

Further remarks on the type-specimens  
of the genus *Cinygma* EATON, 1885  
(Ephemeroptera: Heptageniidae)

VASSILY V. BELOV

Through the kindness of Prof. Dr. H. STRÜPPEL we had the opportunity to study some mayfly types of the G. ULMER collection. A note dealing with actual taxonomic status of *Cinygma tibiale* ULMER, 1920 was published 1982 (TSHERNOVA & BELOV 1982b). In the present note we report the results of *Cinygma cavum* ULMER, 1927, and *Cinygma malaisei* ULMER, 1927 types examination. Both species were described from Kamchatka (ULMER 1927).

*Cinygmula cava* (ULMER, 1927)

*Cinygma cavum* ULMER, 1927, Ark. zool., 19A (8): 16-17, figs 16-17

*Cinygma cavum*: IMANISHI 1935, Annot. zool. japon, 15: 213.

*Cinygmula cava*: TSHERNOVA 1974, Rev. entomol. URSS, 53 (4): 811.

*Cinygmula* ? *altaica*: TSHERNOVA & BELOV 1982, Rev. entomol. URSS, 61 (2): 280-282, figs 1-3, 37, 49.

Examined type-material: male paratype (abdomen with genitalia only) labeled "*Cinygma cavum* Ulm./Kamtschatka", "Zool. Mus. Hamburg/Coll. G. Ulmer/ Eing. Nr. 6-1963".

The left penis lobe of this paratype is atypically right-turned. It is very likely that the fig. 16 in the ULMERS paper (1927) was made just after the above mentioned specimen, but ULMER depicted the right penis lobe only, while the left lobe on fig. 16 is no more than the mirror reflection of the right one. The position of the left penis lobe of paratype is rather similar to that depicted on the fig. 2 in our recent paper (TSHERNOVA & BELOV, 1982a). Since it is still a minor doubt about the conspecificity of adult *Cinygmula* ? *altaica* sensu TSHERNOVA & BELOV, 1982, and *C. altaica* TSHERNOVA, 1949 (nymph) in view of the lack of reared material, we do not approve here *C. cava* (ULMER, 1927) = *C. altaica* TSHERNOVA, 1949, but this synonymy must be considered as the most probable, as it was suggested by LEVANIDOVA (1972: 103).

Now the known geographical distribution of *C. cava* (ULMER) ranges from Altai mountains to the Kamchatka peninsula, Magadan province, Sakhalin, the Kuril Islands, and (probably) Primorye Territory.

*Cinygmula malaisei* (ULMER, 1927)

- Cinygma malaisei* ULMER, 1927, Ark. zool., 19A (8): 14-16, figs 13-15.  
*Cinygmula malaisei*: TSHERNOVA, 1974, Rev. entomol. URSS, 53 (4): 811.  
*Cinygmula andrianovae* TSHERNOVA & BELOV, 1982, Rev. entomol. URSS, 61  
 (2): 283-285, figs 4-7, 35, 38, 50, 54, 58.  
 - S y n. n o v.

Examined type-material: male paratype labeled "*Cinygma Malaisei* Ulm./Kamtschatka, Petropavlovsk/Mus. Stor... (illegible)", "Zool. Mus. Hamburg/Coll. G. Ulmer/Eing. Nr. 6-1963"

The belonging of recently described *Cinygmula andrianovae* TSHERNOVA & BELOV to the species *C. malaisei* (ULMER) became clear at first sight after the examination of the latter species male paratype. Figs 13-15 in the ULMERS (1927) original description are schematic, but the most specific character of the genitalia - a dark triangular sclerite near apex of the penis lobes - was nevertheless quite adequately reflected. Different positions of the penis lobes which occur in this species are shown on the figs 4-7 in our recent paper (TSHERNOVA & BELOV, 1982a; sub nom. *C. andrianovae*).

*C. malaisei* has a limited distribution in the extreme north-east of the asiatic part of the USSR: Magadan province, Kamchatka, and Chukotka peninsula.

## References

- IMANISHI, K., 1935: Mayflies from Japanese torrents. V. Notes on the genera *Cinygma* und *Heptagenia*. - Annot. zool. japon., 15: 213-223. Tokyo.
- LEVANIDOVA, I. M., 1972: Podenki Kamchatskovo poluoostrova ekologo-faunisticheskiy obzor) (Mayflies of Kamchatka peninsula: an ecological-faunistic review). - Izvestija TIRNO, 82: 93-115. Petropavlovsk-Kamchatskiy. (In Russian)
- TSHERNOVA, O. A., 1949: Nimfy podenok pritokov Teletskovo ozera i r. Bii (Mayfly nymphs from the tributaries of lake Teletskoje and river Bika). - Trudy Zool. Inst. AN SSSR, 7: 139-158. Leningrad. (In Russian)
- TSHERNOVA, O. A., 1974: The generic composition of may-flies of the family Heptageniidae (Ephemeroptera) in the Holarctic and Oriental Region. - Rev. entomol. URSS, 53 (4): 801-814. Leningrad. (In Russian with English summary)
- TSHERNOVA, O. A. & BELOV, V. V., 1982: On systematics of imago of the palaearctic mayflies of the genus *Cinygmula* Mc DUNNOUGH, 1933 (Ephemeroptera, Heptageniidae). - Rev. entomol. URSS, 61 (2): 278-296. Leningrad. (In Russian with English summary)
- TSHERNOVA, O. A. & BELOV, V. V., 1982a: Systematic position and synonymy of *Cinygma tibiale* ULMER, 1920 (Ephemeroptera, Heptageniidae). - Entomol. Mitt. zool. Mus. Hamburg, 7 (115): 193-194. Hamburg

ULMER, G., 1927: Entomologische Ergebnisse der schwedischen Kamtchatka-Expedition 1920-1922. 11. Trichopteren und Ephemeropteren.  
- Ark. zool., 19A (8): 1-17. Stockholm.

Address of the author:

Dr. VASSILY V. BELOV, Department of Entomology, Faculty of Biology and Pedology, State University of Moscow, Leninskie Gory, Moskow 234, U.S.S.R.