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# Systematics of the Baikalian *Babr* (Crustacea: Amphipoda: Pallaseidae)

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## Abstract

From morphogical and molecular data we reconsider the systematic composition of the Lake Baikal amphipod genus *Babr* Kamaltynov & Väinölä (Pallaseidae), until recently part of *Pallasea* Bate. The morphology of *Babr* is relatively uniform, but both allozyme and mitochondrial DNA data recognize a deep split into two lineages (Nei's *D* = 1.1, uncorrected COI sequence divergence 17 %). These correspond with the two species *B. baikali* (Stebbing) and *B. nigromaculatus* (Dorogostaisky), which both are found to be widespread throughout the lake but show different depth preferences. We found no support for the third proposed taxon *B. inermis* (Sowinsky), and consider it a synonym of *B. baikali*. Revised morphological diagnoses for the genus and the two species are presented, including new morphological characters. In terms of mtDNA, *B. baikali* is further subdivided into clearly separate geographical lineages, for which no morphological correspondence was however established.

**Key words**. Amphipoda, Lake Baikal, *Babr*, taxonomy, mtDNA, COI, allozymes

На основе новых морфологических и молекулярных данных пересматривается систематика байкальского рода амфипод *Babr* Kamaltynov et Väinölä (Pallaseidae), бывшего до недавнего времени частью рода *Pallasea* Bate. Род *Babr* морфологически довольно однообразен, однако по аллозимному полиморфизму и последовательности митохондриальной ДНК глубоко разделяется на две линии (показатель Нея *D* = 1.1 и 17 % невыравненной дивегренции последевательности гена COI). Линии соответствуют двум видам, *B. baikali* (Stebbing) и *B. nigromaculatus* (Dorogostaisky), как было установлено, широко распространенным по озеру, но распределяющимся по разным глубинам. Самостоятельность третьего вида, *B. inermis* (Sowinsky), не подтверждается, в связи с чем он сводится в синоним *B. baikali.* Приводится пересмотренный морфологический диагноз рода и двух видов, включающий новые морфологические признаки. *B. baikali* по мтДНК далее подразделяется на географически обособленные, но морфологически не отличающиеся генетические линии.

## Introduction

A recent annotation of the endemic amphipod fauna of Lake Baikal by Kamaltynov (2002) involved an erection of several new families and genera, as well as a general upgrading of previous subspecies to full species. In this connection, the genus *Pallasea* Bate, 1867 sensu lato (as treated in Bazikalova 1945; Barnard & Barnard 1983; Takhteev 2000) was split into five genera. In addition to uplifting the previous subgenera, this involved division of the previous subgenus *Pallasea* into three genera, i.e. *Pallasea, Pallaseopsis* Kamaltynov & Väinölä, 2002 and *Babr* Kamaltynov & Väinölä, 2002.

The genus *Babr* was established to include the three previously listed subspecies of *Pallasea (Pallasea) baikali* (Stebbing, 1899): *P. b. baikali* (Stebbing, 1899), *P. b. inermis* (Sowinsky, 1915) and *P. b. nigromaculata* (Dorogostaisky, 1922), which were raised as full species on the grounds of their reported

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