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FIRST FINDING OF *NOPOIULUS KOCHII* (DIPLOPODA, JULIDA, BLANIULIDAE) IN SERBIA

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ABSTRACT. *Nopoiulus kochii* (Gervais, 1847) recorded at single locality in Southeast Serbia is the first representative of the family Blaniulidae for Serbian millipede fauna.

Key words: Serbia, Diplopoda, Julida, Blaniulidae, *N. kochii*.

INTRODUCTION

Up to the present time, 80 species of diplopods belonging to 16 families and 37 genera have been registered in Serbia (MAKAROV *et al*., 2004). The order with greatest number of species is Julida including two families Julidae (33 species) and Nemasomatidae (one species), representing 42.50% of the total number of millipedes in this region (MAKAROV *et al*., 2004). Up to date there were no record of the representatives of the family Blaniulidae Koch, 1847 in Serbia (ENGHOFF and KIME, 2005; HOFFMAN, 1979; MAKAROV *et al*., 2004; STRASSER, 1979). Blaniulids are long and thin julids with sternites intimately fused to the pleuro-tergal arches (BLOWER, 1985). In the millipede fauna of Europe this family includes 19 genera with numerous species (ENGHOFF, 1984; ENGHOFF and SHELLEY, 1979; ГОЛОВАЧ и ЕНГХОФФ, 1990; HOFFMAN, 1979). One of the widespread genera in Europe is genus *Nopoiulus* Menge, 1851, interestingly with only one common European species *Nopoiulus kochii* (Gervais, 1847) (ENGHOFF and KIME, 2005). In this paper we report finding of blaniulid species in Serbia for the first time.

RESULT AND DISCUSSION

***Nopoiulus kochii* (Gervais, 1847)** (Figs. 1-4)
Syn.: *Blaniulus armatus* Nemec, 1895
B. atticus Verhoeff, 1925
B. venustus Meinert, 1868
Nopoiulus breuili Brolemann, 1921

N. subtilis Brolemann, 1921
N. pulchellus Verhoeff, 1926

Material Examined: 18 females and six males, from the Velika Balanica Cave, village Sićevo, Niš, Serbia, 6/12/2005; collected by Siniša Ognjenović. Analyzed materials are deposited in the collections of the Institute of Zoology, at Faculty of Biology, University of Belgrade. For correct determination gonopods and vulvae from three males and three females were dissected and mounted in glycerin as temporary micropreparations. Photographs of males and females were prepared at the Institute of Zoology, Faculty of Biology, Belgrade, using Axiocam camera mounted on binocular microscope Stemi 2000C.

N. kochii is one of the tiniest julids in Serbia, with brownish body coloration and more or less dark brown coloration of ozadenes (Figs. 1-2). Head with two occipital setae; antennae in adults reaching fifth somites. Ocellae are in a single antero-posterior line, with few additional ocellae in a second line anteriorly. Body in adult males with 42 pleurotegites + telson, but in adult females with 44-48 pleurotegites + telson (in analyzed specimens). Pleurotergites with longitudinal striae extending on the prozonite, but are mainly restricted to the ventral half of the pleurotergites. Metazonal setae relatively short, slightly longer in last three somites. Accessory sexual characters in males include ventral projections from both cardines and stipites. The first pair of legs in the male is not hook-like as in the representatives of the family Julidae. Gonopods (modified legs on seventh pleurotergite) are not retractable into ring lumen (Fig. 3). They lie posteriorly along the trunk between leg pairs 10, 11, and 12. The anterior gonopods have protective role, and carry lateral telopodites. Posterior gonopods are long and slender, bifurcated on the top into two branches with additional lamellae. The vulval sucks are much longer than the same structure in the representatives of the family Julidae (Fig. 4).

Fig. 1. - *Nopoiulus kochii* (Gervais, 1847),
male from the Velika Balanica Cave, village Sićevo, Niš, Serbia

Distribution: *N. kochii* inhabits most part of the Europe (ENGHOFF and KIME, 2005). Also this species is introduced in Siberia, North and South America, some parts of Asia, Australia, and New Zealand (ENGHOFF and KIME, 2005; ГОЛОВАЧ и ЕНГХОФФ, 1990;

HOFFMAN, 1979). It is evident that this species inhabits almost all countries bordering with Serbia therefore its presence in Serbia was expected. Unfortunately, numerous sampling of diplopods during last decades in the different parts of Serbia did not uncover any blaniulids (MAKAROV *et al*., 2004). The finding in Southeast Serbia finally confirms that blanulids are present in this region. Moreover, such finding is in accordance with earlier predictions (MAKAROV *et al*., 2004) that territory of Serbia is probably inhabited by more millipede species belonging to different families.

Fig. 2. - *Nopoiulus kochii* (Gervais, 1847),
female from the Velika Balanica Cave, village Sićevo, Niš, Serbia

Fig. 3. - *Nopoiulus kochii* (Gervais, 1847), gonopods,
male from the Velika Balanica Cave, village Sićevo, Niš, Serbia

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Fig. 4. - *Nopoiulus kochii* (Gervais, 1847), head, vulvae, and first five pleurotergites, female, from the Velika Balanica Cave, village Sićevo, Niš, Serbia

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