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The *Cincinna aliena* (Westerlund 1877) species group in Russian water bodies

(Heterobranchia: Valvatidae)

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Abstract

We here present new and summarize published data on five gastropod species from Russian water bodies of the genus *Cincinna* (*C. aliena*, *C. confusa*, *C. sorensis*, *C. korotnevi*, and *C. brevicula*), which have either been considered to be subspecies of *Valvata aliena* or distinct species of the family Valvatidae. The data considered in the present study include photographs of the types, shells from various locations, scanning electron microscope images of teleo- and protoconch sculptures, the detailed lists of references, locality records, shell morphometry, and ecology. The data showed a low level of morphological differentiation in the discussed species group and hence brought up new questions in the taxonomy and the nature of radiations of snails of the subgenus *Sibirovalvata*.

Key words: freshwater valvatids, *Cincinna aliena* species group, shell variability, Russia.

Introduction

Despite a nearly 200 year history of investigations of freshwater gastropods of the family Valvatidae Gray 1840, the family "is in need of a thorough systematic revision" (Hawe et al. 2013). In fact, many valvatid taxa are poorly understood, including the five species from Russian water bodies belonging to the genus *Cincinna* Mörch 1864 (non *Cincinna* Hübner 1810, according to Haszprunar 2014). These are *C. aliena* (Westerlund 1877), *C. confusa* (Westerlund 1897), *C. sorensis* (W. Dybowski 1886), *C. korotnevi* (Lindholm 1909), and *C. brevicula* (Kozhov 1936). In the Russian literature, they were long considered as subspecies of *Valvata aliena* (Kozhov 1936; Shadin 1952), and later treated as separate species belonging to the subgenus *Sibirovalvata* of the genus *Valvata* Müller 1773 (Starobogatov & Streletzkaja 1967). The diagnosis of the subgenus was as follows: a depressed shell; a spherical or very low conical shape with an open, sometimes perspective, umbilicus; an absolutely round or slightly angled upper lip aperture; a whorl surface covered by very thin, sometimes lamellar, axial ribs (Starobogatov & Streletzkaja 1967). Subsequently, the subgenus *Sibirovalvata* was attributed to the *Cincinna* genus (Starobogatov & Sitnikova 1983) and the total number of *Sibirovalvata* species gradually rose to 23, mainly due to new species described from water bodies of the Far East, Kamchatka, Chukotka, and the Kuril Islands (Starobogatov & Zatrawkin 1985; Prozorova & Starobogatov 1998; Starobogatov et al. 2004). Starobogatov & Zatrawkin (1985) subdivided the subgenus into two sections: *Si-*

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