

## ACRIDOIDEA (ORTHOPTERA) DIVERSITY OF TAKHNI-REHMAPUR WILDLIFE SANCTUARY, PUNJAB, INDIA

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**ABSTRACT:** A preliminary study on the Acridoidea diversity of Takhni-Rehmapur Wildlife Sanctuary (Hoshiarpur, Punjab) India was conducted on 12-13 November 2011 and 10-11 November 2013. A total of 17 species belonging to 15 genera and 2 families were recorded from the sanctuary for the first time. The family Acrididae dominated the scene with 15 species, followed by Pyrgomorphidae with 2 species. The family Acrididae is represented by 8 subfamilies i.e., Acridinae (4 spp.), Oedipodinae (3 spp.), Catantopinae (2 spp.), Oxyinae (2 spp.), Eyprepocnemidinae (1 sp.), Spathosterninae (1 sp.), Coptacridinae (1sp.) and Gomphocerinae (1 sp.). An analysis of relative abundance revealed that of the 17 species reported, 2 species were classed as common, 4 as less common and the remaining 11 species as uncommon.

**KEY WORDS:** Acridoidea, diversity, Takhni-Rehmapur WLS, Punjab

The order Orthoptera is one of the largest orders of insects, having over 20,000 species worldwide with about 10% of the total world species (1,750 species) recorded from India. Acridoidea is one of the most sought after superfamilies of the order Orthoptera. 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). Male of most of these insects produce sound by different methods; female, generally, do not produce sound. They are also well adapted for flight since both direct and indirect muscles work together during flight movements thus explaining the reason that these insect can cover long distances during swarming conditions that mainly result from overcrowding and scarcity of food.

Recently, much information on Acridoidea of different regions, states and protected areas of India has been published (Tandon and Shishodia, 1969 (Andhra Pradesh), 1976 (Jammu & Kashmir), 1976a (Rajasthan), 1989 (Orissa), 1995 (Western Himalaya); Shishodia, 1997 (Delhi), 2004 (Rajasthan), 2008 (Himachal Pradesh); Ingrish et al., 2004 (North-East India); Shishodia & Dey, 2006 (Nagaland), 2007 (Mizoram); Mandal & Yadav, 2007 (Andhra Pradesh); Mandal et al., 2006 (Arunachal Pradesh), 2010 (Uttarakhand); Usmani & Nayeem, 2012 (Bihar). However, Acridoidea diversity at the regional level remains data deficient in most of the regions and states of India.

In particular, the state of Punjab is still unexplored in terms of its Acridoidea diversity and the available information is mainly restricted to that published by Shishodia et al. (2006) gave an account of 40 species of Acridoidea from Punjab Shivaliks. Usmani & Kumar (2013) reported 12 species of the family Pyrgomorphidae from different localities of Punjab.

Classification followed here is according to Uvarov (1966) and Shishodia et al. (2010). All the species are reported for the first time from the sanctuary.

**ABBREVIATIONS USED:** Coll. – Name of the Collector.

## MATERIAL AND METHODS

**Study area:** Takhni Rehmapur Wildlife Sanctuary is situated at the foot hills of Shiwalik Range of Himalayas and is representative of Foot Hill Ecosystem. The sanctuary is situated in Hoshiarpur district at a distance of 15 Kms. from Hoshiarpur on Hoshiarpur-Mehengrowal road. This sanctuary is spread over 382.00 hectares of government area i.e., 956 acres of which 498 acres area belongs to village Takhni and 458 acres area belongs to village Rehmapur. Takhni-Rehmapur was first declared as a wildlife Sanctuary vide Punjab Government Notification No. 34(32) 92Ft-IV/2040 dated 16.2.1993 and final notification was issued vide Punjab Government No. 34/10/99-Ft-IV/7182 dt. 8.6.1999.

It abodes a variety of wildlife species ( Barking Deer, Pangolin, Hog Deer, Hare, Jungle Cat, Jackal, Mongoose, Sambar, Monitor Lizard, Porcupine, Wild Boar, Python, Rat Snake). The vegetation mainly consists of Amb, *Mangifera indica*, Amla *Embllica officinalis*, Arjun *Terminalia arjuna*, Bargad *Ficus bengalensis*, Bamboo *Dendrocalamous strictus*, Dhak *Butea monosperma*, Khair *Acacia catechu*, Kikar *Acacia nilotica*, Krembal *Lemna grandis*, Mesquite *Prosopis juliflora*, Neem *Azadirachata indica*, Pipal *Ficus religiosa*, Chilbil Papri *Holoptelia integrifolia*, Shisham *Dalbergia sissoo*, Siris *Albizia lebbek*, Subabul *Leucaena leucocephala*.

**Methodology:** Collections and observations were made in Takhni Rehmapur Wildlife Sanctuary (N 31° 38.985'; E 075°55.494'; Accuracy 20'; Elevation 1200') on 12<sup>th</sup> & 13<sup>th</sup> November 2011 and 10<sup>th</sup> & 11<sup>th</sup> November, 2013.

Short-horned grasshoppers were collected with the help of a specified butterfly net and hand picking method. After netting, the voucher specimens were collected and preserved for identification. Later, these were deposited as the National Zoological Collection (NZC) at the Northern Regional Center, Dehradun. The already established procedure for the identification of grasshoppers was followed using the above mentioned literature.

The abundance status provided here is based on an arbitrary frequency scale formulated from the present observations based on the numbers obtained and was quantified as follows: Common (encountered 6-10 times), Less Common (3-5 times), and Uncommon (only once or twice).

## RESULTS

The present paper deals with 17 species belonging to 2 families and 15 genera of the superfamily Acridoidea. The family Acrididae dominated the scene with 15 species, followed by Pyrgomorphidae with 2 species. The family Acrididae is represented by 8 subfamilies i.e., Acridinae (4 spp.), Oedipodinae (3 spp.), Catantopinae (2 spp.), Oxyinae (2 spp.), Eyprepocnemidinae (1 sp.), Spathosterninae (1 sp.), Coptacridinae (1 sp.) and Gomphocerinae (1 sp.). An analysis of relative abundance revealed that of the 17 species reported, 2 species were classed as common, 4 as less common and the remaining 11 species as uncommon.

**TAXONOMIC ACCOUNT**  
**Order ORTHOPTERA**  
**Superfamily ACRIDOIDEA**

**Key to families**

1. Foveolae of vertex contiguous, superior and forming the extremity of the fastigium; stridulatory mechanism absent .....Pyrgomorphidae

- Foveolae lateral or inferior, never forming the tip of fastigium; stridulatory mechanism present .....Acrididae

**Family PYRGOMORPHIDAE****Genus *Chrotogonus* Serville, 1839*****Chrotogous* (*Chr.*) *trachypterus trachypterus* (Blanchard)**

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

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

1995. *Chrotogonus trachypterus trachypterus*: Tandon & Shishodia, Himalayan Ecosystem Series: Fauna of Western Himalaya (U.P.) Part 1, Zool. Surv. India: 39.

2008. *Chrotogonus trachypterus trachypterus*: Shishodia, Faunal diversity of Jabalpur district, M.P., (Zool. Surv. India): 101.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni-Rehmapur WLS, 1 male, 1 female, 10.xi.2013 (Coll. N. Sharma & party).

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

**Elsewhere:** Afghanistan, Iran, Pakistan, Bangladesh, Nepal.

**Status:** Uncommon.

**Genus *Atractomorpha* Saussure, 1862*****Atractomorpha crenulata* (Fabricius)**

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

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

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni-Rehmapur WLS, 2 male, 1 female. Reg. no. A-12335, 10.xi.2013 (Coll. N. Sharma & party).

**Distribution:** India: Uttar Pradesh, Andaman & Nicobar Islands, Andhra Pradesh, Bihar, Goa, Jammu & Kashmir, Karnataka, Kerala, Lakshadweep Islands, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu, Uttarakhand and West Bengal.

**Elsewhere:** Pakistan, Sri Lanaka, N.W. Sumatra, S. Vietnam, Bangladesh and Myanmar.

**Status:** Less Common.

**Family ACRIDIDAE****Subfamily GOMPHOCERINAE****Genus *Aulacobothrus* Boliver, 1902*****Aulacobothrus luteipes 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.

1993. *Aulacobothrus luteipes luteipes* (Walker): Ingrish, Ent. Scand., 24 (3): 321.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni-Rehmapur WLS, 1 male, 10.xi.2013 (Coll. N. Sharma & party).

**Distribution:** India: Andaman & Nicobar Islands, Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Himachal Pradesh, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal.

**Elsewhere:** Bangladesh, China, Europe, Japan, Myanmar, Nepal, North America, Pakistan, Sri Lanka, Taiwan and Thailand.

**Status:** Uncommon.

**Subfamily ACRIDINAE**  
**Genus *Acrida* Linnaeus, 1758**  
***Acrida exaltata* (Walker)**

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

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

2007. *Acrida exaltata*: Chandra et al., Zoos' Print Journal, 22 (5): 2685.

2008. *Acrida exaltata*: Shishodia, Faunal diversity of Jabalpur district, M.P., (Zool. Surv. India): 97.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni-Rehmapur WLS, 2 male, 1 female, Reg. no. A-12341, 10.xi.2013 (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, and West Bengal.

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

**Status :** Less Common.

***Acrida gigantea* (Herbst)**

1794. *Truxalis gigantea* Herbst, Fuessly Archiv.: 191.

1914. *Acrida gigantea* Kirby, Fauna Brit. India, Orth.: 98.

2006. *Acrida gigantea*: Shishodia, Bionotes, 8 (1): 11.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni-Rehmapur WLS, 1 female, Reg. no. A-12342, 10.xi.2013 (Coll. N. Sharma & party).

**Distribution:** India: Haryana, Himachal Pradesh, Madhya Pradesh, Tamil Nadu, Tripura, Uttarakhand.

**Elsewhere:** Africa & Nepal.

**Status:** Uncommon.

**Genus *Ceracris* Walker, 1870**  
***Ceracris nigricornis nigricornis* (Walker)**

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

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

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

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni Rehmapur WLS, 1 male, 2 female, Reg. no. A-12308, 10.xi.2013 (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, China, Myanmar, Twian, Thailand, Vietnam.

**Status:** Less Common.

**Genus *Phlaeoba* Stål, 1860**

***Phlaeoba infumata* Brunner von Wattenwyl**

1893. *Phlaeoba infumata* Brunner von Wattenwyl, Ann. Mus. Genova, 33 (2): 124.

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

2006. *Phlaeoba ifumata*: Mandal et al., State Fauna Series, 13: Fauna of Arunachal Pradesh, Part 2, Zool. Surv. India: 159.

2007. *Phlaeoba ifumata*: Chandra et al., Zoos' Print Journal, 22 (5): 2685.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni Rehmapur WLS, 2 male, 1 female, 10.xi.2013 (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 Island, Myanmar, South China, South and North Malacca, Yunnan.

**Status:** Less Common.

#### Subfamily OEDIPODINAE

#### Genus *Gastrimargus* Saussure, 1884

#### *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.

2007. *Gastrimargus africanus africanus*: Chandra et al., Zoos' Print Journal, 22 (5): 2685.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni Rehmapur WLS, 2 male, 10.xi.2013 (Coll. N. Sharma & party).

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

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

**Status:** Uncommon.

#### Genus *Oedaleus* Fieber, 1853

#### *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.

2006. *Oedaleus abruptus*: Shishodia, Bionotes, 8 (1) : 11.

2007. *Oedaleus abruptus*: Chandra et al., Zoos' Print Journal, 22 (5): 2685.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni Rehmapur WLS, 3 male, 3 female, Reg. no. A-12289, 12.xi.2011 (P.C. Tak & party).

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

**Elsewhere:** Afghanistan, Bangladesh, China, Myanmar, Nepal, Pakistan, Sri Lanka, Taiwan, Thailand and Vietnam.

**Status:** Common.

#### Genus *Trilophidia* Stål, 1873

#### *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.

1995. *Trilophidia annulata*: Tandon & Shishodia, Himalayan Ecosystem Series: Fauna of Western Himalaya (U.P.) Part 1, Zool. Surv. India: 38.

2006. *Trilophidia annulata*: Mandal et al., State Fauna Series, 13: Fauna of Arunachal Pradesh, Part 2, Zool Surv. India: 160.

2008. *Trilophidia annulata*: Shishodia, Faunal diversity of Jabalpur district, M.P. (Zool. Surv. India): 98.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni Rehmapur WLS, 2 male, 13.xi.2011 (P.C. Tak & party).

**Distribution:** India: Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Haryana, 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, Borneo, Hong Kong, Japan, Java, Korea, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sarawak, Singapore, South China, Sri Lanka, Sumatra, Taiwan, Thailand, Vietnam.

**Status:** Uncommon.

#### Subfamily SPATHOSTERNINAE

#### Genus *Spathosternum* Krauss, 1877

#### *Spathosternum prasiniferum prasiniferum* (Walker)

1871. *Heteracris prasinifera* Walker, Cat. Derm. Salt. Brit. Mus., 5: 65.

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

2006. *Spathosternum prasiniferum prasiniferum*: Mandal et al., State Fauna Series, 13: Fauna of Arunachal Pradesh, Part 2, Zool Surv. India: 165.

2007. *Spathosternum prasiniferum prasiniferum*: Mandal et al., Pictorial handbook on Indian short-horned grasshopper pests (Acridoidea : Orthoptera). Zool. Surv. India: 23.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni Rehmapur WLS, 2 male, 1 female, 13.xi.2011 (P.C. Tak & party).

**Distribution:** India: Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Haryana, 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, Malaysia, Myanmar, South East China, Sri Lanka, Thailand, West and Vietnam.

**Status:** Uncommon.

#### Subfamily OXYINAE

#### Genus *Oxya* Serville, 1831

#### *Oxya fuscovittata* (Marschall)

1836. *Gryllus fuscovittatus* Marschall, Ann. Wien. Mus. Vienna, 1 (2): 211.

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

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni-Rehmapur WLS, 1 female, Reg. no. A-12354, 12.xi.2011 (Coll. P.C. Tak & party).

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

**Elsewhere:** Afghanistan, Bangladesh, Nepal, Pakistan and USSR (South West).

**Status:** Uncommon.

#### *Oxya hyla hyla* Serville

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

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

2007. *Oxya hyla hyla*: Chandra et al., Zoos' Print Journal, 22 (5): 2685.

2007. *Oxya hyla hyla*: Mandal et al., Pictorial handbook on Indian short-horned grasshopper pests (Acridoidea : Orthoptera) (Zool. Surv. India): 28.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni-Rehmapur WLS, 2 female, Reg. no. A-12355, 12.xi.2011 (Coll. P.C. Tak & 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, Ghana, Guinea, Iran, Kenya, Liberia, Madagascar, Nepal, Pakistan, Persia, Sri Lanka, Tanzania, Uganda, Zaire, Zambia.

**Status:** Uncommon.

**Subfamily COPTACRIDINAE**  
**Genus Eucoptacra Bolivar, 1902**  
**Eucoptacra praemorsa (Stål)**

1860. *Acridium (Catantops) praemorsum* Stål, Kongl. Fregat. Eugen. Res. Omkring Jordan, 3: 330.

1870. *Acridium saturatum* Walker, Cat. Derm. Salt. Brit. Mus., 4: 704.

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

1921. *Eucoptacra saturata*: Uvarov, Ann. Mag. nat. Hist., (9) 7: 503.

2006. *Eucoptacra praemorsa*: Mandal et al., State Fauna Series, 13: Fauna of Arunachal Pradesh, Part 2, Zool. Surv. India: 164.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni-Rehmapur WLS, 1 female, Reg. no. A-12313, 10.xi.2013 (N. Sharma & party).

**Distribution:** India: Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Haryana, 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.

**Status:** Uncommon.

**Subfamily EYPREPOCNEMIDINAE**  
**Genus Eyprepocnemis Fieber, 1853**  
**Eyprepocnemis rosea Uvarov**

1942. *Eyprepocnemis rosesus* Uvarov, Ann. Mag. nat. Hist., 9 (11): 597.

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

2007. *Eyprepocnemis rosea*: Chandra et al., Zoos' Print Journal, 22 (5): 2686.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni Rehmapur WLS, 1 male, 13.xi.2011 (P.C. Tak & party).

**Distribution:** India: Andhra Pradesh, Haryana, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Meghalaya, Uttarakhand and Uttar Pradesh.

**Elsewhere:** Bangladesh, Myanmar, Pakistan and Thailand.

**Status:** Uncommon.

**Subfamily CATANTOPINAE**  
**Genus Diabolocatantops Jago, 1984**  
**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.

2007. *Catantops pinguis innotabilis*: Chandra et al., Zoos' Print Journal, 22 (5): 2686.

**Material examined/observed:** Punjab: Distt. Hoshiarpur: Takhni-Rehmapur WLS, 4 male, 2 female, Reg. no. A-12275-A-12276, 10.xi.2013 (Coll. N. Sharma & party).

**Distribution:** India: Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Haryana, 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, Philippines, Sri Lanka, Sumatra, Thailand, Yunan.

**Status:** Common.

**Genus *Xenocatantops* Dirsh and Uvarov, 1953**  
***Xenocatantops humilis humilis* (Serville)**

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

1953. *Xenocatantops humilis humilis*: Dirsh, & Uvarov, Tijdschr. Ent., 96 (3): 237.

2007. *Xenocatantops humilis humilis*: Chandra et al., Zoos' Print Journal, 22 (5): 2686.

**Material examined:** Punjab: Distt. Hoshiarpur: Takhni-Rehmapur WLS, 2 female (A-12282-A-12283), 10.xi.2013 (Coll. N. Sharma & party).

**Distribution:** India: Andaman and Nicobar Islandas, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Haryana, 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, Lombok, Malaya, Myanmar, Nepal, New Guinea, Philippines, Sri Lanka, Sumatra, Thailand, S. Tibet, Vietnam and Yunan.

**Status:** Uncommon.

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