

**ON THE TAXONOMY OF THE TRIBE ADENISSINI DLABOLA
(HEMIPTERA: FULGOROMORPHA: CALISCELIDAE: OMMATIDIOTI-
NAE), WITH THE DESCRIPTION OF A NEW GENUS AND A NEW
SPECIES FROM VIETNAM**

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Abstract - Coinquendini Gnezdilov & Wilson, 2006 is downgraded to subtribal level in the tribe Adenissini Dlabola. *Delhina eurybrachydoides* Distant is redescribed and placed in the subtribe Coinquendina, stat. n., firstly recorded from Nepal. *Phusta dantela* gen. et sp. n. from Vietnam is described in the subtribe Pteriliina Gnezdilov & Wilson.

KEY WORDS: Hemiptera, Caliscelidae, Ommatidiotinae, Adenissini, Coinquendina, Pteriliina, *Delhina*, new genus, new species, new status, Nepal, Vietnam

Izvleček – O TAKSONOMIJI PLEMENA ADENISSINI DLABOLA (HEMIPTERA: FULGOROMORPHA: CALISCELIDAE: OMMATIDIOTINAE), Z OPISOM NOVEGA RODU IN NOVE VRSTE IZ VIETNAMA

Položaj taksona Coinquendini Gnezdilov in Wilson, 2006, je znižan na raven podplemena v plemenu Adenissini Dlabola. Ponovno je opisana vrsta *Delhina eurybrachydoides* Distant, uvrščena je v podpleme Coinquendina, stat. n. in prvič poročana iz Nepala. Opisana je vrsta *Phusta dantela* gen. et sp. n. iz Vietnama, ki pripada podplemenu Pteriliina Gnezdilov in Wilson.

KLJUČNE BESEDE: Hemiptera, Caliscelidae, Ommatidiotinae, Adenissini, Coinquendina, Pteriliina, *Delhina*, nov rod, nova vrsta, nov položaj, Nepal, Vietnam

Introduction

During study of the planthopper collections of the Natural History Museum (London, UK) (BMNH) and the Muséum National d'Histoire Naturelle (Paris,

France) (MNHN) new material of *Delhina eurybrachydoides* Distant from Nepal and a new genus and a new species of the tribe Adenissini from Vietnam were discovered.

Recently the tribal system of the subfamily Ommatidiotinae of the family Caliscalidae was revised (Gnezdilov & Wilson, 2006). Currently Ommatidiotinae comprises 4 tribes: Adenissini Dlabola, Augilini Baker, Coinquendini Gnezdilov & Wilson and Ommatidiotini Fieber. The tribe Adenissini comprises 3 subtribes: Adenissina Dlabola, Bocrina Emeljanov, and Pteriliina Gnezdilov & Wilson. However, the present study of *Delhina eurybrachydoides*, which was described in the family Issidae (Distant, 1912, 1916) shows that the genus *Delhina* Distant belongs to the family Caliscalidae. *D. eurybrachydoides* has the same structure of the posterior connective lamina of gonapophyses IX and anterior connective lamina of gonapophysis VIII (Figs 9, 10, 12) as the genera *Perissana* Metcalf (Gnezdilov, 2003, figs 14, 15) and *Coinquenda* Distant (Gnezdilov & Wilson, 2006, fig. 28 a–d). According to external morphology, e.g. well developed fore and hind wings, the genus *Delhina* occupies an intermediate (transitional) position between Pteriliina and Adenissina. Apparently Pteriliina may be treated as the most primitive Adenissini. *D. eurybrachydoides* demonstrates the conversion from primitive Pteriliina to advanced Adenissina. According to the structure of the penis (massive aedeagus longer than phallobase, with a pair of bifurcate lateral subapical processes, without ventral hooks; phallobase with two narrow lateral lobes dislocated ventrally and narrow ventral lobe (Figs 5, 6) *D. eurybrachydoides* is closely related to *Coinquenda nigroclavata* Distant (Gnezdilov & Wilson, 2006, fig. 27). Accordingly I propose to transfer the genus *Delhina* to Coinquendini and treat this as a subtribe of the Adenissini.

Material and methods

The genital segments of the examined specimens were macerated in 10% KOH and figured in glycerine jelly using light microscope. Photographs of the specimen were made using Leica MZ8 with JVC video camera KY F70B, images are produced using the software Synoptics Automontage.

The holotype of the species described below is deposited in the Muséum National d'Histoire Naturelle, Paris, France.

Taxonomy

Tribe Adenissini Dlabola, 1980

Subtribe Coinquendina Gnezdilov & Wilson, 2006, stat. n.

Type genus: *Coinquenda* Distant, 1916.

Diagnosis (after Gnezdilov & Wilson, 2006, modified): Fore wings subbrachypterous. Phallobase fused with the base of anal tube. Phallobase with two narrow lateral lobes dislocated ventrally and narrow ventral lobe. Massive aedeagus longer than phallobase, with lateral processes, without ventral hooks. Style with

straight hind margin, caudo-dorsal angle widely rounded. Capitulum of style without neck, long and narrow, without lateral tooth.

Gonoplags triangular. Proximal part of posterior connective lamina of gonapophyses IX with a pair of long lateral processes near to the margin of Median field which has deep incision and sclerotized comb extends along its median line from the base of the lamina. Lateral fields narrow and flat. Anterior connective lamina of gonapophysis VIII with 3 flattened rounded teeth in apical group and 2–3 spine-shaped teeth in lateral group.

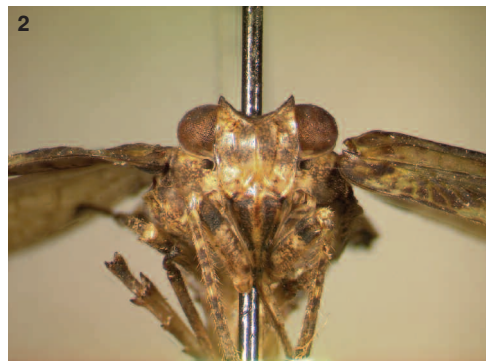
Genus *Delhina* Distant, 1912

Diagnosis: Metope with distinct median and sublateral keels (Fig. 2). Ocelli present. Coryphe transverse, depressed, anterior margin convex, posterior margin concave (Figs 1, 4). Pronotum without keels. Scutellum with lateral keels. Fore and hind wings with marginal setae. Fore wings narrowing apically, with long clavus (4/5 of wing length), narrow precostal area (reduced in basal part of wing and distinct in its apical part), without hypocostal plate (Figs 1, 4). Basal cell elongate, Radius multifurcate (about 12 branches), median with 2 main branches and multifurcate apically, cubitus anterior simple; many transverse veins. Hind wings with well-developed remigium and vannus (Fig. 1). Hind tibia with 2 lateral spines. First metatarsomere as long as second and third together, with 8 intermediate spines located on an arch. Pretarsus short.

Gonoplags elongate, triangular, fused dorso-subapically (Fig. 3). Anterior connective lamina of gonapophysis VIII with 3 spine-shaped teeth in lateral group (Fig. 12).

Delhina eurybrachydoides Distant, 1912

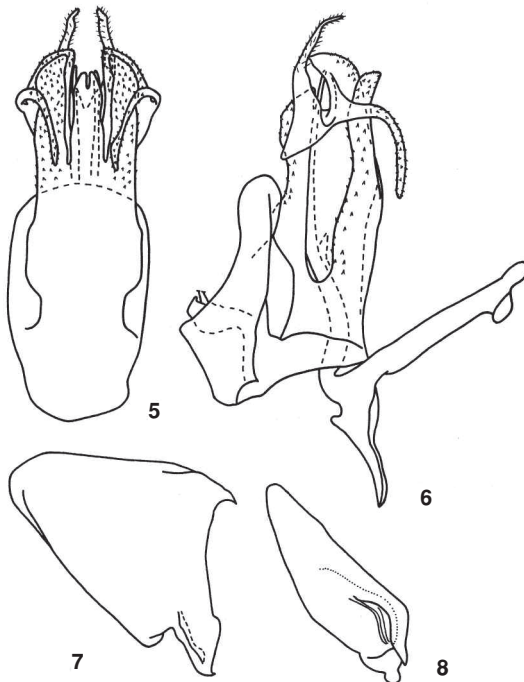
Material examined (BMNH): N. India: ♀, type, Eastern Himalayas. [India, West Bengal]: 1♀, Kurseong, 4700–5000 ft., 25.VI.10, Annandale, “from Ind. Mus. Distant Coll. B.M. 1911-383”. Nepal: 1♂, 1♀, Nagarkot, 6500–7000 ft., 9.VII.–6.VIII.1935, F.M. Bailey; 1♀, Tanjct, 17.VII.1949, “B.M. Nepal Exp. 1949-637”.





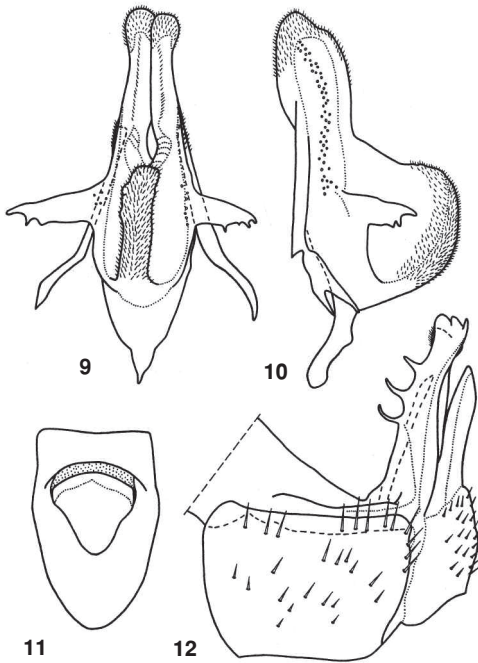
Figs 1-4: *Delhina eurybrachydoides* Distant. 1 – female, type, dorsal view; 2 – same, frontal view; 3 – same, ovipositor, lateral view; 4 – male (Nepal), dorsal view.

Male genitalia (Figs 5-8): Anal tube slightly elongate, parallel-sided, widely rounded apically. Pygofer narrowing apically (in lateral view), hind margin without process. Phallobase elongate, with dorsal lobe bearing acutely angulate concavity apically, two lateral lobes dislocated ventrally, and ventral lobe. Dorsal and lateral lobes divided by deep incision (Fig. 6). Ventral lobe with apical concavity (Fig. 5). Aedeagus longer than phallobase, with a pair of bifurcate lateral subapical processes



externally and a pair of rod-shaped dorsal processes internally (analogous rod-shaped internal processes are present also in the genus *Perissana* Metcalf, for instance, *P. dlabolai* Gnezdilov & Wilson (Gnezdilov & Wilson, 2006, fig. 21a). Phallobase and aedeagus covered by denticles. Style with straight hind margin, caudo-dorsal angle widely rounded (Fig. 7). Capitulum of style without neck (in lateral view), long and narrow (in dorsal view), without lateral tooth (Fig. 8).

Figs 5-8: *Delhina eurybrachydoides* Distant (Nepal), male genitalia. 5 – penis, ventral view; 6 – same, lateral view; 7 – style, lateral view; 8 – same, dorsal view.



Female genitalia (Figs 9-12): Sternum VII with straight hind margin. Anal tube elongate, narrowing to rounded apex (Fig. 11). Distal parts of posterior connective lamina of gonapophyses IX straight (Fig. 9). Median field flattened laterally, convex (in lateral view) (Figs 9, 10). Gonocoxa VIII with straight hind margin. Endogonocoxal process narrowing apically, with simple apex. Gonospiculum bridge small, fused with proximal part of posterior connective lamina of gonapophyses IX.

Figs 9-12: *Delhina eurybrachydoides* Distant (Nepal), female genitalia. 9 – posterior connective lamina of gonapophyses IX, dorsal view; 10 – same, lateral view; 11 – anal tube, dorsal view; 12 – anterior connective lamina of gonapophysis VIII, lateral view.

Distribution: NE India (Distant, 1912, 1916), Nepal, China (Che et al., 2006).

Subtribe Pteriliina Gnezdilov & Wilson, 2006

***Phusta* gen. n.**

Type species: *Phusta dantela* sp. n.

Diagnosis: Metope wide, with concave upper margin (Fig. 15). Median keel of metope reaching middle of postclypeus. Postclypeus large. A pair of ocelli present. Coryphe transverse, depressed, with convex anterior margin and concave posterior margin (Fig. 13). Pronotum with convex anterior margin and straight posterior margin, without keels. Scutellum large, with lateral keels. Fore wings long, narrowing apically, with long clavus (4/5 of wing length), without hypocostal plate, costal margin with setae, precostal area not excavate (Figs 13, 14). Radius multifurcate (with 6–7 major veins), median bifurcate (with short additional bifurcations apically), cubitus anterior simple. Hind tibia with 2 lateral spines distally. First metatarsomere approximately as long as second and third metatarsomeres together, with 7–8 intermediate spines located on an arch. Gonoplags long, triangular (Fig. 16).

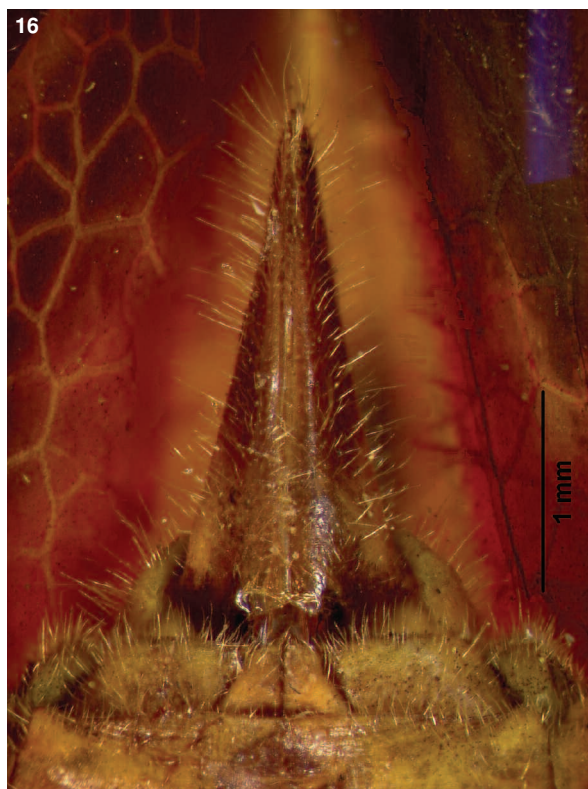
Comparison: This new genus occupies intermediate position between *Pterilia* Stål and *Distantina* Gnezdilov & Wilson according to distinct median and sublateral

keels of metope and convex anterior margin of coryphe (in dorsal view). New genus clearly differs from all other genera of the subtribe by long triangular gonoplacs.

Etymology: The generic name is derived from the Greek noun “*phustis*” – skirt. Gender is feminine.

Phusta dantela sp. n.





Figs 13-16: *Phusta dantela* gen. et sp. n., holotype. 13 – dorsal view; 14 – lateral view; 15 – frontal view; 16 – ovipositor, lateral view.

Holotype: ♀, [Northern Vietnam] Annam, Lién Chién, près Tourane, 1000 m, 1923, Mme Poilane (MNHN).

Description: General coloration light brown, with dark brown spots (Figs 13-15). Fore wings brown reddish, with dark brown or black spots. Hind wings dark brown apically. Apices of spines black.

Female genitalia (Fig. 16): Sternum VII with straight hind margin. Anal tube nearly oval, weakly narrowing apically.

Body length: 16.1 mm.

Etymology: The species name is derived from the Greek noun “ ” – lace.

Acknowledgements

I am sincerely grateful to Dr M.R. Wilson (Cardiff, UK), Mr M.D. Webb (London, UK), and Prof. T. Bourgoïn (Paris, France) for an opportunity to examine

the material and support. The study was financially supported by the Royal Society (London, UK) and Muséum National d'Histoire Naturelle (Paris, France) grant 2007 for invited scientists.

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Received / Prejeto: 25. 3. 2008

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Artikel/Article: [ON THE TAXONOMY OF THE TRIBE ADENISSINI DLABOLA \(HEMIPTERA: FULGOROMORPHA: CALISCELIDAE: OMMATIDIOTINAE\), WITH THE DESCRIPTION OF A NEW GENUS AND A NEW SPECIES FROM VIETNAM 11-18](#)