

Notes on morphology and taxonomic status of some North American species of the genus *Alona* Baird, 1843 (Cladocera: Anomopoda: Chydoridae)

Artem Y. Sinev¹

M. V. Lomonosov Moscow State University, Moscow, Russia

With 8 figures

Abstract: Detailed morphology of three North American species of the genus *Alona* Baird, 1843: *A. bicolor* Frey, 1965, *A. circumfimbriata* Megard, 1967 and *A. setulosa* Megard, 1967 was studied for the first time. The taxonomic status of these species is now clarified. *A. bicolor* belongs to the *costata*-group. Unlike to other species of the group, it demonstrates strong adaptation to benthic habitats – incl. thick carapace, a elongated rostrum and reduced eye. *A. circumfimbriata* is a member of *rectangula*-group, and its closest relative is the tropical *A. monacantha* Sars, 1901, differing in morphology of postero-ventral angle of valves and exopodite of limb III. *A. setulosa* has numerous characters in common with the species of the *pulchella*-group, but the relationship is more distant than in two other discussed species.

Key words: Cladocera, Chydoridae, *Alona bicolor*, *Alona circumfimbriata*, *Alona setulosa*, morphology, North America.

Introduction

The genus *Alona* is the one of the largest genera of Cladocera, and also one of least studied. According to modern views, it is a large, partially artificial assemblage, including several clear groups of related species and a number species of unclear affinities (Sinev et al. 2005a). During the last fifteen years the taxonomical and morphological studies of the genus have been significantly intensified. The taxonomic status of two tropical groups of species was re-evaluated, and they were elevated to the genus level (Dumont & Silva-Briano 2000, Sinev 2004a), several species were translocated to other genera (Sinev & Hollwedel 2005, Sinev et al. 2005b, Van Damme et al. 2003).

The recent publications mostly deal with species from Eurasia (Brancelj 1990, 1992, 1998, Alonso 1996, Flössner 2000, Sinev 1997, 1999a,b, 2001a, Sinev & Kotov 2000, 2001), South and Central America (Hudec 1998, Smirnov 1988, 1996, Sinev, 1998, 2001b, c, 2002a, 2004b, Sinev & Hollwedel 2002, Sinev & Coronel 2006, Sinev et al. 2004) and Australia (Sinev 1997, 1999b, 2001a, 2002b). The investigation of North American species of the genus has come to an almost complete standstill during the last decades. The taxonomical studies on the North American species of *Alona* (Frey 1965, 1969, Flössner & Frey 1970, Megard 1967, Chengalath & Hann 1981) revealed six endemic species and one endemic subspecies in the region, several of them were previously synonymised

Author's address:

¹ Department of Invertebrate Zoology, Biological Faculty, M. V. Lomonosov Moscow State University, Leninskie Gory, Moscow 119991, Russia.

E-mail: ArtemSinev@yandex.ru