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*Ivo Karaman\**

***STROUHALONISCELLUS GORDANI* SP. NOV. (CRUSTACEA:  
ISOPODA: ONISCIDEA) A NEW TROGLOBITE FROM A  
CAVE IN MONTENEGRO**

*Abstract*

*Strouhaloniscellus gordani* sp. nov. (Isopoda, Trichoniscidae, Haplophthalminae), a new woodlice species is described and illustrated from specimens collected from a small cave near Podgorica, Montenegro. It is characterized by its pronounced head ornamentation, presence of a pair of low paramedial tubercles on a pleon article, and unusual fungiform seta on pereiopods 7 carpus. *Strouhaloniscellus gordani* sp. nov. represents the third known species of the dinaric troglobite genus *Strouhaloniscellus*. Emended diagnosis of the genus is given.

*Keywords:* Dinarides, endemic, Podgorica, Žijovo

**INTRODUCTION**

One of the first joint caving expedition with our jubilarian, dr Gordan Karaman, was in 1993 our visit of than still biospeleologically poorly explored surroundings of Podgorica. The Žijovo area, almost with unexplored underground fauna, in a cave fauna extremely rich Montenegro karst, was promising significant findings. That's what happened. Already in the first visit to a small cave, cc 10 km SE of Podgorica, above the settlement of Fundina near the Čafa pješatica passage, I have collected specimens of two species new to science. The first one was a harvestmen (Opiliones), which I have also dedicated to our jubilarian as *Cyphophthalmus gordani* Karaman, 2009. The second one was a new woodlice

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species presented by only one female belonging to the genus *Strouhaloniscellus* Tabacaru, 1993.

Based on this female and the subsequently collected material it took time to make this species formally described in adequate publication. This finding I have presented in 2001 on the "Symposium on the Biology of Terrestrial Isopods" on Crete, just under the name I describe it now.

## TAXONOMICAL PART

### Genus *Strouhaloniscellus* Tabacaru, 1993

**Diagnosis.** Unpigmented blind small to middle sized haplophthalm troglóbites. Cephalon vertex with three rows of tubercles, pereion with four to six low tubercles per side. Male pereopod 7 carpus bearing a strong stout seta or protuberance on its distal sternal margin. Male pleopod 1 exopod distally bent outwards and bearing a rounded lobe inwards.

#### *Strouhaloniscellus gordani* sp. nov.

(Figures 1–3)

**MATERIAL EXAMINED.** ♂ **holotype (3.9 mm)**, unnamed small cave in Ćafa pješatica, by Fundina, Podgorica, Montenegro, 42° 27.072'N, 19° 22.525'E, 850 m, 21. 02. 2001, leg. I. Karaman; **Paratypes.** 2♀ same data as holotype; 1♀ *ibid*, 9. 01. 1993, leg. I. Karaman; 2♀ 1♂ *ibid*, 6. 02. 1997, leg. I. Karaman; 1♀; *ibid*. 18.05. 2009 I. Karaman. All specimens are deposited in authors collection at the Department of Biology and Ecology in Novi Sad, Serbia.

**DIAGNOSIS.** medium sized haplophthalm species (♀ up to 4.5 mm long). Median tubercles on cephalon large epimera triangular. Pereon tergites with 4 pairs of tubercles (two paramedian pairs prominent) and oblique ridge on epimera. Paramedian pair on pereionite 7 more prominent. Pleonites 3–5 with well-developed epimera. Pleon 3 with a pair of low paramedial tubercles. Male pereopod 7 with a stout fungiform seta on carpus. Male pleopod 1 exopod of elongated triangular form, with narrow quadrangular distal part bent outwards and bearing a rounded lobe protruding inwards; pleopod 2 endopod biarticulated, very short proximal article and elongated distal article narrowed in its apical half.

**DESCRIPTION.** Cephalon (Fig. 1c) short and wide, bearing 3 rows of rounded tubercles: frontal row with 3 pairs of small tubercles; middle row with 4 pairs of large tubercles, median tubercles are prominent; posterior row with 3 pairs of

large tubercles, median pair most prominent. Lateral lobes short triangular, laterally oriented.

*Pereon tergites* (Fig. 1d) with 4 pairs of tubercles, (two paramedian pairs prominent) and oblique ridge on epimera. Paramedian pair on pereionite 7 more prominent with tip pointing backwards.

*Pleonal* segments 3–5 with well-developed epimera; pleon 3 with a pair of low paramedial tubercles.

*Telson* (Fig. 1e) with trapezoidal distal part, slightly concave sides and wide, rounded apex.

*Antennula* (Fig. 1a) bearing seven stout aesthetascs on terminal article; terminal article wide, two times longer than wide.

*Antenna* (Fig. 1b) with stout articles; flagellum shorter than fifth article; flagellum of four articles with a short aesthetasc on second and third articles.

*Pereiopod 7* (Fig. 2d) with noticeable male secondary sexual characteristic, carpus sternal margin bearing a strong stout seta with fungiform distal part, bent posteriorly, with a thin seta at apex.

*Genital papilla* (Fig. 2b) stout with setose apical part.

*Pleopod 1* (Fig. 2a) exopod of elongated triangular form, with narrow quadrangular distal part bent outwards and bearing a rounded lobe protruding medially; endopod of two articles subequal in length, second article narrow with densely setose basal portion.; pleopod 2 endopod biarticulated,

*Pleopod 2* (Fig. 2c) exopod trapezoidal; endopod biarticulated, very short proximal article and elongated distal article narrowed in its apical half.

*Uropod* (Fig. 1e) exopod longer than endopod; exopodite and endopodite articulated almost at the same level.

**ETYMOLOGY.** The new species is dedicated to the jubilarian, Academician prof dr Gordan S. Karaman.

**REMARKS.** I found the first specimen on a wet wood at the end of the small unnamed cave. The other specimens have been collected from sites that are characteristic for the species of the genus *Cyphoniscellus*, such as empty small rimstone pools and other very wet speleothems at the end of the cave channel. Maxilliped palp of *S. gordani* sp. nov. wear curly setae, same as in an undescribed amphibian *Cyphoniscellus* species. This character indicates possible amphibian nature of this species inhabited in the deeper, for us inaccessible, parts of the cave system. The end of the cave channel of the small unnamed cave is wet, sometimes is very wet, but I have never found any kind of a pool.

The genus *Strouhaloniscellus* was established by Tabacaru (1993) for the species *Haplophthalmus anophthalmus* Strouhal 1939. It counts three species:

*Strouhaloniscellus anophthalmus* (Strouhal 1939) described upon a male from a small cave on Mt Bjelašnica, south of Sarajevo, Bosnia and Herzegovina; *Strouhaloniscellus biokovoensis* Bedek & Taiti, 2009 from a small pit in Mt Biokovo, Dalmatia, Croatia and here described *Strouhaloniscellus gordani* sp. nov. from Montenegro (Fig. 3). It is another representative of a very rich and highly endemic south Dinaric subterranean fauna.

The genus is characterized by the structure of male pleopod 1 — the distal part of the exopod which shows unique and unusual three-dimensional structure and outwards bent tip. Second important generic character is the male secondary sexual characteristic, the structure on pereopod 7 carpus sternal margin, in the form of strong stout shaped seta or protuberance.

Remarquable differences between three species of the genus *Strouhaloniscellus* indicate a lower importance of the characteristics of cephalon, pereion and pleon ornamentation in reconstruction of haplophthalm Trichoniscidae phylogeny. I consider well developed epimera and pleon ornamentation as plesiomorphic characters in haplophthalm Trichoniscidae. Close relation of this genus with the genus *Haplophthalmus* is evident.

#### ACKNOWLEDGEMENTS

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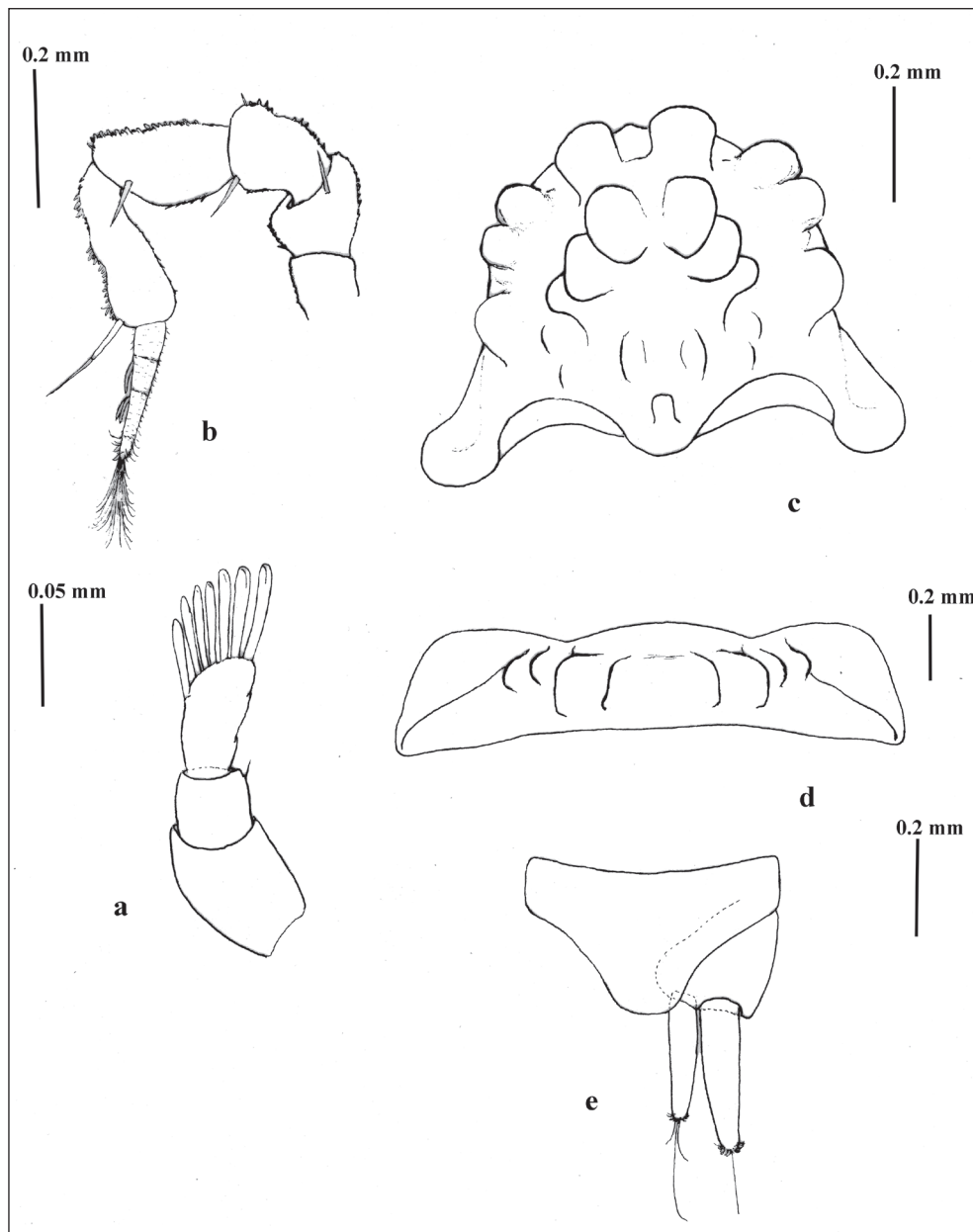


FIGURE 1. *Strouhaloniscellus gordani* sp. nov., paratype ♂: **a**, antennula; **b**, antenna; **c**, cephalon, frontal; **d**, pereonite 2; **e**, telson and uropod, dorsal view.

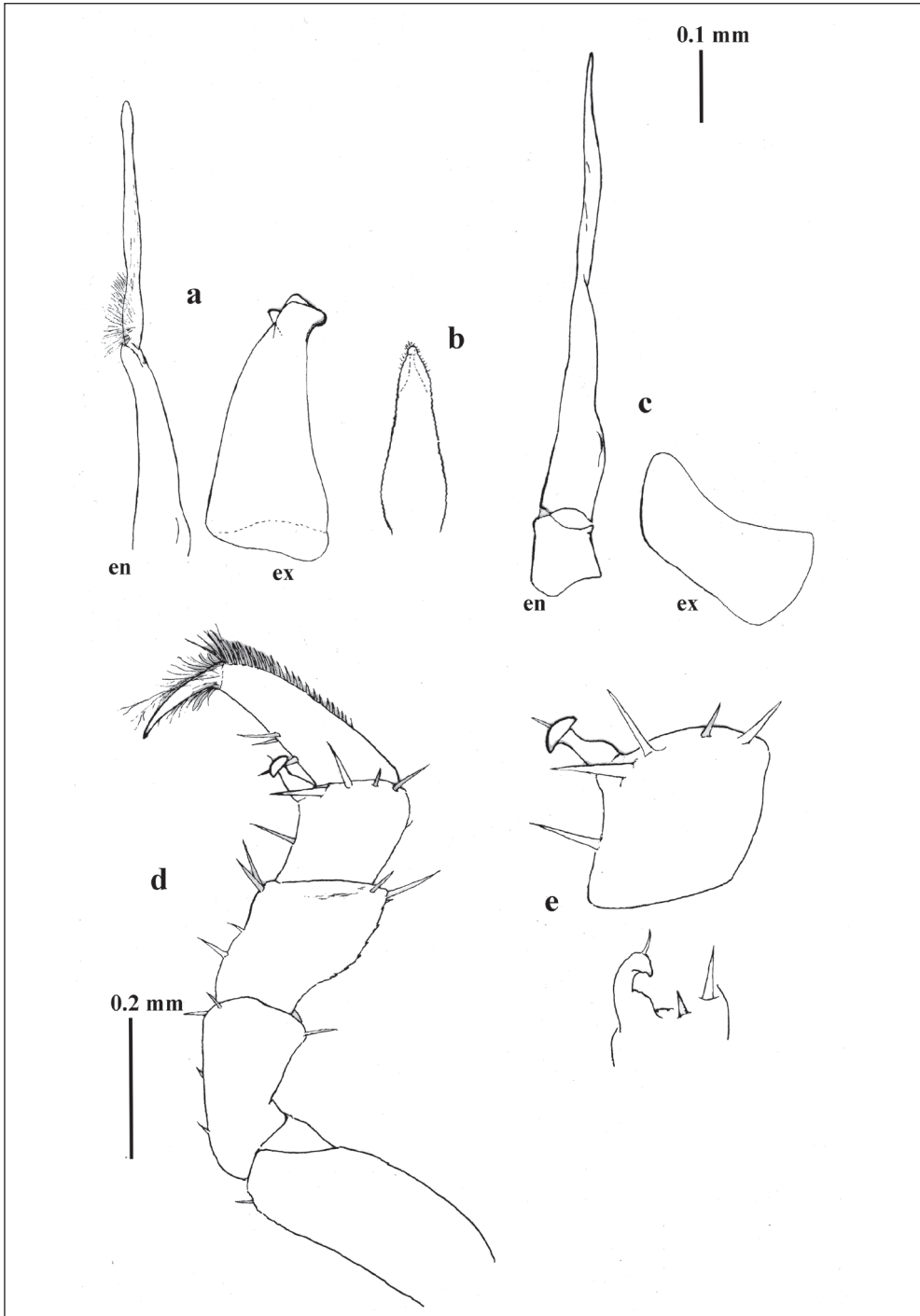


FIGURE 2. *Strouhaloniscellus gordani* sp. nov., paratype ♂: **a**, pleopod 1; **b**, genital papilla; **c**, pleopod 2; **d**, pereiopod 7; **e**, carpus of pereiopod 7 and fungiform seta, medial view

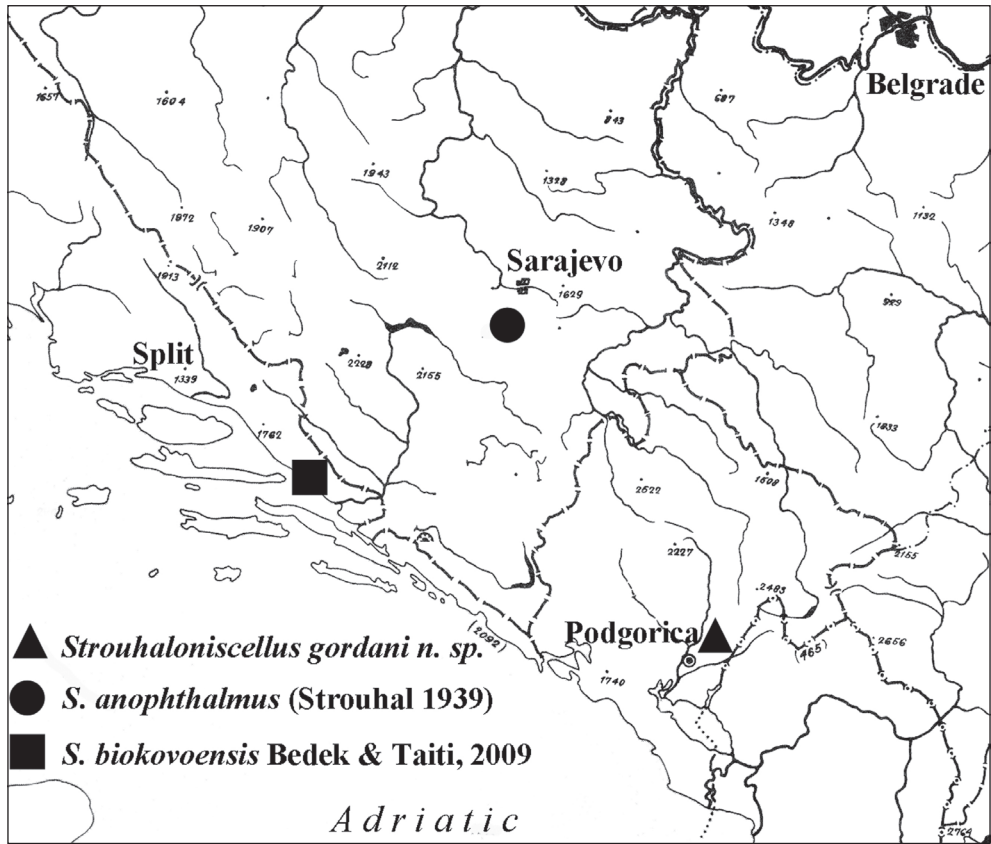


FIGURE 3. Distribution of the genus *Strouhaloniscellus* Tabacaru, 1973.



