

TWO NEW RECORD SPECIES OF DELPHACIDAE (HEMIPTERA, FULGOROIDEA) FROM CHINA

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Abstract Two new record species of Delphacidae in Chinese fauna *Stenocranus pacificus* Kirkaldy, 1907 and *Ribautodelphax pusilla* Emeljanov, 1972 are reported in this paper. Photos of male habitus of the two species are provided and male genitalia are illustrated.

Key words Hemiptera, Delphacidae, new record, China

Stenocranus pacificus Kirkaldy, 1907 New record to China (Figs 1–4, 9–17)

Stenocranus pacificus Kirkaldy, 1907: 139

Stenocranus pacificus Fennah, 1978: 219. Misidentified

Macropterous male 4.40–4.42 mm, tegmina length 3.63–3.83 mm, width at tegulae 0.89–0.98 mm.

Ground color of male body orange-brownish with a whitish median longitudinal stripe from vertex anteriorly to hind margin of scutellum, along the stripe bordered with orange yellow. Vertex with sublateral blackish stripes extending nearly to end of frons. Eyes dark. Ocelli blackish-red. Tegmina with a longitudinal brownish band along inner margin. Abdomen orange-brown. Dorsum of male abdomen furnished with irregular sordid patches laterally on each segment; middorsum of segments IV–VII blackish-brown on anterior tergal margins. Male pygofer sordid. Tips of produced processes of male anal segment black.

Head including eyes narrower than pronotum (about 0.86:1.00) (Figs 1, 4). Vertex longer medially than wide at base (about 1.26:1.00), anteriorly transverse, slightly produced medially; lateral carinae subparallel except where expanded behind eyes; basal compartment wider at base than greatest length (Figs 1, 4). Frons more than twice as long as the maximum width, widest at apex; frontoclypeal suture convex; lateral carinae sinuate (Fig 3). Postclypeus same wide as frons at apex; post- and anteclypeus together approximately 0.94× length of frons; median carina well defined (Fig 3). Antennal segments cylindrical, surpassing frontoclypeal suture; segment II about 2.2 times as long as I (Fig 3). Rostrum almost reaching to metatrochanters.

Thorax. Pronotum in midline slightly shorter than vertex; lateral carinae slightly curved, diverging towards and nearly reaching posterior margin (Figs 1, 4). Mesonotum longer than vertex and pronotum combined (about 1.2:1.0), lateral carinae slightly diverging and extending to posterior margin; median carina obscure apically (Figs 1, 4). Tegmina long, surpassing tip of abdomen about half of its total length, rounded

at apex (Figs 2, 9). Metathiae 1.3–1.4 times longer than metatarsi together, bearing 2 lateral and 5 apical teeth (grouped 2+3), spinulation of metatarsus 7 (2+5), 2nd 4. Posttibial spur slightly shorter than metatarsus; foliate with 27–29 small black-tipped teeth on lateral margin.

Male genitalia. Pygofer in profile ventrally distinctly longer than dorsally; laterodorsal angles obtusely rounded, not produced caudad (Fig 11). Diaphragm of pygofer with dorsal margin slightly incised medially (Fig 12). Parameres broad, contiguous at base, diverging thence from caudal view, widest near apex; inner margin shallowly concave at middle; apex strongly narrowed with outer angle produced, which is bifurcated in lateral aspect (Figs 10, 11, 13, 17). Aedeagus elongate, broad in its basal quarter; distally curved ventrad with a long spinose process arising at subapex on the dorsal side, ventrally near apex about 3 saw-like teeth (Figs 13–15). Opening of diaphragm for parameres trapezoid shape; dorsal margin produced downward medially; ventral margin sinuate (Fig 12). Suspensorium n-shaped, short and broad, laterally with long arms which is deeply incised embracing the base of aedeagus but opening ventrally (Figs 13, 16). Anal segment ring-like, ventrodorsally closed by broad chitin bridge; a stout and short process produced from each laterodistal angle, widely separated at base (Fig 10).

Specimens examined: 2 ♂♂ (macropterous), Wuyanling Zhejiang Province, China, 5 Aug 2007, coll. QIAO Lu-Man; 1 ♂ (macropterous), Fengyang Mountain, Zhejiang Province, China, 31 July 2007, coll. QIAO Lu-Man.

Distribution: China (Zhejiang Province); Fiji, Western Caroline Islands, Palau, Philippines.

Ribautodelphax pusilla Emeljanov, 1972 New record to China (Figs 5–8, 18–30)

Ribautodelphax pusilla Emeljanov, 1972: 220. Anufriev & Emeljanov, 1988: 415; Wilson, 1992: 88.

Ribautodelphax balgasia Vilbaste, 1980: 14.

Macropterous male 3.23–3.31 mm, tegmina length 2.67–2.78 mm, width at tegulae 0.85–0.93 mm; brachypterous male

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Figs 1- 4 *Stenocranus pacificus* Kirkaldy 1907. 5- 8. *Ribautodelphax pusilla* Emeljanov, 1972. 1, 5. Male habitus (macropterous), dorsal view. 2, 6. Same, left lateral view. 3, 8. Head, ventral view. 4. Head and thorax, dorsal view. 7. Male habitus (brachypterous), dorsal view.

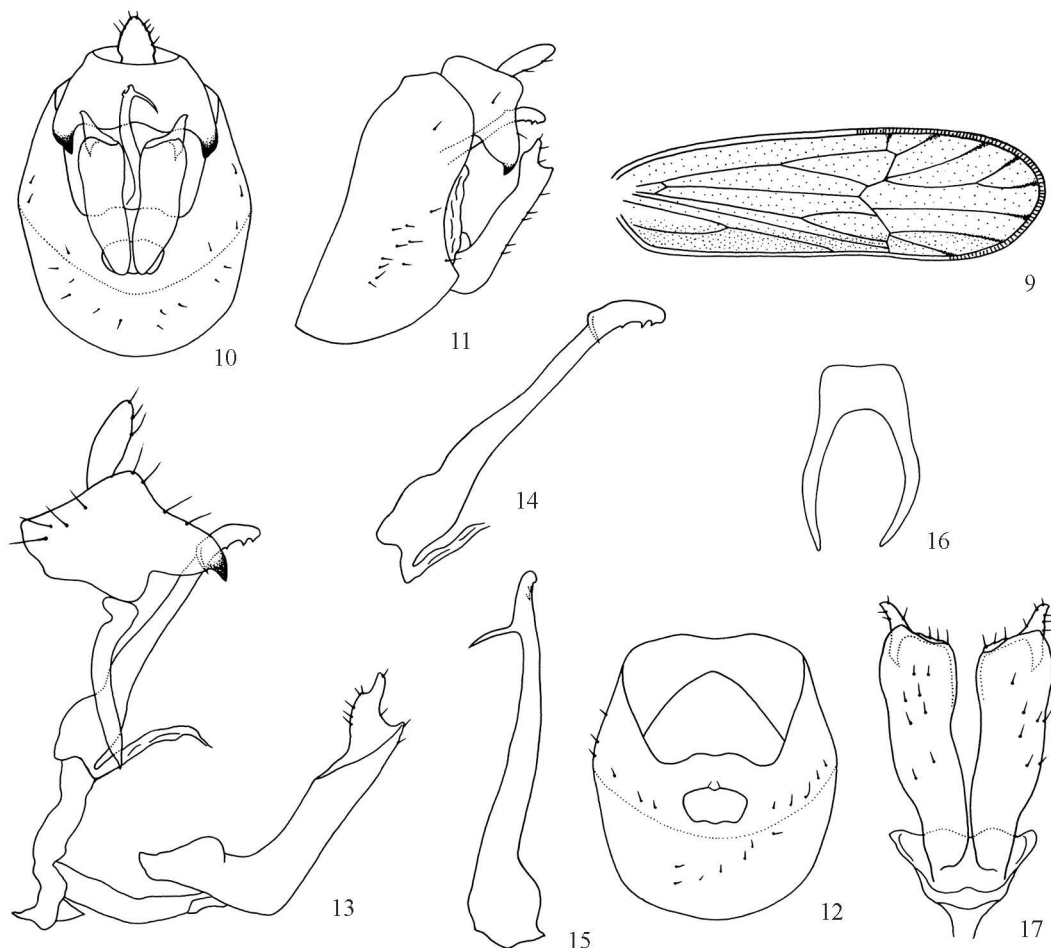
length 2.43- 2.53 mm, tegmina length 1.26- 1.34 mm, width at tegulae 0.82- 0.87 mm.

Color Macropterous Male vertex beige in basal half basal compartment with a brown marking at each side; vertex in apical half black; frons and genae tan; frons with longitudinal black stripes adjacent lateral carinae and at the both sides of median carina; postclypeus mostly black. Antennae sordid yellow. Eyes black. Ocelli blackish brown. Pronotum beige to yellowish brown, at each side of median carina with a brown marking medially; outer lateral carinae of pronotum blackish or not. Mesonotum brown. Tegulae sordid. Abdomen and male pygofer black, dorsum and venter of male abdomen with sordid orange patches laterally at each tergite. Tegmina brownish yellow, subhyaline. Legs sordid brown, 1st to 3rd femora and tibiae with blackish longitudinal stripes. Brachypterous male body color as macropterous.

Head Including eyes slightly narrower than pronotum

(about 0.92: 1.00) (Figs 5, 7). Vertex quadrate wider at base than medially long about 1.1: 1.0, at apex slightly narrower than at base (about 0.9: 1.0), anterior margin transverse slightly produced in middle; two lateral carinae subparallel except where expanded laterally behind eyes; submedian carinae originating from near base of lateral carinae, percurrent and uniting at apex of vertex; Y-shaped carina with arms and stalk distinct; area of basal compartments slightly concave (Figs 5, 7). Frons about twice as long as its maximum width, widest near lower parts of eyes; lateral frontal margins slightly convex; median carina protuberant (Fig 8). Antennal segments cylindrical surpassing frontoclypeal suture; segment I slightly longer than wide at apex, segment II about 2 times as long as I (Fig 8). Postclypeus wider at base than frons at apex, post- and anteclypeus together approximately 0.7× length of frons (Fig 8). Rostum surpassing mesosternites.

Thorax Pronotum in midline slightly shorter than length of



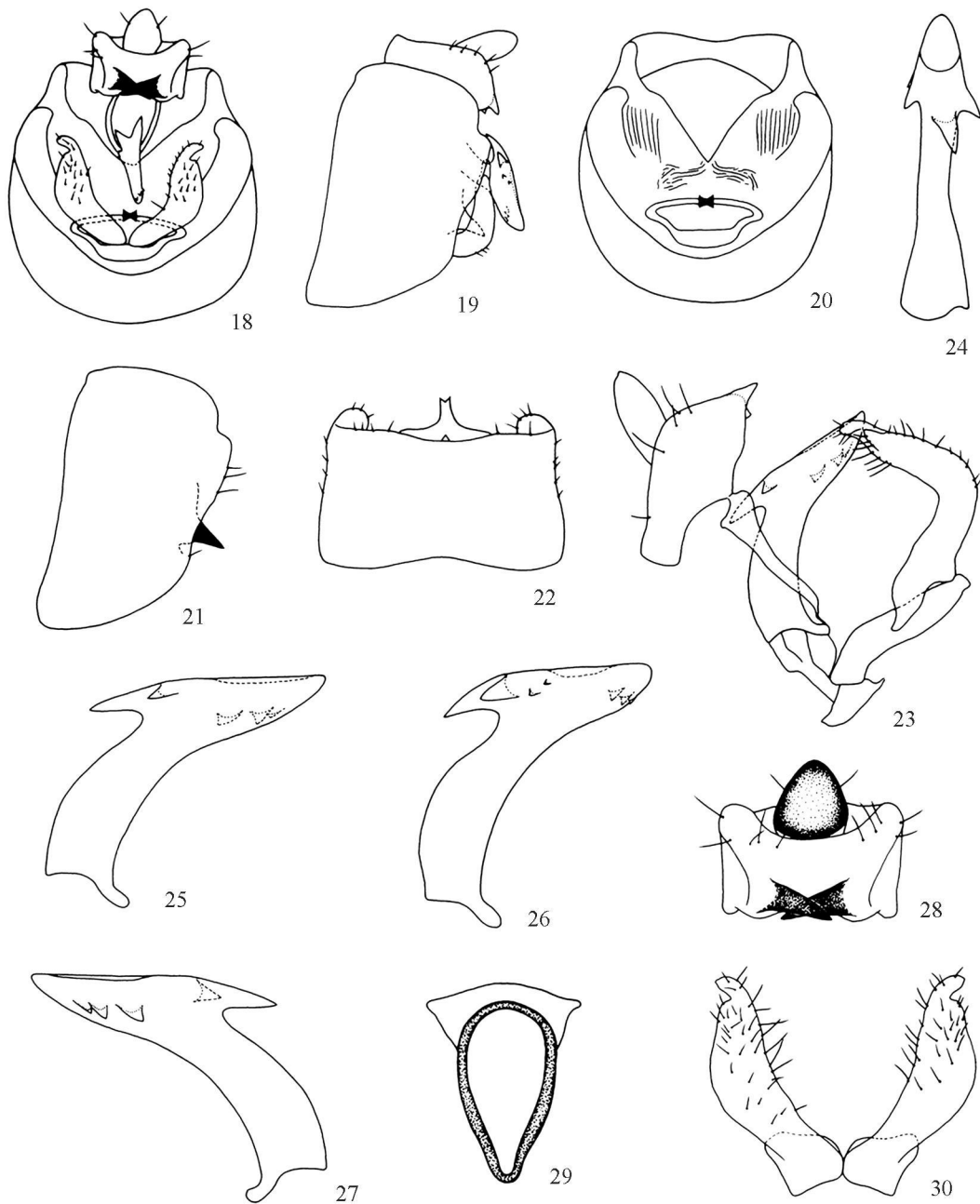
Figs 9– 17. *Stenocranus pacificus* Kirkaldy 1907. 9 Left forewing. 10 Male genitalia, caudal view. 11 Same, left lateral view. 12 Male pygofer, caudal view, anal segment, aedeagus and parameres removed. 13 Anal segment, aedeagal complex and parameres, left lateral view. 14 Aedeagus, left lateral view. 15 Same, dorsal view. 16 Suspensorium, caudal view. 17 Parameres, caudal view.

vertex about 0.8: 1.0, posterior margin concave inwardly, lateral carinae slightly sinuate, diverging posteriorly laterally but not attaining posterior margin (Figs 5, 7), Mesonotum in macropters slightly longer in midline than vertex and pronotum together (about 1.2: 1.0) (Fig. 5), in brachypters shorter than vertex and pronotum combined (about 0.9: 1.0) (Fig. 7), lateral carinae straight, attaining or reaching near posterior margin, median carina obscure apically, in brachypters the lateral carinae of mesonotum more visible (Figs 5, 7). Tegmina in macropters long, surpassing tip of abdomen about one third of its total length, acutely rounded at apex (Fig. 6), in brachypters short, apically rounded and attaining the fifth abdominal tergite (Fig. 7). Legs with metatibia bearing 2 lateral and 5 apical teeth (grouped 2+3), metatarsus distally with 7 apical teeth (grouped 2+5), tarsomere II with 4 apical teeth. Post-tibial spur fibrous, tectiform, with about 15 denticles along interior margin.

Male genitalia. Male pygofer subquadrangular in lateral view, laterodorsal angle obtusely rounded, not produced caudad, laterocaudal margin strongly produced caudad in a lobe near dorsal aspect which is gradually narrowing ventrad (Figs 19, 21), in caudal aspect pygofer ovate, lateroventral margin

incised on each side, posterior opening wider than long (Figs 18, 20). Diaphragm broad, dorsal margin incised medially, “V” shaped near ventral margin produced in a spinose process directed caudoventrad, in lateral view far surpassed posterior margin of male pygofer, in ventral aspect with apex bifurcated (Figs 20–22). Suspensorium broad dorsally, ventrally ring-like embracing base of aedeagus and connecting on ventral side (Figs 23–29). Parameres well developed, contiguous at base and widely divergent from caudal view, widest in middle, abruptly narrowed apically (Figs 18, 30). Aedeagus tubular, in lateral view curved dorso-medially with a large spinous process, base of which with another relatively small one at left side, in apical third near dorsal side with or without teeth on left side, subapex with 3 teeth on right side near ventral margin (Figs 23–27). Opening for parameres large, lateral margins sinuate, ventral margin nearly straight (Fig. 20). Male anal segment ring-like, lateroventral processes spinous, oppositely crossed in caudal view (Figs 18, 28).

Specimens examined: 2 ♂♂ (macropterous), 9 ♂♂ (brachypterous), Mt. Xiaowutai, Zhuolu County, Hebei Province, China, 24 June 2009, 2450 m, coll. QN Dao-Zheng, 1 ♂ (brachypterous), Mt. Xiaowutai, Zhuolu



Figs 18– 30 *Riba tedeiphax pusilla* Emeljanov, 1972 18 Male genitalia, caudal view. 19 Same left lateral view. 20 Male pygofer, caudal view, anal segment aedeagus and parameres removed. 21. Same left lateral view. 22 Same ventral view. 23. Anal segment aedeagal complex and parameres left lateral view. 24. Aedeagus dorsal view. 25– 26. Same left lateral view. 27. Same right lateral view. 28. Male anal segment caudal view. 29. Suspensorium, caudal view. 30. Parameres caudal view.

County Hebei Province, China, 23 June 2009, 1500m, coll QN Dao-Zheng

Distribution: China (Hebei Province); Mongolia, Russia, Canada, USA.

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中国飞虱科二新纪录种记述 (半翅目, 蜡蝉总科)

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摘要 记述来自中国浙江及河北省飞虱科 2 新纪录种: 三齿长突
飞虱 *Stenostranus pacificus* Kirka kly 1907 和 普思黎氏飞虱 *Rhabdodelphax*

pusilla Emeljanov 1972 提供了成虫外形照片及雄性外生殖器特征图。
研究标本均保存在西北农林科技大学昆虫博物馆。

关键词 半翅目, 飞虱科, 新纪录, 中国.

中图分类号 Q969.35