



Rec. zool. Surv. India : 108(Part-3) : 85-96, 2008

ACRIDOIDEA DIVERSITY OF HASTINAPUR WILDLIFE SANCTUARY, UTTAR PRADESH, INDIA

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INTRODUCTION

Hastinapur Wildlife Sanctuary lies along the banks of the Ganga in Western Uttar Pradesh. The sanctuary was established mainly to accord protection to Swamp Deer *Cervus duvauceli duvauceli*, the state animal of Uttar Pradesh, and to conserve the fast vanishing, unique biome, locally known as Gangetic Khadar. It is unique in that it contains a variety of landforms and habitat types such as wetland, marshes, dry sand beds and gently sloping ravines known as Khola. Till a few decades ago (before 1980s), the Gangetic Khadar had extensive tracts of tall wet and dry grass, and khola had luxuriant forests. However, today much of the natural vegetation has been lost due to industries, human settlements and cultivation. Thus, the sanctuary is a highly disturbed protected area. The sanctuary is located between 78° 08' 47" E longitudes and 29° 32' 28" N latitudes. The temperature varies from 0°–48°C and the rainfall is more than 1000 mm. The sanctuary supports 180 species of birds. The vegetation of this sanctuary can be classified into tall wet grasslands, dry short grasslands, scrub and plantations (Nawab 2000).

Short-horned grasshoppers are included in the Superfamily Acridoidea. 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). 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 Henry (1940), Dirsh (1954, 1958), Dirsh & Uvarov (1953), Banerjee and Kevan (1960), Hollis (1965, 1968, 1971, 1975), Mason (1973) and Ritchie (1981, 1982) have taxonomically treated several genera. Tandon (1975, 1976) and Tandon & Shishodia (1969, 1976, 1977) have studied Indian grasshoppers from different states. Shishodia & Hazra (1985, 1986) have studied the Acridoidea fauna of Silent Valley (Kerala), and Namdhapa (Arunachal) Pradesh. Bhowmik (1986) gave an account of the Acridoidea Fauna of West-Bengal, specially of North-Bengal. Further, Hazra *et. al.* (1993) have studied Acridoidea Fauna of West-Bengal.

The present paper deals with 25 species belonging to 2 families and 21 genera. All the species are reported from the sanctuary for the first time. Classification followed here is according to Uvarov (1966).

ABBREVIATIONS USED : Coll.– Name of the Collector, ex(s) – Number of example (s).

SYSTEMATIC ACCOUNT

Order ORTHOPTERA

Superfamily ACRIDOIDEA

Family PYRGOMORPHIDAE

Genus 1. *Chrotogonus* Serville, 1839

1. *Chrotogonus (Chr.) trachypterus trachypterus* (Blanchard)

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

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

Material examined : 3 exs., 11.ix.2005, 4 exs., 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 6 exs., 17.ix.2005, Dhanora Range, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andhra Pradesh, Bihar, Goa, Himachal Pradesh, Karnataka, Kerala, South east of Maharastra, Madhaya Pradesh, Orissa, Tamil Nadu, and West Bengal.

Elsewhere : Sri Lanaka, Bangladesh and Pakistan.

Remarks : In general, it is widely distributed in the northern part of India. It is found on dry conditions on bare ground habitat and is a pest of various types of crops.

Genus 2. *Atractomorpha* Saussure, 1861

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 : 6 exs., 10.ix.2005, 4 exs., 11.ix.2005, Hastinapur Range, Coll. N. Sharma; 5 exs., 17.ix.2005, Dhanora Range, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andaman & Nicobar, Andhra Pradesh, Bihar, Goa, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Lakshadweep, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu, West Bengal.

Elsewhere : Bangladesh, Malaya, Myanmar, Pakistan, Sri Lanka, N. Sumatra, Thailand and S. Vietnam.

3. *Atractomorpha burri* Bolivar

1905. *Atractomorpha burri* Bolivar, *Bol. Soc. Espan. list. nat.*, 5 : 197, 203.

1969. *Atractomorpha burri* : Kevan and Chen, *Zool. J. Linn. Soc.*, 48 : 158, 160, 193.

Material examined : 1 ex., 11.ix.2005, 2exs., 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 2 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Arunachal Pradesh, West Bengal.

Elsewhere : Bhutan, Bangladesh, Malaya to Indo-China.

Remarks : The species is a new record from Uttar Pradesh. Hazra *et al.* (1993) while studying the fauna of West Bengal, has mentioned that no specimens of this species was found in the recent collections. However, a few examples collected earlier from Kurseong in Darjiling district were studied.

Genus 3. *Pyrgomorpha* Serville, 1839

4. *Pyrgomorpha conica* (Olivier)

1791. *Acrydium conicum* Olivier, *Encycl. Meth. Ins.*, 6 : 230.

1914. *Pyrgomorpha conica* : Kirby, *Fauna British India, Orthoptera* (Acridiidae) : 175.

Material examined : 2 ex., 11.ix.2005, 2exs., 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 14 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Karnataka, Rajasthan, West Bengal.

Elsewhere : N & W Africa, W. Asia, S. Europe.

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

Genus 4. *Poeciloceris* Serville, 1831

5. *Poeciloceris pictus* Fabricius

1775. *Poeciloceris pictus* Fabricius, *Syst. Ent.*, p. 289.

1831. *Poeciloceris sonneeratii*, Serville, *Ann. Sci. Nat.* xxxii, 1831, p. 276.

1966. *Poeciloceris pictus* : Akbar, *Sind. Univ. Sci. Res. Journal*, : 1.

Material examined : 4 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Tamil Nadu.

Elsewhere : Baluchistan, Pakistan.

Remarks : The species could be collected from Sukartal only.

Family ACRIDIDAE

Subfamily HEMIACRIDINAE

Genus 5. *Spathosternum* Krauss, 1877

6. *Spathosternum pr. prasiniferum* (Walker)

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

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

Material examined : 10 exs., 10.ix.2005, 4 exs., 11.ix.2005, 4 exs. 14.ix.2005, 5 exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 3 exs., 17.ix.2005, Dhanora Range, Coll. N. Sharma; 4 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andhra Pradesh, Arunachal Pradesh, Bihar, Goa, Himachal Pradesh, Jammu & Kashmir, Karnataka, Madhya Pradesh, Kerala, Maharashtra, Orissa, Rajasthan, Tamil Nadu.

Elsewhere : Myanmar, S.E.China, Thailand and Vietnam.

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

Genus 6. *Hieroglyphus* Krauss, 1877

7. *Hieroglyphus nigrorepletus* Bolivar

1912. *Hieroglyphus nigrorepletus* Bolivar, *Trab. Mus. Cienc. nat. Madr.*, no. 6 : 56.

1973. *Hieroglyphus nigrorepletus* : Mason, *Bull. Brit. Mus. nat. Hist. (Ent.)*, 28(7) : 526.

Material examined : 2 exs., 10.ix.2005, 2 exs., 11.ix.2005, 1ex. 14.ix.2005, 1ex. 15.ix.2005, Hastinapur Range, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Assam, Bihar, Kashmir, Karnataka, Maharashtra, Orissa, Punjab, West Bengal.

Elsewhere : Bangladesh and Pakistan.

Remarks : It is a serious pest of paddy.

Subfamily OXYINAE

Genus 7. *Oxya* Serville, 18318. *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 : 2 exs., 10.ix.2005, 3exs., 11.ix.2005, 2 exs. 14.ix.2005, 4exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andhra Pradesh, Rajasthan, Madhya Pradesh, Jammu & Kashmir, Orissa, West Bengal.

Elsewhere : Afghanistan, Pakistan, USSR (South West).

Remarks : In the sanctuary area, the species is associated with the paddy and grass adjoining the cultivated fields.

9. *Oxya hyla hyla* Serville1831. *Oxya hyla* Serville, *Annl. Sci. nat. (zool)*, 22 : 287.1971. *Oxya hyla hyla* : Hollis, *Bull. Brit. Mus. nat. Hist. (Ent.)*, 26(7) : 282.

Material examined : 3 exs., 10.ix.2005, 4 exs., 11.ix.2005, 3exs. 14.ix.2005, 5exs., 15. ix.2005, Hastinapur Range, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Goa, Himachal Pradesh, Karnataka, Madhya Pradesh, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Tripura, and West Bengal.

Elsewhere : Africa, Afghanistan, Bangladesh, Madagascar, Nepal, Pakistan, Persia and Sri Lanka.

Subfamily EYEPREPOCNEMIDINAE

Genus 8. *Choreodocus* Bolivar, 191410. *Choreodocus illustris* (Walker)1870. *Heteracris illustris* Walker, *Cat. Derm., Salt. Brit. Mus.*, 4 : 622, 623.1921. *Choreodocus illustris* : Uvarov, *Trans. R. ent. Soc. London*, 69(1 & 2) : 109.

Material examined : 2 exs., 10.ix.2005, 2 exs., 11.ix.2005, 1ex. 14.ix.2005, 2exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 2 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Uttaranchal, Himachal Pradesh and Tamil Nadu.

11. *Choreodocus robustus* (Serville)

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

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

Material examined : 2 exs., 10.ix.2005, 1ex., 11.ix.2005, 3 ex. 14.ix.2005, 2exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 4 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Arunachal Pradesh, Assam, West Bengal.

Elsewhere : Bangladesh.

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

Subfamily CATANTOPINAE

Genus 9. *Catantops* Schaum, 1853

12. *Catantops pinguis 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.

Material examined : 6 exs., 10.ix.2005, 4 exs., 11.ix.2005, 3exs. 14.ix.2005, 4exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 8 exs., 17.ix.2005, Dhanora Range, Coll. N. Sharma; 5 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Arunachal Pradesh, Assam, Himachal Pradesh, Kerala, Orissa, Tamil Nadu.

Elsewhere : Myanmar, Java, Malaya, New Guinea, Philippines, Sri Lanka, Sumatra, Yunan and Thailand.

Genus 10. *Xenocatantops* Dirsh and Uvarov, 1953

13. *Xenocatantops humilis humilis* (Serville)

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

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

Material examined : 2 exs., 10.ix.2005, 2 exs. 14.ix.2005, 3exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 1 exs., 17.ix.2005, Dhanora Range, Coll. N. Sharma; 2 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andaman and Nicobar Islandas, Arunachal Pradesh, Assam, Bihar, Himachal Pradesh, Kerala, Madhya Pradesh, Maharastra, Manipur, Meghalaya, Mizoram, Tamil Nadu, and West Bengal.

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

Genus 11. *Stenocatantops* Dirsh & Uvarov, 195314. *Stenocatantops splendens* (Thunberg)

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

1953. *Stenocatantops splendens* : Dirsh, & Uvarov, *Tijdschr. Ent.*, **96** : 237.

Material examined : 1 exs., 11.ix.2005, 2 exs. 14.ix.2005, Hastinapur Range, Coll. N. Sharma; 4 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andaman and Nicobar Islandas, Arunachal Pradesh, Assam, Bihar, Delhi, Kerala, Madhya Pradesh, Maharastra, Orissa, Tamil Nadu, West Bengal.

Elsewhere : China, Myanmar, Nepal, Korea, Hainan, Philippines, Sumatra, Java, Taiwan, Vietnam.

Subfamily CYRTACANTHACRIDINAE

Genus 12. *Cyrtacanthacris* Walker, 187015. *Cyrtacanthacris tatarica* (Linnaeus)

1758. *Gryllus locusta tataricus* Linnaeus, *Systema Naturae* (10th ed.) : 432.

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

Material examined : 1ex., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andhra Pradesh, Assam, Bihar, Delhi, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Maharastra, Manipur, Orissa, Rajasthan, Tamil Nadu, Uttaranchal, West Bengal.

Elsewhere : Africa (except North Africa) and Sahara, Hainan, Madagascar, Phillipines, Seychelles, Sri Lanka, Sumatra and Thailand.

Subfamily ACRIDINAE

Genus 13. *Acrida* Linnaeus, 175816. *Acrida exaltata* (Walker)

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

1954. *Acrida exaltata* : Dirsh, *Bull. Soc. Fouad Ent.*, **38** : 149.

Material examined : 1ex., 10.ix.2005, 6 exs., 11.ix.2005, 2ex. 14.ix.2005, 2exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 4 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA (Throughout India).

Elsewhere : Afghanistan, Aden, Arabia, Bangladesh, S.E. Iran, Nepal, Pakistan, Sri Lanka, S.E.Tibet and Yemen.

Genus 14. *Phlaeoba* Stål, 186017. *Phlaeoba infumata* Brunner

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

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

Material examined : 2exs., 10.ix.2005, 1ex., 11.ix.2005, 2exs.2.ix.2005, 1ex. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 3 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA (Widely distributed).

Elsewhere : S. China, Malacca, Myanmar, E. Nepal.

Genus 15. *Ceracris* Walker, 187018. *Ceracris striata* (Brunner)

1989. *Ceracris fasciata* Ingrisch, *Spixiana*, **11**(3) : 235.

Material examined : 2 exs., 10.ix.2005, 5 exs., 11.ix.2005, 5 exs. 14.ix.2005, 2exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 2 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Uttaranchal, Tripura.

Elsewhere : S. Chaina, Myanmar and Thailand.

Remarks : It is newly recorded from Uttar Pradesh.

Genus 16. *Perella* Bolivar, 191419. *Perella insignis* Bolivar

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

Material examined : 2 exs., 14.ix.2005, Hastinapur Range, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, West Bengal.

Remarks : The species is endemic to India and is newly recorded from Uttar Pradesh. It is a rare species.

Subfamily GOMPHOCERINAE

Genus 17. *Dnopherula* Karsch, 1896Subgenus *Aulacobothrus* Bolivar, 190220. *Dnopherula (Aulacobothrus) luteipes* (Walker)

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

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

Material examined : 2 exs., 10.ix.2005, 3exs., 11.ix.2005, 2 exs. 14.ix.2005, 1ex. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 2 exs., 13.ix.2005, Sukartal, Coll. N. Sharma; 1 ex., 17.ix.2005, Dhanora Range, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Assam, Bihar Delhi, Himachal Pradesh, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharastra, Orissa, Tamil Nadu, Uttaranchal, West Bengal.

Elsewhere : Myanmar, Sri Lanka, N. America, China, Europe, Japan.

21. *Dnopherula (Aulacobothrus) decisus* (Walker)

1871. *Stenobothrus decisus* Walker, *Cat. Derm. Salt. Br. Mus.*, **5** : 80.

1971. *Dnopherula (Aulacobothrus) decisus* : Jago, *Proc. Acad. Sci. nat. Philad.*, **123**(8) : 24.

Material examined : 1ex. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; Coll. N. Sharma; 3 exs., 17.ix.2005, Dhanora Range, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Uttaranchal, Arunachal Pradesh, Karnataka, Maharastra.

Remarks : This species is limited in distribution.

Subfamily OEDIPODINAE

Genus 18. *Aiolopus* Fieber, 1853

22. *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 : 1 ex., 10.ix.2005, 1 ex. 14.ix.2005, 1exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 3 exs., 17.ix.2005, Dhanora Range, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andaman & Nicobar Islands, Bihar, Delhi, Himachal Pradesh, Karnataka, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttaranchal, West Bengal.

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

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

Genus 19. *Oedaleus* Fieber, 1853

23. *Oedaleus abruptus* (Thunberg)

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

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

Material examined : 2 exs., 13.ix.2005, Sukartal, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andhra Pradesh, Bihar, Goa, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Meghalaya, Orissa, Rajasthan, Tamil Nadu, West Bengal.

Elsewhere : Afghanistan, Bangladesh, China, Indo-China, Myanmar, Nepal, Pakistan, Sri Lanka and Thailand.

Remarks : It is widely distributed species.

Genus 20. *Gastrimargus* Saussure, 1884

24. *Gastrimargus africanus africanus* (Saussure)

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

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

Material examined : 2 exs., 10.ix.2005, 3 exs., 11.ix.2005, 2 exs. 14.ix.2005, 2exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma.

Distribution : INDIA : Uttar Pradesh, Andhra Pradesh, Bihar, Delhi, Goa, Himachal Pradesh, Karnataka, Orissa, Sikkim, Uttaranchal, West Bengal.

Elsewhere : Nepal, Saudi Arabia, Sri Lanka, Thailand, Tibet and Yemen A. R.

Genus 21. *Trilophidia* Stål, 1873

25. *Trilophidia annulata* (Thunberg)

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 : 3exs., 10.ix.2005, 3exs., 11.ix.2005, 2 exs. 14.ix.2005, 4 exs. 15.ix.2005, Hastinapur Range, Coll. N. Sharma; 4 exs., 13.ix.2005, Sukartal, Coll. N. Sharma; 3 exs., 17.ix.2005, Dhanora Range, Coll. N. Sharma.

Distribution : INDIA : Andhra Pradesh, Bihar, Goa, Himachal Pradesh, Karnataka, Madhya Pradesh, Orissa, Sikkim, Tamil Nadu, and West Bengal.

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

ACKNOWLEDGEMENT

The authors are grateful to Director, Zoological Survey of India, Kolkata and Dr. A.K. Hazra, Head, Division of Entomology A & B, Zoological Survey of India, Kolkata for providing facilities and encouragement.

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