



A NEW SPECIES OF THE GENUS *AEROPEDELLUS* FROM HOVSGOL PROVINCE (ORTHOPTERA, ACRIDIDAE: GOMPHOCERINAE)

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ABSTRACT

We have described a new species of genus *Aeropedellus* from Mongolia. We collected the specimens from near the Tunamalnuur, Tsagaanuuul Sum, Hovsgol Province, Mongolia. The diagnosis and the detail description of the species are provided in this paper.

INTRODUCTION

Since the description of the genus *Aeropedellus* by Hebard in 1935 and the naming of type species as *Aeropedellus clavatus* (Thomas, 1873) [= *Gomphocerus clavatus* Thomas, 1873], 21 species genus *Aeropedellus* worldwide have been identified and described to date. Three species of the genus have been hitherto from Mongolia: *A. baliolus* (Mistshenko, 1951), *A. reuteri* (Miram, 1906) and *A. variegatus* (Fischer-

Waldheim, 1846) [Zubovskiy, 1899-1900; Bey-Bienko and Mishchenko, 1951; Cejchan and Maran, 1966; Steinmann, 1971; Gunther, 1971 and Chogsomjav, 1972, 1975, 1977].

Here we describe a new species of the genus *Aeropedellus* Hebard, 1935, compare it with *Aeropedellus reuteri*, and provide a detailed description of the male and female type materials.

MATERIALS AND METHODS

The specimens of the species were collected by conventional sweep net from their natural habitat. Totally, 4 specimens were collected and were treated with the standard procedures to make specimens.

The all specimens are deposited: MAS-Institute of Biology, Mongolian Academy of Sciences.

All measurements were expressed in mm and were taken using an ocular micrometer in a stereo dissecting microscope (MOTIC B1) and for drawing male genitalia were studied

wet.

The following abbreviations are used in the text: M (Male), F (Female), TBL (Total body length), AL (Antenna length), FwL (Forewing length), HfL (hind femur length), PL (Pronotum length).

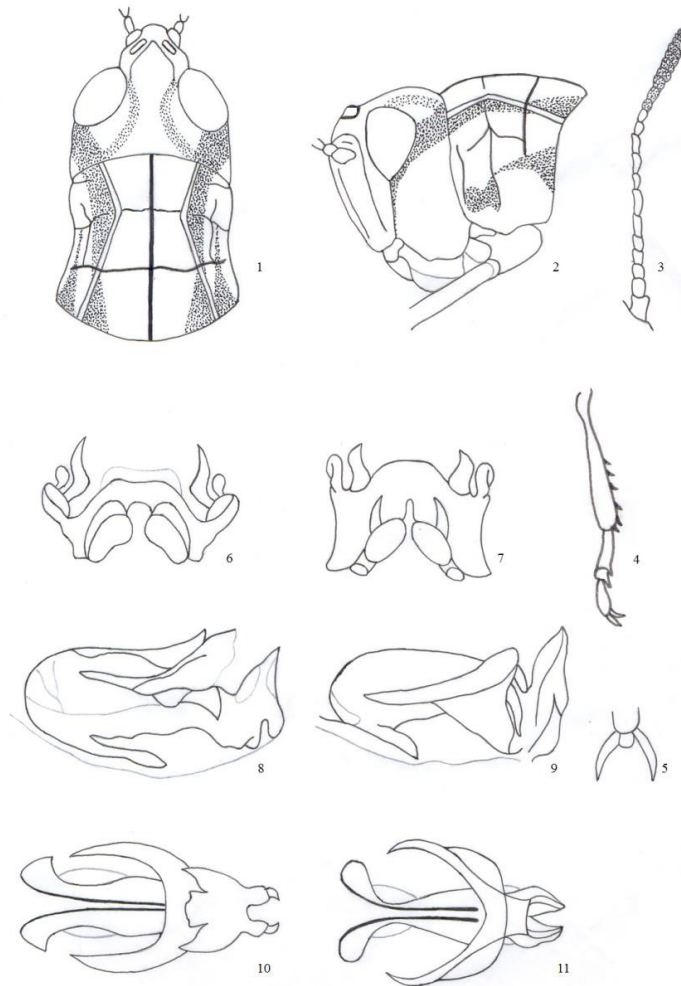
Aeropedellus chogsomjavi, NEW SPECIES (Figs. 1-11)

Holotype locality: Near the Tunamalnuur, Tsagaanuuul Sum, Hovsgol Province, Mongolia; elev: 1887 m, N49.40292, E98.49088, 31 July

2011 (Linchen, Altanchimeg and Uranbileg); 3 paratype females, same locality as holotype (MAS).

Diagnosis: The new species is similar to *Aeropedellus reuteri* (Miram, 1907), but it is distinguished from the latter by the following characters: In the male, forewing exceeds apex of abdomen, and prosternal process is in conical shape. While the narrowest part of the lateral carina is less than 2.5 times of the length of prozona in the male, it is 3.4 times as long

as the prozona in the female. The lateral carina of pronotum is triangular curved at the prozona in the male. The number of spines on the hind tibia is also different between the two species. There are 12 spines on outer side and 11 spines on inner side of hind tibia of the male new species, while there are 15 on the outer and 13 on the inner side of the hind tibia in the male of *Aeropedellus reuteri* (Mir.). In addition, the male genital characteristics are different between these two species (Figs. 6-11).



Figs 1-11. *Aeropedellus chogsomjavi* sp. n. Male: 1. Head and pronotum in dorsal view, 2. Head and pronotum in lateral view, 3. Left antenna, 4. Fore left tibia, 5. Fore tarsal arolium, 6. Epiphallus, 8. Phallic complex in lateral view, 10. Phallic complex in dorsal view. *Aeropedellus reuteri* Mir., 7. Epiphallus, 9. Phallic complex in lateral view, 11. Phallic complex in dorsal view.

Description of male (Holotype):

Interspace of compound eyes 2.1 times wider than space between scapus and frontal costa. Fastigial foveola rectangular, length 1.4 times more than its width. Antenna clavate, with 22 segments, longer than pronotum, and the middle segment of antennae is 1.3 times longer than its width (Fig. 3). Inner margin of compound eyes straight, outer margin arch-shaped, and vertical diameter of the compound eyes 1.3 times more than horizontal diameter and 1.4 times more than subocular furrows. Center of pronotum convex, median carina distinct throughout, lateral carina of pronotum angular curved. The broadest interspace of lateral carinas is 3.2 times wider than its narrowest portion which is shorter than 2.5-fold length of prozona. There is a relatively wide black longitudinal stripe on prozona along the distal side of lateral carina, and on metazona along the proximal side of lateral carina. Posterior transverse sulcus is located at posterior part of pronotum, cutting through median carina and lateral carina. Prozona 1.5 times longer than metazona. Anterior margin of pronotum straight, and posterior margin arched with a slight protruding at the end of the median carina. Lateral lobe of pronotum is 1.7 times longer than its width, blunt episternum, and right angle posteroventra (Figs. 1 and 2). Prosternal process distinct conical convex between two forelegs, and width of mesosternal interspace 1.5 times more than length. Metasternal lateral lobes are slightly separated from each other. Forewing is large, reaching to distal end of the hind femur, and exceeding apex of abdomen. Apex of forewing rounded, the length of the forewing 2.4 times more than its width, and front margin straight. Precostal area not widened at the base of the wing, arch-shaped, distal end not reaching to middle of the forewing, with 7 parallel weak veins. Costal area is wide, its widest part is 1.6 times more than that of medial area, and 1.7 times more than that of cupital area. Costal area, with multiple parallel veins, has white spots on the base. The widest part of medial area 1.5

times more than that of cupital area. Front tibia enlarged, outer side of hind tibia with 12 spines and 11 spines on inner side, apical spine absent; Arolium between tarsus claw small, width of arolium and tarsus nearly same (Figs. 4 and 5), inner margin of hind femur brown-yellowish, upper kneelobe black. Tympanum oval. Subgenital plate of male short conical, its apex blunt, epiproct wide, parallel black ridge on middle part. Cerci long and flattened, its apex round. Epiphallus and Phallic complex are illustrated in Figs. 6, 8 and 10.

Body dark brown, and flagellum with 7 broadened distal blackish brown segments and yellowish-brown others. Back part of eyes black, upper kneelobe with black sloping stripe. Medium part of epiproct separated and its margin black.

Description of female: Interspace of eyes 2.1 times more than interspace of frontal costa. Length of fastigial foveola is 2.4 times longer than its width. Tip of antenna slightly broadened, exceeding posterior margin of pronotum. Segment length of medial part of antenna 1.6 times more than its width. Vertical and horizontal diameter of eyes almost equal, 1.3 times longer than subocular furrows. Lateral carina of pronotum angular curved in prozona, the narrowest interspace of lateral carinas less than 1/3.4 length of prozona but longer than 1/3 of metazona length. Prosternal process is semicircle, and slightly convex. Forewing short, slightly exceeding posterior margin of 3rd abdominal segment, merged on end of posterior part of thorax; its length 3 times more than width. Precostal area exceeds middle part of anterior margin of forewing. Width of costal area is almost equal to that of median area, which is 1.2 times wider than cupital area width. Two black sloping stripes on each of outer and inner sides of hind femur. Upper kneelobe rufous, hind tibia with 10 spines on inner side, 11 spines on outer side. Ventral valve and bottom margin of the first valve ovipositorare concave.

Body dark brown; Black band extending from the posterior part of eyes to posterior



margin of pronotum. Middle of lateral lobe of pronotum is black. There are white spots on the base of costal area.

Measurements (mm): TBL(M)=13, TBL(F)=16-17.8(F); AL(M)=5.2, AL(F)=5; PL(M)= 2.8, PL(F)=3.2;

FwL(M)=8.7, FwL(F)= 6.9-8; HfL(M)=8.4, HfL(F)=8.1-10.4.

Etymology: This species is named *Aeropedellus chogsomjavi* for Chogsomjav L., who was the first orthopterist from Mongolia.

DISCUSSION

The new species is morphologically similar to *Aeropedellus reuteri* (Miram, 1907), but the new species differs following

characters: It has a prosternal process; number of spines on the hind tibia; characters of the male genitalia different.

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ТОВЧЛОЛ

ХӨВСГӨЛ АЙМГААС *AEROPDELLUS* ТӨРЛӨӨС
ОЛДСОН ШИНЭ ЗҮЙЛ
(ORTHOPTERA, ACRIDIDAE: GOMPHOCERINAE)

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Бид Хөвсгөл аймгийн Цагаан уул сумын Тунамал нуур орчмоос *Aeropedellus* төрлийн шинэ зүйлийг шинжлэх ухаанд шинээр тэмдэглэн, *Aeropedellus chogsomjavi* хэмээн Монголын анхны шулуун далавчтан (Orthoptera) судлаач эрдэмтэн Л.Чогсомжавын дурсгалд зориулан нэрлэлээ. Зүйлийн харьцуулалт, ангилалзүйн нягтлалыг БНХАУ-ын ШУА-ийн Амьтан судлалын хүрээлэнгийн царцаа судлаач Ли Хонг Чанг (Li Hong Chang)-аар боловсруулав. Уг зүйл нь *Aeropedellus reuteri* хэмээх зүйлтэй төстэй боловч урд цээжний сэртэн, хойд шилбэний өргөсний тоо, эрэгчний үржлийн эрхтэний бүтцээр ялгаатай юм. Шинэ зүйлийн бичиглэлийг хийсэн паратип эрэгчин, голотип 3 эмэгчин нийт 4 бодгалийг ШУА-ийн Биологийн Хүрээлэнгийн Шавж судлалын лабораторийн сан хөмрөгт хадгалж байна. Энэхүү өгүүлэлд уг шинэ зүйлийн морфологийн бичиглэл, зургийг дэлгэрэнгүйгээр орууллаа.

Энэхүү өгүүллээ АНУ-ын “Transactions of American Entomological Society” хэмээх олон улсын сэтгүүлд хэвлүүлэхээр (accepted) болоод байгаа билээ.