

## NEW RECORD OF THE GENUS *TRICHODELPHAX* VILBASTE FROM CHINA WITH REDESCRIPTION OF *T. LUKJANOVITSHI* (HEMIPTERA, FULGOROIDEA, DELPHACIDAE)

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**Abstract** *Trichodelphax* Vilbaste, 1968 and *T. lukjanovitshi* (Kusnezov, 1929) are reported for the first time from China based on specimens collected from Heilongjiang Province in North China. Photos of brachypterous male of *T. lukjanovitshi* are provided and male genitalia are reillustrated.

**Key words** Hemiptera, Delphacidae, *Trichodelphax*, new record, China.

### 1 Introduction

The delphacid genus *Trichodelphax* was established by Anufriev in 1968 for *T. splendidus* Vilbaste from Far East of Russia. Emeljanov (1977) transferred *Delphacinus lukjanovitshi* Kusnezov (1929) to *Trichodelphax* and Logvinenko (1977) added the third species, *T. aurora* to this genus. Anufriev & Emeljanov (1988) reillustrated *T. splendidus* and *T. lukjanovitshi* and provided a key to the two Russian species. So far, all *Trichodelphax* species are known to occur only in Palearctic Region but no species of this genus has been reported in the Chinese fauna.

During recent work on the taxonomy of Delphacidae based on the specimens collected from the northernmost area in China (Sanjiang plain in Heilongjiang Province), this genus and the species *T. lukjanovitshi* were discovered. This opportunity is taken to redescribe and reillustrate the species.

### 2 Material and Methods

The specimens for this study are deposited in the Entomological Museum, Northwest A & F University, Yangling, Shaanxi, China (NWAUFU). Habitus photos were taken by using a Scientific Digital micrography system equipped with an Auto-montage imaging system and a high sensitive QIMAGING Retiga 4000R digital camera (CCD). Multiple photographs were compressed into final images. The body measurements are from apex of vertex to tip of abdomen. The morphological terminology used in this description follows Ding (2006). All measurements are in millimeters (mm).

#### **Genus *Trichodelphax* Anufriev, 1968 New record to China**

*Trichodelphax* Vilbaste, 1968: 35. Type species: *Trichodelphax splendidus* Vilbaste, 1968. By original designation.

Distribution. China (Heilongjiang), Russian, Mongolia, Turkestan, Azerbaijan.

#### ***Trichodelphax lukjanovitshi* (Kusnezov, 1929) New record to China (Figs 1–15)**

*Delphacinus lukjanovitshi* Kusnezov, 1929: 157. Type locality (Turkestan).

*Trichodelphax lukjanovitshi*, Emeljanov, 1977: 108; Anufriev & Emeljanov, 1988: 369.

Redescription. brachypterous male length 1.90–2.35, tegmina length 0.88–0.97, width at tegulae 0.62–0.68.

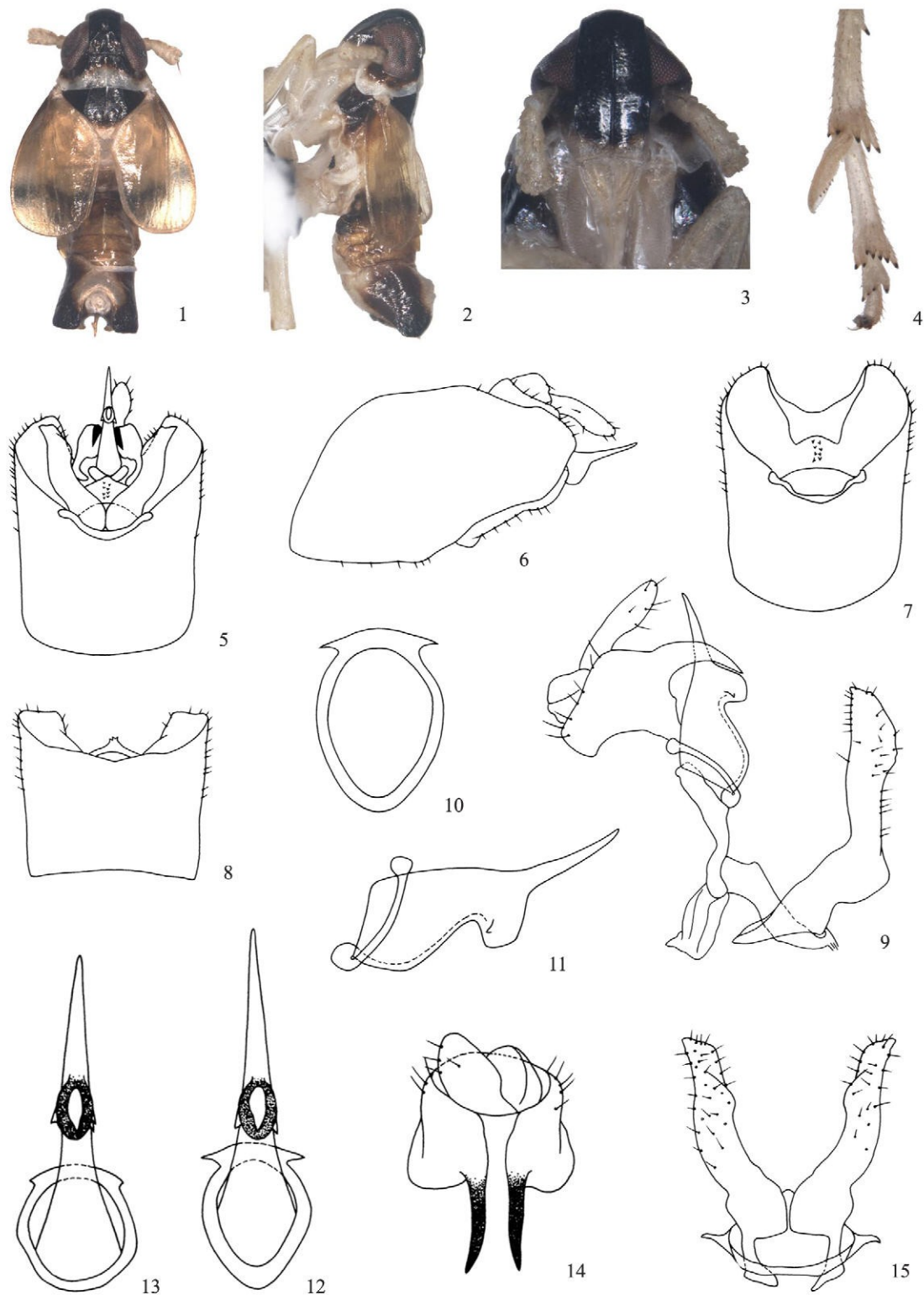
Color. Brachypterous. Body shiny. Vertex, frons, genae, anterior half of pronotum, mesonotum except scutellum and male pygofer laterally dark, caudal half of pronotum, tegulae and scutellum whitish, frons anteriorly, antennae, legs, post- and anteclypeus slightly beige. Eyes blackish brown. Tegmina yellowish brown, subhyaline. Apices of teeth on tibiae and tarsi black. Male pygofer ventrally beige to blackish brown.

Head. Including eyes narrower than pronotum (about 0.92: 1.00) (Fig. 1), profile of transition vertex to frons rounded (Fig. 2). Vertex quadrate, slightly longer in midline than wide at base, anterior margin of vertex rounded, projecting in front of eyes, slightly narrower at apex than at base (about 0.91: 1.00); two lateral carinae subparallel except where slightly expanded behind eyes; submedian carinae arising near base of lateral carinae, converging but vanishing before apex of vertex; Y-shaped carina with arms and stalk distinct, area of basal compartments slightly depressed (Fig. 1). Frons subrectangular (Fig. 3), surface convex in profile (Fig. 2), ca. 1.75 times higher than its maximum width, widest at level of antennal bases, lateral frontal margins slightly convex, median carina weakly developed and only more conspicuous at apical 2/3 (Fig. 3). Antennal segments cylindrical, surpassing frontoclypeal suture, segment I slightly broadening towards apex, shorter than segment II about 0.48: 1.00 (Fig. 3). Postclypeus wider at base than frons at apex, post- and anteclypeus together approximately 0.86 × length of frons, median carina well defined (Fig. 3).

Thorax. Pronotum in midline approximately 0.85 × as long as vertex, lateral carinae slightly curved, diverging towards but not attaining posterior margin (Fig. 1). Mesonotum in midline apparently shorter than vertex and pronotum together, lateral carinae of mesonotum straight, reaching posterior margin, median carina obscure apically (Fig. 1). Tegmina in brachypterous male 0.53–0.57 mm in maximum width, widest in

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Figs 1 – 15. *Trichodelphax lukjanovitshi* (Kusnezov, 1929). 1. Male habitus (brachypterous), dorsal view. 2. Same, lateral view. 3. Frons. 4. Post-tibial spur and metatarsus. 5. Male genitalia, caudal view. 6. Same, left lateral view. 7. Pygofer, caudal view, anal segment, aedeagus and parameres removed. 8. Same, caudoventral view. 9. Anal segment, aedeagal complex and parameres, left lateral view. 10. Suspensorium, caudal view. 11. Aedeagus, left lateral view. 12, 13. Same, caudal view. 14. Anal segment, caudal view. 15. Parameres, caudal view.

middle, apically rounded and attaining the fifth abdominal tergite (Figs 1–2). Legs with metatibia 0.81–0.85 mm long, with 2 lateral and 5 apical teeth (grouped 2+3), metabasitarsus (0.33–0.38) nearly as long as tarsomere 2 (0.13–0.16) + 3 (0.20–0.21) combined, metabasitarsus distally with 7 apical teeth grouped 2+5, tarsomere II with 4 apical teeth. Post-tibial spur 0.25–0.27 mm long, slightly shorter than metabasitarsus, foliaceous, tectiform, with about 12 denticles along interior margin (Fig. 4).

Abdomen (except genitalia). Apodemes of 2nd sternite elongate, nearly attaining tergite.

Male genitalia. Male pygofer flattened dorsoventrally, caudal half strongly narrowed in lateral view, laterocaudal margin bevelled and almost truncated, laterodorsal angles obtusely rounded (Fig. 6), in caudal aspect pygofer opening wider than long (Fig. 5). Diaphragm produced dorsomedially, between dorsal margin and opening for parameres armed with not numerous teeth (Figs 5, 7). Articulated suspensorium ventrally ring-like, embracing base of aedeagus and connecting at ventral side, dorsally slightly broadened and with short process at each side leading to the anal segment laterally (Figs 9–10). Parameres well developed, divergent and sinuate, surpassing level of anal segment from caudal view, apical part not parallel-sided, subapex distinctly projected on inner margin, outer angle strongly attenuate (Figs 5, 15). Aedeagus broad at base, in middle with a subquadrangular projection ventrally which is usually bearing 1–2 teeth before gonopore, gonopore at apex of the projection, apical 2/5 of aedeagus spine-shaped, tapered and slightly curved caudodorsad (Figs 9, 11–13).

Opening for parameres with dorsal margin slightly arched, lateral margins sinuate, ventral margin slightly convex medially (Fig. 7). Male anal segment deeply sunk into dorsal emargination of male pygofer which is barely visible in profile, processes of anal segment arcuate, in caudal aspect the processes almost straight and slightly divergent distally (Figs 5, 6, 9, 14).

Specimens examined. 11 ♂♂ (brachypterous), Sanjiang Plain, Heilongjiang Province, China, 25 May 2007. coll. BAO Xiao, WEI Li and QI Hui-Hui.

Distribution. China (Heilongjiang), Mongolia, Turkestan, USSR.

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## 特里飞虱属在中国的首次发现及卢氏特里飞虱的再描记 (半翅目, 蜡蝉总科, 飞虱科)

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摘要 记述采自黑龙江三江平原的飞虱科中国1新纪录属: 特里飞虱属 *Trichodelphax* Vilbaste, 1968 及中国1新纪录种: 卢氏特里飞虱 *T. lukjanovitshi* (Kusnezov, 1929), 并对卢氏特里飞虱作了重新描记,

关键词 半翅目, 飞虱科, 特里飞虱属, 新纪录, 中国.

中图分类号 Q969.35

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