# Genetic Polymorphism, Haplotype Distribution, and Phylogeny of *Daphnia* (Cladocera: Anomopoda) Species from the Water Bodies of Russia as Inferred from the 16S mtDNA Gene Sequencing

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**Abstract**—The data on the genetic polymorphism of the most widespread *Daphnia* species occupying different water bodies of Russia are presented. The phylogenetic relationships between the examined species were established, and the haplotype networks were constructed. A fragment of the 16S mitochondrial DNA gene was used as a genetic marker. The results of molecular phylogenetic analysis generally coincided with modern concepts in the systematics of the genus *Daphnia*. The representatives of the divergent mitochondrial lineages within the *D. longispina*, *D. pulex*, and *D. magna* complex remain poorly investigated morphologically. For *D. dentifera*, a new habitat on the territory of Russia, namely, the water bodies of the Lake Baikal basin, was identified. A conclusion was made that the 16S mtDNA gene could be successfully used in phylogeographic analysis of the genus *Daphnia*.

*Keywords*: genus *Daphnia*, genetic polymorphism, haplotypes, 16S gene, mitochondrial DNA

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