

## FIRST NEW WORLD RECORD OF *PARADELPHACODES PALUDOSUS* (FLOR 1861) (HEMIPTERA: FULGOROIDEA: DELPHACIDAE) IN ALASKA<sup>1</sup>

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The delphacid genus *Paradelphacodes* Wagner, 1963, currently consists of 5 species, viz. *P. gvosdevi* (Mitjaev, 1980) (= *P. insolitus* Dmitriev, 2000), *P. litoralis* (Reuter, 1880), *P. orientalis* Anufriev, 1972, *P. paludosus* (Flor, 1861), and *P. tengaica* Vilbaste, 1965 (Anufriev and Emeljanov 1988, Dmitriev 2000, Dmitriev and McKamey 2013). Members of the genus are generally found in the northern Palearctic regions, although *P. litoralis* has been reported from Canada (British Columbia, Northwest Territories, Newfoundland, Yukon; Wilson 1992, 1997, Maw et al., 2000). Here we report a single male specimen of *P. paludosus* (Fig. 1) from Alaska (Kanuti National Wildlife Refuge), el. 151m., 66.37075°N, 152. 02144°W ±102m, on floating vegetation, lake side, sweep, 21 June 2010, D. S. Sikes; UAM:Ento:164292), a new species record for North America. This brings the total number of delphacid species known north of Mexico to 314 (also including *Megamelus scutellaris* Berg, 1883, introduced for control of water hyacinth, *Eichornia crassipes* (Mart.) Solms; Pontederiaceae). Specimen data are available online from both Arctos (see below) and the Tri-Trophic Thematic Collection Network (<http://tcn.amnh.org/>).

Delphacids from Alaska consist of 17 reported species (Wilson 1988, Bartlett et al., 2014). Of these species, 12 are also found in the Palearctic and 5 are restricted to the New World. *Paradelphacodes paludosus* is widely distributed in northern Europe, Russia, Japan, Korea, China, Mongolia, and Afghanistan (Anufriev and Emeljanov 1988). *P. paludosus* is reported from 'bogs, spring mires and fens' in Central Europe, probably on *Carex rostrata* Stokes and *C. panicea* L. (Cyperaceae; Nickel 2003: 57), and from the grasses (Poaceae): *Agropyron* sp., (wheatgrass), *Dactylis glomerata* L. (orchardgrass), *Phalaris canariensis* L. (annual canarygrass), and *Sporobolus* sp. (dropseed) in China (Ding 2006). The Alaskan specimen was collected from a floating mat of vegetation, mostly Cyperaceae and mosses with prominent *Eriophorum angustifolium* Honck (cottonsedge, Cyperaceae). The specimen data, figures, and photos of habitat are available online at <http://arctos.database.museum/guid/UAM:Ento:164292>. It is likely that *P. paludosus* had been overlooked in earlier work since delphacids have not been exhaustively collected in Alaska, and additional species are likely to be detected.

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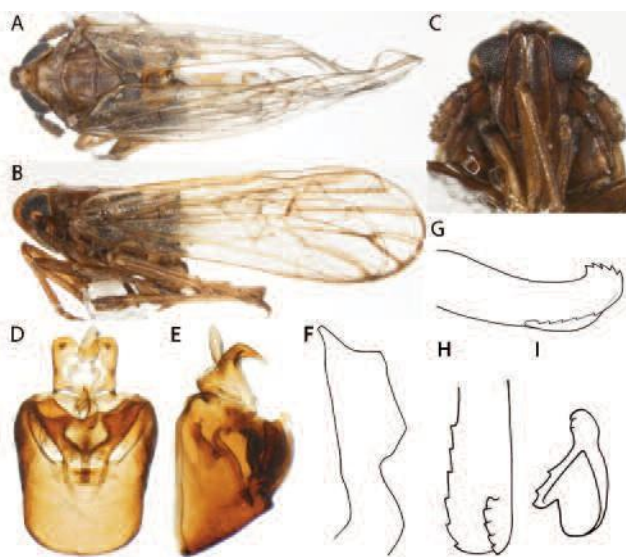


Fig. 1. *Paradelphacodes paludosus* specimen UAM:Ento:164292 from Alaska. A. dorsal habitus, B. lateral habitus, C. front, D. male pygofer, ventrocaudal view, E. male pygofer, lateral view, F. left paramere, widest view, G. aedeagus left lateral view, H. aedeagus apex, dorsal view, I. aedeagus apex, caudal view.

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### LITERATURE CITED

- Anufriev, G. A. and A. F. Emeljanov. 1988. Volume II: Homoptera and Heteroptera. In: P. A. Lehr (ed.). Keys to the Insects of the Far East of the USSR in Six Volumes. Nauka Publishing House, Leningrad. 496 pp + index.
- Bartlett, C. R., L. B. O'Brien, and S. W. Wilson. 2014. A review of the planthoppers (Hemiptera: Fulgoroidea) of the United States. *Memoirs of the American Entomological Society* 50: 1-287.
- Ding, J. H. 2006. *Fauna Sinica Insecta Vol. 45 Homoptera Delphacidae*. Science Press, Beijing, China. xx + 776 pp. + 10 plates [in Chinese with English summary].
- Dmitriev, D. A. 2000. A new species of *Paradelphacodes* from centre of European Russia (Homoptera: Delphacidae). *Zoosystematica Rossica* 8: 281-282.
- Dmitriev, D. A. and S. H. McKamey. 2013. Nomenclatural changes in Cicadellidae: Typhlocybiinae and Delphacidae (Homoptera). *Zookeys* (277): 109-113.

- Maw, H. E. L., R. G. Footitt, K. G. A. Hamilton, and G. G. E. Scudder.** 2000. Checklist of the Hemiptera of Canada and Alaska. NRC Research Press, Ottawa.
- Nickel, H.** 2003. The leafhoppers and planthoppers of Germany (Hemiptera, Auchenorrhyncha), patterns and strategies in a highly diverse group of phytophagous insects. Pensoft Series Faunistica 28, Sofia, Bulgaria.
- Wilson, S. W.** 1988. Delphacidae of Alaska (Homoptera: Fulgoroidea). Great Basin Naturalist Memoirs 12: 335-343.
- Wilson, S. W.** 1992. The Delphacidae of Yukon Territory, Canada (Homoptera: Fulgoroidea). Insecta Mundi 6: 79-100.
- Wilson, S. W.** 1997. Delphacid planthoppers (Homoptera: Fulgoroidea: Delphacidae) of the Yukon. pp. 377-385. In: H. V. Danks and J. A. Downes, (eds.). Biological Survey of Canada (Terrestrial Arthropods), Ottawa, Canada.