

Taxonomic notes on some aphid species of the subtribe Anuraphidina (Homoptera: Aphididae)

A.V. Stekolshchikov

Stekolshchikov, A.V. 2007. Taxonomic notes on some aphid species of the subtribe Anuraphidina (Homoptera: Aphididae). *Zoosystematica Rossica*, **16**(2): 223-224.

New synonymies: *Brachycaudus* subgenus *Mordvilkomemor* Shaposhnikov, 1950 = *Scythaphis* Kadyrbekov, 2002; *Dysaphis* (*Pomaphis*) *plantaginea* (Passerini, 1860) = *Dysaphis rotalis* Zhang, Chen, Zhong & Li, 1999. New combinations: *Brachycaudus* (*Mordvilkomemor*) *eurotiae* (Mamontova, 1968) for *Scythaphis eurotiae*; *Protaphis flaviovis* (Zhang, Chen, Zhong & Li, 1999) for *Dysaphis flaviovis*.

A.V. Stekolshchikov, Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, St. Petersburg 199034, Russia. E-mail: aphids@zin.ru

Genus **Brachycaudus** van der Goot, 1913

Subgenus **Mordvilkomemor** Shaposhnikov, 1950

= *Scythaphis* Kadyrbekov, 2002, **syn. n.**

The type species of the monotypic genus *Scythaphis* belongs to the subgenus *Mordvilkomemor* (see below).

Brachycaudus (Mordvilkomemor) eurotiae (Mamontova, 1968), **comb. n.**

= *Scythaphis eurotiae* (Mamontova, 1968).

The species was described by Mamontova (1968) as *Cryptosiphum eurotiae* from apterous viviparous females collected on *Krascheninikovia ceratoides* (L.) Gueldenst. (= *Ceratoides papposa* Botsch. et Ikonn., *Ceratoides latens* (J.F. Gmel.) Reveal & N.H. Holmgren, *Eurotia ceratoides* (L.) C.A. Mey., *Eurotia ferruginea* (Nees) Boiss.) (Chenopodiaceae). Mamontova (1968) placed this species in the genus *Cryptosiphum* Buckton, 1879, which she considered as belonging to the subtribe Aphidina of the tribe Aphidini, but she noted significant similarity of this species with those of the genus *Brachycaudus* van der Goot, 1913 (subtribe Anuraphidina, tribe Macrosiphini).

In his revision of the genus *Cryptosiphum*, Kadyrbekov (2002) redescribed apterous and described alatae viviparous females of *C. eurotiae*

based on new, extensive material. He mentioned significant differences between this species and other species of the genus and described for the species a new monotypic genus *Scythaphis*, which he placed in the subtribe Anuraphidina and considered that the new genus is most close to the genus *Mariaella* Szelegiewicz, 1961 and the subgenus *Mordvilkomemor* Shaposhnikov, 1950 (= *Thuleaphis* Hille Ris Lambers, 1960) of the genus *Brachycaudus* van der Goot, 1913. According to Kadyrbekov, the genus *Scythaphis* can be distinguished from the subgenus *Mordvilkomemor* by the structure of cuticle (smooth, non-tuberculous, non-reticulated), presence of a broad rounded cauda in alatae females and greater number of hairs (11-16) on the abdominal tergite VIII of apterous females.

A paratype of *Cryptosiphum eurotiae* kindly sent by V.A. Mamontova and two slides of *Scythaphis eurotiae* presented by R.Kh. Kadyrbekov from his extensive material are kept in the collection of Zoological Institute of RAS (St. Petersburg). Our morphometrical study of available individuals has unequivocally shown that the placement of this species both in *Cryptosiphum* and in a separate genus is incorrect.

According to Andreev (2004), the subgenus *Mordvilkomemor* includes following species: *Brachycaudus* (*Mordvilkomemor*) *acaudatus* (Hille Ris Lambers, 1960), *B. (M.) amygdalinus* (Schouteden, 1905), *B. (M.) brevisrostratus* Pashtshenko, 1988, *B. (M.) pilosus* (Nevsky, 1929), *B. (M.) rumexicolens* (Patch, 1917), *B. (M.) sedi* (Jacob, 1964) and *B. (M.) shaposh-*

nikovi Narzikulov, 1949. Species of the subgenus *Mordvilkomemor* have typical of *Brachycaudus* large rounded spiracles placed close to centre of peritreme, short antennae, siphunculi varying from more or less short cylindrical to short widely conic and cauda varying from broad tongue-shaped to very short semicircular. The cauda is better expressed in alatae females, but alatae of *B. (M.) amygdalinus* have semicircular cauda expressed only slightly more than cauda of apterous. The structure of cuticle varies within the subgenus from cellular and tuberculous to smooth (e.g., in *B. shaposhnikovii* and *B. pilosus*) and the cuticle varies from thick, strongly sclerotized to thin, almost without sclerotization (e.g., in *B. rumexicolens*). The number of hairs on abdominal tergite VIII varies from 6 up to 15. Thus, the only difference between *Scythaphis eurotiae* and species of the subgenus *Mordvilkomemor* is a bit greater number of hairs on abdominal tergite VIII, but this is obviously not sufficient for retaining a separate genus.

Protaphis flaviovis (Zhang, Chen, Zhong & Li, 1999), comb. n.

= *Dysaphis flaviovis* Zhang, Chen, Zhong et Li, 1999.

This species was described by Zhang et al. (1999) from roots of plants of Compositae. Apterous viviparous females of *D. flaviovis* have the distance between centres of spiracles on abdominal segments II and III less than twice the distance between centres of spiracles on segments I and II, large marginal tubercles on abdominal segments I and VII, short processus terminalis, long rostrum, short barrel-shaped siphunculi, short triangular cauda with numerous hairs. All these characters are typical of the genus *Protaphis*, not of the genus *Dysaphis*.

Dysaphis (Pomaphis) plantaginea (Passerini, 1860)

= *Dysaphis rotalis* Zhang, Chen, Zhong et Li, 1999, **syn. n.**

This species was described by Zhang et al. (1999) from *Malus baccata* (L.) Borkh. on which it lives in young curled leaves. Examination of a paratype of this species kindly sent by Dr. Qiao Ge-Xia shows the absence of any morphological differences between *D. rotalis* and *D. plantaginea* (Passerini, 1860) also living on *Malus* whose leaves become curled and yellow.

Acknowledgements

The author is grateful to Dr. Qiao Ge-Xia (Institute of Zoology, Chinese Academy of Sciences, Beijing, China) for numerous consultations and loan of specimens and to Dr. R.Kh. Kadyrbekov (Institute of Zoology, Ministry of Education and Science, Almaty, Kazakhstan) for the loan of his material.

References

- Andreev, A. 2004. The subgeneric classification of *Brachycaudus* van der Goot. In: Simon, J. C. et al. (Eds.). *Aphids in a New Millennium*: 111-117. INRA Editions, Paris.
- Kadyrbekov, R.Kh. 2002. Revision of the aphid genus *Cryptosiphum* Buckton, 1879 (Homoptera, Aphidinae). *Tethys Entomol. Res.*, 6: 39-49.
- Mamontova, V.A. 1968. New species of aphids (Homoptera, Aphidinea) in the Ukrainian steppes. *Vestnik Zool.*, 1968(2): 33-45. (In Russian).
- Zhang, G., Chen, X., Zhong, T. & Li, J. 1999. Family Aphididae. In: Zhang, G. (ed.). *Fauna of agricultural and forestry aphids of Northwest China (Insecta: Homoptera Aphidinea)*: 273-508. China Environmental Science Press, Beijing. (In Chinese).

Received 18 November 2007