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A New Genus for *Hysteropterum boreale* Melichar, 1902 (Hemiptera, Auchenorrhyncha: Fulgoroidea: Issidae) from China[1]

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Abstract—A new genus is erected for *Hysteropterum boreale* Melichar, 1902 which is redescribed. Lectotype is designated in the type series of the species deposited in the Zoological Institute of the Russian Academy of Sciences (St. Petersburg, Russia). Photographs of the female (paralectotype) and drawings of the male (lectotype) genitalia are provided.

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Hysteropterum boreale was described by L. Melichar (1902) based on the material collected over 100 years ago by the Russian traveler and scientist G.N. Potanin (1835–1920) from Sichuan Province. This species has not been mentioned in the literature since Melichar, except for the statement of the fact that it was erroneously attributed to the Mediterranean genus *Hysteropterum* Amyot et Serville, 1843 (Gnezdilov, 2013) with 6 species distributed in Southwestern and Central Europe (Gnezdilov et al., 2014).

In his description of *H. boreale*, Melichar (1902) indicated the type series comprising 5 males, 10 females, and 1 larva. The collection of the Zoological Institute of the Russian Academy of Sciences (ZIN; St. Petersburg, Russia) includes 2 males, 8 females, and 1 larva of the 5th instar; 6 more males of this species are in the collection of the Moravian Museum (Brno, the Czech Republic) where L. Melichar's private collection is deposited. Since L. Melichar did not indicate the holotype in the description of this species, I designate here the lectotype (male) among the specimens of the type series in the ZIN collection, according to the rules of the International Code of the Zoological Nomenclature (ICZN, 1999, Art. 74).

Based on a complex of such external morphological characters of *H. boreale* as its wide metope with a weak median carina, wide fore wing with wide hypocostal plate, and the aedeagus with a pair of bifurcate ventral hooks, two branches of which are directed apically and two, basally, I suppose that this species does not belong to any of the known genera of the tribe Issini Spinola and erect here a new genus to accomodate this species.

The terminology and classification follow those in Gnezdilov (2003, 2013). The photographs were taken using a Leica MZ8 microscope and a JVC KY F7OB video camera and subsequently processed with Synoptics Automontage and Adobe Photoshop software. The figures were performed using a Leica MZ95 microscope and a drawing tube.

Family ISSIDAE Spinola

Tribe Issini Spinola

Genus ***Potaninum*** Gnezdilov, gen. n.

Type species *Hysteropterum boreale* Melichar, 1902 (Figs. 1–15).

Description. Metope wide (1.5 times as wide below eyes as long along midline), widened toward clypeus, with very weak median carina running from its upper margin and not reaching metopoclypeal suture (Figs. 3, 5). Clypeus without carinae. Coryphe transverse (3 times as wide as long along midline), without carinae (Figs. 1, 4). Proboscis reaching hind coxae. 3rd segment of proboscis slightly shorter than 2nd, weakly narrowed toward apex. Pedicel cylindrical. Ocelli absent. Pronotum slightly shorter than mesonotum along midline. Pronotum and mesonotum without carinae. Fore wing wide, with wide hypocostal plate, widely rounded apically (Figs. 2, 6, 7). Clavus long, not less than 4/5 as long as wing. Venation: *R* 2 *M* 2-3

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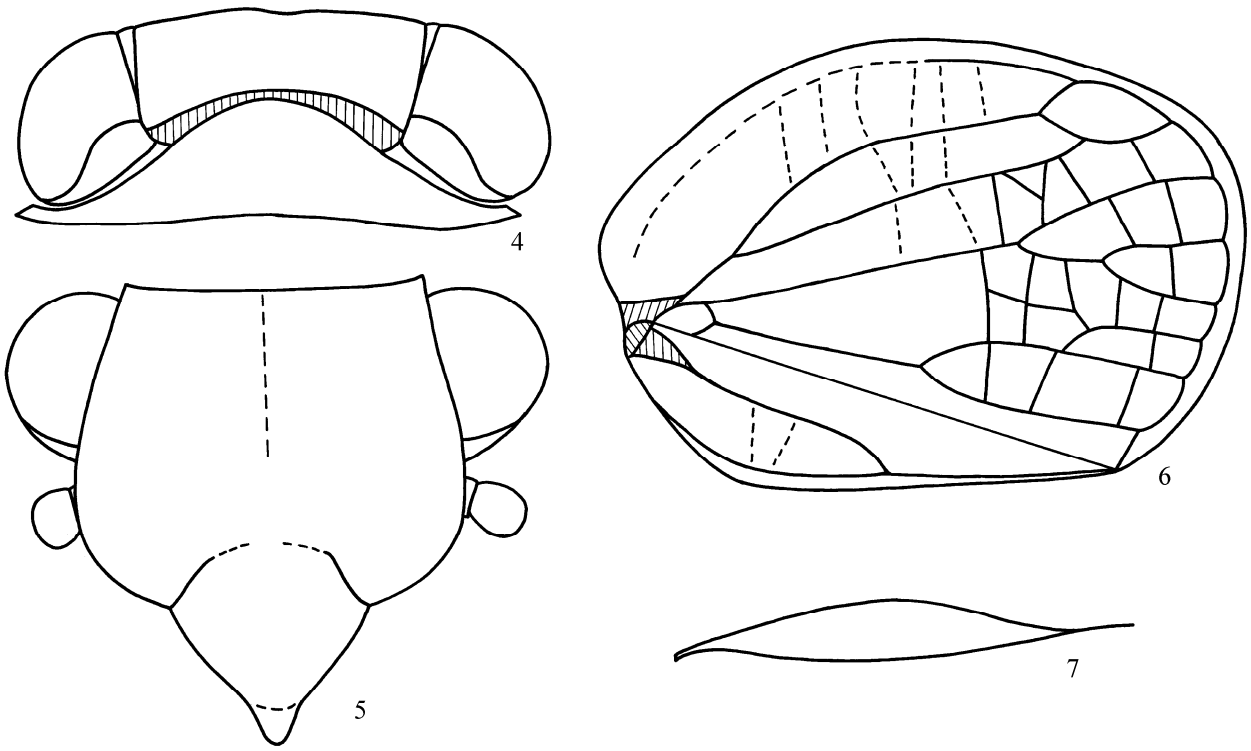
Figs. 1–3. *Potaninum boreale* (Melichar, 1902), female (paralectotype): (1) dorsal view, (2) lateral view, (3) front view. Scale bar 1 mm.



Figs. 4–7. *Potaninum boreale* (Melichar, 1902), male, lectotype: (4) head and pronotum, dorsal view; (5) head, frontal view; (6) fore wing; (7) hypocostal plate.

CuA 2; *R* furcating near basal cell, its branches fused apically to form long and narrow characteristic loop; *M* and *CuA* furcating near middle of wing (Fig. 6). Hind wing rudimentary, only reaching middle of clavus of fore wing. Hind tibia with 2 lateral spines in its distal half and with 9 apical spines. 1st metatarsomere with 2 lateroapical spines and with 6 or 7 intermediate spines in continuous row.

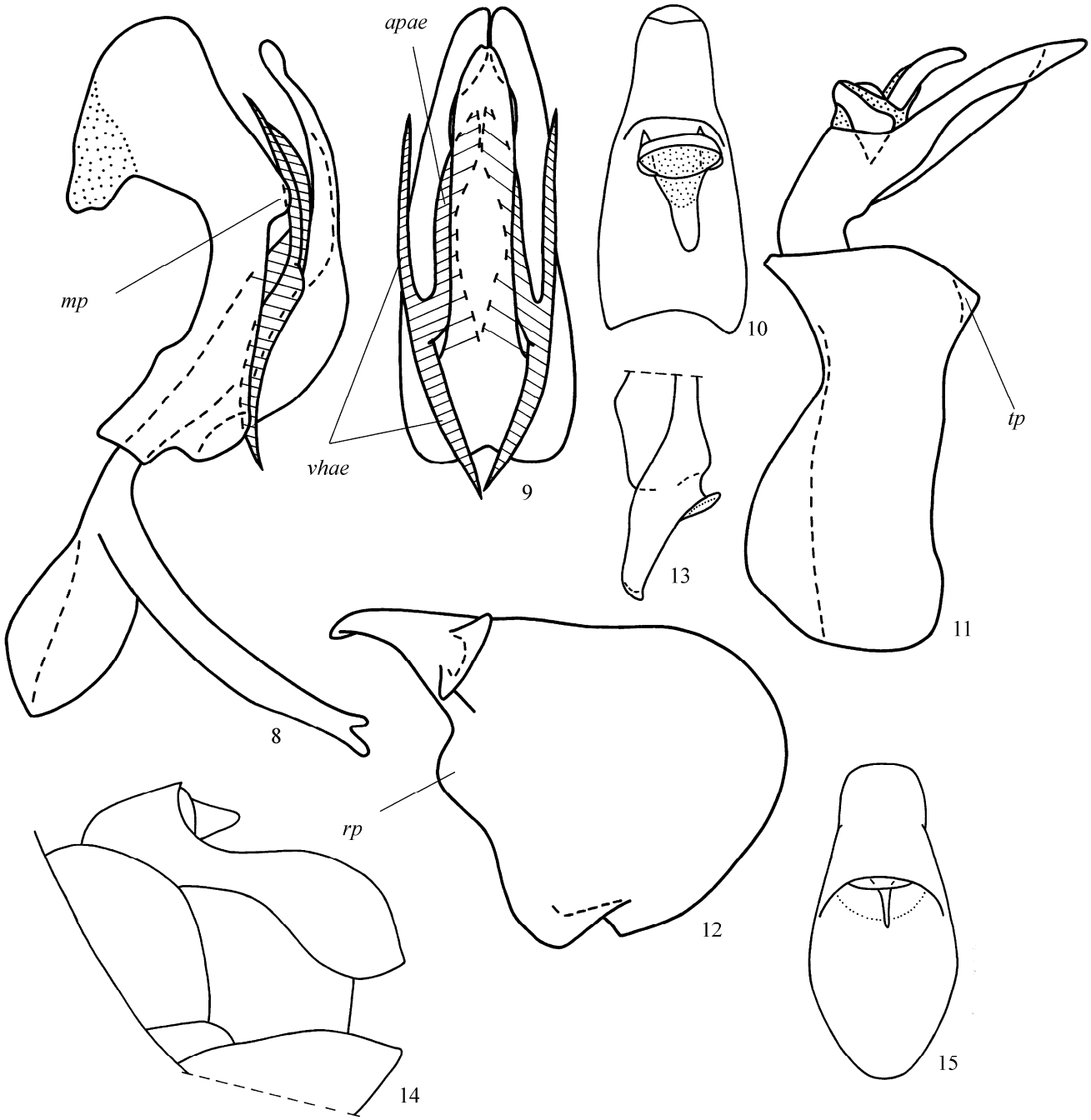
Pygofer with triangular process of hind margin (Fig. 11). Phallobase with weakly sclerotized dorsoapical sac (Fig. 8). Ventral lobe of phallobase swollen at base, long and narrow (Figs. 8, 9). Aedeagus with ventral hooks furcating from base and forming branches directed apically and basally (Fig. 9). Capitullum of stylus without neck (Fig. 12). Hind margin of sternite VII of female widely concave.

Etymology. The genus is named after G.N. Potanin.

Potaninum boreale (Melichar, 1902), comb. n.
(Figs. 1–15)

Hysteropterum boreale Melichar, 1902 : 17.

Description. Male genitalia (Figs. 8–13). Anal tube elongate, widened toward emarginate apex (dorsal view) (Fig. 10). Anal column long (about 0.3–0.4 times as long as anal tube). Pygofer with triangular process of hind margin in dorsal part (Fig. 11, *tp*). Phallobase strongly arcuately curved (lateral view), with weakly sclerotized dorsoapical sac and with pair of lateral lobes at the basement (Fig. 8). Dorsolateral lobes of phallobase widely rounded apically. Near middle, inner margin of each dorsolateral lobe with large rounded projection directed toward aedeagus (Fig. 8, *mp*). Ventral lobe of phallobase swollen in proximal half (lateral view) (Fig. 8), long, narrow, narrowed toward apex, with weak apical emargination (ventral view) (Fig. 9). Apical processes of aedeagus not reaching apex of phallobase, narrow, narrowed toward apices (Fig. 9, *apae*). Ventral hooks of aedeagus furcating from base, each with one branch directed apically, and one, directed basally (Fig. 9, *vhae*). Branches equal in length, tapering apically. Branches of hooks directed apically parallel, those directed basally converging toward apex. Stylus with wide plate; capitullum without neck; margin of stylus with large rounded projection under capitullum (lateral view) (Fig. 12, *rp*). Capitullum narrow (dorsal view), narrowed toward apex (Fig. 13); lateral tooth large.



Figs. 8–15. *Potaninum boreale* (Melichar, 1902), male genitalia (lectotype) (8–13) and female genitalia (paralectotype) (14, 15) [(8), penis and connective, lateral view; (9) penis, ventral view; (10) anal tube of male, dorsal view; (11) male pygofer and anal tube, lateral view; (12) stylus, lateral view; (13) capitulum of stylus, dorsal view; (14) gonoplacs and anal tube, lateral view; (15) anal tube of female, dorsal view. Abbreviations: *apae*, apical processes of aedeagus; *vhae*, ventral hooks of aedeagus; *mp*, marginal projection; *rp*, rounded projection; *tp*, triangular projection.

Female genitalia (Figs. 14, 15). Anal tube elongate, narrowed toward rounded apex (dorsal view) (Fig. 15), with lateral margins deflexed in distal part (lateral view) (Fig. 14). Anal column short (1/7 as long as anal tube). Gonoplacs rounded (Fig. 14).

Material. China. Lectotype, ♂: "Sichuan, Khunshuigu-Lifan, Potan. 18.VIII. [18]93." Paralectotypes: 1 ♂, 8 ♀, 1 larva, "Sichuan, Khunshuigu-Lifan, Potan. 18.VIII. [18]93."

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