A NEW SPECIES OF EOTMETHIS BEI-BIENKO FROM GANSU, CHINA
(ORTHOPTERA, ACRIDOIDEA, PAMPHAGIDAE)

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Abstract A new species of the genus Eotmethis Bei-Bienko 1948, namely Eotmethis unicolor sp. nov., is described from Gansu, China in this paper. The new species is similar to Eotmethis nasutus Bei-Bienko 1948, but differs from the latter in the body with simple color, hind femur without two dark bands on outer side, lower area of hind femur on inner side all red, spines of hind tibia red on inner side and hind tarsus red. The new species is also similar to Eotmethis rufemarginis Zheng, 1985, but differs from the latter in the tegmina reaching to the 6th abdominal tergite, the transverse diameter of eye is 2.2 times the length of frontal ridge. The new species is similar to E. ningxiaensis (Chang, 1978) and E. jingtaiensis (Zheng, 1984; Eades et al, 2003) and E. rufemarginis (Eades et al, 2003), but E. hentzei (Chang, 1978) is synonym of Eotmethis rufemarginis (Chang, 1978).

Keywords Orthoptera, Pamphagidae, Eotmethis, new species


During identifying the specimens of grasshoppers collected from Gansu, China in July 2006, a new species of the genus Eotmethis, i.e. Eotmethis unicolor sp. nov., was found and is described below. The type specimen is deposited in College of Life Sciences, Hebei University, Baoding, China.

Eotmethis unicolor sp. nov. (Figs 1–5)

Holotype α Jingtai Gansu (37°13'N, 103°52'E; alt 1850 m), 18 July 2006, collected by LIX in-Jiang and ZHENG Jin-Yu

Male Body medium-size, thickset with hairs especially noticeable on the legs. Vertex short and wide, the width between eyes is about 4 times as wide as width of frontal ridge between the base of antennae lateral aspects of vertex edged by distinct carina extending to behind of eye. Fastigial furrow present. Vertex and dorsal side of head depressed with small granular Frontal ridge distinct whole length with a groove; narrow upper the median ocellus widen gently downwards the widest near the base of labrum between the bases of antennae slightly projecting forward the transverse diameter of eye is 2.2 times the length of projection. Lateral facial carinae distinct Eyes larger near circle. Antennae longer 18 segments, almost reaching to the hind margin of pronotum, length about 2.0–2.5 times width of the middle part. Pronotum rough with short subuliform projection anterior and posterior margin angled promuding median carina extending into laminar, strongly incised by the posterior transverse suture; the length of metazona is 1.1 times the length of prozona, in prozona the carina is cut by the 2 transverse suki in metazona the carina are like raised. Prosternum with a strong laminar process on the anterior margin which emarginated in the middle part. Interspace of mesosternum lateral lobes trapezoid wider than all except vein area wider than cubital vein area distinctly in tegmina. Hind femur wide and compressed length is 3 times the width of broadest part of median carina of hind femur on the upper side serrate. Hind tibia with 10 spines on the outer side and 9 spines on inner side (including apical spine). Arolium between the claws...
of hind tarsus larger, extending beyond the middle of claws. Tympanic organ developed, tympanic aperture expanded, tympanic flap larger. Krause’s organ near ellipse, with thinly rugose on surface. Abdomen dorsally with 3 rows of tubercles, the middle row plate-like distinctly. Epiproct near tongue-like, with longitudinal groove in middle. Cercus long conical, extending over the end of epiproct. Subgenital plate conical.


### Table 1 Main morphological differences between *Eotmethis unicolor* sp. nov. and *E. nasutus*.

<table>
<thead>
<tr>
<th>Character</th>
<th><em>Eotmethis unicolor</em> sp. nov.</th>
<th><em>E. nasutus</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coloration of body</td>
<td>Simple color</td>
<td>With yellow and black stripe</td>
</tr>
<tr>
<td>Outer side of hind femur</td>
<td>Without two dark band</td>
<td>With two dark bands</td>
</tr>
<tr>
<td>Lower area of hind femur on inner side</td>
<td>Red in all</td>
<td>Red in distal third only</td>
</tr>
<tr>
<td>Spines of hind tibia on inner side</td>
<td>Red</td>
<td>Yellow</td>
</tr>
<tr>
<td>Hind tarsus</td>
<td>Red</td>
<td>Yellowish-brown</td>
</tr>
</tbody>
</table>

Table 2  Main morphological differences between E. unicolor sp. nov. and E. rufemarginis.

<table>
<thead>
<tr>
<th></th>
<th>E. rufemarginis</th>
<th>E. unicolor sp. nov</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tegmina in male</td>
<td>Longer reaching to the 10th abdominal tergite</td>
<td>Shorter reaching to the 6th abdominal tergite only</td>
</tr>
<tr>
<td>Projection of frontal ridge between antennae</td>
<td>The transverse diameter of eye is 1.8 – 2.0 times the length of projection</td>
<td>The transverse diameter of eye is 2.2 times the length of projection</td>
</tr>
<tr>
<td>Outer side of hind femur</td>
<td>With two dark bands</td>
<td>Wthout two dark bands</td>
</tr>
<tr>
<td>Hind tarsus</td>
<td>Yellowish-brown</td>
<td>Red</td>
</tr>
</tbody>
</table>

Female Unknown
Measurement (in mm). δ. Length of body 25.5, length of tegmen 11.3, length of hind femur 13.0

Diagnosis The new species is similar to E. natus and E. rufemarginis, but with several differences listed in Tables 1 and 2

Etymology The specific epithet is named for combination of body unicolor meaning simple color

Acknowledgements We thank Mr. ZHENG Jin-Yu for collecting the type specimen

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