



## Diversity within the Ponto-Caspian *Paramysis baeri* Czerniavsky sensu lato revisited: *P. bakuensis* G.O. Sars restored (Crustacea: Mysida: Mysidae)

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### Abstract

The Ponto-Caspian mysid crustacean *Paramysis bakuensis* G.O. Sars, 1895, which was previously synonymized with *P. baeri* Czerniavsky, 1882, is restored on the basis of new morphological and molecular characters. The Sea of Azov subspecies *P. baeri bispinosa* Martynov, 1924, in turn, is synonymised with *P. bakuensis*. The two species, *P. baeri* and *P. bakuensis*, are distinguished by the shapes of paradactylar setae of pereopods, maxilla II exopod and antennal scale, and by the number of denticles in the telson cleft. They also are characterized by ca 7% divergence in mitochondrial COI gene sequences. *P. bakuensis* is shown to be a widespread species, distributed in estuaries and rivers of the Caspian, Azov and Black Sea basins and in the Caspian Sea itself. *P. baeri* is endemic to the Caspian Sea, where the two species overlap and are sometimes found together.

**Key words:** Mysida, Caspian Sea, Black Sea, Sea of Azov, *Paramysis*, taxonomy, endemism

Понто-каспийская мизида *Paramysis bakuensis* G.O. Sars, 1895, сведенная прежде в синоним *P. baeri* Czerniavsky, 1882, восстанавливается по новым морфологическим и молекулярным признакам. Азовский подвид *P. baeri bispinosa* Мартынов, 1924, в свою очередь, сводится в синоним *P. bakuensis*. Два вида, *P. baeri* и *P. bakuensis*, отличаются по форме парадактилярных щетинок, экзоподита максиллы II и антеннальной чешуйки, и по числу зубчиков в выемке тельсона; а также приблизительно 7% дивергенции гена цитохром-с-оксидазы-1 мтДНК. *P. bakuensis* оказался широко распространенным в Понто-Каспийском бассейне видом, который обитает в эстуариях и реках бассейна и в самом Каспийском море. *P. baeri*—эндемик Каспийского моря. Оба вида встречаются в Каспийском море, иногда в одних и тех же пробах.

### Introduction

The Ponto-Caspian basin, which comprises the Black, Azov and Caspian seas and their rivers, is inhabited by a rich endemic brackish-water fauna. This diversity has been intensively explored since the middle of the 19<sup>th</sup> century, but might still remain underestimated, as few recent taxonomic revisions have been made. For example, recent studies of molecular phylogeography of Ponto-Caspian amphipod and mysid crustaceans revealed deep molecular divergence and cryptic species diversity (Cristescu *et al.* 2003; Cristescu & Hebert 2005; Audzijonyte *et al.* 2006).

Thirty five species of mysid crustaceans are known from the Ponto-Caspian basin, of which 15 belong to the genus *Paramysis* Czerniavsky, 1882. The genus itself has a broader distribution that also includes the Mediterranean and low-boreal and subtropical East Atlantic, and in total comprises 23 currently recognized species. The genus *Paramysis* exhibits considerable morphological diversity which was initially attributed to several genera (Czerniavsky 1882; Sars 1895), later relegated to subgenera (Derzhavin 1939; Băcescu 1954).