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A new species of Genus *Ochrilidia* Stal (Gomphocerinae: Acrididae: Orthoptera) from Pakistan

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Abstract

Genus *Ochrilidia* was established by Stal in 1877, *Ochrilidia jagoi* was described as a new species collected from Multan Pakistan; present new species update the world checklist of *Ochrilidia* with 33. Present species was closely related to *beybienkoi* Cejchan, but differs from it in the shape of antenna, fastigial fevoolae and epiphallus, further this species differed from the other species occurring in Punjab, it differed from *O. ahmadi* Wagan & Baloch 2001 by lateral carinae of pronotum less well developed, and from *O. geniculata* (L. Bolivar) by antenna not flattened at base and festigial foveolae ramboid

Keywords: Gomphocerinae, Punjab, acrididae, new species

1. Introduction

Genus *Ochrilidia* was established by Stal in 1877 [1]. Jago [2] provided the history, ecological and economic importance of this important genus *Ochrilidia*. Thirty five species were described in this genus, this number was reduced to eleven following the revisionary work [2]. Three more species namely, *O. alshatiensis* [3], *O. nuragica* [4] and *O. ahmadi* [5] were listed. However, thirty two species are listed in the Orthoptera Species file [6]. The addition of *O. jagoi* makes a total of 33 species in this genus. As grasshoppers are important from Agriculture and ecological point of view, so a survey was carried out throughout Punjab to explore grasshopper fauna of the Punjab.

2. Materials and Methods

2.1 Study area

The material was collected from the agricultural fields of Bahauddin Zakariya University during October 1995; and from Rawalpindi during October 1997.

2.2 Method of collection and preservation

The grasshoppers were collected through the traditional hand net (8.89 cms in dia and 50.8 cms in length), hand picking was also made.

2.3 Dissection of Phallic complex

For the study of male genitalia the procedure described by McEKevean *et al.* [7] was followed. For softening the material desiccator was used for 24 hours by adding few drops of phenol/70 % alcohol to prevent fungal growth. Further to study male genitalia, the maceration of abdomen was done with 10% KOH for overnight.

2.4 Statistical analysis

Measurement is provided for 1 holotype (male), 1 paratype (female) and 1 allotype (female), due to individual representative no further analysis was required.

3. Results

Ochrilidia jagoi, new species (Fig. 1a-d)

3.1 Diagnosis

Ochrilidia jagoi was closely related to *O. beybienkoi* Cejchan [8], but differed from it in the shape of antenna, fastigial fevoolae and epiphallus. The basal portion of antennae in *O. jagoi* was not flattened, fastigial fevoolae was broad and Ancorae of epiphallus was pointed and

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curved distally, whereas, in *O. beybienkoi* antenna was flattened in the basal part, fastigial fevoleae was broader and ancorae of epiphallus decurved distally.

3.2 Description of holotype male (Fig. 1a)

Size was small, antenna (Fig.1c) filiform with elongated segments and broken towards apex. Fastigium of vertex angular, with obtuse apex, almost flat in middle, with transverse basal furrow and strong marginal carinae merging with carinulae of vertex; median carinula begins behind basal furrow and merging with strong carinula of vertex; fastigial foveolae visible from above, somewhat rhomboid shape with rugose surface, frontal ridge wide with carinae well developed. Pronotum (Fig1b) subcylindrical with sharp

median, lateral carinae indicated by ridges and thickened at certain places in prozona and absent in metazona; posterior sulcus crossing median carina placed behind the middle, metazona shorter than prozona, its posterior margin obtuse angular. Mesosternal interspace wider than long. Tegmina and wings well developed. Folded tegminal apices surpassing apex of abdomen. Hind femur moderately slender, lobes of hind knee rounded. Hind tibia slightly shorter than femur with 14 inner and 13 outer spines. Arolium large. Male supra-anal plate angular, cerci narrow and conical, sub-genital plate short, sub-conical with obtuse apex. Epiphallus (Fig. 1d) bridge shaped, ancorae broad at base narrow and strongly curved distally, posterior lobe of lophus slightly larger than anterior lobe of lophus.

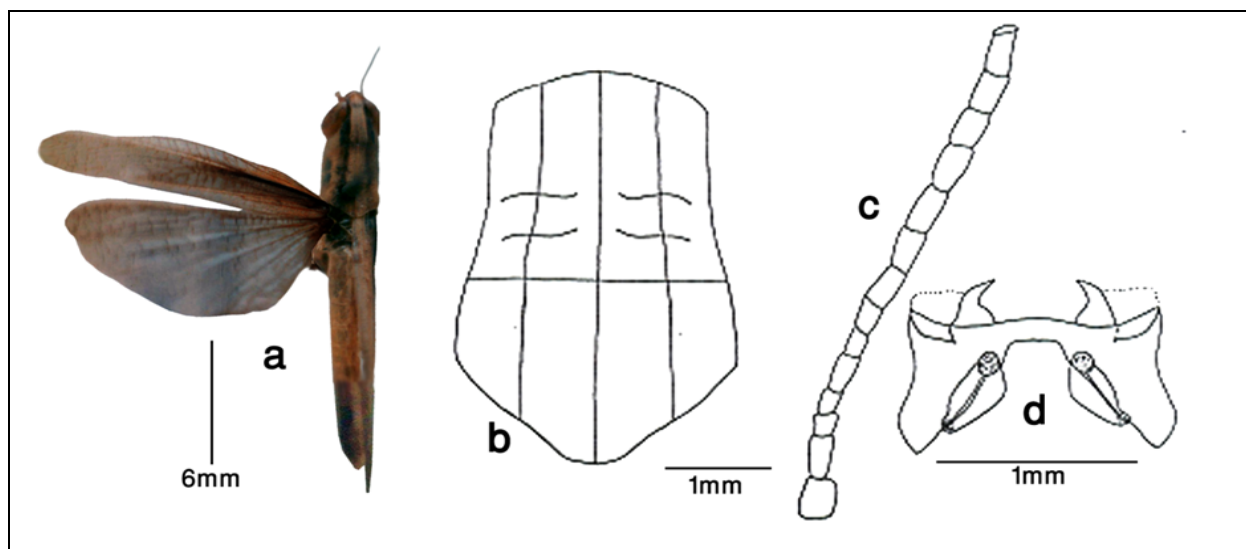


Fig 1: *Ochrilidia jagoi* n. sp. a) male holotype b) pronotum, dorsal aspect c) antenna d) epiphallus, dorsal aspect.

3.3 General coloration

Yellowish with a dark band on the lateral carinulae of fastigium of vertex running behind the posterior margin of eyes upto posterior end of pronotum. Hind femur reddish brown from the innerside, hind tibia straw coloured.

3.4 Allotype

As the holotype but slightly larger. Antennae slightly shorter than head and pronotum together. A yellowish white stripe extend from apex of head to hinder end of pronotum.

3.5 Paratype

In every respect like holotype and allotype.

3.6 Measurements (mm)

	Holotype	Allotype	Paratype
	Male	Female	Female
Antennal length	----	7.0	----
Pronotal length	3.9	4.2	4.2
Tegminal length	14.0	15.0	15.5
Hind femur length	9.1	11.5	11.2
Total length	18.9	20.5	20.0

3.7 Material examined

Pakistan, Punjab, Multan: 1 male holotype B.Z. University field 1.x.1995.(M.S.Wagan & N. Baloch); Rawalpindi: 2 females allotype and paratype near Rawalpindi 17.x.97 (M.S. Wagan)

3.8 Habitat

This species was collected from grasses along cultivated field of Maize and Jowar.

3.9 Etymology

This species was named after Dr. N. D. Jago, Natural Resource Institute London

3.10 Repository

The male holotype was in possession to Dr. N. D. Jago. Most of the collection of Natural Resource Institute London was deposited to the British Museum of Natural History.

4. Discussion

Ochrilidia jagoi differed from the other species occurring in Punjab. It differed from *O. geniculata* (I. Bolivar) and *O. gracilis gracilis* (Ckrauss) by smaller size, antenna not flattened at base and fastigial foveolae rhomboid whereas, it differed from *O. ahmadi* Wagan & Baloch 2001 by larger size and the lateral carinae of pronotum is less well developed.

5. Conclusion

The present research concluded with the description of one new species *Ochrilidia jagoi*, and updated the world checklist of genus *Ochrilidia* with 33 species.

6. Acknowledgements

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identification by comparing holotype with related material and confirmed that this is new species. Financially supported by Pakistan Science Foundation project NO. S-SU/Bio (198).

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