# NOTES ON A COLLECTION OF GRASSHOPPERS (ORTHOPTERA: ACRIDIDAE) FROM BIHAR STATE, INDIA

Dr. H. K. BHOWMIK\*

Zoological Survey of India, Patna

#### Introduction

The grasshopper fauna of Bihar State is meagrely known, there being no consolidated account. Kirby (1914) in his Fauna of British India recorded only four species especially from Pusa (Bihar), containing three new species: Phlaeoba cinctalis which is now considered a synonymy of Ceracris deflorata Brunner, 1883; gen. et sp. nov. Lefrova acutipennis and Aswatthamanus cylindricus both of which are now merged with the unique genus, Mesopsis Bolivar, 1906, as the species, M. cylindricus (Kirby, 1914). In the same year Bolivar (1914) also described a unique new species, Perella insignis, again from Pusa, which remains unrecorded till then. Uvarov (1921) recorded 16 species from Pusa of which 4 species were also reported from Ghapra. Of these species, Aulacobothrus bolivari was described from Chapra. Pusana laevis, P. rugulosa and Tristria pulvinate from Pusa; Hygracris palustria from Pusa, Waini and Darbhanga and three species of the genus Paraconophyma from Pusa collection, but from uncertain localities. The same author in 1927 again reported three species from Chota Nagpur and in 1937 described Tropidopola (Longicornis) indica from Pusa (also from Kaira, Gujarat).

After Uvarov (op. cit.) there had been no substantial contribution barring a report of grasshoppers from Chota Nagpur by Tandan and Shishodia (1976) in which they recorded 22 species but without detailed localities or any other data.

As a result of these studies not more than 44 species of grasshoppers were known from the entire Bihar State (vide Appendix I), of which 24 species were recorded from Chota Nagpur alone. The present contribution comprising of 36 species from Chota Nagpur collection made by the author and old collections of Patna Regional Station enhances the number of species known so far from Bihar to 62, with 19 additional new records.

A large number of species from Bihar are common with West Bengal fauna studied by Bhowmik (1986); for latest reference of these species Bhowmik (op. cit) may be consulted. Current references have been given only in restricted and required cases only.

<sup>\*</sup> Present address: Officer-in-Charge, Field Survey Division, ZSI, Calcutta.

#### Systematic Account

Order: ORTHOPTERA

Family: ACRIDIDAE

#### 1. Acridia exaltata Linn. 1758

Material examined: 13; Kodarma, Hazaribagh; 5-11-86. 39 and 19 mymph; Kabar lake; 25-28-8.89; H. K. Bhowmik coll.

Remarks: It is a common species. During Oct.-Nov. its population becomes rare, but it persists throughout the winter and also breeds round the year.

### 2. Phlaeoba infumata Brunner, 1893

Material: 53,39; Netarhat, Bihar; 12.2.1971; Bhola Nath coll.

Remarks: This is rather an uncommon species of the genus in Indian fauna. All the specimens were collected in February.

#### 3. Phlaeoba panteli Bolivar, 1902

Material: 19; Bhadu vill. Bukhari, Kabar lake; 25.8.89; H. K. Bhowmik coll. 13; Sitamarhi, Sonauli; 16.3.88; Y. Chaturvedi coll.

Remarks: Through the species is quite wide spread and is known from Tamilnadu, Bihar (Pusa), West Bengal and Afganistan, it is not common in Bihar.

### 4. Ceracris deflorata (Brunner, 1893)

(Plate 1 Fig. 1)

Material: 10♂,5♀; Betla, Palamu; 8-9.9.87; H. K. Bhowmik coll. 1♀; Maroma 13.9.87; H. K. Bhowmik coll. Manipur: 1♂; Morea; 25.11.83; B. C. Saha coll.

Remarks: The species is already known from Pusa and Chapra and as well as from Manipur (India) and Burma, here it is recorded from Chota Nagpur where it is found in abundance. The present lots of specimens were collected from deep, dumpy places, bordering natural water resources in the localities. The present specimens, however, are slightly bigger in size.

Measurements: Body & 21-22,  $\circ$  30-31; antenna & 14-16,  $\circ$  11-12; head & 3-3.5,  $\circ$  4-4.5; prozona & 2.25-2.5,  $\circ$  3-3.25; metazona & 1.75-2,  $\circ$  2.5-2.75; tegmen & 19-20,  $\circ$  25-26; post-femur & 13-14,  $\circ$  17-18; post. tibia & 10-11,  $\circ$  16-17.

### \*5. Truxalis nasuta (Linp, 1758)

Material: 1 ♀; Kodarma, Hazaribagh, 5.11.86. 1 ♂; Jogadishpur, Deoghar; 19.10.86.

Remarks: It is a cosmopolitan species. But from India it was so far recorded from only Bilaspur, Madhya Pradesh and Surat (Gujarat). It is a new record from the State of Bihar.

### \*6. Aulacobothrus luteipes (Walk, 1871)

Material; 29; Giridhi; 22.10.86.33; Hazaribagh town; 3.11.86.

Remarks: A common species found throughout India. But it seems not to have been recorded earlier from the Bihar State.

#### 7. Leva indica (Bol. 1902)

Material: 4 9; Madhuban; 26.10.86. 13; Kodarma, Hazaribagh; 6.11.86

Remarks: More or less a common species of India, found almost throughout the length and breadth of the country.

#### 8. Aiolophus thalassinus tamulus (Fabr.. 1798)

Material: 19; Madhuban, Giridhi; 26.10.86. 39; Baikthpur, Patna; 21.7.67; T. Vazirani coll. 19; Jogipur, Patna; 16.8.66; B. Nandi Coll. 13; Kankarbagh, Patna; 24.7.68; B. Nandi Coll. 23, 29; Maner, Bihar; 30.11.74; R. K. Varshney coll. 19; Chhatarpur; 29.1.71; T. Venkateswarlu coll. 13; Munachali, Patna; 10.2.70; B. Nandi coll.

Remarks: This subspecies is very common in Bihar and is cosmopolitan in distribution.

### 9. Gastrimargus africanus africanus (Saussure, 1888)

Material: 12; Madhuban, Giridih; 26.10.86. 13; Goshipur; 17.10.86. 13; Laxhimpur, Munger; 8.9.89 and 12; Dighal Pahar; 20.8.1989. 43; Gariapani; 16.9.89; All by H. K. Bhowmik Coll.

Remarks: A very common subspecies of India and of Africa.

# 10. Trilophidia annulata (Thunberg, 1815)

Material: 11 exs; Jaimangla gham, Forest near Kaber Lake, 27.8.1989.

# \*11. Clonacris sila Rehn, 1944

(Plate 1 Figs. 2)

1944. Clonacris siln Rehn, Proc. Acad. nat. Sci. Philad, 96: 58-66.

Material: 15 and nymph; Netarhat, Palamau dist; 16.9.87; H. K. Bhowmik coll. 12; Kolebira, Gumla dist; 22.9.87; H. K. Bhowmik coll.

Remarks: The species was described from Tamilnadu from both sexes and lately, after 42 years, has been recorded by me from Joshipur and Harishankar, Orissa State (in press, Rec. Zool. Surv. India) and provided with short notes on its description, measurements, key, etc. The availability of nymphal stage (19mm) is recorded herewith for the first time, indicating its breeding period just after rains. The specimens were found in almost cleared ground, barring a few dried up leaves, but under the canopy of big trees.

#### \*12. Pternoseirta bimaculata (Thunberg, 1815)

Material: 65,29; Giridih; 22.10.86.

Remarks: Described from Sri Lanka, the species is recorded recently from West Bengal (Bhowmik, 1986) and now from Bihar for the first time.

### 13. Acrotylus humbertianus Saussure, 1884

Material: 13; Giridih; 22.10.86. 13, 12; Dumri; 29.10.86.

Remarks: A common species of India.

### 14. Morphacris fasciata sulcata (Thunberg, 1815)

Muterial: 19; Dumri; 29.10.86. 13, 19; Hazaribagh town; 1.11.86. 19; Sherghati, Gaya dist; T. Venkateshwarlu Coll.

Remarks: This subspecies is found almost throughout India.

### \*15. Sphingonotus balteatus balteatus (Serville, 1839)

(Plate 1 Fig. 4)

1839. Oedipoda balteata Serville, Ins. Orth. 734.

Material: 13; Hazaribagh town; 1.11.86; H. K. Bhowmik coll.

Remarks: This subspecies was known so far from Bombay (t. c.), Gujarat (Perim Island, Gulf of Cambay) and Arabia (Aden).

The specimens (14-15 mm) differ in coloration of posterior tibiae, they are bright dark brownish instead of blue. The band in wing is light brownish. The species is recorded from Bihar for the first time.

## \*16. Sphingonotus orissaensis Jago and Bhowmik

Material: Numerous examples of both sexes.

Remarks: The species is described from Orissa (in press, Rec. Zool. Surv. India). Examples of both sexes of the species were also collected by me from the nearby hill top of Chanabati, Bihar. The hillock was barren barring small grasses in crevices.

The species was seen basking in direct sunlight. It appears to be abundant both in Orissa and Bihar in identical babitats.

### 17. Oedaleus abruptus (Thunberg, 1815)

Material: 25,19; Madhuban; 27.10.66.

Remarks: A very easily available species.

#### \*18. Locusta migratoroides Reiche & Fairmaire, 1847

Material: 13, 19; Baikallour; 6.4.1968; T. Venkateswarlu party coll. 13; Bagali Diar; 15.4.1967; K. K. Mahajan coll.

Remarks: General colour reddish brown; head with a very pale line behind eyes. Pronotum granulated, constricted in middle; the sole carinae in pronotum though clear but not very distinct and definitely angulated behind. Tegmina mottled are reticulated with brown, more so in  $\circ$  compared to male. Wing clearly byaline. Posterior femora rather long, not much thickened basad and uniformly tapering.

Though the species belongs to a noted and renowned genus, its population seems very limited now. The present specimens are, however, smaller in size.

Measurements: Body 337, 939-40; antenna 312, 914-15; head 33.25, 94-4.5; prozona 34, 94.5-5, metazona 35, 95.5-6, tegmen 336, 940-45; post. femur 318, 922-25; post. tibia 319, 919-24.

### \*19. Eucoptacra praemorsa (Stal, 1860)

Material: 5 ?; Madhuban; 26.10.86. 1 3, 1 ?; Hazaribagh town; 3.11.86.

Remarks: A very common species. But it is here newly recorded from Bihar.

### \*20. Epistaurus sinetyi (Bolivar, 1902)

Material: 1 9; Dhumri, Deoghar; 30.10.86.

Remarks: The species was known so far from Tamilnadu, West Bengal and Sri Lanka. It is a new record from Bihar.

# \*21. Coptacra punctoria (Walker, 1870)

1870. Acridium punctorium Walker, Cat. Derm Salt. Br. Mus., 4:630.

Material: 19; Netarhat, Palamau dist.; 15.9.87; H. K. Bhowmik coll.

Remarks: Bhowmik (in press) has redescribed the species, in detail, from collections of material from Orissa and Andhra Pradesh (Araku Valley), with the description of male for the first time. It is a new record from Bihar.

### \*22. Pachyacris violascens (Walker, 1870)

Material: 19; Maner, Bihar; 30.11.74; R. K. Varshney coll.

Remarks: The specimen (55 mm) seems to be discoloured, even the colouration of its wings does not give any indication of its pale violet tinge. The tegmen has big oblique patches of brownish tinge. Posterior tibia with 6 external and 7 internal yellowish-red tipped spines, the inner spines are stouter and longer than external ones.

The species was described from Sri Lanka and is now reported from Orissa (Bhowmik, 1983) and Himachal Pradesh (Bhowmik and Halder, 1983). It is, however, a new record from Bihar.

#### 23. Pachyacris vinosa (Walker, 1870)

Material: 29; Madhuban, Giridih; 27.10.86. 13,19; Kolebira, Gumla dist.; 21.9.87. 43, 59; Dighal Pahar, Santal Pargana; 19-20.9.89. 43,39; Kharagpur (Munger dist.); 7.9.89; All H. K. Bhowmik coll.

Remarks: This interesting species is rather common in India (Bhowmik, 1986).

### 24. Cyrtacanthacris tatarica (Linn. 1758)

Material: 13,19; Dhumri, Giridih 29.10.86. 15,19; Dighal Pahar; 20.9.89. H. K. Bhowmik Coll.

Remarks: A very common species found in agricultural fields, especially in paddy fields.

### 25. Chondracris rosea (de Geer, 1773)

Material; 23; Jagadishpur forest, Deoghar; 19.10.86. 33, 69; Digal Pahar, Santal Parganas, 19-20.9.1989; H. K. Bhowmik Coll.

Remarks: A wide spread species in north eastern states of India. In Digal Pahar, the species was noticed in abundance along with Pachyacris vinosa in the shining bushes.

## 26. Catantops innotabilis (Walkar, 1870)

Material: 3♀; Madhuban, Deoghar, 16.10.86. 1♂, 1♀; Giridih; 22.10.86. 3♂, 2♀; Dighal Pahar; 20.9.1989; All H. K. Bhowmik coll.

Remarks: A very common species in the Indian Fauna.

## \*27. Stenocatantops splendens (Thunberg, 1815)

Material: 19; Madhuban, Giridih; 22.10.86.

Remarks: It is rather a rare species. It is here newly recorded from Bihar.

#### \*28. Xenocatantops jagabandhui Bhowmik, 1985

1985. Xenocatantops jagabandhui Bhowmik, Bull. Zool. Surv. India, 7 (2-3): 295.

Material: 19; Dhumri, Giridih; 29.10.86; H. K. Bhowmik & S. Sur coll; 19; Kolibera, Gumla, 22.9.87.

Remarks: The species was described from Himachal Pradesh, and Orissa, in India. The present locality is a new extension of its distributional range.

### +29. Cataloipus elegans (Walker, 1870)

1870. Heteracris elegans Walker, Cat. Derm Salt. Br. Mus., 4: 662-663.

Material: 25, 29; Dumri, Giridih, Bihar; 29.10.1986; H. K. Bhowmik and S. Sur coll.

Remarks: Uvarov (1921) synonymised H. elegans Walk. with C. cognatus Walk. mentioning, inter alia, Kirby's (1914) fig. 139, in which figure the tegmen is shown to be longer than the abdomen. But the same author (1921, P. 139) while pointing out differences of C. cognatus from C. oberthiiri Bol. narrates that in the former the tegmina are shorter specially in  $\mathcal{P}$  where it scarcely reach the apex of abdomen.

The specimens before me tally nicely with the description of H. elegans, as given in Kirby's fauna. Uvarov (op. cit.) puts maximum emphasis, for specific identity of C. cognatus, on the structure of prosternal tuberale which is somewhat distinctly narrowed at extremity, in both sexes. But in the present lot of material the same structure is tongue-shaped, almost identical to that of C. indicus Uvarow, 1942 or C. zuluensis Sjöstedt, 1929. Whereas the male cercus is also similar to those species. However, the present material, unlike C. indicus, lacks any depression, or median carinicula of pronotum and have tegmina shorter than abdomen in  $\mathcal{P}$ , but almost as long as in  $\mathcal{E}$  but in either sex never surpass post. femoral spex. In size as measurements given below, the specimens, especially females are larger than all the related species: C. indicus ( $\mathcal{E}$ 38,  $\mathcal{P}$ 52), C. cognatus ( $\mathcal{E}$ 33-35,  $\mathcal{P}$ 46-50) or C. zuluensis (under which C. cognatus is now a synonymy—Sjöstedt, 1929) ( $\mathcal{E}$ 32). The male subgenital plate big, supersede abdominal end and distinctly biforked.

The specimens thus exhibit an admixture of features of related species with propensity to elegans so demanding further review of its identity.

Measurements: Body & 34-35,  $\$ \$ 63-64; antenna & 13-14,  $\$ \$ 18-18.5; head & 4.5-5,  $\$ \$ 6.5-6.75; prozona & 4-4.25,  $\$ \$ 6-6.25, metazona & 2.5-2.75,  $\$ \$ 4.25-4.5; tegmen & 23-24,  $\$ \$ 38-39; post. femur & 21-22,  $\$ \$ 35-35.5; post. tibia & 20-20.5,  $\$ \$ 31-33.5; male subgenital plate 2-2.5.

Note: The size of  $\delta$  is almost same as *indicus* or *cognatus*, but the  $\mathfrak{P}$  is, of course, larger than related species.

#### \*30. Heteracris pulcher (Bolivar, 1902)

(Plate 1, Fig. 3)

Material: 19; Dhumri, Giridih; 29.10.86. 43, 59; Bhadu vill. Bukhari, Kaber Lake; 25.8.89; H. K. Bhowmik coll.

Remarks: A rare species recorded so far from Tamilnadu, West Bengal and Sri Lanka. It is being recorded here for the first time from Bihar. In Kaber Lake these examples were found on the bank of a canal, under direct sun light. The embankment was covered with wild bushes, one side of which was bushy along with paddy fields. A large numbers of them were seen basking in the sun.

The specimens agree with the redescription of the species given by Bhowmik (1986).

### 31. Eyprepocnemis alacris alacris (Serville, 1839)

Material: 23, 19; Dhumri, Deoghar; 29.10.86. 29; Laxhmipur, Munger; 8.9.89 and 29; Gariapani, Santhal parganas; 16.9.89. 13; Bogati Diar; 15.4.67; K. K. Mahajan (Patna Insect Survey); 19 nymph; Bogampur; 12.7.67; T. Venkateswarlu and party.

Remarks; It is one of the commonst sub-species of the genus in India.

### \*32. Eyprepocnemis rosea Uvarov, 1942

1942. Eyprepcenemis roseus Uvarov, Ann. Mag. nat. Hist., 9 (11): 597, fig. 4 R.

1958. Eyprepocnemis rosea: Dirsh, Proc. R. ent. Soc. Lond., (8): 27 (3-4): 42, fig. 7: Bhowmik and Halder, 1983. Rec. Zool. Surv. India, 81: 185-186, figs. 21-22.

Material: 13; Kolebire, Gumla dist, 22.9.87; H. K. Bhowmik coll, 12; Betla, Palamau dist; 8.9.87; H. K. Bhowmik coll. 53, 32; Madhuban, Giridih; 27.10.86. 12; Bhimbandh, Munger; 6.9.89; H. K. Bhowmik coll.

Remarks: This interesting species was recorded so far from scattered areas—Shillong, Dehra Dun and abundantly throughout Himachal Pradesh. It is recorded here for the first time from Bihar State.

### \*33. Choroedocus robustus (Serville, 1839)

(Plate II, Fig. 5)

Material: 19; S. F. R. I. lab; 25.11.1967, K. K. Mahajan coll. 19; Hyrocalekar, From—Patna; 17.8.1967; K. K. Mahajan coll. 19; Dighal Pahar, Santhal Pargana; 20.9.89; H. K. Bhowmik coll.

Remarks: The species was recorded previously from eastern India (eastern Himalayas, Calcutta); its availability in Bihar is a new record. The present specimens, however, tally exactly with the descriptions and measurements given by Bhowmik (1986).

# \*34. Choroedocus illustris (Walker, 1870)

(Plate II, Figs. 6-7)

Material: 53,32; Netar Hat, Palamau, Bihar; 16.9.87 H. K. Bhowmik coll. 13; Betla, Palamau; 8.9.87. H. K. Bhowmik coll. 13,12, Kolebira, Gumla dist; 21.9.87; H. K. Bhowmik coll.

Remarks: The species was described from South India. But now it is abundantly found in Himachal Pradesh (Bhowmik and Halder, 1983). Its availability in Northeastern India is, therefore, very interesting and indicates its wide distribution.

The species seems to be a "forest dweller". In Chota Nagpur it was noticed in plenty in a slope, in jungle, directly under sun shine.

Measurements: Length of body 32-33, 955-57; antenna 314-15, 921-22; tegmen 325-27, 945-47; post. femur 325-26, 935-37; pronotum 36-7, 910-11; male cercus 6-7.

### \*35. Eupreponotus punctatus Singh, 1978

(Plate II, Fig. 9)

Material; 63 and a ? nymph; Netarhat, Palamau dist.; 16.987; H. K. Bhowmik and S. Sur coll.

Remarks: Singh (1978) has described the species from Dehra Dun (U. P.) material. The present material appears to be identical to his material.

The availability of a nymph during September indicates that its generation starts after rainy season.

The specimens were collected from a shaircase of a hillock which was under direct sun-light.

#### ACKNOWLEDGEMENTS

Author's sincere thanks are due to the Director, Prof. Mohammad Shamim Jairajpuri and Joint Director, Dr. R. K. Varshney for providing working facilities, to Sri Rambabu Sharma for taking photographs and to Sri M. Nandakumar, U. D. Clerk, Patna for typing the manuscript.

#### References

- Bhowmik, H. K. 1983. Report on a collection of Orthoptera (Insecta) from three North-eastern districts of Andhra Pradesh and Chilka Lake. *Indian Mus. Bull.*, 18: 63-75.
- Bhowmik, H. K. and Halder, P. 1983. Preliminary distributional records with remarks on little known species of Acrididae (Orthoptera: Insecta) from the Western Himalayas (Himachal Pradesh). Rec. zool. Surv. India, 81: 167-191.

- Bhowmik, H. K. 1985. Three new species of grasshopper (Orthoptera; Acrididae) from India. Bull. zool. Surv. India, 7 (2-3): 291-296.
- Bhowmic, H. K. 1986. Grasshopper fauna of West Bengal, India (Orthoptera: Acrididae). Bull. Surv. India, Tech. Monogr. 14: 1-180.
- Bhowmik, H. K. and Jago, N. D. (in press). A new species Oedipodine Grasshoppers, Sphingonatus orissaensis, from Eastern India. Rec. zool. Surv. India.
- Bhowmik, H. K. 1991. Contribution to the grasshopper faune (Orthoptera: Acrididae) of Orissa, India. State Fauna Series 1 (Part 3) 177-189.
- Bolivar, I. 1914. Estudies Entomologicos II.2. Los Truxalinos del Antiguo Mundo. Trab. Mus. nat. Cienc. nat. Madr., 20: 41-110.
- Kirby, W. F. 1914. The fauna of British India including Ceylon and Burma. Orthoptera (Acrididae) Vol. 1. 1-276 pp., London.
- Singh, A. 1978. A new species of *Eupreponotus* Uvarov, 1921 (Orthoptera: Acrididea: Catantopinea) from Dehra Dun. *GEOBIOS* 5 (5): 215-217.
- Tandon, S. K. and Shishodia, M. S. 1976. News Letter, Z. S. I.
- Uvarov, B. P. 1921a. Records and descriptions of Indian Acrididae (Orthoptera).

  Ann. Mag. nat. Hist., 7 (9): 489-509.
- Uvarov, B. P. 1921b. Notes on the Orthoptera in the British Museum 1. The group of Euprepocnemini. Trans. R. ent. soc. Lond., 69 (1 & 2): 106-144.
- Uvarov, B. P. 1927. Distributional records Indian Acrididae. Rec. Indian Mus., 29 (4): 233-239.
- Uvarov, B. P. 1937. Tropical species of *Tropidopola* Stal and the past history of the genus (Acrididae). Ann. Mag. nat. Hist., (10) 9 (26): 112-117.
- Uvarov, B. P. 1942. New Acrididae from India and Burma. Ann. Mag. nat. Hist., 9 (11): 587-607.

#### APPENDIX

# List of grasshoppers known from Bihar

- 1. Acrida exaltata Linn., 1758
- Ceracris deflorata Br. 1893(=Phlaeoba cintalis Kirby, 1914)
- 3. C. nigricornis nigricornis (Walk. 1870)
- 4. Gonista sagitta (Uv. 1932)
- \*5. Perella insignis Bol. 1914
- 6. Phlaeoba infumata Br. 1893

- 7. P. panteli Bol. 1902
- 8. Truxalis indica Bol. 1902
- +9. T. nasuta (Linn. 1758)
- \*10. Aulacobothrus bolivari Uv. 1921
- +11. A. luteipes (Walk. 1871)
- 12. Leva indica (Bol. 1909)
- 13. L. cruciate (Bol. 1914)
- 14. Mesopsis cylindricus Kirby, 1914
  - (= Aswatthamanus Kirby, 1914)
  - (=Lefroya acutipennis Kirby, 1914)
- 15. Oedalaus abruptus (Thunberg, 1815)
- +16. Locusta migratoroides Reiche & Fairmaire, 1847
  - 17. O. senegalensis (Krauss, 1877)
- +18. Pternoscirta bimaculata (Thunberg, 1815)
- 19. Morphacris fasciata sulcata (Thunberg, 1815)
- 20. Gastrimargus af. africanus (Sauss, 1888)
- 21. Aiolopus th. thalassinus (Fabr. 1781)
- 22. Acrotylus humbertianus, Sauss. 1884
- 23. Chlaebora marshalli (Henry, 1933)
- \*24. Pusana laevis (Uv. 1921)
- \*25. P. rugulosa (Uv. 1921)
- +26. Shingonotus balteatus balteatus (Serville, 1839)
- +27. Spingonotus orissaensis Jago and Bhowmik (in press)
- +28. Clonacris sila Rehn, 1944
- 29. Trilophidia ahnulata (Thunberg, 1815)
- 30. Spathosternum pr. prasiniferum (Walk, 1871)
- 31. Hieroglyphus annulicornis (Shikari, 1910)
- 32. H. banian (Fabr. 1798)
- 33. H. oryzivorus Carl, 1916
- \*34. Hygracris palustris Uvarov, 1921
- 35. Oxya velox (Fabr. 1787)
- 36. O. hyla hyla Sarviile, 1831
- 37. O. fuscovittata (Marschall 1836)

- +38. Eucoptacra praemorsa (Stal, 1860)
- +39. Epistaurus sinetyi (Bolivar, 1902)
- +40. Coptacra punctoria (Walk. 1870)
- 41. Pachyacris vinosa (Walk, 1870)
- +42. P. violascens (Walk. 1870)
  - 43. Anacridium flavescens (Fabr. 1773)
  - 44. Chondracris rosea (De Geer, 1773)
  - 45. Cyrtacanthacris tatarica (Linn. 1758)
  - 46. Tristria pulvinata (Uv. 1921)
- \*\*47. Tropidopola (longicornis) indica Uv., 1937
  - 48. Catantops innotabilis (Walk. 1870)
- +49. Stenocatantops slendens (Th., 1815)
- +50. Xenocatantops jagabandhui Bhowmik, 1985
  - 51. Paraconophyma polita Uv. 1921
  - 52. P. punctata Uv. 1921.
  - 53. P. scabra (Walker, 1870)
- +54. Catantcipus elegans (Walker, 1870)
- 55. Caloptenopsis glaucopsis (Walk. 1870)
- 56. Acorypha glaucopsis (Walker)
- +57. Eyprepocnemis rosea Uvarov, 1942
  - 58. E. alacris alacris (Servile, 1839)
- +59. Heteracris pulcher (Bolivar, 1902)
- +60. Choroedocus illustris (Walk. 1870)
- <sup>+</sup>61. *C. robustus* (Serville, 1839)
- +62. Eupreponotus punctatus Singh, 1978

<sup>\*</sup> Denotes type locality

<sup>\*\*</sup> Type locality jointly with other areas

<sup>+</sup> New records in this communication