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ON SOME COLLECTION OF GRASSHOPPERS (ACRIDIDAE : ORTHOPTERA) FROM RADHANAGARI, BISON RESERVE FOREST, KOLHAPUR, MAHARASTRA

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INTRODUCTION

The short horned grasshoppers belong to the family Acrididae which are the interesting agriculturally important group of insects. The present work is mainly based on the taxonomic study of grasshopper from the Kolhapur, Bison Reserve forest in Maharashtra. It was a part of environmental impact assessment survey. The area is mining area on the hill top. There was good grass cover and various types of trees were also present.

The present paper deals with 22 examples of grasshoppers belong to 6 genera and 7 species specially from the mining area. So far, there is no earlier reports on this group from this area.

The classification followed here is after Dirsh (1961).

The diagnostic characters for identification of each species has been given along with the global distribution.

TAXONOMIC ACCOUNT

Key to family ACRIDOIDEA

1. Foveolae of the vertex contiguous, superior and forming the extremity of the fastigium; stridulatory mechanism absent..... **Pyrgomorphidae**
– Foveolae lateral or inferior, never forming tip of the fastigium, stridulatory mechanism present..... **Acrididae**

Key to the genera

1. Head acutely conical, tuberculate, rugose fastigial furrow present; lower basal lobe of hind femur usually longer than upper *Chrotogonus* Serville
 - Head variable in shape; fastigial furrow absent; lower basal lobe of hind femur usually shorter than or equal to upper one 2
2. Fastigial foveolae visible from above *Aulacobothrus* Bolivar
 - Fastigial foveolae not visible from above 3
3. Hind femur comparatively slender, much narrowed towards knees, prosternal tubercle, compressed, truncated slightly in flated at apex *Tyloptropidius* Stal
 - Hind femur normal and not much narrowed towards knees; prosternal tubercle absent 4
4. Pronotum with strong crest or acutely tectiform; wings with dark brown or black fascia *Gastrimargus* Saussure
 - Pronotum without very distinct crest; wings with yellowish near the base .. *Heteropternis* Stal

Family PYRGOMORPHIDAE

Genus *Chrotogonus* Serville, 1839

1. *Chrotogonus (Chrotogonus) tr. Trachypterus* (Blanchard)

1836. *Ommexecha trachypterus* Blanchard, *Ann. Soc. Ent. France*, 5 : 618.

1959. *Chrotogonus (Chr.) tr. trachypterus*: Kevan, *Publcoes. Cult. Co. Diam* angola, no. 43 : 147.

Material examined : 1 ♀ Kolhapur, Radganagari, 9.ix.1998, coll. A.K. Hazra.

Diagnosis : Size medium; robust and dorsoventrally depressed body; tegmina reaches about 2/3 of the body, hind wings smaller than tegmina, hind wings hyaline, or occasionally faintly tinged yellowish brown but never infumated or fuscated.

Distribution : Bangladesh; Nepal; E. Iran; Pakistan; India (Maharastra, Andhra Pradesh, Assam, Bihar, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Orissa, Punjab, Rajasthan, Uttar Pradesh and West Bengal).

Remarks : In general it is found in northern India and found in bare ground.

Subfamily GOMPHOCERINAE

Genus *Dnopherula (Aulacobothrus)*

Key to the genera

1. Fastigium of vertex sub-triangular, a pale stripe usually runs from fastigium to vertex *decicus* (Walker)
 - Fastigium of vertex almost trapezoidal with truncate apex *luteipes* (Walker)

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

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

1921. *Aulacobothrus decisus* : Uvarov, *Ann. Mag. Nat. Hist.*, 7(9) : 482.

Material examined : 2 ♂♂ E.I.A. Survey, Kolhapur, 9.i.1998, coll. A.K. Hazra & party.

Diagnosis : Size small; antennae filiform; fastigium of vertex sub-triangular; tegmen extend beyond the hind femur; brown in colour, a pale stripe runs from the tip of the fastigium to the end of the pronotum, wings hyaline.

Distribution : India (Maharashtra, Andhra Pradesh, Tamil Nadu and West Bengal).

Remarks : This species is limited in distribution. Generally it is found on long grasses and cultivated field.

2. *Dnopherula (Aulacobothrus) luteipes* (Walker)

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

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

Material examined : 6 ♂♂, E.I.A. Survey, Kolhapur, Loliganj, 9.i.1998, coll. A.K. Hazra & party.

Diagnosis : Size small; fastigium of vertex trapezoidal, apex truncate with transverse basal furrow; pronotum with nearly parallel lateral carinae; hind femora with three black bands on the dorsal surface.

Distribution : India (Maharashtra, Andhra Pradesh, Assam, Himachal Pradesh, Jammu and Kashmir, Karnataka, Madhya Pradesh, Orissa, Tamil Nadu and West Bengal); N. America; China; Europe; Japan; Myanmar and Sri Lanka.

Remarks : Generally this species is available in long grass and cultivated fields.

Subfamily OEDIPODINAE

Genus *Gastrimargus* Saussure, 1884

3. *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 : 1 ♂, Kolhapur, Dajipur, Kankuliriverbed, 13.i.1998, coll. A.K. Hazra.

Diagnosis : Size medium; pronotum tectiform with a high shaped medium carina; metazoan of pronotum without pale striae; tegmen and wings with complete fascia; base of the wing is bright yellow; hind femur bluish black; hind tibiae usually reddish.

Distribution : India (Maharashtra, Andhra Pradesh, Bihar, Delhi, Goa, Himachal Pradesh, Madhya Pradesh, Orissa, Sikkim, Uttar Pradesh and West Bengal); Nepal; Saudi Arabia; Sri Lanka; Thailand; Tibet and Yemen A.R.

Remarks : A single specimen has been collected from this area.

Genus *Tylotrypidius* Stål, 1873

4. *Tylotrypidius varicornis* (Walker)

1870. *Heteracris varicornis*, Walker, *Cat. Derm. Salt. Brit. Mus.*, 4 : 667.

1914. *Tylotrypidius varicornis* : Kirby, *Fauna. Brit. India Orthopt.* (Acrididae) : 265.

Material examined : 1 ♂ 1 ♀ Kolhapur, Loegons, 9.i.1998, coll. A.K. Hazra; 1 ♀ Radhanagari, 9.i.1998, coll. A.K. Hazra; 200, 2 nymph, Kolhapur, Durgawandimining, 10.i.1998, coll. A.K. Hazra; 1 ♀ Dajipur Bison Reserve, 13.i.1998, coll. A.K. Hazra & party.

Diagnosis : Size medium; prosternal tubercle compressed, truncated and slightly bifurcate at apex; tegmen and wings longer than abdomen but smaller than femur; hind femora very slender and thickened at base; supra anal plate of male elongate and triangular; tegmina with a triangular whitish spots in the costal area.

Distribution : India (Maharashtra, Andhra Pradesh, Goa, Orissa, Rajasthan, Tamil Nadu, Uttaranchal and West Bengal). *Elsewhere* : Myanmar; Sri Lanka.

Remarks : It is fairly distributed in Maharashtra.

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