

**NEW SYNONYMS AND COMBINATION IN THE TRIBE
PARALIMNINI (HEMIPTERA: CICADELLIDAE:
DELTOCEPHALINAE) FROM CHINA**

Jichun Xing* and Zizhong Li

* Institute of Entomology, Guizhou University; The Provincial Key Laboratory for Agricultural Pest Management of Mountainous Region, Guiyang, Guizhou, P.R. CHINA, 550025. E-mail: xingjichun@aliyun.com

[Xing, J. & Li, Z. 2016. New synonyms and combination in the tribe Paralimnini (Hemiptera: Cicadellidae: Deltocephalinae) from China. Munis Entomology & Zoology, 11 (2): 657-660]

ABSTRACT: In the present paper, one genus and one species are synonymized in the tribe Paralimnini of the subfamily Deltocephalinae. *Didymotettix* Yang, 1996 (previously placed in the tribe Athysanini) is a junior synonym of *Falcitettix* Linnauvori, 1953, *Didymotettix kunlunicus* Yang, 1996 is a junior synonym of *Falcitettix guttiger* (Kusnezov, 1929). And, *Sorhoanus longivittatus* Kuoh, 1981 is transferred to the genus *Emeljanovianus* based the characters of male genitalia.

KEY WORDS: Homoptera, taxonomy, leafhopper, nomenclatural change, China

The deltocephaline tribe Paralimnini is distributed worldwide, including 2 subtribes, 139 genera and 931 species (Zahniser & Dietrich, 2013). Most members of the tribe are closely associated with grass dominated habitats. During a study of the Chinese Paralimnini, we recognized one genus and one species as junior synonyms, and also proposed one new combination. The examined specimens are deposited in the Institute of Entomology, Guizhou University, Guiyang, China (GUGC).

NOMENCLATURAL CHANGES AND NOTES

**Family Cicadellidae
Subfamily Deltocephalinae Dallas, 1870
Tribe Paralimnini Distant, 1908**

Genus *Falcitettix* Linnauvori, 1953

Falcitettix Linnauvori, 1953: 58. Type species: *Falcitettix sibiricus* Linnauvori, 1953: 58, by original designation.

Didymotettix Yang, 1996: 85. Type species: *Didymotettix kunlunicus* Yang, 1996: 86, by original designation. **syn. n.**

Notes. Yang (1996) established the genus *Didymotettix* with the type species *D. kunlunicus* Yang, 1996 from Xinjiang, China. Recently, Zahniser & Dietrich (2013) placed this genus in the tribe Athysanini of the subfamily Deltocephalinae. Based on investigation of the descriptions and illustrations by Linnauvori (1953) and Yang (1996) and the examined specimens from type locality, we recognize the genus *Didymotettix* Yang, 1996 as a junior synonym of *Falcitettix* Linnauvori, 1953.

The genus *Falcitettix* was established by Linnauvori (1953) for *F. sibiricus* Linnauvori, 1953 as its type species. Later, Emeljanov (1962) placed *Falcitettix* Linnauvori, 1953 as a junior subjective synonym of *Mocuellus* Ribaut, 1946, and placed *Falcitettix sibiricus* Linnauvori, 1953 as a junior synonym of *Deltocephalus*

guttiger Kusnezov, 1929. Oman, Knight & Nielson (1990) listed it as a subgenus of *Mocuellus* Ribaut, 1946, and indicated that *Mocuellus* contains five subgenera (*Erzaleus*, *Mocuola*, *Falcitettix*, *Mocuastrum* and *Promocuas*). However, Hamilton (1975), Emeljanov (1989, 1999) and Zahniser & Dietrich (2013) reinstated *Falcitettix* as a separate genus. Here, we also treat *Falcitettix* as a genus distinct from *Mocuellus*. The species of *Falcitettix* appears to be sufficiently different to justify generic rank on the basis of aedeagal differences.

Distribution. Palaearctic Region.

***Falcitettix guttiger* (Kusnezov, 1929)**

(Figs. 1-10)

Deltococephalus guttiger Kusnezov, 1929:181

Mocuellus guttiger (Kusnezov, 1929), n. comb. by Emeljanov, 1962: 178

Falcitettix guttiger(Kusnezov, 1929), n. comb. Emeljanov, 1989: 124

Falcitettix sibiricus Linnavuori, 1953:58, synonymized by Emeljanov, 1962: 178

Falcitettix minor Vilbaste, 1965: 59, synonymized by Emeljanov, 1989: 124

Mocuellus (*Falcitettix*) *minor* (Vilbaste, 1965), Li, Dai & Xing, 2011: 137.

Didymotettix kunlunicus Yang, 1996: 86 **syn. n.**

Notes. *Didymotettix kunlunicus* Yang, 1996 was described and illustrated from Xinjiang Autonomous Region, China. After examination of specimens from type locality, we found the characters of male genitalia described by Yang (1996) are the same as the species *Falcitettix minor* described by Vilbaste (1965). Li, Dai & Xing (2011) recorded this species *Mocuellus* (*Falcitettix*) *minor* from China flowing Vilbaste (1965) and Oman, Knight & Nielson (1990).

Material examined. 1 ♂, China: Xinjiang Autonomous Region, Buerjing, 14. VIII.1997, coll. Zizhong Li (GUGC).

Measurement. Length (including tegmen): ♂, 2.9 mm.

Distribution. European Russia, Mongolia, Tajikistan, China (Xinjiang).

Genus *Emeljanovianus* Dlabola, 1965

Sorhoanus (*Emeljanovianus*) Dlabola, 1965:125. Type species: *Sorhoanus suncharicus* Dlabola, 1965: 126, by original designation.

Notes. *Emeljanovianus* was established with the type species *Sorhoanus suncharicus* Dlabola, 1965, as a subgenus in *Sorhoanus* by Dlabola (1965). Later, Vilabste (1980) placed *S. (E.) suncharicus* Dlabola, 1965 as a junior synonym of *Deltococephalus hilaris* Melichar 1900, and raised *Emeljanovianus* to the genus level based on male genitalia. Recently, Zhang *et al.* (2013) recorded *Emeljanovianus* for the first time from China and reviewed this genus.

Distribution. Palaearctic Region.

***Emeljanovianus longivittatus* (Kuoh, 1981), comb. n.**

(Figs. 11-20)

Sorhoanus longivittatus Kuoh, 1981: 111.

Notes. Kuoh (1981) described this species in *Sorhoanus* from Qinghai Province, China. After examination of specimens from type locality, we here transfer it to

Emeljanovianus mainly based on the characters of male genitalia.

Diagnosis. This species differs from *Emeljanovianus medioides* (Mulsant & Rey, 1855) and *Emeljanovianus hilaris* (Melichar, 1900) in having pronotum with two black longitudinal bands originating from vertex, aedeagal shaft medially on ventral side with a forked process.

Material examined. 1 ♂, China: Qinghai Province, Datong, 3000 m, 9.VII.2007, coll. Xiangsheng Chen (GUGC); 3 ♂♂, China: Qinghai Province, Kanbula, 2600 m, 7.VII.2008, coll. Maofa Yang (GUGC).

Measurement. Length (including tegmen): ♂, 4.0-4.2 mm.

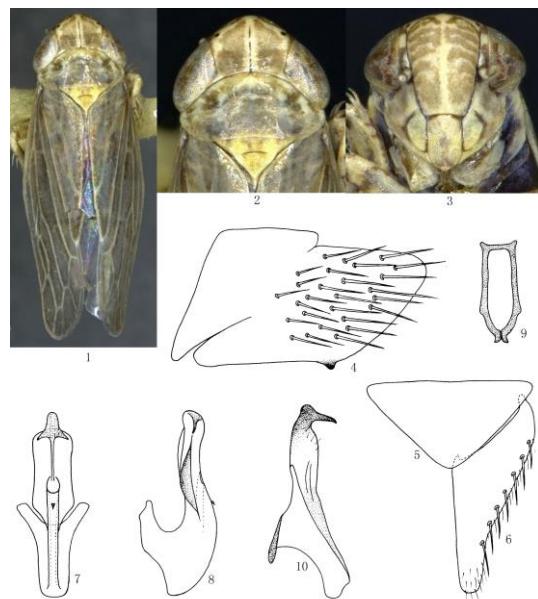
Distribution. China (Qinghai).

ACKNOWLEDGEMENTS

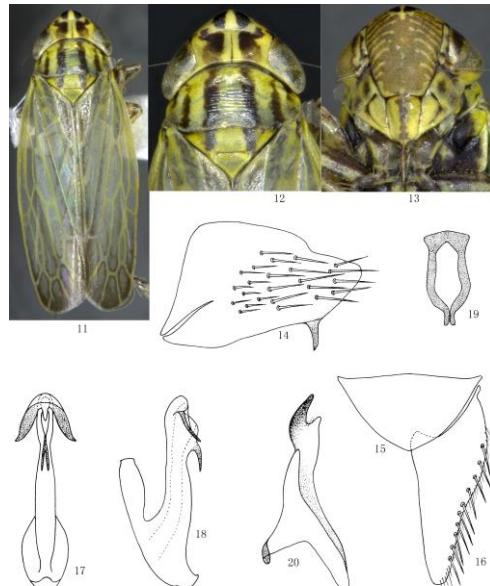
This work was supported by the National Natural Science Foundation of China (31301909) and China Postdoctoral Science Foundation funded project (2013T60864, 2012M521719).

LITERATURE CITED

- Dlabola, J. 1965. Ergebnisse der zoologischen forschungen von Dr. Z. Kaszab in der Mongolei. 54. Homoptera—Auchenorrhyncha. Sbornik Faunistickych Praci Entomologickeho Odeleni Narodniho Muzea V Praze, 11 (100): 79-136.
- Emeljanov, A. F. 1962. Materials on taxonomy of Palearctic leafhoppers (Auchenorrhyncha, Euscelinae). Trudy Zoologicheskogo Instituta Akademii Nauk SSR, 30: 156-184.
- Emeljanov, A. F. 1989. New species of leafhoppers (Homoptera, Cicadellidae) from the Mongolian Peop's Republic and adjacent regions of the USSR. Nasekomye Mongoli, 10: 118-125.
- Emeljanov, A. F. 1999. A key to genera of the Subfamily Deltoccephalinae s.l. (Homoptera, Cicadellidae) from Kazakhstan, Middle Asia, and Mongolia with description of new genera and subgenera. Entomological Review, 79 (5): 547-562.
- Hamilton, K. G. A. 1975. Review of the tribal classification of the leafhopper subfamily Aphrodiinae (Deltoccephalinae of authors) of the Holarctic region (Rhynchota: Homoptera: Cicadellidae). Canadian Entomologist, 107: 477-498.
- Kuoh, C. L. 1981. Six new species of Cicadellidae from Qinghai, China. Entomotaxonomia, 3 (2): 111-117 [In Chinese with English summary].
- Kusnezov, V. 1929. Beitrag zur Kenntnis der transbaikalischen Homopteren fauna. Wiener Entomologische Zeitung, 46: 157-185.
- Li, Z.Z., Dai, R. H. & Xing, J. C. 2011. Deltoccephalinae from China (Hemiptera: Cicadellidae). Popular Science Press, Beijing, China, 336 pp. [In Chinese with English summary].
- Linnavuori, R. 1953. On some new or interesting leafhopper species of the family Cicadellidae. Annales Entomologici Fennici, 19 (2): 56-63.
- Oman, P. W., Knight, W. J. & Nelson, M. W. 1990. Leafhoppers (Cicadellidae): a bibliography, generic check-list and index to the world literature 1956-1985. CAB International Institute of Entomology, Wallingford, U.K., 368 pp.
- Vilbaste, J. 1965. Über die zikadenfauna Altais. Tartu, 144 pp.
- Vilbaste, J. 1980. Homoptera Cicadinea of Tuva. Valgus, Tallin, Estonia, 217 pp.
- Yang, C. K. 1996. Homoptera: Cicadellidae. In: The Comprehensive Scientific Expedition to the Qinghai Xizang Plateau, Chinese Academy of Sciences (Eds), Insects of the Karakorum – Kunlun Mountains. Science Press, Beijing. pp. 80-90 [In Chinese with English summary].
- Zahniser, J. N. & Dietrich, C. H. 2013. A review of the tribes of Deltoccephalinae (Hemiptera: Auchenorrhyncha: Cicadellidae). European Journal of Taxonomy, 45: 1-211.
- Zhang, H. N., Dai, W. & Zhang, Y. L. 2013. A taxonomic review of the leafhopper genus *Emeljanovianus* Dlabola (Hemiptera: Cicadellidae: Deltoccephalinae: Paralimnini). Entomotaxonomia, 35 (2): 129-137.



Figures 1-10. *Falcitettix guttiger* (Kusnezov, 1929): 1. ♂, dorsal view; 2. Head and thorax, dorsal view; 3. face; 4. Male pygofer side, lateral view; 5. Valve; 6. Subgenital plate; 7. Aedeagus, ventral view; 8. Aedeagus, lateral view; 9. Connective; 10. Style, dorsal view.



Figures 11-20. *Emeljanovianus longivittatus* (Kuoh, 1981): 11. ♂, dorsal view; 12. Head and thorax, dorsal view; 13. face; 14. Male pygofer side, lateral view; 15. Valve; 16. Subgenital plate; 17. Aedeagus, ventral view; 18. Aedeagus, lateral view; 19. Connective; 20. Style, dorsal view.