



<http://dx.doi.org/10.11646/zootaxa.3974.3.4>

<http://zoobank.org/urn:lsid:zoobank.org:pub:54B50671-22A8-4BB1-9233-49133E598CB9>

## ***Niphargus* (Crustacea: Amphipoda) species in Hungary: literature review, current taxonomy and the updated distribution of valid taxa**

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### **Abstract**

Research of the Hungarian *Niphargus* species is a rather neglected field. This is due to the growing distance between the level of knowledge about Hungarian species and the elaboration determined by the international publications, which had caused a hardly negotiable inconvenience in the judgment of the state of the Hungarian species. The clarification of species in questionable positions could be the starting point of further inland research. During our work, the species with Hungarian distributions were assigned based on the literature's data, and were evaluated with morphological examinations of the specimens collected by us from their type localities and other habitats. Considering the validity of the species we created three categories. Eight of the 20 species proved to be invalid or non-inland species, three remain in an uncertain taxonomic state, while nine are classifiable into the 'valid Hungarian species' category. During the 43 samplings in 27 localities we added new distributional data for seven species.

**Key words:** Hungary, checklist, new records, Amphipoda

### **Introduction**

Although the blind amphipod genus, *Niphargus* Schiödte, 1849 is among the most significant elements of European subterranean communities, its research in Hungary has lagged behind in the past decades, in comparison with its other European counterparts. At the first half of the last century Endre Dudich and Lajos Méhelý performed extensive taxonomic research on *Niphargus* species. As a result of their work, numerous species descriptions and other articles, which were concerned with morphological data and systematic problems, were published (e.g. Dudich 1924; 1926; 1927; 1932; Méhelý 1927; 1937; 1941). However, the inland research of the genus was soon effaced and nothing more than sporadic contributions, announcing only distributional data, were published due to surveys of hydrobiologist specialists (e.g. Stiller 1953; Ponyi 1962; Bajomi 1969; Lantos; 1986), with the exception of the description of *Niphargus forroi* (Karaman, G. S. 1986).

While globally, the number of the known *Niphargus* species and subspecies has exceeded 300, taxonomic status of the few species described from Hungary has remained uncertain. When the descriptions and distribution data were published, many of the Hungarian caves known today were undiscovered, which had limited the chance of finding new species and even new populations. Most of the descriptions operated with insufficient morphological information and few drawings, and often the type locality cannot be exactly identified. The taxonomic review of the Hungarian species is aggravated by the fact that in most cases the holotypes are no longer available in the type collections for various reasons, like perished in the fire which ravaged the Hungarian Natural History Museum during the revolution in 1956 (Balázs & Angyal 2013).

Muskó (2007) lists 15 *Niphargus* species in her Hungarian Malacostraca checklist (*Niphargus foreli* Humbert, 1877, *N. forroi* G. Karaman, 1986, *N. gebhardti* Schellenberg, 1934, *N. hrabei* S. Karaman, 1932, *N. hungaricus* Méhelý 1937, *N. leopoliensis* Jaworowsky, 1893, *N. longicaudatus* A. Costa, 1851, *N. magyaricus* Méhelý 1941 ?,