

A new subgenus of the genus *Adarrus* Ribaut, 1947 (Homoptera: Cicadellidae)

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A new subgenus *Nagadarrus* subgen. n. of the genus *Adarrus* Ribaut, 1947 is described for *Adarrus emeljanovi* Mitjaev, 1980 (type species) and *Deltocephalus antennalis* Haupt, 1924.

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The genus *Adarrus* was described by Ribaut (1947). Somewhat later it was subdivided into several subgenera (Ribaut, 1952; Emeljanov, 1966). But the subgeneric position of several species of *Adarrus* has not yet been elucidated. One of such species is *A. emeljanovi* Mit., described by Mitjaev (1980) from N Kazakhstan and known from the Moscow and Voronezh provinces (Tishechkin, 1988; Dmitriev, 1999). Examining this species, I found that its closest relative is *Deltocephalus antennalis* Hpt. from Central Europe. It was described by Haupt (1924) from a single female from Austria. Wagner (1939) recorded it from Germany, described the male and published some figures of the male genitalia. These two species are placed into a new subgenus *Nagadarrus*.

Nagadarrus subgen. n.

Type species *Adarrus emeljanovi* Mitjaev, 1980.

Description. Habitus resembling that of *Adarrus multinotatus* Boh. Vertex flat, as long as pronotum or somewhat longer; its anterior margin obtuse-angulately rounded or right-angled. Vertex-face transition narrowly rounded. Face approximately as long as wide. Anterior margin of pronotum prominent, posterior margin concave, lateral edge with weak keel. Fore wing without additional veins, as long as abdomen or somewhat longer in male and slightly shorter than abdomen in female.

♂. Pygofer as in Fig. 1, with numerous disorderly arranged macrosetae and small lobe on the lower edge. Anal tube as in Figs 2-3,

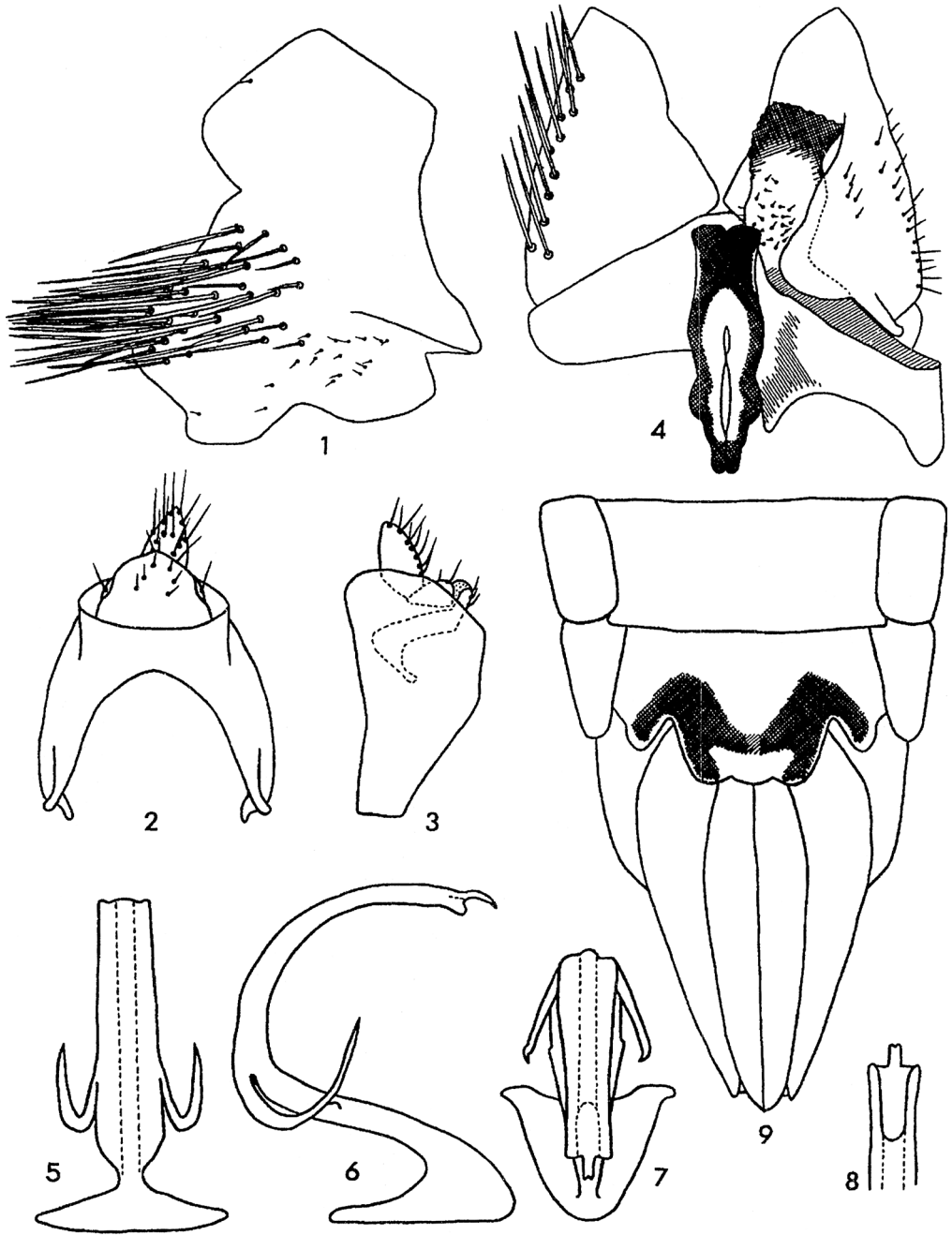
with deep basal cavity. Genital plates triangular, closed, with acute raised apices which can be elongated and crossed with one another; their macrosetae arranged along lateral margins forming uneven row on each plate (Figs 4, 10). Stylus with widened bluntly-toothed apex, underdeveloped subapical projection and numerous microsetae (Figs 4, 10). Shaft of aedeagus along whole length dorsoventrally flattened and only near the base laterally flattened, with a pair of curved appendages in middle of the shaft, a pair of teeth somewhat nearer to the base of aedeagus and unpaired bifurcate projection on dorsal side of the apex; phallosome subapical, ventral; phallobase inversely triangular (Figs 5-8). Penis laterally resembling the figure "2". Connective U-shaped, with closed branches (Fig. 4).

♀. Caudal border of 7th abdominal sternum with cavities as in Fig. 9 or in Haupt (1924; Fig. 2).

Included species: type species and *Deltocephalus antennalis* Haupt, 1924.

Etymology. The subgeneric name is given after the form of the penis which resembles in lateral view a cobra coming to a point.

Remarks. Species of the subgenus *Nagadarrus* can be easily distinguished from other representatives of *Adarrus* by the following characters: genital plates with raised apices, their macrosetae arranged along lateral margins; stylus with widened toothed apex; penis laterally resembling the figure "2", with unpaired projection on dorsal side of the aedeagal apex and a pair of appendages in the middle of the shaft.



Figs 1-9. *Adarrus (Nagadarrus) emeljanovi* Mit.: 1, pygofer lobe from side; 2, anal tube from above; 3, same from side; 4, genital plates, stylus and connective; 5, penis from front; 6, same from side; 7, same from above; 8, aedeagal apex from below; 9, apex of female abdomen from below.

Some diagnostic characters of the new subgenus show a similarity to other subgenera of *Adarrus* and to related genera. For example, the pygofer lobe is similar to that of *Errastunus* and *Adarrus* subgen. *Adarrus*; genital plates as those in *Errastunus* and *Altaiotettix* (genital plates of *Adarrus* (*Nagadarrus*) *emeljanovi* Mit. are similar to those of *Altaiotettix oshanini* Em., **comb. n.** (described in *Adarrus* (*Batarius*)) and genital plates of *Adarrus* (*Nagadarrus*) *antennalis* Hpt. resemble those of *Altaiotettix forficula* Vilb. and *Errastunus ocellaris* Fall.); chaetotaxy of genital plates as in *Errastunus* and *Arthaldeus*; stylus is similar to that of *Jassargus* and other genera of the tribe Paralimnini; shape of penis resembling that of *Errastunus*; unpaired projection on dorsal side of the aedeagal apex as in *Mendreus* and *Errastunus*, but in the latter it is not bifurcated.

The new subgenus is not placed in *Altaiotettix*, as was proposed for *Deltocephalus antennalis* Hpt. by Emeljanov (1966) (*Batarius* Em. is a synonym of *Altaiotettix* Vilb.), because their similarity is restricted to the shape of the genital plates. It is not placed in *Errastunus* Rib. either, as was done by Remane (1961), Nast (1987) and Holzinger et al. (1997) in spite of the fact that Ribaut (1947) did not place *Deltocephalus antennalis* Hpt. in the genus *Errastunus* and Remane & Asche (1980) noted that a resemblance of *Errastunus ocellaris* Fall. and *E. antennalis* Hpt. is apparently convergent. The differences between *Adarrus* and *Errastunus* are as follows:

- 1(2). Aedeagus with subapical dorsal phallotreme, with unpaired projection on dorsal side; fore wings with additional cross-veins on clavus *Errastunus* Rib.
- 2(1). Aedeagus with ventral phallotreme; fore wings without additional cross-veins on clavus *Adarrus* Rib.

Key to species of *Nagadarrus* subgen. n.

- 1(2). Genital plates shorter, their apices not elongate; stylus with right-angled apex; anterior margin of vertex obtuse-angled; frons with dark transverse streaks only in upper third (Figs 1-9).

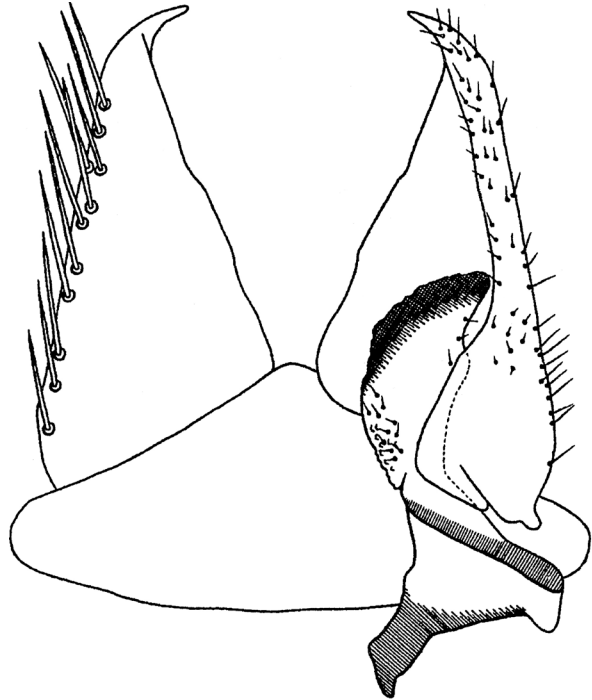


Fig. 10. *Adarrus* (*Nagadarrus* subgen. n.) *antennalis* Hpt., genital plates and stylus.

- 3.1-3.4 mm. Distribution: N Kazakhstan, Central European Russia *N. emeljanovi* Mit.
- 2(1). Genital plates longer, with elongate crossed apices; stylus thin to apex; anterior margin of vertex right-angled; frons with dark transverse streaks along its full length (Fig. 10). 2.9-4.0 mm. Distribution: Austria, Germany *N. antennalis* Hpt.

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