida striatopunctatus Wiedemann, 1821 (Fig. 5C)

Stenocida striatopunctatus Wiedemann, *Germ. Mag. Ent.* IV, 1821, p.149- Kraatz, *Revis.* 1865, p.234.

Material examined: 6 ex., Sathiyana (DNP), Lakhimpur Kheri, 1.iii.2013, 1 ex. Dudhwa Rest House, Lakhimpur Kheri, 28.ii.2013, all V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19878/H4A.

Distribution: INDIA: Uttarakhand (Chandi Devi-Haridwar) and Uttar Pradesh (Dudhwa National Park).

Elsewhere: Indomalay.

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Uloma polita (Wiedemann, 1821)

Uloma polita Wiedemann, *Germ. Mag.* IV, 1821, p. 149.

Material collected: 1 ex., Sathiyana (DNP), Lakhimpur Kheri, 1.iii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19879/H4A.

Distribution: India: Assam (Kaziranga), Sikkim (Tadung), Uttarakhand (Uttarkashi, Barkot, Gangani), West Bengal (Darjeeling, Kalimpong, Purbong), Uttar Pradesh (Dudhwa National Park).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Hoplobrachium asperipenne Fairmaire, 1886 (Fig. 3D)

Hoplobrachium asperipenne Fairmaire, 1.C. p.74 t.2, f.9, 1886

Material examined: 1 ex., Belarayan (DNP), Lakhimpur Kheri, 28.ii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19880/H4A.

Distribution: INDIA: Jharkhand (Konbir), Uttar Pradesh (Dudhwa National Park).

Elsewhere: Madagascar.

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

***Anthracias punctipennis* Gravely, 1915 (Fig. 3B)**
Anthracias punctipennis Gravely, 1915, *Redt. Fn. Austr. Ed.*, 2: 617.

Material examined: 1 ex., Dudhwa Rest House (DNP), Lakhimpur Kheri, 28.ii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19881/H4A.

Distribution: INDIA: West Bengal (Medinipur) and Uttar Pradesh (Dudhwa National Park).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Tribe: Alphitobini Reitter, 1917

***Alphitobius laevigatus* (Fabricius, 1781)**
Alphitobius laevigatus Fabricius, 1781, *Spec. Ins.* 1: 90.

Alphitobiuslaevigatus (Fabricius), Kaszab, *Tijdschr. V. Ent. C. VII* (5): 295.

Material examined: 1 ex (under bark), Dudhwa National Park, Lakhimpur Kheri, 29.x.2007. P. Mukhopadhyay colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19882/H4A.

Distribution: INDIA: Assam, West Bengal (Calcutta), Rajasthan, and Andaman Island, Uttar Pradesh (Dudhwa National Park).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

***Caedius indicus* Fairmaire, 1896**
Caedius indicus Fairmaire, *Ann. Soc. ent. Belg.* XL, 1896, p.18.

Material examined: 3 ex., Dudhwa Rest House (DNP), Lakhimpur Kheri, 26.ii.2013, 4 ex., Chandan Chauki, (DNP), Lakhimpur Kheri 27.ii.2013 all V.D. Hegde Colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19883/H4A.

Distribution: INDIA: Uttar Pradesh (Dudhwa National Park).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

***Gonocephalum abnormale* Kaszab, 1952**
Gonocephalum abnormale Kaszab, 1952a: 634.

Material examined: 4 ex., Salukapur, (DNP), Lakhimpur Kheri, 2.ii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19884/H4A.

Distribution: INDIA: Tamil Nadu (Madura; Trichinopoly), Uttarakhand (Haridwar, Rurki) and Uttar Pradesh (Dudhwa National Park).

Elsewhere: Burma, Amherst Distr., Kawkaeik.

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

***Gonocephalum bilineatum* (Walker, 1858) (Fig. 3C)**

Opatrum bilineatum Walker, 1858: 284.
Hopatum bilineatum Walker, 1858. – Gemminger 1870: 1931.

Gonocephalum bilineatum (Walker, 1858). – Gebien 1910b: 322, 1921: 269, 1939: 446; Chatanay 1917: 238; Blair 1921: 269; Schuster 1928: 989; Reichardt 1936: 109; Kaszab 1952a: 641, 1954: 75, 1965a: 114, 1965d: 287, 1970a: 424, 1977: 257, 1979a: 260, 1979b: 65, 1980b: 171; Boddy 1965: 171; Kwon and Choi 1986: 106; Schawaller 1997a: 3; Hua Li 2002: 138; Iwan and Löbl 2008: 263.

Gonocephalum kamtschaticum Motschulsky, 1860: 139.

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

Gonocephalum kamtschaticum Motschulsky, 1860. – Reitter 1904: 146; Gebien 1910b: 323; Schuster 1928: 989; Reichardt 1936: 109; Kaszab 1952a: 682, 1965d: 287.

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

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: 2 ex., Dudhwa Rest House (DNP), Lakhimpur Kheri, 26.ii.2013; 6 ex., Salukapur (DNP) Lakhimpur Kheri, 2.iii.2013; 4 ex., Dudhwa Rest House (DNP), Lakhimpur Kheri, 3.iii.2013, all V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19885/H4A.

Distribution: INDIA: Sikkim, Andaman Islands, West Bengal (Darjeeling) Uttarakhand and Uttar Pradesh (Dudhwa National Park).

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

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

***Gonocephalum depressum* (Fabricius, 1801) (Fig. 4D)**

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; 1910b: 323, 1913: 376, 1939:



Fig. 2: Congregation of darkling beetles on *Shorea robusta* tree



A.



B.



C.



D.

Fig. 3: A. *Catapiestus subrufescenus* Pic, 1831; B. *Anthracias punctipennis* Gravely, 1915; C. *Gonocephalum bilineatum* (Walker, 1858); D. *Hoplobrachium asperipenne* Fairmaire, 1886



A.



B.



C.



D.

Fig. 4: A. *Gonocephalum tuberculatum* (Hope, 1831); B. *Luprops indicus* Wiedemann, 1823; C. *Cossyphus depressus* (Fab. 1781); D. *Gonocephalum depressum* (Fab. 1801).



A.



B.



C.



D.

Fig. 5: A. *Scleron reitteri* Gebien 1906; B. *Hyperops coromandelensis* Solier 1835; C. *Stenocida striatopunctatus* Wiedemann 1821; D. *Opatroides vicinus* (Fairm. 1896)

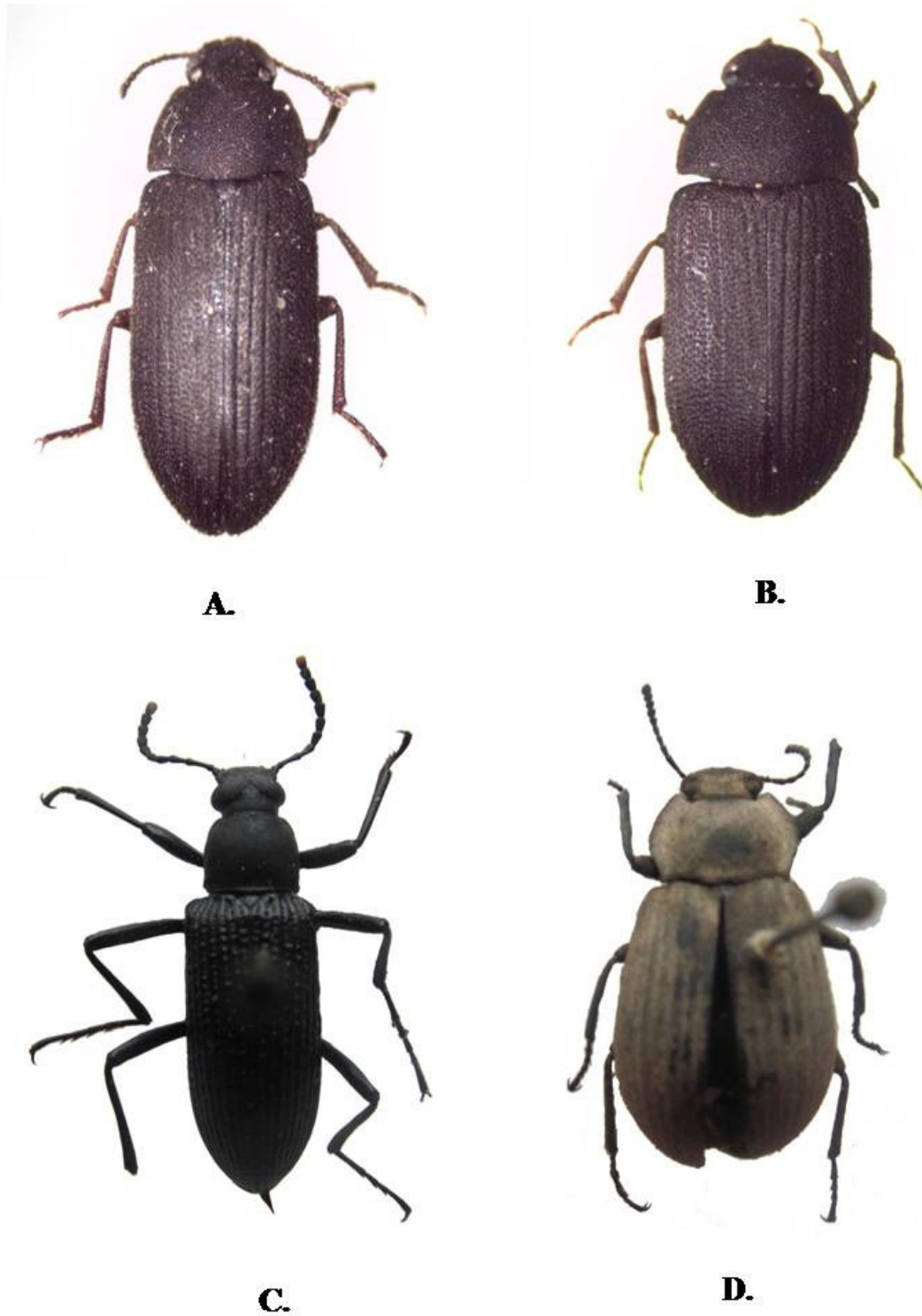


Fig. 6: A. *Mesomorphus villiger* Blanch 1853; B. *Mesomorphus rugulosus* Chatanay 1917; C. *Strongylium aratum* Fairmaire, 1896 D. *Gonocephalum helopioides* (Fairmaire, 1894)

447; Gravely 1913: 520; Blair 1922: 292; Kaszab 1952a: 635, 1974a: 193, 1979a: 260, 1979b: 65; Kwieton 1981: 17; Schawaller 1997a: 5; Hua Li 2002: 138; Iwan and Löbl 2008: 263.

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

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

Gonocephalum contrahens (Walker, 1858). – Gebien 1910b: 322, 1939: 447; Kaszab 1952a: 681. Material examined: 7 ex., Gauri phanta (DNP), Lakhimpur Kheri, 26.ii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19886/H4A.

Distribution: INDIA: Sikkim, Arunachal Pradesh, Assam (Tiegaon, Goalpara), Manipur (Imphal Valley) Meghalaya (Shillong), West Bengal (Darjeeling), Himachal Pradesh, Kashmir and Uttar Pradesh (Dudhwa National Park).

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

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

***Gonocephalum helopioide* (Fairmaire, 1894) (Fig. 6D)**

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: 9 ex., Gauri phanta (DNP), Lakhimpur Kheri, 26.ii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19887/H4A.

Distribution: INDIA: Sikkim, West Bengal (Darjeeling District) and Uttar Pradesh (Dudhwa National Park).

Elsewhere: Myanmar, Nepal.

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

***Gonocephalum tuberculatum* (Hope, 1831) (Fig. 4A)**

Opatrum tuberculatum Hope, 1831: 31.

Gonocephalum tuberculatum (Hope, 1831). – Chatanay 1917: 243; Miwa 1931: 151; Gridelli 1934: 67; Reichardt 1936: 108; Gebien 1939: 446; Kaszab 1941a: 51, 1952a: 464, 1960a: 139, 1961d: 236, 1968b: 19, 1970a: 423, 1970c: 145, 1973b: 55, 1974a: 193, 1980b: 171; Gridelli 1954: 283; Nakane 1966: 243; Schawaller 1997a: 13; Hua Li 2002: 139; Iwan and Löbl 2008: 266.

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: 1 ex., Dudhwa Rest House, Lakhimpur Kheri, 26.ii.2013, V.D. Hegde colln.; 2 ex., Salukapur (DNP), Lakhimpur Kheri, 2.iii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19888/H4A.

Distribution: INDIA: Sikkim, West Bengal (Darjeeling), Kashmir; Himachal Pradesh, Uttarakhand And Uttar Pradesh (Dudhwa National Park).

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

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

***Gonocephalum vagum* (Steven, 1829)**

Opatrum vagum Steven, 1829: 96.

Hopatum vagum Steven, 1829. – Gemminger 1870: 1934.

Gonocephalum vagum (Steven, 1829). – Gebien 1910b: 327, 1939: 448; Kaszab 1952a: 662, 1979b: 66; Ferrer 1995a: 59; Hua Li 2002: 139; Iwan and Löbl 2008: 266.

Hopatum arenarium Fairmaire, 1894: 17. – Blair 1922: 269. **hom. nov.** nom. preoccup., nec

Opatrum arenarium Fabricius, 1775.

Gonocephalum arenarium (Fairmaire, 1894). – Kaszab 1952a: 684; Ferrer 1995a: 59 (syn.).

Opatrum planatum Walker, 1858: 284.

Hopatum planatum Walker, 1858. – Gemminger 1870: 1933.

Gonocephalum planatum (Walker, 1858). – Gebien 1910b: 324, 1939: 448 (= *Opatrum moluccanum* Blanchard, 1853); Blair 1922: 292; Kaszab 1952a: 684; Ferrer 1995a: 59 (syn.).

Material examined: 17 ex., Gauri phanta (DNP), Lakhimpur Kheri, 26.ii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19889/H4A.

Distribution: INDIA: Sikkim (Darjeeling District) and Uttar Pradesh (Dudhwa National Park).

Elsewhere: China, Yunnan, Sri Lanka, Nepal.

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

***Mesomorphus rugulosus* Chatanay, 1917 (Fig. 6B)**

1921. *Mesomorphus maquilinguis* Gebien.

Material examined: 4 ex., Salukapur, (DNP), Lakhimpur Kheri, 2.ii.2013, V.D. Hegde colln.

Deposited in Zoological survey of India, Kolkata. Reg. No: 19890/H4A.

Distribution: INDIA: Uttarakhand (Harrawala, Dehradun) and Uttar Pradesh (Dudhwa National Park).

Elsewhere: Sri Lanka, Nepal, Myanmar, Indochina, Java and Philippines.

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Mesomorphus villiger Blanch, 1853 (Fig. 6A)

Mesomorphus villiger Blanch, 1853, *Voy. Pole Sud.* 4: 154, t.10, f.15.

Material examined: 1 ex. Dudhwa Rest House (DNP), Lakhimpur Kheri, 1.vii.2002, M.

Prasad colln; 16exs. Dudhwa Rest House (DNP), Lakhimpur Kheri, 2.ii.2009, P.

Mukhopadhyaycolln.; 1 ex. ,Dudhwa Rest House (DNP), Lakhimpur Kheri, 18.i.2009, G.P.

Mondal colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19891/H4A.

Distribution: INDIA: Karnataka (Dharwar, N.Kanara), West Bengal (Calcutta, Hoogly, Singur).

Uttar Pradesh (Dudhwa National Park).

Elsewhere: Myanmar (Rangoon).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Opatroides vicinus (Fairmaire, 1896) (Fig. 5D)

Opatroides vicinus Fairmaire, 1896, *Ann. Soc. Ent. Belg.* XLp. 21, Kaszab 1930 *Ent. Arb. Mus. Frey*, 11: 157-159.

Material examined: 3 ex., Gauri phanta, (DNP), Lakhimpur Kheri, 26.ii.2013, V.D. Hegde

Colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19892/H4A.

Distribution: INDIA: Uttarakhand (Raipur, Dehradun), Kolkata (Kidderpore) and Darjeeling (Kalimpong) and Uttar Pradesh (Dudhwa National Park).

Elsewhere: Nepal and Arabian region (Schawaller, 2006).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Scleron ferrugineum Fabricius, 1801

Scleron ferrugineum Fabricius, 1801, *Spt. El.* 1: 118.

Material examined: 4 ex., Chandan Chauki (DNP), Lakhimpur Kheri, 27.ii.2013, V.D. Hegde

colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19893/H4A.

Distribution: INDIA: West Bengal (Calcutta) and Uttar Pradesh (Dudhwa National Park).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Scleron reitteri Gebien 1906 (Fig. 5A)

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: 1 ex., Sathiyana, (DNP), Lakhimpur Kheri, 1.iii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19894/H4A.

Distribution: INDIA: Uttarakhand (Raipur, Chandrabani, Dehradun), West Bengal (Calcutta) and Uttar Pradesh (Dudhwa National Park).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Scleropatrum arenarium Fabricius, 1755

Gonocephalum arenarium Fabricius, 1755. *Spt. Ent.* 76.

Material examined: 1 ex., Dudhwa Rest House (DNP), Lakhimpur Kheri, 25.ii.2013; 1 ex.,

Chandan Chauki, (DNP), Lakhimpur Kheri, 27.ii.2013, all V.D. Hegde colln. Deposited in

Zoological survey of India, Kolkata. Reg. No: 19895/H4A.

Distribution: INDIA: West Bengal (Howrah).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Catapiestus subrufescens Pic, 1831 (Fig. 3A)

Catapiestus subrufescens Pic, 1912:134.

Material examined: 2 ex. (under litter), Gauriphanta, (DNP), Lakhimpur Kheri, 26.ii.2013,

V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19755/H4A.

Distribution: India: Uttar Pradesh (Dudhwa National Park).

Elsewhere: China: Taiwan (Lang and Ren 2009).

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state, India (Hegde and Lal 2013).

Derosphaerus rugosus Gravely, 1915

Material examined: 1 ex. Sathiyana (DNP), Lakhimpur Kheri, 1.iii.2013, V.D. Hegde colln.

Deposited in Zoological survey of India, Kolkata. Reg. No: 19896/H4A.

Distribution: INDIA: Assam, Sikkim, Meghalaya (Tura), West Bengal (Darjeeling, Kalimpong) and Uttar Pradesh (Dudhwa National Park).

Elsewhere: Nepal, Aborland.

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

Strongylium aratum Fairmaire, 1896 (Fig. 6C)

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

Material examined: 1 ex. Sathiyana (DNP), Lakhimpur Kheri, 1.iii.2013, V.D. Hegde colln. Deposited in Zoological survey of India, Kolkata. Reg. No: 19897/H4A.

Distribution: INDIA: Uttarakhand (Mussoorie), West Bengal (Darjeeling, Kurseong, Pedong), Sikkim, Meghalaya, Assam and Uttar Pradesh (Dudhwa National Park).

Elsewhere: Yunnan and Nepal.

Remark: This species is recorded for the first time not only from DNP but also from Uttar Pradesh state.

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