

GALERIELLA LICINIANA, A NEW CAVE GENUS AND SPECIES OF SPRINGTAILS (COLLEMBOLA, SMINTHURIDAE) FROM HERZEGOVINA. B. P. M. Ćurčić, L. R. Lučić, V. T. Tomić, S. E. Makarov, and ¹I. M. Karaman. *Institute of Zoology, Faculty of Biology, University of Belgrade, 11000 Belgrade, Serbia;* ¹*Department of Biology and Ecology, Faculty of Science, University of Novi Sad, 21000 Novi Sad, Serbia.*

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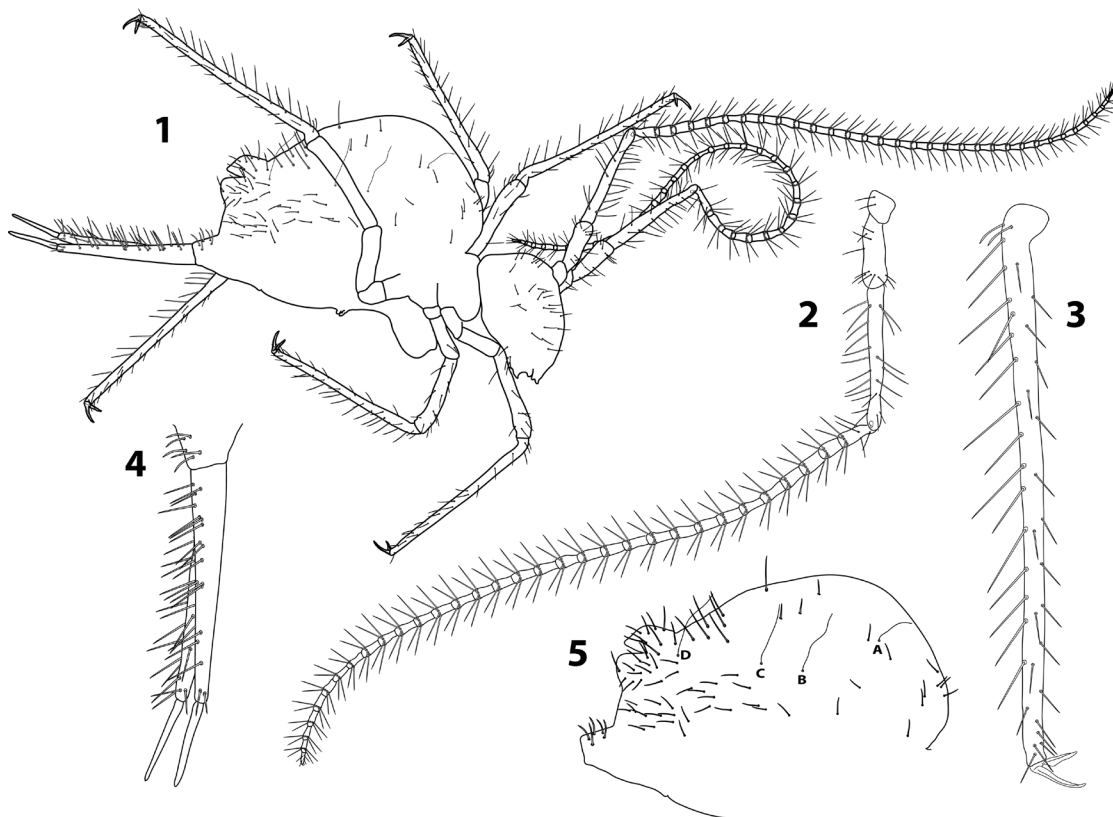
In a cave near the gorge of the Mušnica (Avtovac Mulje), near Trebinje, Herzegovina, one of us (IMK) collected two male specimens of a peculiar sminthurid taxon which, after a thorough study, appears to be a new genus and species. The new form is phenetically closest to the genus *Disparrhopalites* Stach, 1956 (otherwise present in Europe; C a s s a g n a u and Delamare - D e b o u t e v i l l e, 1953; F a n c i u l l i et al., 2005). Additionally, it exhibits some similarities with another genus, *Pararrhopalites* Bonet and Teler, 1947, which inhabits Africa, Asia and the Americas.

In the present paper, we describe a new genus and species of these sminthurid collembolans. This is their first finding both in Herzegovina and on the Balkan Peninsula. The type specimens are housed in the collection of the Institute of Zoology, Faculty of Biology, 11000 Belgrade, Serbia.

SMINTHURIDAE

GALERIELLA ĆURČIĆ & LUČIĆ, NEW GENUS

Etymology. – The generic name is derived from the name



Figs. 1-5. – *Galerietta liciniana* n. g., n. sp., from Herzegovina. Holotype male: 1 – habitus, 2 – antennomeres I-IV, 3 – chaetotaxy of large abdomen (with three trichobothria – A, B, and C; trichobothrium D is found on the small abdomen), 4 – tibiotarsus III, 5 – distal part of furca, with manubrium, dens, and mucro.

of the Roman tetrarch Galerius (Caius Galerius Valerius Maximianus), who ruled over the Balkan and Danube countries from 305 to 311 A. D.

Description. – Body pigmentation absent. Head with no eyes (Fig. 1). Antennal length to head diagonal ratio = 5.05. Antennae I and II with 2 and 10 setae, respectively. Antennae III with 20 setae and apical sensory organ. Antennae IV with 32 articles. Head chaetotaxy as presented in Figs. 1 and 2. Abdominal chaetotaxy as in Fig. 3. Tibiotarsus III longer than tibiotarsus I or II, without tenent hairs (Fig. 4).

Foot complex: claw elongated, with no tunica, nor with inner or outer teeth, and without setae. Claw empodium with lamellae, without teeth and terminal filament (Figs. 1 and 4). Mucro with both inner and outer edges serrated, without setae (Fig. 5). Retinaculum with three teeth and with no setae (Fig. 1). Ventral tube without filament (Fig. 1).

Differential diagnosis. – From the tropical *Pararrhopalites*, the new genus differs in the absence/presence of a tunica (with vs. without), in body form (stout vs. elongate), antennal length (short vs. long), number of antenna IV subsegments (14 vs. 32), and distribution area (Africa, Asia, and the Americas vs. the Balkan Peninsula).

Galeriella liciniana n. g., n. sp. also differs from *Disparrrhopalites* (inhabiting Central Europe, the Northern Mediterranean area, the Azores and the Canary Islands) in many important respects, such as: life preference (troglobitic vs. epigeal, endogean, or troglphilic) (Cassagnau and Delamare-Debouteville, 1953; Fanciulli et al., 2005); and the number of antenna IV articles (32 vs. 12-14), head diagonal length, antennal length to head diagonal length ratio, claw structure, and distribution area (Fanciulli et al., 2005).

The new taxon is monotypic; its only known species to date is *G. liciniana* from Herzegovina, Bosnia-Herzegovina.

GALERIELLA LICINIANA ČURČIĆ & LUČIĆ, NEW SPECIES (Figs. 1-5)

Etymology. – After Licinius (Valerius Licinianus Licinius), the last Roman tetrarch to rule over the Balkan and Danube countries (from 308 to 324 A. D.).

Material examined. – Holotype male and paratype male, from a cave near the Mušnica Gorge (Avtovac Mulje), near Trebinje, Herzegovina, Bosnia-Herzegovina; 10 September 2006, collected by Ivo M. Karaman. The type series is housed at the Institute of Zoology, Faculty of Biology, University of Belgrade, 11000 Belgrade, Serbia.

Description. – Body length: 1.66 mm; diagonal of head = 0.54 mm. Pigmentless sminthurid, with no eyes developed (Fig. 1). Length of antennae: 2.73 mm. Antennal length/head diagonal ratio = 5.05. Antennal articles I-IV lengths: 0.07 mm, 0.18 mm,

0.44 mm, and 2.04 mm, respectively. Relative lengths of antennal segments I-IV – 1 : 2.57 : 6.28 : 29.14 (Fig. 2). Antennae I and II with 2 and 10 setae, respectively (Fig. 2). Antennae III with 20 long setae and an apical sensory organ (Fig. 2). Antennae IV with 32 sub-articles (Fig. 2), the first one with 12 setae, and the remaining 30 with eight setae arranged in the form of an apical whorl (Fig. 2). The uppermost sub-article with some setae, short sensilla, and an apical vesicle (Fig. 2).

Head chaetotaxy as in Fig. 1. Large abdomen with the trichobothria A, B, and C, small abdomen with trichobothrium D (Fig. 3).

Legs: trochanter III with two setae, a spiny seta, and a trochanteral organ (Fig. 1). Femur with 11 setae (Fig. 1). Tibiotarsus III longer than other two articles (I : II : III = 0.70 mm : 0.66 mm : 0.82 mm), with no tenent hairs (Fig. 4). Tibiotarsi I-III with 20, 29, and 37 setae, respectively.

Foot complex: claw elongated, without tunica, with no inner or outer teeth and with no setae. Claw empodium with lamellae, but without teeth and terminal filament. Claw length: 1 – 0.08 mm, 2 – 0.09 mm, 3 – 0.09 mm. Furca = 0.92 mm (manubrium = 0.15 mm, dens = 0.56 mm, mucro = 0.21 mm). Dens and manubrium with 20 and five setae, respectively. Mucro with both inner and outer edges serrate, but without setae (Fig. 5). Retinaculum with three teeth, hairless (Fig. 1). Ventral tube without filament (Fig. 1).

Differential diagnosis. – A single species is known to date.

This new taxon shares its type-locality with a new form of *Heteromurus* Wankel, 1860 – *Heteromurus (Verhoeffiella) constantius* Čurčić & Lučić, 2007 (Čurčić et al., 2007).

Remarks. – The new taxon is an endemic relic form which inhabits caves in Herzegovina, in the western part of the Balkan Peninsula. Since its close relatives inhabit either Mediterranean or tropical regions, it is probable that *Galeriella liciniana* or its ancestor originated in a period and geographic area with a tropical climate. After several dramatic climatic subversions, it is assumed that its predecessors colonized soil, humus, or underground habitats.

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