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ACRIDOIDEA (ORTHOPTERA : INSECTA) DIVERSITY OF DUDHWA NATIONAL PARK, UTTAR PRADESH, INDIA

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INTRODUCTION

Dudhwa National Park is spread around 500 sq km along with a buffer area of almost 100 Sq km. Dudhwa National Park is home to one of the finest Sal forests in India, some of these trees are more than 150 years old and over 70 feet tall. Dudhwa's birds, in particular, are a delight for any avid bird watcher. The marshlands are especially inviting for about 400 species of resident and migratory birds including the Swamp Partridge, Great Salty Woodpecker, Bengal Florican, plenty of painted storks, sarus cranes, owls, barbels, woodpeckers, minnets and many more. Much of the park's avian fauna is aquatic in nature, and is found around Dudhwa's lakes-especially Banke Tal.

Dudhwa National Park is full of mosaic grasslands and dense sal forests to swampy marshes. Dudhwa National park's terrain is as diverse as the wildlife population of it. While the northern edge of the Park lies along the Indo-Nepal border, the River Suheli is in the southern boundary.

Dudhwa National Park is punctuated by extensive stretches of grasslands. The predominant tree species found in the park are *Shorea robusta*, *Terminalia lomentosa*, *Adina cordifolia*, *Eugenia jambolana*, *Terminalia belericca*, *Bombax malabaricum* and *Jalbergia sissoo*, and more.

The Acridids popularly known as "grasshoppers and locusts" constitutes an interesting and agriculturally important group of insects. They are moderate in size, but range from less than 10 mm to 65 mm. The form of body shape,

head and thorax are diverse; antennae are filiform but sometimes ensiform; tarsi three segmented; hind femora long, slender and thick towards base and adapted for leaping; wings are either fully developed or reduced or absent; forewings in the form of leathery tegmina; hind wings fan like; male external genitalia complex, symmetrical and concealed, when not in use, by the enlarged ninth abdominal sternum (Subgenital plate).

The most notable work on Indian grasshoppers was made by Kirby (1914). He wrote "Fauna of British India, including Ceylon and Burma". Later on Bolivar (1914, 1918), Uvarov (1921, 1923, 1925, 1927, 1929, 1940, 1940a, 1940b, 1942) have also studied the Orthoptera of Indian subcontinent. Willemse (1955) has studied the Orthoptera of Indo-Malayan region. Later on Dirsh (1954, 1956, 1958), Dirsh & Uvarov (1953), Banerjee & Kevan (1960), Hollis (1965, 1968, 1971, 1975), Mason (1973) and Ritchie (1981, 1982) have taxonomically revised several genera. Tandon and Shishodia (1969, 1976, 1989) have studied Indian grasshoppers from different states. As regards to Acridoidea fauna of Uttar Pradesh, no body has worked out the group from the state.

The present paper deals with 32 species belonging to 2 families and 25 genera. All the species are reported from the National Park for the first time. Four species are recorded for the first time from Uttar Pradesh. Classification followed here is according to Uvarov (1966) and Shishodia *et al.* (2010).

ABBREVIATIONS USED : Coll. Name of the Collector.

SYSTEMATIC ACCOUNT

Order ORTHOPTERA

Superfamily ACRIDOIDEA

Family 1. PYRGOMORPHIDAE

Subfamily ORTHACRIDITNAE

Genus 1. *Chrotogonus* Serville, 1839

1. *Chrotogous (Clir.) trachypterus trachypterus* (Blanchard)

1836. *Ommexecha trachypterus* Blanchard, *Annls. Soc. ent. France*, 5: 618.

1959. *Chrotogonus (Chr.) trachypterus trachypterus* : Kevan, *Publcoes cult. Co. Diam, Angola*, no. 43 : 147.

Material examined : Dudhwa, Bhadrola Kuan, 1 ♂, 2 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 1 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujrat, Haryana, Himachal Pradesh, Jammu & Kashmir, Madhaya Pradesh, Maharashtra, Meghalaya, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal. *Elsewhere* : Afghanistan, Bengladesh, Iran, Nepal, Pakisthan.

Remarks : This species is the pest of various types of crops.

Genus 2. *Atractomorpha* Saussure, 1862

2. *Atractomorpha crenulata* (Fabricius)

1793. *Truxalis crenulata* Fabricius, *Ent. Syst.*, 2 : 28.

1969. *Atractomorpha crenulata*: Kevan and Chen, *Zool. J. Linn. Soc.*, 48 : 187.

Material examined : Dudhwa, Bhadrola Kuan, 2 ♂, 3 ♀, 1 ♂, 1.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujrat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Lakshadweep Islands, Madhaya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Punjab. Rajasthan, Sikkim, Tamil Nadu, Tripura Uttarakhand, Uttar

Pradesh, West Bengal. *Elsewhere* : Bangladesh, Cambodia, Malaya, Myanmar, Nepal, Pakistan, Sri Lanka, Sumatra, Thailand, Vietnam.

Remarks : It is a common species, generally found near the marshy land.

Family ACRIDIDAE

Subfamily GOMPHOCERINAE

Genus 3. *Aulacobothrus* Bolivar, 1902

3. *Aulacobothrus luteipes luteipes* (Walker)

1871. *Stenobothrus luteipes* Walker, *Cat. Derm. Salt. Brit. Mus.*, 5 : 82.

1971. *Dnopherula (Aulacobothrus) luteipes* : Jago, *Proc. Acad. Sci. Philad.*, 123 (8): 243.

1993. *Aulacobothrus luteipes luteipes* : Ingrisch, *Enl. Scand.*, 24 (3) :321.

Material examined : Dudhwa. Bhadrola Kuan, 2 ♂, 2 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station. 2 ♂, 4 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Madhaya Pradesh, Maharashtra, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura Uttarakhand, Uttar Pradesh and West Bengal. *Elsewhere* : Bangladesh, China, Europe, Japan, Myanmar, Nepal. North America, Pakistan, Sri Lanka, Taiwan and Thailand.

Subfamily ACRIDINAE

Genus 4. *Acrida* Linnaeus, 1758

4. *Acrida exaltata* (Walker)

1859. *Truxalis exaltata* Walker, *Ann. Mag. nat. Hist.*, (3) 4: 222.

1954. *Acrida exalta* : Dirsh, *Bull. Soc. FouadEnt.*, 38 : 149.

Material examined : Dudhwa, Bhadrola Kuan, 2 ♂, 3 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 2 ♀, 2.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 1 ♂, 1 ♀, 30.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Punjab.

Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal. *Elsewhere* : Afghanistan, Bangladesh, Iran, Pakistan, Saudi Arabia, South East Tibet, Sri Lanka, Yemen and West Aden.

Genus 5. *Perella* Bolivar, 1914

5. *Perella insignis* Bolivar

1914. *Perella insignis* Bolivar, *Trab. Mus. Cienc. nal. Madr., Madrid*. 20 : 87

Material examined : Dudhwa Railway Station, 2 ♀, 2.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 1 ♂, 30.x.2006 (Coll. N. Sharma & party).

Distribution : Bihar, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal.

Remarks : The species is endemic to India and is not found common in distribution.

Genus 6. *Phlaeoba* Stal, 1860

6. *Phlaeoba infumata* Brunner

1893. *Phlaeoba infumata* Brunner, *Annali Mus. civ. Stor. Nat. Giacomo Doria*, 33 : 124.

1914. *Phlaeoba ifumata* : Kirby, *Fauna Brit. India. Orthopt.*, : 103.

Material examined : Dudhwa, Near National Park Entry Gate, 2 ♂, 2 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 1 ♂, 2 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 1 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Haryana, Himachal Pradesh, Madhya Pradesh, Manipur, Meghalaya, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal. *Elsewhere* : Bangladesh, East Nepal, Hainan Islands, Myanmar, S. China, South and North Malacca, Tennasserim, Yunnan.

Genus 7. *Orthochtha* Karsch

7. *Orthochtha indica* Uvarov

1942. *Orthochtha indica* Uvarov, *Ann. Mag. Nat. Hist.* (11)9 : 587.

Material examined : Dudhwa Railway Station, 2 ♂, 1 ♀, 2.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 1 ♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party).

Distribution : India : Delhi, Himachal Pradesh, Maharashtra, Madhya Pradesh, Meghalaya and Uttar Pradesh.

Remarks : During the recent surveys undertaken in Uttar Pradesh, this species has been collected only from Dudhwa National Park. The species is a new record from Uttar Pradesh.

Subfamily OEDIPODINAE

Genus 8. *Ceracris* Walker, 1870

8. *Ceracris nigricornis nigricornis* (Walker)

1870. *Ceracris nigricornis* Walker, *Cat. Derm. Salt. Br. Mus.*, 4 : 791.

1923. *Ceracris nigricornis nigricornis* : Uvarov, *Ent. Mitt. Berl.*, 14 : 13.

Material examined : Dudhwa, Near National Park Entry Gate, 2 ♂, 1 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 1 ♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 2 ♂, 1 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Arunachal Pradesh, Assam, Bihar, Haryana, Himachal Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal. *Elsewhere* : Afghanistan, Myanmar, South China, Taiwan, Thailand and Vietnam.

Remarks : This species is forest in habitat and is a new record from Uttar Pradesh.

9. *Ceracris striata* Uvarov

1924. *Ceracris striata* Uvarov, *Ent. Mitt.*, 14 : 16.

Material examined : Dudhwa, Bhadrola Kuan, 1 ♂, 2 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 1 ♂, 1 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 3 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Arunachal Pradesh, Himachal Pradesh, Mizoram and Uttar Pradesh. Tripura

Genus 9. *Aiolopus* Fieber, 1853

10. *Aiolopus thalassinus tamulus* (Fabricius)

1798. *Gryllus tamulus* Fabricius, *Ent. Syst. Suppl.* : 195.

1968. *Aiolopus thalassinus tamulus* : Hollis, *Bull. Brit. Mus. nat. Hist. (Ent.)*, 22 (7) : 347.

Material examined : Dudhwa, Near National Park Entry Gate. 2 ♂, 2 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 1 ♂, 1 ♀, 1.x.2006

(Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Orissa, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal.

Elsewhere : Australia, Bangladesh, Borneo, Celebes, China, Hainan, Hong Kong, Indonesia, Japan, Java, Lombok, Malaysia, Myanmar, New Guinea, Pakistan, Papua, Philippines, Singapore, Sri Lanka, Sumatra, Taiwan, Thailand and Timor.

Remarks : This species is recorded throughout Oriental region and extends upto Australia.

Genus 10. *Oedaleus* Fieber, 1853

11. *Oedaleus abruptus* (Thunberg)

1815. *Gryllus abruptus* Thunberg, *Mem. Acad. Sci. St.-Petersb.*, 5 : 233.

1981. *Oedaleus abruptus* : Ritchie, *Bull. Brit. Mus. nat. Hist. (Ent.)*, 42 (3) : 104-107.

Material examined : Dudhwa Railway Station, 1 ♂, 2 ♀, 2.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 1 ♂, 1 ♀, 30.X.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 2 ♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Bihar, Chhattisgarh, Delhi, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Grissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal.

Elsewhere : Australia, Bangladesh, China, Myanmar, Nepal, Pakistan, Sri Lanka, Sumatra, Taiwan, Thailand and Vietnam.

Genus 11. *Gastrimargus* Saussure, 1884

12. *Gastrimargus africanus africanus* (Saussure)

1888. *Oedaleus (Gastrimargus) marmoratus var. africana* Saussure, *Mem. Soc. Phys. Hist. nat. Geneve.*, 30 (1) : 39.

1910. *Gastrimargus africanus* : Kirby, *Syn. Cat. Orth.*, 3 : 227.

1982. *Gastrimargus africanus africanus* : Ritchie, *Bull. Brit. Mus. nat. Hist. (Ent.)*, 44 (4) : 248.

Material examined : Dudhwa, Near National Park Entry Gate, 1 ♂, 30.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 1 ♂, 2 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 1 ♀, 2.X.2006 (Coll. N. Sharma %, party).

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Maharashtra, Meghalaya, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Africa, Myanmar, Nepal, Pakistan, Saudi Arabia, Sri Lanka, Thailand, Tibet and Yemen.

Genus 12. *Trilophidia* Stal, 1873

13. *Trilophidia annulata* (Thunber)

1815. *Gryllus annulatus* Thunberg, *Mem. Acad. Sci. St.-Petersb.*, 5 : 234.

1965. *Trilophidia annulata* : Hollis, *Trans. R. ent. Soc. London.* 117(8) : 251.

Material examined : Dudhwa, Bhadrola Kuan, 3 ♂, 2 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 2 ♂, 1 ♀, 30.X.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 3 ♂, 2 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal.

Elsewhere : Afghanistan, Bangladesh, Borneo, China, Hong Kong, Japan, Java, Korea, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sarawak, Singapore, Sri Lanka, Sumatra, Taiwan, Thailand and Vietnam.

Genus 13. *Acrotylus* Tieber, 1853

14. *Acrotylus humbertianus* Saussure

1884. *Acrotylus humbertianus* Saussure, *Mem. Soc. Phys. Hist. nat. Geneve*, 28 (9) : 189.

1914. *Acrotylus humbertianus* : Kirby, *Fauna Brit. India, Orthoptera* : 153.

Material examined : Dudhwa, Near National Park Entry Gate, 1 ♂, 30.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 1 ♂, 1 ♀, 1 .x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Bihar, Chhattisgarh, Delhi, Goa, Haryana, Himachal Pradesh, Lakshadweep Island, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal. *Elsewhere* : Afghanistan, Bangladesh, Nepal, Pakistan, Sri Lanka.

Subfamily SPATHOSTERNINAE

Genus 14. *Spathosternum* Krauss, 1877

15. *Spathosternum prasiniferum prasiniferum* (Walker)

1871. *Heteracris* (?) *prasinifera* Walker, *Cat. Derm. Salt. Brit. Mm.*, 5 Suppl.: 65.

1936. *Spathosternum prasiniferum prasiniferum* : Tinkham, *Lingman. Sci. Journ. Canton*, 15 : 51.

Material examined: Dudhwa, Bhadrola Kuan, 2 ♂, 5 ♀, 1 x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 3 ♂, 2 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 10 ♂, 9 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Bangladesh, Hainan, Myanmar, Nepal, Pakistan, South East China, Sri Lanka, Thailand, Vietnam and West Malaysia.

Remarks : The species is found almost throughout India and is associated with the grassy habitats.

Subfamily OXYINAE

Genus 15. *Gesonula* Uvarov, 1940

16. *Gesonulapunctifrons* (Stal)

1860. *Acridium* (*Oxya*) *punctifrons* Stal, *Kongl. Freg. Eug. Resa. Omkring for den, Insects* : 336.

1951. *Gesonula punctifrons* : Mischenko, *Locusts and grasshoppers of USSR and Adjacent countries, Catantopinae* : 172

Material examined : Dudhwa, Near National Park Entry Gate, 2 ♂, 1 ♀, 30.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Punjab, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal.

Elsewhere : Bangladesh, Borneo, China, Hainan, Japan, Java, Kalimantan, Malacca, Myanmar, Philippines, Sri Lanka, Sumatra, Taiwan, Thailand and Vietnam.

Genus 16. *Oxya* Serville, 1831

17. *Oxya fuscovittata* (Marschall)

1836. *Gryllus fuscovittatus* Marschall, *Annl. Wien. Mus. Naturg.*, 1:211.

1971. *Oxya fuscovittata* : Hollis, *Bull. Brit. Mus. nat. Hist. (Ent)*, 26 (7) : 289.

Material examined : Dudhwa, Bhadrola Kuan, 1 ♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 2 ♂, 1 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan, Bangladesh, Nepal, Pakistan and USSR.

18. *Oxya hyla hyla* Serville

1831. *Oxya hyla* Serville, *Amis. Sci. nat. (zool)*, 22 : 287.

1971. *Oxya hyla hyla* : Hollis, *Bull. Brit. Mus. nat. Hist. (Ent)*, 26 : 282.

Material examined : Dudhwa, Near National Park Entry Gate, 2 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 2 ♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 1 ♀, 2.X.2006 (Coll. N. Sharma & party).

Distribution : India : Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujrat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Punjab,

Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan, Africa, Angola, Bangladesh, Madagascar, Tanzania, Uganda, Zaire, Zambia, Ghana, Guinea, Iran, Kenya, Liberia, Nepal, Pakistan, Persia and Sri Lanka.

19. *Oxya nitidula* (Walker)

1870. *Acridium nitidula* Walker, *Cat. Derm. Salt. Brit. Mus.*, 4 : 631.

1971. *Oxya nitidula* : Hollis, *Bull. Bri. Mus. nat. Hst. (Ent.)*, 26 (7): 315.

Material examined : Dudhwa, Bhadrola Kuan, 2 ♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 1 ♀, 30.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Bihar, Chhattisgarh, Goa, Karnataka, Kerala, Madhya Pradesh, Manipur, Orissa, Punjab, Rajasthan, Tamil Nadu, Tripura and West Bengal.

Elsewhere : Sri Lanka.

Remarks : During recent surveys undertaken in Uttar Pradesh, this species has been only collected from Dudhwa National Park. The species is a new record from Uttar Pradesh.

20. *Oxya velox* (Fabricius)

1787. *Gryllus velox* Fabricius, *Mantissa Insectorum*, 1:239.

1971. *Oxya velox* : Hollis, *Bull. Brit. Mus. nat. Hist. (Ent.)*, 26 (7): 297.

Material examined : Dudhwa, Bhadrola Kuan, 2 ♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party). Dudhwa, Near National Park Entry Gate, 1 ♂, 30.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Bangladesh, China, Myanmar, Pakistan, Singapore, Sri Lanka and Thailand.

Subfamily COPTACRIDINAE

Genus 17. *Eucoptacra* Bolivar, 1902

21. *Eucoptacra praemorsa* (Stal)

1860. *Acridium (Calantops ?) praemorsum* Stal, *Kpnjgl. Freg. Eug. Resa. Omkring Jor den. Insects* : 330.

1914. *Eucoptacra praemorsa* : Kirby, *Faun Brit. India, Orihoptera (Acrididae)* : 240.

Material examined : Dudhwa Railway Station, 1 ♂, 1 ♀, 2.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 2 ♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 1 ♂, 30.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Orissa, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal. *Elsewhere* : China, Myanmar, Taiwan and Tenasserim.

Subfamily CYRTACANTHACRIDINAE

18. *Cyrtacanthacris* Walker, 1870

22. *Cyrtacanthacris tatarica* (Linnaeus)

1758. *Gryllus Locusta talaricus* Linnaeus, *Systema Naturae (10th ed.)*: 432.

1923. *Cyrtacanthacris tatarica* : Uvarov, *Bull. Ent. Res.*, 14: 39.

Material examined : Dudhwa, Near National Park Entry Gate, 2 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Tripura, Uttarakhand. Uttar Pradesh and West Bengal.

Elsewhere : Africa, Bangladesh, Central America, Hainan, Indonesia, Madagascar, Mediterranean Region, Myanmar, Nepal, Pakistan, Philippines, Saudi Arabia, Seychelles, Sri Lanka, South West Asia, Sumatra and Thailand.

Subfamily EYEPREPOCNEMIDINAE

Genus 19. *Eyprepocnemis* Fieber, 1853

23. *Eyprepocnemis alacris alacris* (Serville)

1839. *Acridium alacre* Serville, *Hist. Nat. Ins. Orth.*: 682.

1958. *Eyprepocnemis alacris alacris* : Dirsh, *Proc. R. ent. Soc. London*, (B) 27 (3-4): 40.

Material examined : Dudhwa, Bhadrola Kuan, 2 ♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa,

Near National Park Entry Gate, 1 ♂, 30.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1♂, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Haryana, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal. *Elsewhere* : Afghanistan, Bangladesh, Iran, Iraq, Pakistan and Sri Lanka.

Remarks : This species is widely distributed in India.

24. *Eyprepocnemis roseus* Uvarov, 1942

1942. *Eyprepocnemis rosesus* Uvarov, *Ann. Mag. not. Hist.*, 9(11): 597.

1958. *Eyprepocnemis rosea* : Dirsh, *Proc. R. ent. Soc. London*, (8) 27(3-4): 42.

Material examined : Dudhwa, Near National Park Entry Gate, 1 ♂, 30.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 2 ♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Haryana, Andhra Pradesh, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Meghalaya, Uttarakhand and Uttar Pradesh. *Elsewhere* : Bangladesh, Myanmar, Pakistan and Thailand.

Genus 20. *Heteracris* Walker, 1870

25. *Heteracris pulchra* (Bolivar)

1902. *Euprepocnemis pulchra* Bolivar, *Annls. Soc. ent. France*, 70: 630. 1958. *Heteracris pulchra* : Dirsh, *Tijdschr. Ent.*, 101 : 54.

Material examined : Dudhwa, Near National Park Entry Gate, 1 c5\ 30.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Bihar, Delhi, Orissa, Tamil Nadu, Uttarakhand and West-Bengal. *Elsewhere* : Sri Lanka.

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Genus 21. *Choreodocus* Bolivar, 1914

26. *Choreodocus robustus* (Serville)

1839, *Acridium robustus* Serville, *Ins. Orth.*, 647.

1921. *Choreodocus robustus* : Uvarov, *Trans. ent. Soc. Land.* (69) : 109.

Material examined : Dudhwa, Bhadrola Kuan, 1♂, 1 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 2 ♂, 1 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 2 ♂ 2.x.2006 (Coll. N. Sharma & party).

Distribution : Haryana, Arunachal Pradesh, Andhra Pradesh, Assam, Haryana, Himachal Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, Tripura, Uttar Pradesh and West Bengal. *Elsewhere* : Bangladesh.

27. *Choreodocus illustris* (Walker)

1870. *Heteracris illustris* Walker, *Cat. Derm., Salt. Brit. Mm.*, 4 : 622, 623.

1921. *Choreodocus illustris* : Uvarov, *Trans. R. ent. Soc. London*, 69 (1&2) : 109.

Material examined : Dudhwa Railway Station, 2♂, 1 ♀, 2.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 4 ♂, 3 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 1 ♂, 2 ♀, 30.x.2006 (Coll. N. Sharma & party).

Distribution : Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Maharashtra, Tamil Nadu and Uttarakhand. *Elsewhere* : Bangladesh.

Remarks : The species is a new record from Uttar Pradesh.

Genus 22. *Eupreponotus* Uvarov, 1921

28. *Eupreponotus inflatus* Uvarov

1921. *Eupreponotus inflatus* Uvarov, *Ann. Mag. nat. Hist.*, (9)7: 508.

Material examined : Dudhwa, Bhadrola Kuan, 2 ♂, 2 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 1 ♂, 2 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Orissa, Uttarakhand, Uttar Pradesh, and West Bengal.

Genus 23. *Diabolocatantops* Jago, 1984

29. *Diabolocatantops innotabilis* (Walker)

1870. *Acridium innotabile* Walker, *Cat. Derm. Salt. Brit. Mus.*, 4 : 629.

1953. *Catantops pinguis innotabilis* : Dirsh and Uvarov, *Tijdsch. Ent.*, 96 (3) : 233.

1984. *Diabolocatantops innotabilis*, Jago, *Trans. Amer. Entomol. Soc.* 110 (3) : 371.

Material examined : Dudhwa, Near National Park Entry Gate, 2 ♂, 30.x.2006 (Coll. N. Sharma & party); Dudhwa, Bhadrola Kuan, 2 ♂, 1.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 1 ♀, 2.X.2006 (Coll. N. Sharma & party).

Distribution : India : Haryana, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Lakshadweep Island, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Afghanistan, Bangladesh, Borneo, Cambodia, China, Hong Kong, Indo-China, Japan, Java, Korea, Malaysia, Myanmar, Nepal, New Guinea, Pakistan, Philippines, Sri Lanka, Sumatra, Tibet and Thailand.

Genus 24. *Xenocatantops* Dirsh and Uvarov, 1953

30. *Xenocatantops humilis humilis* (Serville)

1839. *Acridium humile* Serville, *Ins. Orth.*, : 662.

1953. *Xenocatantops humilis humilis* : Dirsh, & Uvarov, *Tijdschr. Ent.*, **96**: 237.

Material examined : Dudhwa, Bhadrola Kuan, 8 ♂, 5 ♀, 1 .x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 2 ♂ 1 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 1 ♂, 1 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andaman and Nicobar Islandas, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

Elsewhere : Bangladesh, Borneo, Indo-China, Java, Lombok, Malaysia, Myanmar, Nepal, New Guinea, Philippines, Sri Lanka, Sumatra, Thailand, Tibet, Vietnam and Yunan.

31 *Xenocatantops karnyi* (Kirby)

1910. *Catantops karnyi* Kirby, *Syn. Cat. Orthopt.*, **3** : 483.

1982. *Xenocatantops karnyi* : Jago, *Tram. Am. ent. Soc*, **108** (3): 455.

Material examined : Dudhwa Railway Station, 2 ♂, 1 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Delhi, Himachal Pradesh, Maharashtra, Orissa, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh. *Elsewhere* : Nepal.

Genus 25. *Stenocatantops* Dish and Uvarov

32. *Stenocatantops splendens* (Thunberg)

1815. *Gryllus splendens* Thunberg, *Mem. Acad. Sci. St.-Petersh.*, **5** : 236.

1953. *Stenocatantops splendens* : Dirsh and Uvarov, *Tijdschr. Ent.*, **96** (3): 237.

Material examined : Dudhwa, Bhadrola Kuan, 1 ♂, 5 ♀, 1.x.2006 (Coll. N. Sharma & party); Dudhwa, Near National Park Entry Gate, 1 ♂, 2 ♀, 30.x.2006 (Coll. N. Sharma & party); Dudhwa Railway Station, 2 ♀, 2.x.2006 (Coll. N. Sharma & party).

Distribution : India : Andaman and Nicobar Islandas, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Orissa, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal. *Elsewhere* : Borneo, China, Celebes, Hainan, Java, Korea, Malaysia, Moluccas Island, Myanmar, Nepal, New Guinea, Philippines, Sri Lanka, Sumatra, Taiwan, Thailand, and Vietnam.

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REFERENCES

- Banerje, S. K. & D. K. McE. Kevan (1960). A preliminary revision of the genus *Atractomorpha* Saussure, 1862 (Orthoptera : Acridoidea : Pyrgomorphidae). *Treubia*, **25** : 165-189
- Bolivar, I. (1914) Estudios entomologicos, segunda parte. *Trab. Mils. Cienc. nat. Madr.* **20** : 1-10.
- Bolivar, I. (1918). Contribution al conocimiento de la fauna indica Orthoptera (Locustidae vel Acridiidae). *Revta R. Acad. Cienc. Exact. Fis nat Madr.*, **16** : 278-89, 374-412.
- Dirsh, V.M. (1954). Revision of the species of the genus *Acrida* Linn. (Orthoptera : Acridiade). *Bull. Soc. Pouad. her d'ent., Cairo*, **38** : 107-160, 8 maps.
- Dirsh, V.M. (1956). Preliminary revision of the genus *Catantops* Schaun and review of the group Catantopini (Orthoptera : Acrididae). *Publ. Cult. Cia. Diamanl. Angola. Lisbon*, **28** : 11-150.
- Dirsh, V.M. (1958). Revision of the genus *Eyprepocnemis* Fiedr, 1853 (Orthoptera : Acridoidea) *Proc. R. ent. Soc. Lond*, **B**, **27** : 33-45, 27 figs.
- Dirsh, V.M. (1961). A Preliminary revision of the families of Acridoidea (Orthoptera : Insecta). *Bull. Br. Nat. Mus. Hist. (Ent.)* **10**(9) : 351-419
- Dirsh, V.M. and B.P. Uvarov (1953). Preliminary diagnosis of new genera and new synonymy in Acrididae. *Tijdschr. Ent. Amsterdam*, **96** (3) : 231-237.
- Hollis, D. (1965). A revision of the genus *Trilophidia* Stal (Orthoptera : Acridoidea) *Trans. R. ent. Soc. Lond.*, **117** (8) : 245-262, 33 figs.
- Hollis, D. (1968). A revision of the genus *Ailopus* Fieber (Orthoptera : Acridoidea). *Bull. Br. Mus. nat. Hist. (Ent.)*, London, **22** (7) : 307-355, 102 text figs.
- Hollis, D. (1971). A preliminary revision of the genus *Oxya* Audinet-Serville (Orthoptera : Acridoidea). *Bull. Br. Mus. nat. Hist. (Ent.)*, London, **26** (7) : 269-343.
- Hollis, D. (1975). A review of the subfamily Oxyinae (Orthoptera : Acridoidea). *Bull. Br. Mus. nat. Hist. (Ent.)*, London, **31**(6) : 191-234.
- Kirby, W.F. (1914). *The fauna of British India, including Ceylon and Burma. Orthoptera (Acrididae)*. ix + 276pp.
- Mason, J. B. (1973). A revision of the genera *Hieroglyphus* Krauss, *Parahieroglyphus* Carl and *Hieroglyphodes* Uvarov (Orthoptera : Acroidea). *Bull. Br. Mus. nat. Hist. (Ent.)*, London, **28** (1) : 507-560, 12 text figs., 4 maps.
- Ritchie, J.M. (1981). A taxonomic revision of the genus *Oedaleus* Fieber (Orthoptera : Acrididae). *Bull. Br. Mus. nat. Hist. (Ent.)*, London, **42** (3) : 83-183.
- Ritchie, J.M. (1982). A taxonomic revision of the genus *Gaslrimargus* Saussure (Orthoptera : Acrididae). *Bull. Br. Mus. nat. Hist. (Em.)*, London, **44** (3) : 239-329.
- Shishodia, M. S, Chandra, K. and Gupta, S.K. 2010. An annotated checklist of Orthoptera (Insecta) from India. *Ret. Zool. Surv. India, Occ Paper No. 314* : 1-366.
- Tandon, S.K. and M.S. Shishodia (1969). Acridoidea (Insecta : Orthoptera) collected along the Bank of river Tawi (Jammu and Kashmir), India. *Newsl. Zool. Surv. India*, **2**(6) : 269-271.
- Tandon, S.K. and M.S. Shishodia (1976). On a collection of Orthoptera from Rajasthan, India. *Newsl. Zool. Surv. India*, **2**(1) : 7-11.
- Tandon, S.K. and M.S. Shishodia (1989). Insecta : Orthoptera : Acridoidea, *Fauna of Orissa : State Fauna Series 1, Pt. 2* : 93-145. (Zoological Survey of India).
- Uvarov, B.P. (1921). Records and description of Indian Acrididae. *Ann. Mag. nat. Hist.* London, **7**(9) 480-509.
- Uvarov, B.P. (1923). A revision of the Old World Cyrtacanthacrinae (Orthoptera, Acrididae). Part III. Genera *Valanga* to *Patanga*. *Ann. Mag. nat. Hist.* London, (9), **12** : 345-367.

- Uvarov, B.P. (1925). A revision of the genus *Cerqocris* Walk. (Orthoptera : Acrididae). *Int. Mitt. Ber.*, **14** : 11.
- Uvarov, B.P. (1927). Distributional records of Indian Acrididae. *Rec. Indian Mus. Calcutta*, **29** (4) : 233-239.
- Uvarov, B.P. (1929). Acrididen (Orthoptera) aus Sud-Indian. *Revue Suisse Zool.*, **36** : 533-563.
- Uvarov, B.P. (1940). Twenty-eight new generic names in Orthoptera. *Ann. Mag. nat. Hist.* London, (11)5(26) : 173-176. Uvarov, B.P. (1940 a). Twenty-four new generic names in Orthoptera. *Ann. Mag. nat. Hist.* London, (11)6(31) : 112-117.
- Uvarov, B.P. (1940 b). Eleven new generic names in Orthoptera. *Ann. Mag. nat. Hist.* London, (11)6(34) : 377-380.
- Uvarov, B.P. (1942). New Acrididae from India and Burma. *Ann. Mag. nat. Hist.* London, (11)9(56) : 587-607.
- Uvarov, B.P. (1966). Grasshoppers and locusts, *A handbook of general-Acridology*. I Cambridge University Press, xi, 484 pp.
- Willemsse, C, (1955). Synopsis of the Acridoidea of the Indo-Malayan and adjacent regions. (Insecta, Orthoptera) part II, Fam. Acrididae, Subfain. Catantopinae. part two. *Publ. natuurrh. Genool. LSmhurg, Reeks*, **10** : 227-500.