ВОРОНЕЖСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
Биологический учебно-научный центр ВГУ «Веневитиново»

**III ВСЕРОССИЙСКИЙ СИМПОЗИУМ
ПО АМФИБИОТИЧЕСКИМ И ВОДНЫМ
НАСЕКОМЫМ**

ПРОБЛЕМЫ ВОДНОЙ ЭНТОМОЛОГИИ РОССИИ И СОПРЕДЕЛЬНЫХ СТРАН

Издательско-полиграфический центр
Воронежского государственного университета
2007

УДК 595.7:574.5/.6(470+571)
П 781

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П 781 **Проблемы водной энтомологии России и современных стран:** Материалы III Всероссийского симпозиума по амфибиотическим и водным насекомым. – Воронеж, 2007. – 409 с.

Questions of aquatic entomology of Russia and adjacent lands: Materials of the Third All-Russia Symposium on Amphibiotic and Aquatic Insects. – Voronezh, 2007. – 409 pp.

Сборник включает материалы докладов, представленных на III Всероссийском симпозиуме по амфибиотическим и водным насекомым России, состоявшемся в г. Воронеже в биоцентре ВГУ «Веневитиново» 12–15 сентября 2006 года.

В статьях обсуждаются вопросы филогении, морфологии, поведения, экологии и зоогеографии ряда групп насекомых: Trichoptera, Ephemeroptera, Plecoptera, Diptera, Coleoptera, Heteroptera и др., а также водяных клещей (Hydracarina).

The book contains materials presented at the Third All-Russia Symposium on Amophibiotic and Aquatic Insects, which took place in Venevitinovo Biological Centre of Voronezh State University, September 12–15, 2006.

Questions of phylogeny, morphology, behaviour, ecology, and zoogeography of some insect taxa (Trichoptera, Ephemeroptera, Plecoptera, Diptera, Coleoptera, Heteroptera, etc.) and of aquatic mites (Hydracarina) are discussed in the articles.

ISBN 978-5-9273-1169-9

Bieńkowski A.O. New data on morphology and systematics of the larvae of Donaciinae (Coleoptera, Chrysomalidae) from Palearctic // Russian Entomological Journal. – 1993. - 1(2). – P. 3-15.

Bieńkowski A.O. Leaf-beetles (Coleoptera: Chrysomelidae) of the Eastern Europe. New key to subfamilies, genera, and species. – Moscow, 2004. – 278 p.

Bieńkowski A.O., Orlova-Bieńkowskaja M.J. Morphology, systematics and host plants of Palearctic Donaciinae larvae // New Developments in the Biol. of Chrysomelidae – Hague, 2004. – P. 481-502.

Jäch M.A. Annotated check-list of aquatic and riparian/littoral beetle families of the world (Coleoptera) // Water Beetles of China. 1998. Vol. 2. – P. 25-42.

Nilsson A.N. Coleoptera, Introduction // Aquatic Insects of North Europe – A Taxonomic Handbook. – Stenstrup, 1996a. – P. 115-122.

Nilsson A.N. Coleoptera Chrysomelidae Donaciinae, Water Lily Beetles // Ibid. 1996b. – P. 209-216.

УДК 504.06.(075.8) + 595.763.1

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ЭКОЛОГИЧЕСКАЯ КЛАССИФИКАЦИЯ ПАЛЕАРКТИЧЕСКИХ ПРЕДСТАВИТЕЛЕЙ РОДА *CERCYON* LEACH, 1817 (COLEOPTERA, HYDROPHILIDAE)

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THE ECOLOGICAL CLASSIFICATION ON THE BASIS OF ECOLOGICAL PREFERENCES FOR THE GENUS *CERCYON* LEACH, 1817 (COLEOPTERA, HYDROPHILIDAE) OF THE PALAEARCTIC REGION

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The genus *Cercyon* Leach comprises 255 species and is distributed worldwide. 73 species inhabit the territory of the Palaearctic (Hansen, 1999; Hebauer, 2002; Ryndevich, 2004a). Individuals dwell in different decomposing organic substances (dung, decomposing plant remnants, decomposing fungi, etc.).

No detailed ecological classification of the genus based on ecological preferences has been proposed so far, though data on the ecology of species are given in some papers (Smetana, 1978; Shatrovskiy, 1989, Ryndevich, 1994, 2004b, 2004c). On the basis of my own long-term research and the study of the data provided in scientific sources, any species belonging to the

genus *Cercyon* can be included in one of the two ecological complexes (see below), which in their turn include ecological groups established on the base of ecological preferences of species. The classification proposed here is given below.

The complex of ***detritobionts*** includes species which inhabit decomposing plant remnants near water (mostly, sea, river and lake drifts) or live not very deep in the detritus (they also occur in sand on the banks of water bodies). This complex contains two groups:

– the group of ***sea detritobionts***: *C. littoralis* (Gyllenhal, 1808), *C. arenarius* Rey, 1885 *C. depressus* Stephens, 1829, *C. dux* Sharp, 1873, *C. numerosus* Shatrovskiy, 1989, *C. symbion* Shatrovskiy, 1989, *C. algarum* Sharp, 1873, *C. aptus* Sharp, 1873, *C. setulosus* Sharp, 1884.

– the group of ***freshwater detritobionts***: *C. tristis* (Illiger, 1801), *C. convexiusculus* Stephens, 1829, *C. sternalis* (Sharp, 1918), *C. subsulcatus* Rey, 1885, *C. kryzhanovskii* Shatrovskiy, 1989, *C. renneri* Hebauer, 1997, *C. granarius* Erichson, 1837, *C. korbianus* Kniz, *C. hungaricus* Endrődy-Younga, 1967, *C. marinus* Thomson, 1853, *C. bifenestratus* Kűster, 1851, *C. ustulatus* (Preyssler, 1790)

The complex of ***herpetobionts*** includes species inhabiting the surface of soil, namely, different decomposing organic substances. This complex comprises three groups:

– the group of ***coprobionts***, dung inhabitants. The group comprises species occurring only in the dung of various animals (cow, horse, deer, etc.): *C. obsoletus* (Gyllenhal, 1808), *C. tatricus* Endrődy-Younga, 1967, *C. alpinus* Vogt, 1969, *C. emarginatus* Baranowski, 1985, *C. borealis* Baranowski, 1985, *C. ovillus* Motschulsky, 1860, *C. laminatus* Sharp, 1873, *C. noctuabundus* Shatrovskiy, 1989.

– the group of ***saprobionts***, inhabitants of dung and different decomposing organic substances, including decomposing fungi: *C. impressus* (Sturm, 1807), *C. haemorrhoidalis* (Fabricius, 1775), *C. melanocephalus* (Linnaeus, 1758), *C. lateralis* (Marsham, 1802), *C. inquinatus* Wollaston, 1854, *C unipuncatus* (Linnaeus, 1758), *C .unipustulatus* Nakane, 1982, *C. quisquilius* (Linnaeus, 1761), *C. pygmaeus* (Illiger, 1801), *C. terminatus* (Marsham, 1802), *C. nigriceps* (Marsham, 1802), *C. vagus* Sharp, 1884. Species found on fungi (*C. quisquilius*, *C. lateralis*, *C. melanocephalus*) are the most interesting among the members of this group.

– the group of ***phytodestructobionts***, inhabitants of decomposing plant remnants in land ecosystems (decayed hay, forest ground layer, etc.): *Cercyon analis* (Paykull, 1798), *C. rotundulus* Sharp, 1884, *C. saluki* Ryndevich, 1998. Among these species, *C. saluki*, which was found under the bark of rotten *Ulmus* alburnum, is of interest.

Some species cannot be included into any ecological unit for lack of ecological information about them. The species with unknown habitat preferences are the following: *C. subsolanus* Balfour-Browne, 1939, *C. tropisternus* Wu & Pu, 1995, *C. medvedorum* Shatrovskiy, 1999, *C. strandi* Roubal, 1938, *C. berlovi* Shatrovskiy, 1999, *C. ustus* Sharp, 1874, *C. lencoranus* Kuwert, 1890, *C. olibrus* Sharp, 1874, *C. verus* Shatrovskiy, 1989, *C. paradoxus* Kuwert, 1890, *C. abeillei* Guillebeau, 1896, *C. bononiensis* Chiesa, 1964, *C. costulipennis* Nakane, 1996, *C. jonensis* Nakane, 1965, *C. rhomboidalis* Perris, 1874, *C. shinanensis* Nakane, 1965, *C. signifer* Hebauer, 2002, *C. subopacipennis* Nakane, 1965, *C. uenoi* Satô, 1984, *C. yayeyama* Chûjô & Satô, 1970, *C. moroderi* Dodero, 1932, *C. kabaki* Ryndevich, 2004, *C. alinae* Ryndevich, 2004, *C. dieganus* Regimbart, 1903, *C. circumcinctus* Reitter, 1889, *C. honorabilis* Shatrovskiy, 1999, *C. aequalis* Sharp, 1884, *C. placidus* Sharp, 1874, *C. rubicundus* Sharp, 1884.

Most of these are species known by a few type specimens (*C. ustus*, *C. aequalis*, *C. placidus*, *C. bononiensis*, *C. paradoxus*, *C. jonensis*, *C. medvedorum*, *C. honorabilis*, etc.). The labels contain only the geographical locality, without the indication of the habitat where the species was collected. Some species were collected attracted at light. Some species were found only in burrows and nests of mammals, for example *C. lencoranus* from a burrow of *Prometheomis schaposchnikowi*). This habitat is unusual for most *Cercyon* species. All the facts mentioned above complicate the determination of the environmental preferences of this species.

Further studies of the ecology of the genus *Cercyon* will help to determine the place of all the species of the genus in the ecological classification based on environmental preferences.

References

Hansen M. Hydrophiloidea (s. str.) (Coleoptera) // World Catalogue of Insects. – Vol. 2: – Stenstrup: Apollo Books, 1999. – 416 pp.

Hebauer F. New Hydrophilidae of the Old World (Coleoptera: Hydrophilidae) // Acta Coleopterologica. – 2002:V.18, № 3 – P. 3-24.

Ryndevich S.K. Ecological structure of hydrophilids (Coleoptera, Hydrophilidae) of Belarussian fauna // Vestnik BGU. Seriya 2 Chimiya, Biologiya, Geografiya – 1994. № 2. – P. 28-30. [in Russian]

Ryndevich, S.K. Review of species of genus *Cercyon* Leach, 1817 of Russia and adjacent regions. I. Subgenus *Cercyon* (s. str.) Leach, 1817. *Cercyon lateralis* – group (Coleoptera: Hydrophilidae). // Annales Universitatis Mariae Curie-Skłodowska. Sectio C. – 2004a. V. 59. – P. 29-41.

Ryndevich S.K. Ecological structure of water beetles of Belarus (Haliplidae, Noteridae, Dytiscidae, Gyrinidae, Helophoridae, Georissidae Hydrochidae, Spercheidae, Hydrophilidae, Hydraenidae, Limnichidae, Dryopidae, Elmidae). // Fauna, questions of ecology, morphology and evolution of amphibiotic and aquatic insects: proceedings of the

Second All-Russia Symposium on Amphibiotic and Aquatic Insects of Russia (15-17 September 2004, Voronezh). – Voronezh, 2004b. – P. 150 -155. [in Russian]

Ryndevich S.K. Fauna and ecology of water beetles of Belarus (Coleoptera: Haliplidae, Noteridae, Dytiscidae, Gyrinidae, Helophoridae, Georissidae Hydrochidae, Spercheidae, Hydrophilidae, Hydraenidae, Limnichidae, Dryopidae, Elmidae). Part I. – Minsk: Technoprint, 2004c – 272 pp. [in Russian]

Shatrovskiy A.G. Family Hydrophilidae. In: P.A. Lehr (ed.) Keys of the Insects of the Far East of USSR. – Leningrad: Nauka, 1989. – P. 264-293. [in Russian].

Smetana A. Review of the family Hydrophilidae of Canada and Alaska (Coleoptera) // Mem Entomol. Soc. Canada. – 1988. V. 131. – P. 1-136.

УДК 595.763.1

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НОВЫЕ ДАННЫЕ ПО РАСПРОСТРАНЕНИЮ ВОДНЫХ ЖУКОВ (COLEOPTERA: DYTISCIDAE, HELOPHORIDAE И HYDROPHILIDAE)

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NEW RECORDS OF PALAEARCTIC WATER BEETLES (COLEOPTERA: DYTISCIDAE, HELOPHORIDAE, AND HYDROPHILIDAE)

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Zoogeographical distribution of species is one of the most interesting aspects in coleopterology. The distribution of species makes it possible to follow the ways of beetle fauna formatin in particular regions, helps to define phylogenetic ties of systematic groups.

The distribution of Helophoridae and Hydrophilidae was reviewed by M. Hansen (1999), and that of Dytiscidae by A.N. Nilsson (2001).

Results of studying private collections and material of an expedition to the area of the Sea of Azov in 2004 were used as the material for this work.

New localities of one species of Dytiscidae, two species of Hydrophilidae, and six species of Helophoridae are reported.

Dytiscidae

Colymbetes semenowi (Jakovlev, 1896)

Ukraine, Donetsk reg., Sedovo, the Sea of Azov, 12.07.2004, leg. Ryndevich O.S., 1 specimen; same data, Sedovo, at light, 13.07.2004, leg. Ryndevich S.K & A.G., 3 specimens.