

New *Oedaleus* Fieb., and *Bryodema* Fieb. (Orthoptera) Species from Central and East Asia

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The working up of the Orthopteran Collection of the Hungarian Natural History Museum began in recent years. A rich material had accumulated especially from Central and East Asia. In the course of identification of the more than ten thousand specimens, also 2 new taxa were found, whose description and respective insertion into the key of identification constructed for the particular faunas given above are as follows.

Acerididae

Oedipodinae

Oedaleus FIEBER 1853

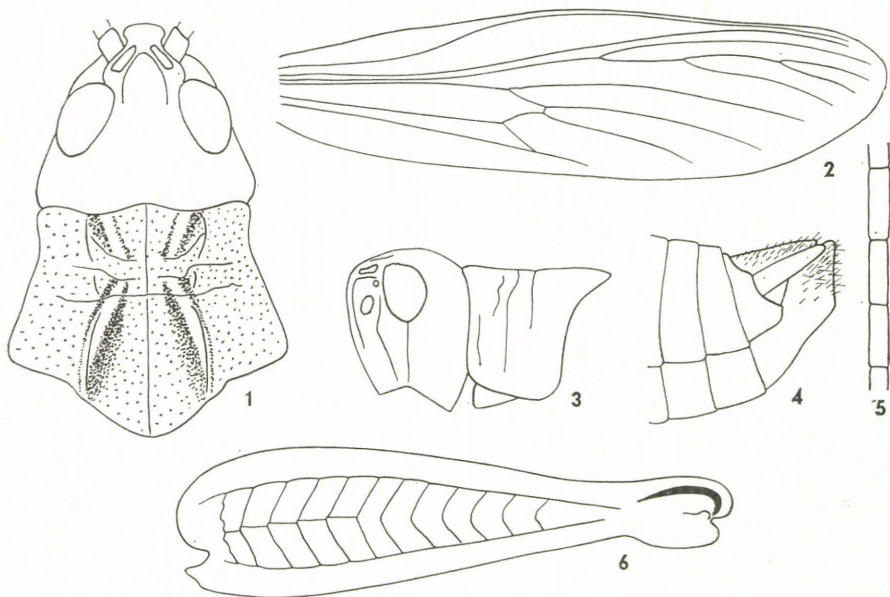
Oedaleus infernalis pendulus ssp. n. (Figs. 1—6)

Head, when viewed from above, short, conspicuously as wide as long. Area between eyes medium wide, but broader than width of one eye when viewed from above. Pits of vertex distinct, well discernible, essentially longer than wide. Ribs constituting posterior margin of vertical pits decurrent between eyes, terminating at their anterior portion. Frontal rib wide, considerably wider than breadth of scape. Head strongly dilating posteriorly of eyes, slightly wider from above than breadth of pronotum measured at anterior margin. In a lateral view, head thickset, only slightly longer than wide. Eyes relatively small. Antennae articulated anteriorly and about median line of eyes. Frontal rib as high as height of scape. Lateral facial rib extending below eye deep, only slightly shorter than length of eye. Median joints of antenna long, about three times longer than wide.

Pronotum, when viewed from above, about equally long and wide, anterior margin visibly sinuous, posterior margin slightly elongate and postero-median section widely rounded. Median ridge of pronotum low but well discernible, medially with a conspicuous transversal furrow. Anterior (prozonal) portion of light, X-shaped pattern on surface of pronotum narrow, about half as wide as breadth of white metazonal stripe. In a lateral view, pronotum narrow, slightly arcuate, anterior and posterior margins exclineate, median section only very slightly arched. Entire median ridge lower than vertex. Laterally decumbent section, so-called lateral lobe, of pronotum small as related to other measurements of body, antero-inferior and postero-inferior corners widely rounded. Median transversal incision of breast straight, distance between longitudinal furrows small, smaller than wide.

Joints of legs short, thick. Arolia between tarsal claws relatively large, extending to about half length of tarsi. Outer and inner margins of tibia with a row of black spinules each. Posterior tibia reddish orange. Inner margin of tibia with 13–14 black spinules. Inner surface of hind femur yellow, upper margin with three dark brown, velutinous large spots; below yellow. Abdomen yellow. Posterior margin of subgenital plate of male sharply excised, lanceolate. Cerci of medium length, not extending beyond subgenital plate.

Combined length of head, thorax, and abdomen; 22.3 mm, length of pronotum: 5.1, length of tegmen: 22.4, breadth of tegmen: 5.8, length of hind femur: 15, length of hind tibia: 13.7 mm.



Figs. 1–6: *Oedaleus infernalis pendulus* ssp.n., 1 = Head and pronotum from above, 2 = tegmen, 3 = head and pronotum laterally, 4 = abdominal end of female, laterally, 5 = median joints of antenna, 6 = posterior femur

Holotype male: „USSR, Kasahstan (nearer locality indecipherable, handwriting), 10 June, 1957, leg. MALKOVSKIJ”. Deposited in the Zoological Department of the Hungarian Natural History Museum.

In place of differential diagnosis see the following key of identification:

Key for Identification of Central and East Asiatic species

- 1 (10) Light stripes of X-shaped pattern on pronotum not situated on elevated riblets; pattern occasionally indistinct. Dark band of wings anteriorly extending to costa of wing. Width of area on breast between lateral lobes of mesothorax equalling, or slightly smaller than, width of lobes.
- 2 (5) Surface of pronotum with a slight constriction. Metazonal sides not projecting as roundly constricted and protruding shoulders. Light spots of X-shaped pattern es-

essentially wider in metazone than in prozone. Inferior portion of lateral lobes of pronotum rounded anteriorly. Dark band of hind wings meeting costa, but occasionally indistinct. Apex of male wing frequently dark.

- 3 (4) Upper portion of frontal rib punctate. Narrow rib separating vertex from frontal rib well discernible on anterior margin of vertical apex. Dark band of hind wing narrow, occasionally wellnigh evanescent.

a (f) Body small: male 18–23 mm, female 30–35 mm.

b (c) Median joints of antenna short, at most 1.5–1.8 times longer than wide. Inferior margin of hind femur of male red. Length of tegmen of male: 16–20 mm; ♀ unknown **infernalis montanus** B.-BIENKO

c (b) Median joints of antenna long, at least twice as long as wide. Inferior margin of hind femur of male orange or yellow.

d (e) Median joints of antenna 2–2.5 times longer than wide. Inferior margin of hind femur of male yellow. Length of tegmen of male: 18–22 mm, of female: 26–31 mm **infernalis amurensis** IKONN.

e (d) Median joints of antenna at least thrice longer than wide. Inferior margin of posterior femur orange. Length of male tegmen: 22.4 mm; ♀ unknown **infernalis pendulus** ssp.n

f (a) Body large: male 25–27 mm, female 35–42 mm. Inferior margin of hind femur red. Length of tegmen of male: 23–26 mm, of female: 32–36 mm **infernalis infernalis** SAUSS.

- 4 (3) Upper portion of frontal rib coarsely punctate. Narrow rib separating vertex and frontal rib absent from anterior portion of vertical apex. Dark band of hind wing broad. Length of body of male: 21.5–27, length of tegmen: 21.6–27, length of body of female: 31–39, length of tegmen: 29.5–35 mm¹ **manjius** CHANG

- 5 (2) Surface of pronotum with a strong and conspicuous constriction. Metazonal sides projecting as conspicuous shoulders. Light stripes of X-shaped pattern not wider, or even narrower than, in prozone. Dark band of wings not reaching posterior margin.

- 6 (9) Inner surface of femur of hind leg black, with 2 light, occasionally indistinct bands. Antenna short, at most one and a half times longer than combined length of head and pronotum in male, and not longer than that in female.

- 7 (8) Posterior tibia brownish yellow or red. In latter case, light bands at base of tibia not mixed with red. Median ridge of pronotum high, slightly arcuate in lateral view, very thick and strongly dilating anteriorad in metazone, since sides with longitudinal and oblique impressions. ♂♂: 18–31, 16–33, ♀♀: 25–43, 25–40 mm **decorus** GERM.

- 8 (7) Posterior tibia red, light bands at tibial base also mixed with reddish colour. Median ridge of pronotum not high, not arched in lateral view, straight, not thickened in metazone. ♂♂: 21–24, 20–24, ♀♀: 28–32, 27–31 mm

asiaticus B.-BIENKO

- 9 (6) Inner surface of femur of hind leg yellow, occasionally with dark band or bands. Antenna long, nearly twice longer than combined length of head and pronotum in male, and one and a half times longer than that in female. Length of median joints of antenna 2.5 to 4 times longer than wide. Cerci of male short, apically conical. X-shaped dorsal pattern of pronotum as in preceding species. Posterior margin of pronotum rounded, often obtuse. ♂♂: 15–20, 18–25; ♀♀: 22–32, 24–34 mm **senegalensis** KRAUSS

- 10 (1) Light stripes of X-shaped dorsal pattern on pronotum very sharp, distinct, situated on slightly elevated riblets. Dark band of wings not complete, not reaching anterior margin. Area on breast between lateral lobes of mesothorax wider than lobes, strongly dilating anteriorad. Vertical apex almost wholly flat. Body small. ♂♂: 13–16, 15–16 ♀♀: 20–23. 5, 19–21 mm **abruptus** THUNB.

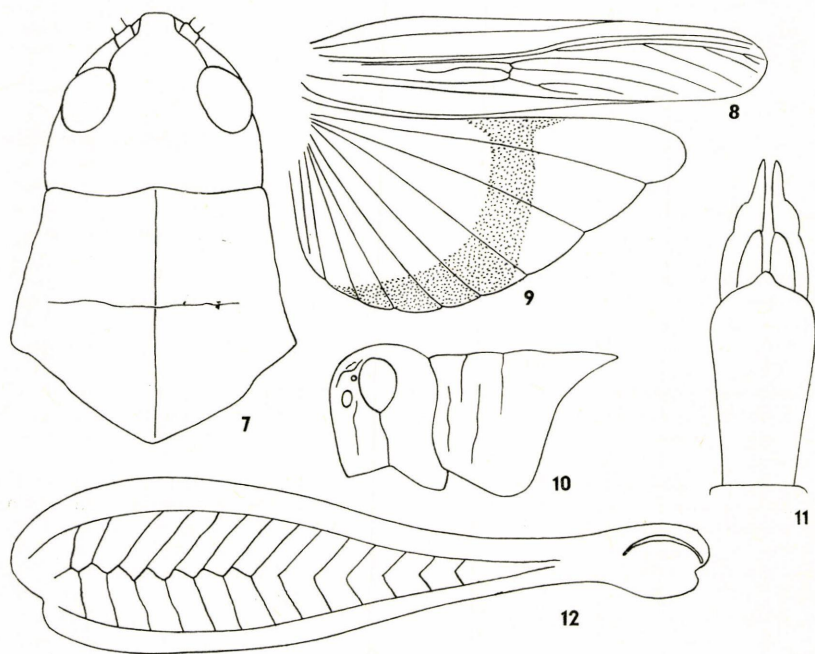
¹ All further measurement data given in this order of sequence.

Bryodema FIEBER, 1853

(=*Rhodorrhapis*, SAUSSURE, 1884; = *Ctyphippus* STAL, 1873)

Bryodema divum sp.n. (Figs. 7–12)

A pale drab, greyish tinted species with long tegmina. Head, when viewed from above, rather large, wide and long. Eye relatively small. Width of vertex between eyes considerably exceeding breadth of one eye when measured from above. Vertical pits extremely shallow, to be regarded as nothing more than area bordered by two low



Figs. 7–12: *Bryodema divum* sp. n., 7=Head and pronotum from above, 8=tegmen, 9=hind wing, 10=head and pronotum laterally, 11=abdominal end of female, laterally, 12=posterior femur

riblets bifurcating from facial pair of ribs decurrent between antennae and extending toward eyes. Scape short and wide from above, considerably shorter than section of facial rib between antennae. Vertex smooth, spotted, velutinous. In a lateral view, head thickest. Facial rib decurrent evenly and uninterruptedly to upper labrum. Eye relatively small; facial furrow arising on its lower portion slightly sinuous and shallow. Antennae originating aligned with median section of eyes.

Pronotum wide and short. Anterior margin, when viewed from above, slightly sinuous, median ridge low, hardly detectable and apperceptible only by refracting light. Median ridge interrupted, or touched by a slight transversal furrow; posterior margin right-angled, caudal apex visibly rounded. In a lateral view, pronotum slightly scabrous, shiny, greyish brown. Anterior margin a laterally decumbent lateral lobe, slightly sinuous, antero-inferior corner strongly obtuse.

Tegmen with two darker brown transversal stripes, apical area vitreous, hyaline. Base of hind wing pale yellow, that is, yellowish white. Medial area with a conspicuous, dark brown band, curving toward base along posterior margin of wing, as shown on Fig. 9. Legs pale yellow, with sparsely scattered darker spots, except for vividly orange tibia of hind legs. Inner surface of posterior femur light, ornamented with dark bands, inferior margin orange. Last abdominal sternite of female long, visibly longer than wide, indeed, length twice exceeding width; posterior margin slightly elongate medially.

Combined length of head, thorax, and abdomen; 35–39, length of tegmen: 33–34, length of hind femur: 18–19, and length of hind tibia: 17 mm.

Holotype female: „China, Prov. Kiangsi, Lushan Range, 2–6 Sept., 1959, leg. Dr. V. SZÉKESSY et YANG”. Paratypes: ditto. Deposited in the Zoological Department of the Hungarian Natural History Museum, Budapest.

In place of differential diagnosis, see the following key of identification:

Key of Identification for Central and East Asiatic Species

- 1 (22) Posterior tibia red or blue. If red, hue may frequently tend toward orange reddish.
- 2 (17) Base of hind wings pink.
- 3 (10) Wing of male with a distinct, dark band. Tegmen of females without median spurious vein, or if present, rudimentary and hardly discernible.
- 4 (7) Posterior tibia red.
- 5 (6) Inner surface and inferior margin of posterior femora black, a red band anteriorly of knee. Hind tibia blood-red. Length of ♂♂: 25–26, length of tegmen: 27–28, length of ♀♀: 32–33, length of tegmen: 23–24 mm¹ **diamesium** B.-BIENKO
- 6 (5) Inner surface and inferior margin of posterior femur orange. Wings of female at repose not extending beyond genu of hind legs.
 - a (b) Larger animals. Pronotum longer, male: 8–8.5, female: 8.5–10 mm. ♂♂: 29–31, 26–29; ♀♀: 30–36, 15–18 mm **zaisanicum zaisanicum** B.-BIENKO
 - b (a) Smaller animals. Pronotum shorter, male: 6.3–7.3, female: 7.8–9 mm. ♂♂: 23–29, 26–30, ♀♀: 28–33, 14–17 mm **zaisanicum fallax** B.-BIENKO
- 7 (4) Posterior tibia blue.
- 8 (9) Inner surface of posterior femur and lower margin (anteriorly of knee) with a light band. ♂♂: 21–26; 24–28; ♀♀: 26–31, 15–17 mm **orientale** B.-BIENKO
- 9 (8) Inner surface of posterior femur and inferior margin entirely blue. ♂♂: 25–27, 26–31; ♀♀: 32–37, 18–22 mm **semenovi** IKONN.
- 10 (3) Besides pink base, wings of male entirely dark. Tegmen of female with median spurious vein.
- 11 (16) Inner surface and inferior margin of posterior femur red or dark blue, but not black.
- 12 (15) Posterior femur above without velutinous black spots. Median ridge of pronotum extremely narrow, locally completely indistinct.
- 13 (14) Inner surface and inferior margin of posterior femur red or dark blue; in latter case also a light band anteriorly of knee present.
 - a (b) Inner surface of posterior femur red. ♂♂: 25–32, 32–39; ♀♀: 32–42, 20–25 mm **gebleri gebleri** F.-W.
 - b (a) Inner surface of posterior femur dark blue. ♂♂: 30–38, 40–46; ♀♀: 35–45, 20–25 mm **gebleri mongolicum** ZUB.
- 14 (13) Inner surface and inferior margin of posterior femur dark blue, without band anteriorly of knee. ♂♂: 28–30, 33–38; ♀♀: 32–33, 25–27 mm **heptapotamicum** B.-BIENKO

¹ All further measurement data given in this order of sequence.

- 15 (12) Posterior femur above with 3 black, velutionous spots each.
 a (b) Larger and robust specimens. ♂♂: 28–32, 35–37; ♀♀: 36–37, 48–49 mm
miramae miramae B.-BIENKO
- b (a) Smaller and slender specimens. ♂♂: 23–24, 28–29.5; ♀♀: 23–24, 28–29.5 mm. Female unknown
miramae elegantulum B.-BIENKO
- 16 (11) Inner surface and inferior margin of posterior femur black, with a red band anteriorly of knee. Posterior tibia blue. ♂♂: 22.5–25, 27–29; ♀♀: 27–28, 47 mm
kozlovi B.-BIENKO
- 17 (2) Base of wing dark or yellow, occasionally colourless.
- 18 (21) Base of wing dark or colourless, with black, incrassate veins. Vertical pits sharp or indistinct.
- 19 (20) Vertical pits sharp, well discernible.
 a (b) Posterior tibia blackish blue, almost black. ♂♂: 26–32, 35–43; ♀♀: 25–38, 45–50 mm
luctuosum luctuosum STOLL
- b (a) Posterior tibia red. ♂♂: 27–39, 38–39; ♀♀: 35, 50 mm
luctuosum indum SAUSS.
- 20 (19) Vertical pits indistinct. Posterior tibia red. Male unknown. Female: 28, 45 mm
brunnerianum SAUSS.
- 21 (18) Base of wing light, dull yellow, veins normal. Tibia orange. Male unknown; ♀♀: 35–39, 33–34 mm
divum sp.n.
- 22 (1) Posterior tibia yellow.
- 23 (26) Entire median ridge of pronotum low.
- 24 (25) Section of genu of posterior femur wide, inferior lobe visibly widened. Posterior tibia unicolorous ochreous yellow.
 a (b) Larger and robust specimens: ♂♂: 31–36, 32–36; ♀♀: 34–40, 32–38 mm
holdereri holdereri KRAUSS
- b (a) Smaller and slender specimens: ♂♂: 29–30, 30–31; ♀♀: 33–34, 30–31 mm
holdereri occidentale B.-BIENKO
- 25 (24) Section of genu of posterior femur normal, inferior lobe not widened. Posterior tibia dirty yellowish. Larger and robust animals. A number of subspecies known. ♂♂: 29–39, 28–38; ♀♀: 34–43, 29–36 mm
tuberculatum dilutum STOLL
- 26 (23) Median ridge of pronotum lobately elevated in prozone. ♂♂: 32–36; 37–40; ♀♀: 38–39, 36–37 mm
uvarovi B.-BIENKO

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