



## The genus *Leptodora* Lilljeborg (Crustacea: Branchiopoda: Cladocera) is not monotypic: description of a new species from the Amur River basin (Far East of Russia)

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### Abstract

New species, *Leptodora richardi* sp. nov., is described from some large lakes and other water bodies of the Lower Amur River basin. It differs from *L. kindtii* Focke, the only species known in this genus until now, by a smaller body size and proportions of some body parts, namely a comparatively longer head and shorter abdomen, and by presence of fine setules on the end of anterior distal seta of second segment of thoracic limbs of first pair. Small differences in male features require further elucidation. Among the investigated populations of *L. kindtii*, one of them from the Volga Delta was analyzed in more detail due to the unusually small size of their adults, comparable with those of *L. richardi* sp. nov., but had body proportions characteristic of the former species and probably represented its extreme morpho-ecological variation. *L. kindtii* is widely distributed in Palearctic, while *L. richardi* sp. nov. seems to be an endemic of East Asia probably distributed from the Lower Amur River in the Far East of Russia to Eastern China and Japan (Honshu Island) in the south.

**Key words:** *Leptodora richardi* sp. nov., taxonomic description, *L. kindtii*, morpho-ecological variation, distribution

### Introduction

For a long time the genus *Leptodora* was considered to be represented only one species, *L. kindtii*, a peculiar freshwater planktonic animal, mostly widely distributed all over the northern boreal latitudes. In the past, this confidence of the monotypic nature of the genus was challenged by the description of a second species, *L. pellucida* Josef, from the Slovenian caves (Josef 1882). However, the latter taxon remains enigmatic, being thought a mythic creature (Sket 1994) or the example of the accidental occurrence of *L. kindtii* in the caves (Dumont & Negrea 1996, 2002). Another record of the presumed new species was made by Poppe and Richard (1890) who reported, though without a description, about an unusually small adult female of *Leptodora* from Lake Sitai (China).

The recent detailed morphological investigation of *L. kindtii* (Korovchinsky & Boikova 2008), raised the issue about the reality of the cave dweller *Leptodora* species and of the described adult specimens with a small body size and unusual body size proportions from Lake Bolon' (Lower Amur River basin, Far East of Russia), which implied the possible existence of a real new species of the genus. However, the available material in that time was inadequate for such conclusion.

Later, it was obtained an additional material from Lake Bolon' and other adjacent water bodies, allowing to study in more detail the morphology of these organisms and to compare them with numerous individuals of *L. kindtii* from different populations. This led to the conclusion of the taxonomic specificity of small Amurian leptodoras, which deserved attribution to a new separate species.