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## New member of the family Niphargidae from Croatia, *Niphargus radzai*, sp. n. (Contribution to the Knowledge of the Amphipoda 273)

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### Abstract

One new species of the genus *Niphargus* Schiödte, 1849 (Amphipoda, Gammaridea, Niphargidae) from the subterranean waters (springs) above Ravno Vrdovo in Dinara Mountain, Croatia, is described. *Niphargus radzai* sp. n. belongs to the artificial group within *Niphargus* with elevated number of setae along outer margin of dactylus in gnathopods 1 and 2 and dactylus of some or all pereopods provided with additional spines along inner margin. The differences between *N. radzai* and some other similar members of this group of taxa are discussed.

**Key words:** taxonomy, Crustacea, Amphipoda, Niphargidae, *Niphargus radzai*, new species, subterranean waters, Croatia

### Introduction

The amphipods of the family Niphargidae have wide distribution in Europe and Near East till Caucasus, Iran and Iraq. Among several known genera of this family, the genus *Niphargus* Schiödte 1849 is currently presented by almost 300 known taxa settling various types of the subterranean waters, but as the subterranean waters are explored further, it is highly likely that more species will be described. In Croatia over 40 species and subspecies of genus *Niphargus* are known. During recent relatively intense researches of the caves in Croatia provided by various investigators and speleologists, many samples of genus *Niphargus* were collected. In this paper, one new species of this genus collected by speleologist Tonči Radža of the Speleological Society Špiljar from Split, Croatia, is described.

### Material and methods

The collected material was preserved in 70% ethanol. The specimens were dissected using a WILD M20 microscope and drawn using a camera lucida attachment. All appendages were temporarily submersed in the mixture of glycerine and water for study and drawing. The body-length of examined specimens was measured from the tip of head to the end of telson using camera lucida. All illustrations were inked manually. After the end of the study, the dissected body-parts were submerged in Liquid of Faure and covered by thin cover glass. Some morphological terminology and seta formulae follows Karaman's terminology (Karaman, G. 1969; 1970; 1993; 2012): for last mandibular palp [A= setae on outer face; B= setae on inner face; C= additional setae on outer face; D= lateral marginal setae; E= distal long setae] and for propodus of gnathopods 1 and 2 [S= corner spine; L= lateral spines; M= facial setae; R= subcorner spine]. Term "setae" and "spines" are used based on its shape, not origin. The advantage of use of Liquid of Faure is the possibility to remove the dissected body-parts from Liquid of Faure by water, and study it again in the various positions under the microscope. The new species is established based on provided morphological and ecological investigations and data.

the peduncle of uropod 1 in males. The discovery of various recent new species having these characters combined with some other different or peculiar taxonomic characters, puts in question the validity of this subgenus based on these characters only. The further genetic studies of these species will maybe clear up this problem.

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