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ГЛАСНИК ОДЈЕЉЕЊА ПРИРОДНИХ НАУКА, 19, 2011.

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NIPHARGUS OZIMECI, NEW SPECIES (FAM. NIPHARGIDAE), WITH REMARKS ON SOME OTHER AMPHIPODS FROM BOSNIA AND HERZEGOVINA

(Contribution to the knowledge of the Amphipoda 251)

Abstract

One new species of the subterranean genus *Niphargus* Schiödte, 1849 (fam. Niphargidae), *N. ozimeci*, sp. n., is described and figured from the spring-cave of Miljacka Morkinjska River near Pale, Romania Mt. (Bosnia and Herzegovina) and its taxonomical position is discussed. Numerous localities of *Echinogammarus acarinatus* (Karaman, S., 1931a), *Echinogammarus thoni* (Schäferna, 1922), *Gammarus balcanicus* Schäferna, 1922, *Gammarus fossarum* Koch, 1836 (fam. Gammaridae), as well as *Synurella ambulans ambulans* (Müller, F., 1846) and *Synurella ambulans ambulans* forma *subterranea* Karaman, S., 1931 (fam. Crangonyctidae) from Bosnia and Herzegovina, are cited.

Key words: Amphipoda, *Niphargus ozimeci*, new species, *Echinogammarus acarinatus, Echinogammarus thoni, Gammarus balcanicus*, *Gammarus fossarum, Synurella ambulans ambulans, Synurella ambulans ambulans* forma *subterranea,* Bosnia and Herzegovina, distribution

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NIPHARGUS OZIMECI, NOVA VRSTA (FAM. NIPHARGIDAE), SA OSVRTOM NA NEKE DRUGE VRSTE AMFIPODA IZ BOSNE I HERCEGOVINE

(251. Prilog poznavanju Amphipoda)

Sažetak

Iz izvora-pečine rijeke Miljacka Mokrinjska kod Pala (Romanija planina, Bosna i Hercegovina) opisana je jedna nova vrsta od podzemnog roda *Niphargus* Schiödte, 1849, *N. ozimeci*, sp. n., i njen taksonomski položaj je analiziran.

Prezentirani su mnogobrojni novi lokaliteti vrsta amfipoda *Echinogammarus acarinatus* (Karaman, S., 1931), *Echinogammarus thoni* (Schäferna, 1922), *Gammarus balcanicus* Schäferna, 1922, *Gammarus fossarum* Koch, 1836 (fam. Gammaridae), *Synurella ambulans ambulans* (Müller, F., 1846) i *Synurella ambulans ambulans* forma *subterranea* Karaman, S., 1931 (fam. Crangonyctidae) iz Bosne i Hercegovine.

Ključne riječi: Amphipoda, *Niphargus ozimeci*, nova vrsta, *Echinogammarus acarinatus, Echinogammarus thoni, Gammarus balcanicus*, *Gammarus fossarum, Synurella ambulans ambulans*, *Synurella ambulans ambulans* forma *subterranea,* Bosna i Hercegovina, rasprostranjenje

INTRODUCTION

The freshwater fauna of Amphipoda in Bosna and Herzegovina was studies by various scientists during XX century and first decade of XXI century: Schäferna (1922), Karaman, S. (1932, 1943, 1950, 1950a, 1952, 1953, 1960, etc.), Karaman, G. (1977, 1980, 1984, etc), Sket (1956, 1958, 2003), Fišer (2006, 2008), etc., and over 53 species and subspecies of the surfaced and subterranean Amphipoda, belonging to 12 genera and 6 families, respectively, have been discovered (Karaman, G., 2010). Among them, nearly 17 species are endemic for Bosnia and Herzegovina, including 12 endemic species belonging to the subterranean genus *Niphargus* Schiödte, 1849 (fam. Niphargidae G. Kar., 1962).

During the recent studies of the subterranean fauna in various caves of Bosna and Herzegovina, the speleologist Roman Ozimec with other speleologists, collected various material, among them one amphipod from the Cave-spring of Miljacka Morkinjska River near Pale, Romania Mt., described here.

During many years of our study of epigean and subterranean Amphipoda from Bosnia and Herzegovina, we collected various samples of known species belonging to the genus *Gammarus* (fam. Gammaridae) and genus *Synurella* (fam. Crangonyctidae). Recently Dr. Lučić send me one sample from the mouth of Neretva River also.

All studied material is deposited in KARAMAN`s Collection in Podgorica, Crna Gora.

NIPHARGUS OZIMECI, SP. N.

Figs. 1-5

MATERIAL EXAMINED: BOSNIA AND HERZEGOVINA:

S-6826= Cave-spring of Miljacka Morkinjska River near Pale, Romania Mt., 28. 7. 2009, 1 exp. (leg. Roman Ozimec). Holotype is deposited in the KARAMAN`s Collection in Podgorica, Crna Gora (Montenegro).

DESCRIPTION. OVIGEROUS FEMALE, 7.0 mm, with 25 eggs (holotype): Body slender, metasomal segments 1-3 with 3-5 dorsoposterior setae each (fig. 5C); urosomite 1 on each side with 1 dorsolateral seta (fig. 1F) and one slender ventroposterior spine near basis of uropod 1 (fig. 1F); urosomite 2 with 1 spine and 1 seta at each dorsolateral side; urosomite 3 smooth (fig. 1F).

Epimeral plates 1-2 angular, with slightly convex posterior margin; epimeral plate 3 with distinctly pointed ventroposterior corner and straight posterior margin (fig. 5C); epimeral plate 2 with one, and plate 3 with 2 submarginal ventral spines (fig. 5C).

Coxal plates 1-4 short, bearing row of marginal setae each (figs. 2A, D; 3D, F). Coxa 1 slightly broader than long, with subrounded ventroanterior corner (fig. 2A); coxae 2-4 nearly as long as broad (figs. 2D; 3D, F) Coxae 5-7 short (figs. 4A, B, D).

Head with short rostrum and narrow short lateral cephalic lobes (fig. 1A).

Antenna 1 exceeding half of body (ratio: 4.2: 7); peduncle segments 1-3 progressively shorter; peduncle segment 3 nearly reaching half of segment 2 (fig. 1B); main flagellum consisting of 21 articles (most of them with one short aesthetasc). Accessory flagellum short, 2-segmented, not exceeding half of peduncle segment 3 (fig. 1B).

Antenna 2 slender, peduncle segment 5 slightly shorter than 4, both with bunches of long setae along inner margin (fig. 1C); flagellum longer than last peduncle segment and consisting of 9 articles; antennal gland cone short (fig. 1C).

Mouthparts normal. Labrum broader than long, entire. Labium with short inner lobes (fig. 1D).

Maxilla 1: Inner plate with 2 setae; outer plate with 7 spines [6 spines with one lateral tooth each; inner spine with 2 lateral teeth] (fig. 1E); palp 2-segmented, not reaching tip of spines of outer plate and provided with 7 distal setae (fig. 1E).

Maxilla 2 with both plates bearing lateral setae only (fig. 3A).

Maxilliped: Inner plate with 4 pointed distal spines; palp segment 3 along outer margin with one median and one distal group of setae (fig. 3B, C).

Mandibles: Left mandible: Incisor with 5 teeth, lacinia mobilis with 4 teeth (fig. 5B). Right mandible: Incisor with 4 teeth, lacinia mobilis serrate.

Mandibular palp of both mandibles equal, palp segment 1 smooth, palp segment 2 with 10 setae (fig. 5A); palp segment 3 hardly longer than segment 2, on outer face by one group of A-setae, on inner face by 2 groups of B-setae, along inner margin with nearly 20 D-setae and 5 long E-setae (fig. 5A).

Gnathopods 1-2 of moderate size, their segment 6 nearly as large as the corresponding coxa (fig. 2A, D) and segment 2 with long setae at both margins. Gnathopod 1: segment 5 slightly shorter than 6. Segment 6 trapezoid, slightly longer than broad, bearing 4 groups of setae along posterior margin (fig. 2B). Palm oblique nearly 2/3 of propodus-length, convex, defined on outer face by one strong corner spine accompanied laterally by 3 slender toothed spines and row of 5 long facial setae (fig. 2B), on inner face by one strong sub corner spine (fig. 2C); dactyl reaching posterior margin of segment 6, with 7 single long setae along outer margin (fig. 2B).

Gnathopod 2: Segment 6 of hardly different shape, poorly larger than that of gnathopod 1, bearing 7 groups of setae along posterior margin (fig. 2E). Palm oblique almost ¾ of propodus-length, defined on outer face by one strong corner spine accompanied laterally by 3 slender toothed spines and 5 facial long setae (fig. 2E), on inner face by one strong sub corner spine (fig. 2F). Dactyl reaching posterior margin of segment 6, with 6-7 long setae along outer margin (fig. 2E).

Pereopods 3-4 relatively slender (fig. 3D, F), their dactyl slender and long, slightly exceeding half of propodus segment 6 length, and provided

with short spine at inner margin, nail slender, nearly as long as pedestal (fig. 3E, G).

Pereopods 5-7 long, bearing spines along both margins of segments 5-6, and with setae along inner margin of segment 4 (fig. 4A, B, D). Segment 2 less than twice as long as broad, bearing row of short setae along posterior margin and with ventroposterior dilatation, but without distinct lobe (fig. 4A, B, D). Dactyl of perepods 5 and 7 is missing, that of pereopod 6 relatively slender, remarkably shorter than half of segment 6, and bearing one short spine at inner margin (fig. 4C), nail shorter than pedestal (fig. 4C).

Pleopods 1-3 with 2 retinacula each. Peduncle of pleopod 1 with 2 distal setae at anterior margin (fig. 5D), that of pleopod 2 naked (fig. 5E). Peduncle of pleopod 3 with 2 median setae at posterior margin (fig. 5F).

Uropod 1: Peduncle with dorsoexternal row of spines, and dorsointernal row of spines and setae (fig. 1F). Rami of subequal length, both rami with numerous lateral and distal spines, accompanied with several facial setae (fig. 1F).

Uropod 2: Rami sub equal, with lateral and distal spines (fig. 1F).

Uropod 3 long, peduncle short; inner ramus scale-like, short and provided with distal spine and seta (fig. 1G). Outer ramus 2-segmented, first segment along both margins with bunches of spines, along inner margin appear several long plumose setae (fig. 1G); second segment slightly shorter than half of first segment, bearing several simple setae only (fig. 1G).

Telson short, hardly broader than long, deeply incised: lobes obtuse distally, bearing 6 long distal spines each (fig. 4E); a pair of short plumose setae appears near the middle of each lobe.

Coxal gills elongated, these on gnathopod 2 and pereopods 3-4 slightly exceeding the distal tip of corresponding segment 2 (figs. 2D; 3D, F); coxal gills on pereopods 5-6 slightly shorter (fig. 4A, B).

Oostegites large and provided with long marginal setae (fig. 2D).

MALES unknown.

VARIABILITY: Unknown.

DERIVATIO NOMINIS. This species is nominated to the speleologist Roman Ozimec from Zagreb who collected this species in the cavespring Miljacka Mokrinjska.

REMARKS. The new species, *Niphargus ozimeci,* seems to be close to the *Niphargus stygius* group by the elongated uropod 3, poorly armed urosomites, presence of row of setae along outer margin of dactyl of gna-

thopods 1-2, simple dactyl of pereopod 6, unlobed segment 2 of pereopods 5-7, etc. (Karaman, S., 1952). *N. ozimeci* differs from all other members of this group by very oblique palm of gnathopods 1-2, sub equal rami of uropods 1-2, etc.

Stanko Karaman (1943) described one new species, *Niphargus bosniacus*, from Mračna pečina-cave in Bosna, species very close to the *N. stygius* group. But *N. ozimeci* differs from this species by much more oblique palm of gnathopods 1-2, by absence of facial spines on telson, by elevated number of spines on each telson-lobe, presence of 2 setae on inner plate of maxilla 1, slender dactyls of pereopods 3-7, etc.

Niphargus boskovici S. Karaman, 1952a, described from Vjetrenica cave in Herzegovina, and later found in some other localities also, is provided with quadrate epimeral plates, elongated uropod 3, dactyl of gnathopods 1-2 with row of setae along outer margin, but *N. ozimeci* differs from this species by much more oblique palm of gnathopods 1-2, by presence of higher number of spines on telson, etc. Discovery of the males of *N. ozimeci* will resolve the real taxonomical position of this species.

GAMMARUS BALCANICUS SCHÄFERNA, 1922

Gammarus balcanicus Schäferna, 1922, p. 1, pI. 1, fig. 7, text figs. 1-2; Karaman, G., 1977: 47, figs. I-VII; Karaman, G. & Pinkster, 1987: 211, figs. 1-3; Karaman, G., 2010: 21.

MATERIAL EXAMINED: BOSNIA & HERZEGOVINA:

S-3850= Ercegovo Vrelo-spring on Zalomska River, 23. 8. 1980, 25 exp. (leg. Karaman, G. & Karaman, M.);

S-3851= Šumeće Vrelo-spring in Travnik, 20. 8. 1980, many specimens mixed with *Echinogammarus acarinatus*, (leg. Karaman, G. & Karaman, M.);

S-3853= Torrent near Novi Travnik (= Pucarevo), towards Gornji Vakuf, spring, 20. 8. 1980, 10 exp. mixed with *Gammarus fossarum* and *Echinogammarus acarinatus* (leg. Karaman, G.).

S-3856= Torrent along the road Ustiprača- Višegrad, near Ustiprača, 15. 8. 1980, 16 exp. (leg. Karaman, G. & Karaman, B.);

S-3865= Spring below Bobijerska pečina-cave near village Osječenica (Grahovo reg.), 7. 12. 1979, 20 exp. (leg. Karaman, G.);

S-3912= Drina River near Višegrad, 17. 8. 1980, 1 exp. (leg. Karaman, G.);

S-4024= Neretva River near Počitelj, pump, 1. 9. 1982, many exp. (leg. Karaman, G. & Karaman, I.);

S-4166= Small cave-spring near Berkovići, 25. 7. 1963, 3 exp. (leg. Deeleman, C.);

S-4169= Bobatovo Groblje near Luka (on road Gacko-Nikšić), 24. 7. 1969, 4 exp. (leg. Deeleman, C.);

S-4289= Spring near Jablanica village (Neretva drainage system), 2. 9. 1982, 5 exp. (leg. Karaman, G.);

S-5593= Spring below Tjentište, 18. 5. 1976, many exp. (leg. Karaman, G.);

S-5634= Čemerno, 195?, 15 exp. (leg. Buturović, A.);

S-5644= Spring "Jezero", under stones, Treskavica Mt. (data?) 27 exp. (leg. Buturović, A.);

S-5654= Platno Jezero-Lake, Treskavica Mt., 12. 8. 1951, 14 exp. (leg. Buturović, A.);

S-5658= Tjentište, torrent near the hotel, 18. 5. 1976, 29 exp. (leg. Karaman, G.);

S-5670= Čemerno, spring Rovke, 1950, 7 exp. (leg. Buturović, A.);

S-5684= Output of Bijela River into Neretva River near Konjic, 11. 9. 1973, many exp. (leg. Karaman, G.);

S-5688= Spring near the village Čemerno, 18. 5. 1976, many exp. (leg. Karaman, G.);

S-5700= Bunica and Buna Rivers near Mostar, 5. 8. 1975, 19 exp. (leg. Kačanski, D.);

S-5715= Spring near Konjic, below the railroad, 7. 8. 1952, 17 exp. (leg. Buturović, A.);

S-6650= Ponikva cave in Dabarsko polje-field, 18. 6. 2003, 1 exp., mixed with *Niphargus vjetrenicensis bilecanus* S. Kar. 1953 (leg. Karaman, I.);

S-6651= Fatničko polje- field, village Fatnica, spring, 18. 6. 2003, many exp. (leg. Karaman, I.);

S-6800= Bijambare, mountain house, torrent Bjelila below the cave, Čemerno Mt. (on road Sarajevo-Olovo), 10. 11. 2008, many exp. (leg. Karaman, B. & Karaman, G.);

S-6802= Žitomislići [Neretva River], 43°12`N, 17°47`E, 13. 10. 2008, 108 exp (leg. Paunović, M.);

S-6806= Žitomislići [Neretva River] (second sample), 43°12`N, 17°47`E, 13. 10. 2008, 500 exp., mixed with *Echinogammarus thoni* (leg. Paunović, M.);

S-6827= Cave-spring of Miljacka Mokrinska, near Pale, 28. 7. 2009, 25 exp. (leg. Pavićević, M.);

S-6832= Londza spring, Deransko Lake, Hutovo Blato, February, 2010, many spec. mixed with *Echinogammarus thoni* (leg. Lučić, D.).

REMARKS. Karaman, G. (1977; 2002) revised this species mentioning a large number of localities of this species of ex Yugoslavia, including these from Bosnia and Herzegovina. In the monography of *G. balcanicus* Group from Europe and adjacent regions (Karaman, G. & Pinkster, 1987), there are no individual localities of this species cited.

GAMMARUS FOSSARUM KOCH, 1836

Gammarus fossarum Karaman, Koch, in: Panzer, 1836: 2; Karaman, G. & Pinkster, 1977: 50, figs. 19-20; Karaman, G., 2010: 21.

MATERIAL EXAMINED: BOSNIA & HERZEGOVINA:

-273= Boranjska reka-River, Podrinje, 1922, 2 juv. exp. (leg. Stanković, S.);

Am. 524= Baštašića spring near Drvar, August 1935, many exp. (leg. Karaman, S.);

Sp. 337= Vitina, March 1949, 6 exp. (leg. Buturović?);

S-2208= Teslić, spring, July 1931, 14 exp. (leg. Dr. Jäger);

S-2243= Spring near Vakuf, 12. 9. 1950, 5 exp. (leg. ? Rucner, D.);

S-2732= Ibrahimovac village near Gornji Vakuf, 4. 9. 1950, 2 exp. (leg. Buturović);

S-3853= Torrent near Novi Travnik (=Pucarevo), towards Gornji Vakuf, spring, 20. 8. 1980, 7 exp. mixed with *Gamm. balcanicus* and *Echin. acarinatus* (leg. Karaman, G.);

S-3855= Lašva River near Travnik, 21. 8. 1980, 8 exp. mixed with *Echinogammarus acarinatus* (leg. Karaman, G.).

REMARKS. In the monograph of *G. pulex* Group from Europe and adjacent regions (Karaman, G. & Pinkster, 1977), there are no individual localities of this species cited.

ECHINOGAMMARUS ACARINATUS (KARAMAN, S., 1931A)

Ostiogammarus acarinatus acarinatus Karaman, S. 1931a: 105;

Echinogammarus acarinatus Karaman, G., 1970: 47, figs. I, 1-9; II, 10-17; Karaman, G., 1974a: 7; Pinkster, 1993: 136, fig. 58A, H, K; Karaman, G., 2010: 20.

MATERIAL EXAMINED: BOSNIA & HERZEGOVINA:

S-1113= Buna River, S. of Mostar, 27. 10. 1968, many exp. (leg. Karaman, G.);

S-2709= Spring of Buna River in Blagaj, S. of Mostar, 12. 9. 1973, many exp. (leg. Karaman, G.);

S-2712= Komardinovo Vrelo- spring near Neretva River by Jablanica, 11. 9. 1973, many exp. (leg. Karaman, G. & Karaman, M.);

S-2730= Spring Studenci near Ljubuško, 31. 7. 1953, 20 exp. (leg. Buturović);

S-2860= Neretva River below Čapljina, 27. 5. 1975, many exp. mixed with *Gammarus balcanicus* (leg. Karaman, G.).

S-3853= Torrent near Novi Travnik (=Pucarevo), towards Gornji Vakuf, spring, 20. 8. 1980, 5 exp. mixed with *Gammarus balcanicus* and *Gammarus*. *fossarum* (leg. Karaman, G.);

S-3855a= Lašva River near Travnik, 21. 8. 1980, 10 exp. mixed with *Gammarus fossarum* (leg. Karaman, G.);

S-3879= Šumeće Vrelo spring in Travnik, 20. 8. 1980, 15 exp. mixed with *Gammarus balcanicus* (leg. Karaman, G.);

REMARKS. Karaman, G. (1970) and Pinkster (1993) cited known localities of this species.

ECHINOGAMMARUS THONI (SCHÄFERNA, 1922)

Carinogammarus thoni Schäferna, 1922: 42, figs. 19-21, pls. 1-4;
Echinogammarus thoni Karaman, G. 1969: 66, pl. 4, figs. 24-28, pl. 5, figs. 29-35; Pinkster, 1993: 141, figs. 60, 61; Karaman, G., 2010: 21.

MATERIAL EXAMINED: BOSNIA & HERZEGOVINA:

S-2334= Hutovo Blato, lateral canal, Svitovske Kašete (Mouth of Neretva River region), 26. 4. 1974, 20 exp. (leg. Kačanski, D.);

S-2335= Krupa, not far from Svitovske Kašete, 23. 4. 1974, 12 exp. (leg. Kačanski, D.);

S-2337= Jelimska Rječina (Mouth of Neretva River), 25. 4. 1974, many exp. (leg. Kačanski, D.);

S-2338= Krupa, below the lake, Deransko Blato, (Mouth of Neretva River, 24. 4. 1974, 10 exp. (leg. Kačanski, D.);

S-2523= Spring on the Adriatic Sea at mouth of Neretva River, 13. 9. 1973, 5 exp. (leg. Karaman, G.) (Croatia);

S-2704= Spring SE. of Metković, on old road towards Dubrovnik, 13. 9. 1973, many exp. (leg. Karaman, G. & Karaman, M.) (Croatia);

S-6801= Neretva River, Salakovac 2 (near the dam, upper the fish farm) [nearly 20 km upstream of Mostar] [43°271N, 17°49`E, 14. 10. 2008, 9 exp. (leg. Paunović, M.);

S-6806= Žitomislići (Neretva River), 43°12`N, 17°47`E, 13. 10. 2008, 4 exp. mixed with *Gammarus balcanicus*, (leg. Paunović, M.);

S-6831= Londza spring, Deransko Lake, Hutovo Blato, February, 2010, one exp. mixed with *Gammarus balcanicus* (leg. Lučić, D.).

REMARKS. Karaman, G. (1969) mentioned all known localities of this species from western Balkan, including these of Bosnia and Herzegovina. Pinkster (1993) cited several localities from Bosnia and Herzegovina: „Deransko jezero"; Bregava River at Klepci; Buna River; Morino spring.

SYNURELLA AMBULANS AMBULANS (MÜLLER, F., 1846)

Gammarus ambulans Müller, F., 1846: 296, figs. A-C;
Synurella ambulans Karaman, G., 1974a: 29;
Synurella ambulans ambulans Karaman, G. 1974: 86, figs. I-VI; Karaman, G., 2010: 20.

MATERIAL EXAMINED: BOSNIA AND HERZEGOVINA:

S-2232= Bileća, spring, 1955, 1 exp. (leg. Petkovski, T.);

S-3180= Bosansko Grahovo, spring Zvijezda (Pašče polje- field) (data?), 4 exp. (leg. Marić, D.);

S-3854= Spring in the torrent near Novi Travnik (=Pucarevo), 20. 8. 1980, 14 exp. (leg. Karaman, G.).

S-4175= Snjetnica pečina- cave, Kifino Selo, 23. 7. 1963, 2 exp. (leg. C. Deeleman);

S-4179=Ršnica pečina-cave, Čemerno (water-cave), 4. 8. 1968, 1 exp. (leg. Deeleman-Reinhold, C.);

S-4769= Bosnia, near railroad Fojnica- Bakovići (Ključ reg.), 550 m a.s.l. (data?), 3 exp. (leg. Gereke, R.);

S-5033= Trebinje, 1951, 4 exp. (leg. S. Karaman);

S-6828= Cave-spring of Miljacka Mokrinska, near Pale, 28. 7. 2009, 25 exp. (leg. Pavičević, M.).

REMARKS. Karaman, G. (1974) cited numerous localities of this species from Europe, but only two from Bosnia and Herzegovina: Vitak spring near Donji Lukavac, and Crnulje abyss in Turkovići village (Popovo polje-field).

SYNURELLA AMBULANS AMBULANS FORMA SUBTERRANEA KARAMAN, S., 1931

Synurella jugoslavica subterranea Karaman, S., 1931: 25, fig. 1;
Synurella ambulans forma *subterranea* Karaman, G., 1974: 98, figs. I, 9-10; VI-X;
Synurella ambulans ambulans forma *subterranea* Karaman, G., 2010: 20.

MATERIAL EXAMINED: BOSNIA AND HERZEGOVINA:

Sp. 308= Boračko jezero Lake (=Borke), spring below the hotel „Prenj", 20. 12. 1956, 3 exp. (leg. Buturović, A.);

S-3889= Drina River near Brod na Drini (by Foča), pump in the river, 18. 8. 1980. many exp. (leg. Karaman, G.).

REMARKS. Karaman, G. (1974) cited this taxon from numerous localities, but only one locality from Bosnia and Herzegovina: Boračko jezero Lake. The taxonomic status of this taxon (without eyes and pigment) is still uncertain.

CONCLUSIONS

Fauna of epigean and subterranean fauna of Amphipoda in Bosnia and Herzegovina is highly endemic due to his geographical position and geological and geomorphologic history of this region, abundance of the waters, different ecological conditions and presence of large karstic area.

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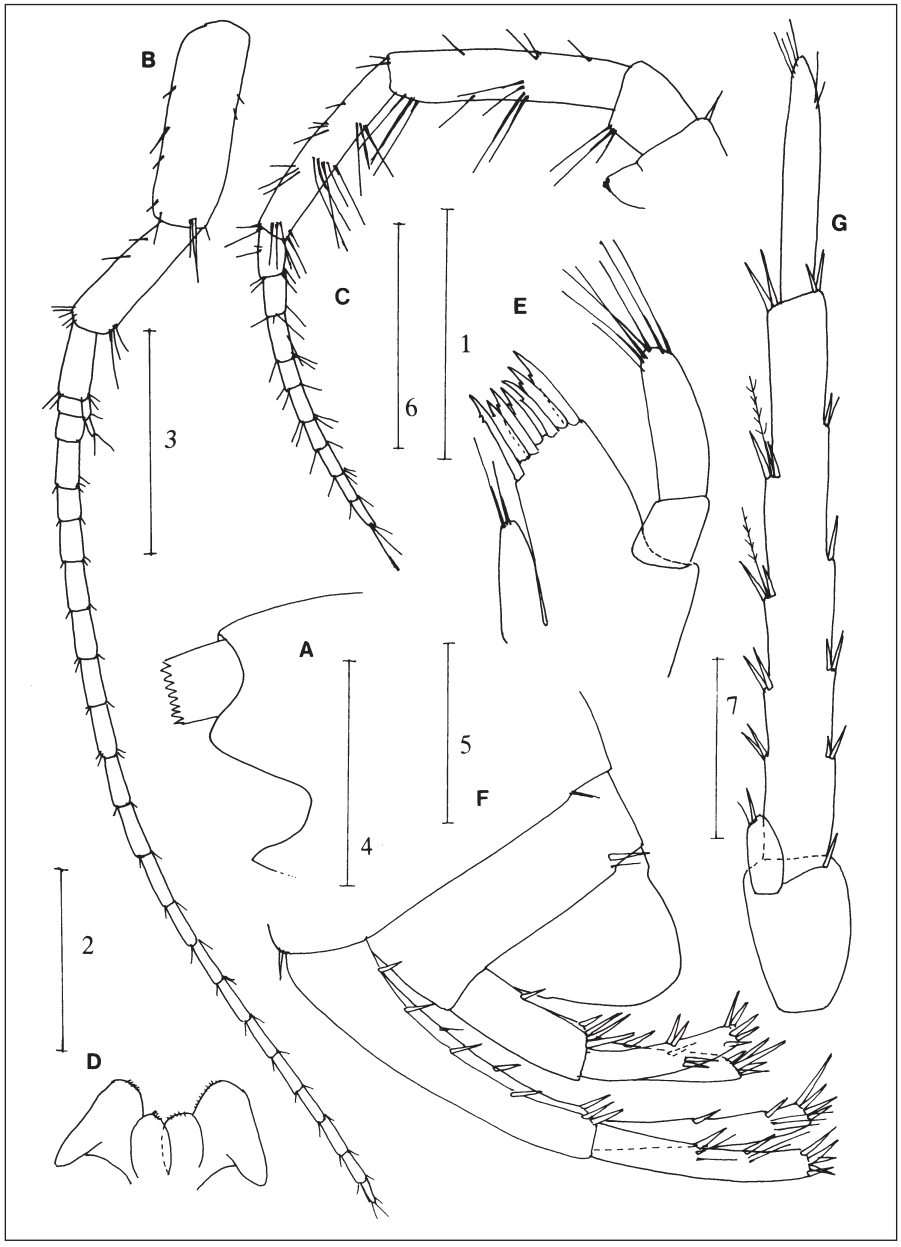

Fig. 1. *Niphargus ozimeci*, sp. n., female 7 mm (holotype):
A= head; B= antenna 1; C= antenna 2; D= labium; E= maxilla 1; F= urosome with uropods 1-2; G= uropod 3. Scale bars: 1= 0.25 mm; 2-7= 0.5 mm.

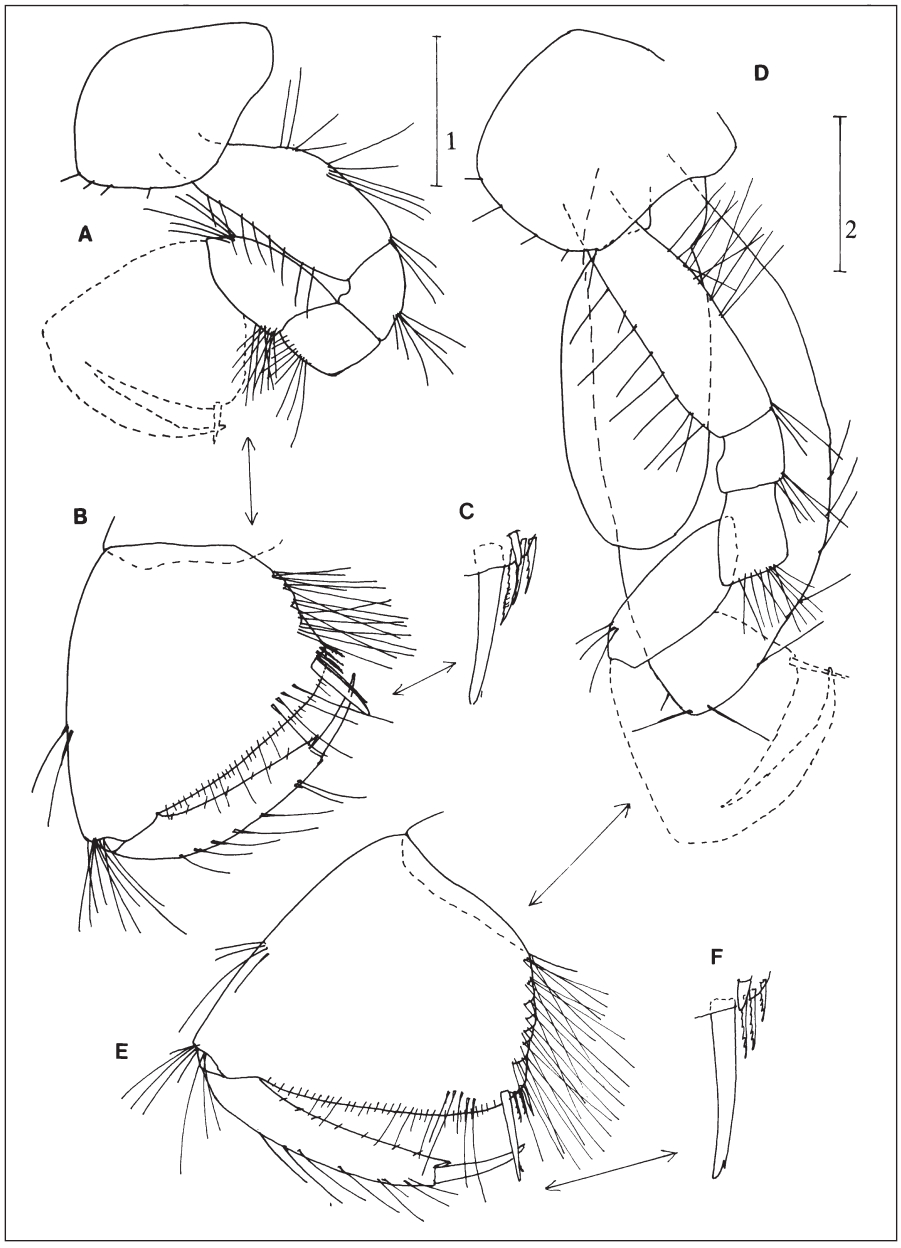

Fig. 2. *Niphargus ozimeci*, sp. n., female 7 mm (holotype):
A-C= gnathopod 1; D-F= gnathopod 2. Scale bars 1-2= 0.5 mm.

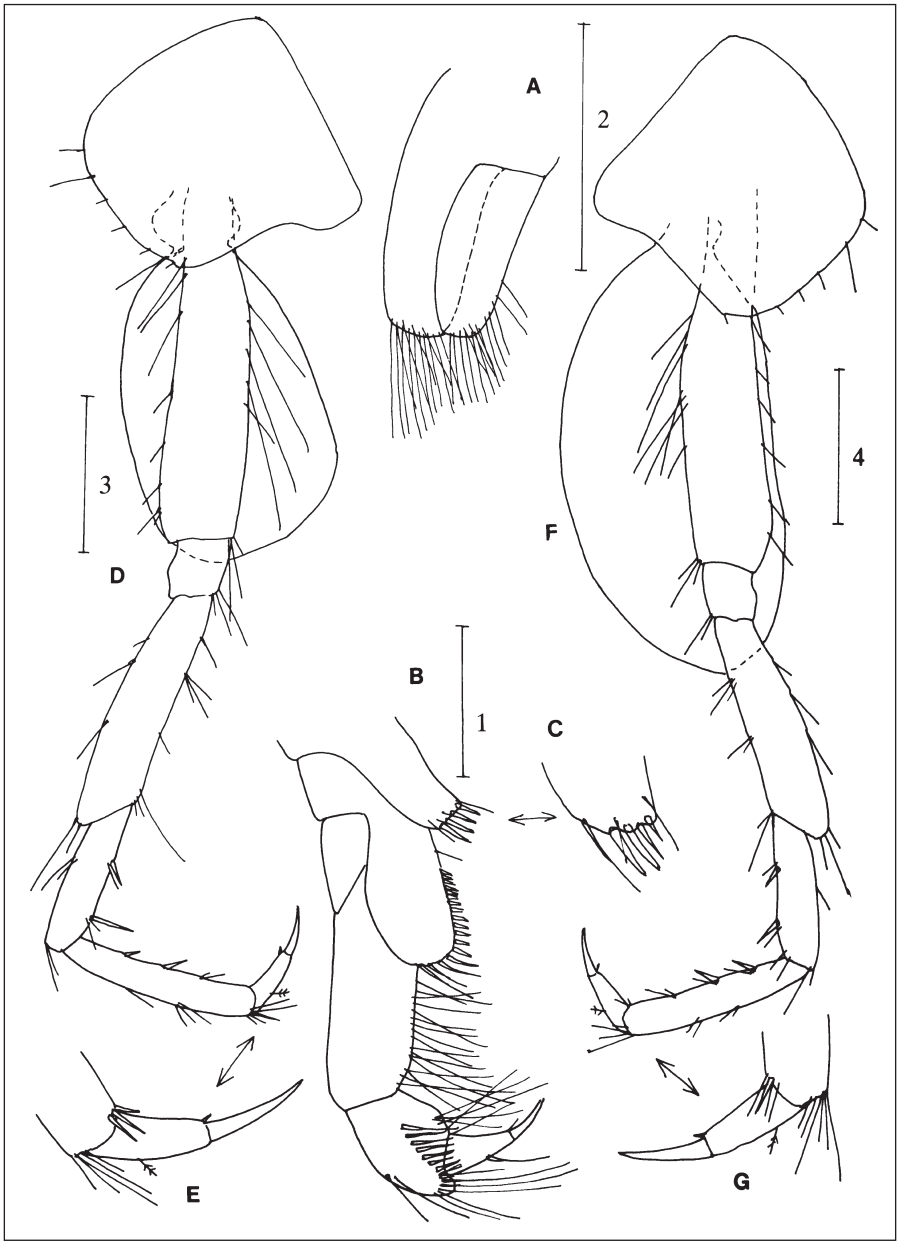

Fig. 3. *Niphargus ozimeci*, sp. n., female 7 mm (holotype): A= maxilla 2; B-C= maxilliped; D-E= pereopod 3; F-G= pereopod 4. Scale bars: 1-2= 0.25 mm; 3-4= 0.5 mm.

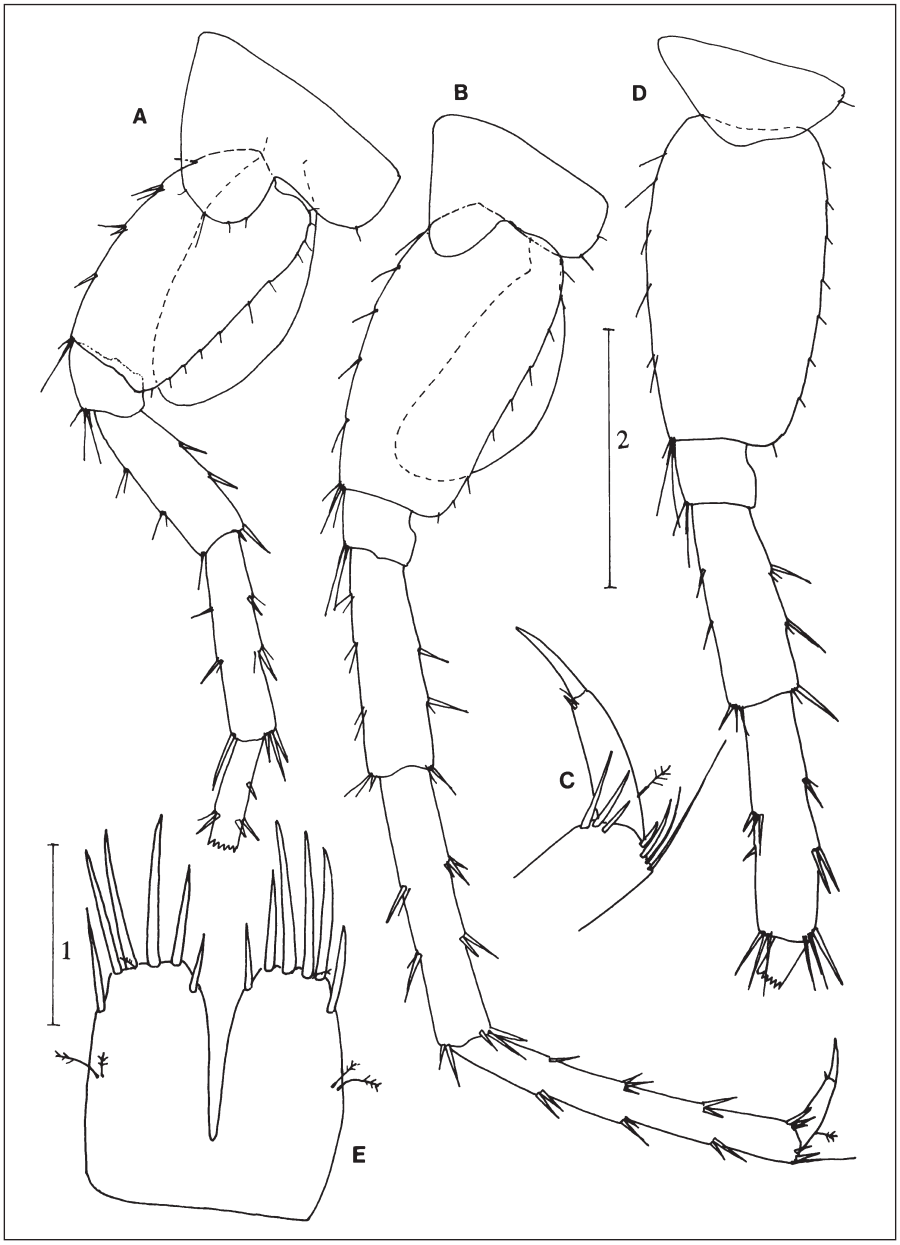

Fig. 4. *Niphargus ozimeci*, sp. n., female 7 mm (holotype):
A= pereopod 5; B-C= pereopod 6; D= pereopod 7; E= telson.
Scale bars: 1= 0.25 mm; 2= 1 mm.

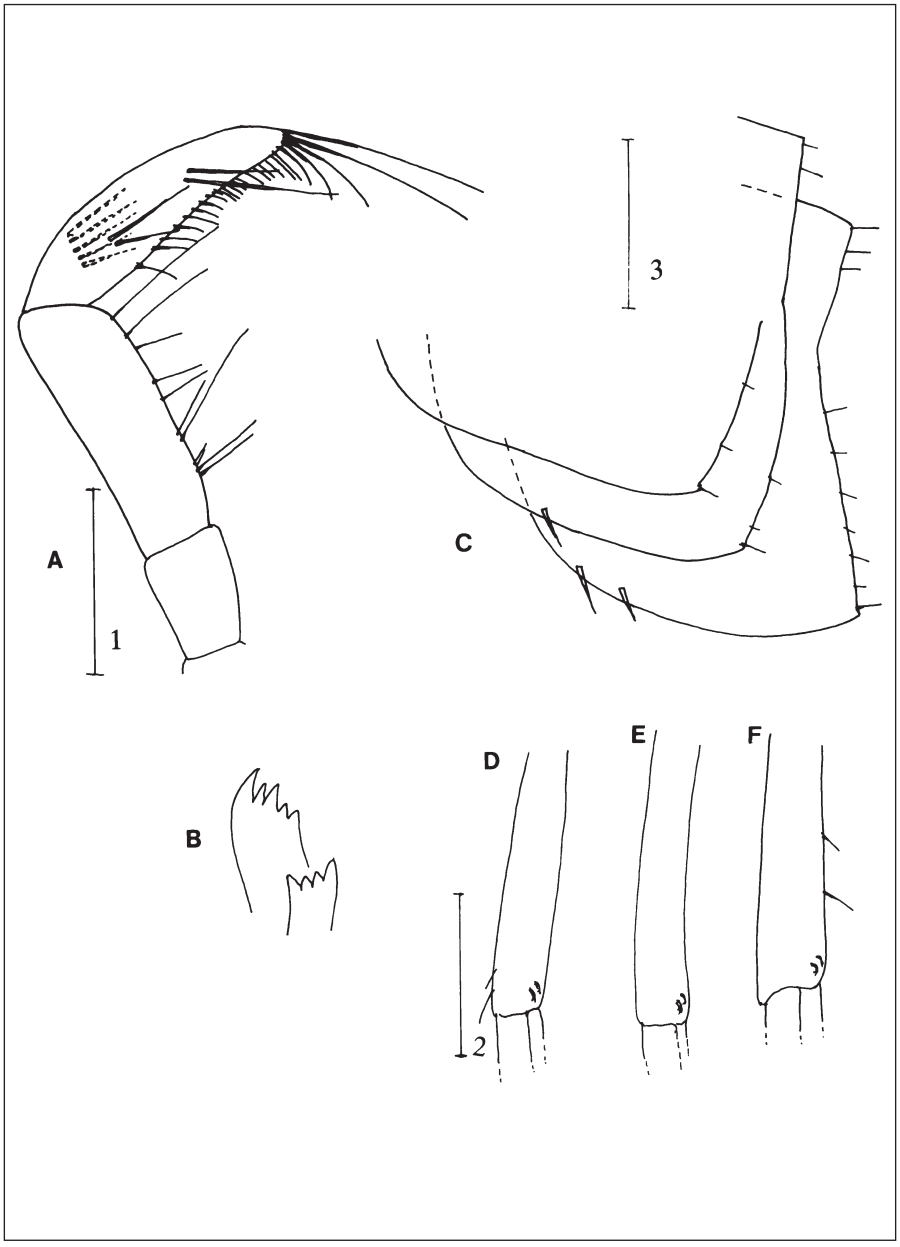

Fig. 5. *Niphargus ozimeci*, sp. n., female 7 mm (holotype):
A= mandibular palp, inner face; B= left mandible, incisor and lacinia mobilis;
C= epimeral plates 1-3; D-F= peduncle of pleopods 1-3, lateral view.
Scale bars: 1= 0.25 mm; 2-3= 0.5 mm.