

ПРИРОДОНАУЧЕН МУЗЕЈ НА МАКЕДОНИЈА — СКОПЈЕ

## FRAGMENTA BALCANICA

MUSEI MACEDONICI SCIENTIARUM NATURALIUM

Tom XI

22. 9. 1981

N° 7 (249)

### MICROCHARON ULLAE N. SP., A MICROPARASELLID FROM SUBTERRANEAN WATERS OF RHODES, GREECE (ISOPODA:ASELLOTA)

Giuseppe Lucio Pesce

Zoological Institute, University of Aquila, Italy

(With 1 figure in the text)

#### ABSTRACT

*Microcharon ullae* n. sp., a Microparasellid isopod from phreatic and hyporheic waters of the island of Rhodes (Greece) is described and illustrated. The new species is included in the group of *Microcharon* with a female second pleopod armed with 4 distal setulae, being close to *M. major* Karaman and *M. othrys* Argano & Pesce, respectively known from Macedonia, Bulgaria and Northern Greece.

During a study still in progress on the stygofauna of some Aegean Islands (Pesce, in press), a number of microparasellid isopods of the genus *Microcharon* Karaman were obtained from fresh-water wells and hyporheic habitat on the island of Rhodes.

This material is referable to a new species, here described as *Microcharon ullae* n. sp.

The discovery of the above species proves that the genus *Microcharon* is widely distributed in the subterranean waters of both continental and insular Greece.

Up to now, the other records for the genus *Microcharon* from this country are: *M. latus latus* Karaman 1933, from the islands of Lefkas (Karaman, 1958), Cephalonia (Argano & Pesce, 1979) and Corfu (Pesce, in press); *M. latus prespensis* Karaman 1954, from Epirus and Peloponnesus (Argano & Pesce, 1979) and from Euboea and northern Sporades (Pesce, in press); *M. othrys* Argano & Pesce 1979, from Thessalia; *M. stygius hellenae* Chappuis & Delamare Deboutteville 1954, from Attica and northern Sporades (Pesce, in

press) and two *Microcharon* species, respectively from Euboea (C o - i n e a u , 1971), and from Epirus ( A r g a n o & P e s c e , 1979).

### ***Microcharon ullae* n. sp. (\*)**

**M a t e r i a l** - 1♂ (holotype), 1 ♀ (allotype), completely dissected and mounted on cover lips in Faure's medium, Rhodes, fresh-water well along the main road Rhodes-Kamiro, at Paradission; june 2, 1981; coll. G. L. Pesce, B. Cicolani and U. Hurtig; 6 ♀♀, 2 ♂♂ (paratypes), preserved in alcohol 60°, same data as the holotype; 2 ♀♀, 2 ♂♂ and 1 juv., dissected and mounted on cover lips in Faure's medium, 7 ♀♀ and 3 ♂♂ (paratypes), preserved in alcohol 60°, Rhodes, fresh-water well, main road Rhodes-Kamiro, cross-road to Tholos; 1 ♀ (paratype), dissected and mounted on cover lips in Faure's medium, Rhodes, hyporheic habitat near Arhipolis; june 3, 1981; coll. G. L. Pesce, B. Cicolani and U. Hurtig.

Holotype and allotype preserved in the collections of the Prirodonaučen Muzej, na Makedonija, Skopje, Yugoslavia; other paratypes in the Author's collections, at the Zoological Institute of the University of L'Aquila, Italy.

**D e s c r i p t i o n** - Body length, without antennae and uropods, 1.40-1.75 mm in the females, 1.35-1.45 mm in the males; width at the 7th pereopods 0.20-0.25 mm; cephalosome larger than long ( $L/1 = 0.82-0.84$ ); the 3rd, 4th and 7th somites slightly larger than long; pleotelson distinctly longer than large, with regularly rounded margins; armature without particulars.

First antenna 6-segmented: proximal segment smooth; segment 2 with an aesthete, implanted on a distal protuberance, which overreaches the tip of the antenna, and with four setae (2 plumose); segment 6 bearing three setae and two aesthetes.

Second antenna with a pointed, 1-segmented exopod, armed with two lateral setae; all specimens lacking in flagellum.

First maxilla consisting of 2 endites: the outer one bears 9-10 spines (4 denticulate and 1 plumose) and some short setae; the inner endite bears cilia and some apical small spinules, and setae.

Second maxilla consisting of 3 arthrites of about the same length: the outer and the central ones, each with 4 long, naked setae; the inner arthrite bears 10-11 setae of different length, and some cilia.

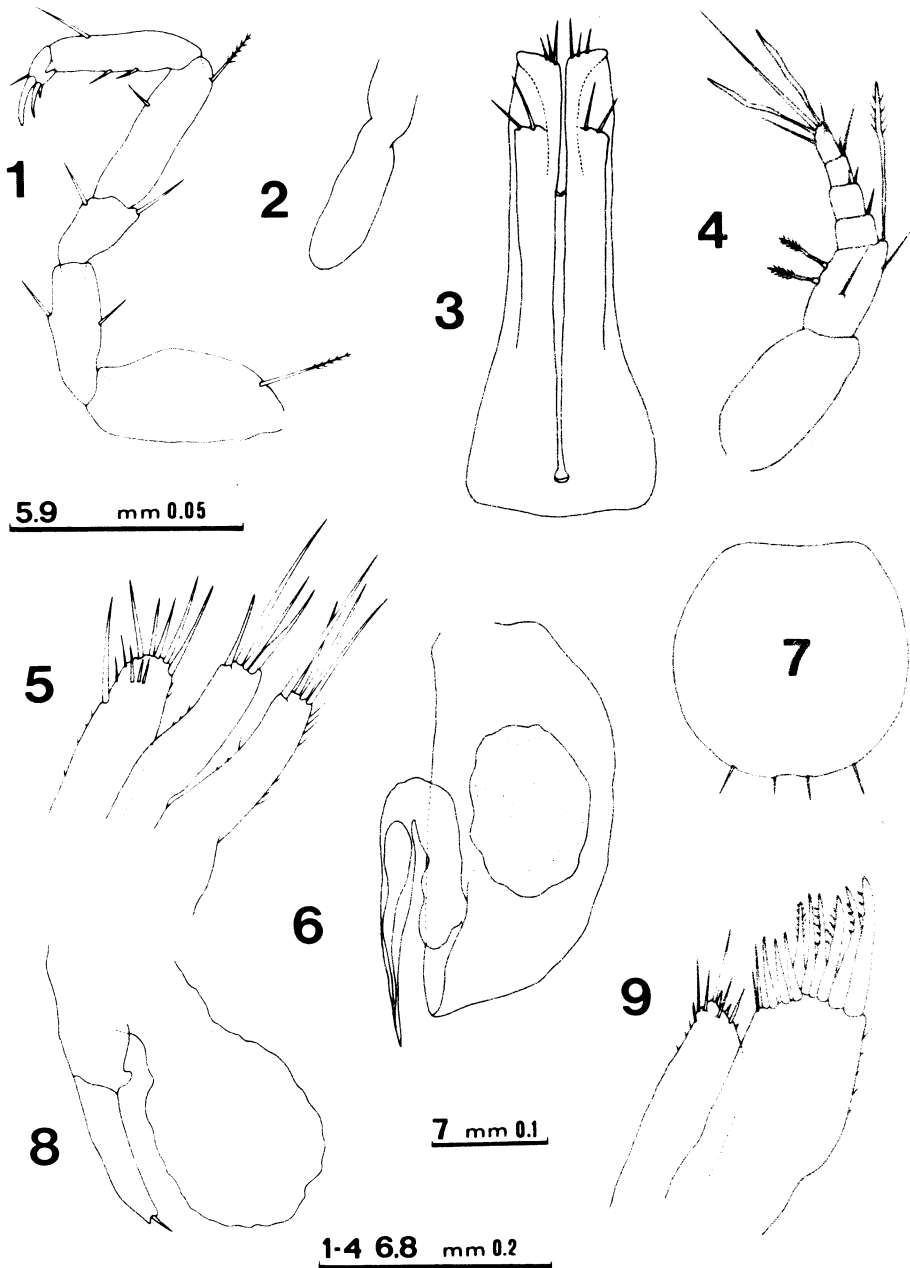
Other mouthparts without particular characteristics as compared to the other fresh-water species of the genus.

Pereopods P<sub>1</sub>-P<sub>6</sub> rather similar in shape and in armature; dactylus with 2 claws of different length, the longer about twice longer than the dactylus.

First pleopods (♂) elongated, slightly wider at the basis, and consisting of two coalescent halves; internal margins jointed by a hyaline

---

(\*) Name after Miss. Ulla Hurtig who took part to the collecting trip in Rhodes.



Figs. 1-9. *Microcharon ullae* n. sp.

1. pereopod VII; 2. pleopod IV; 3. pleopod I (♂);  
 4. antenna; 5. maxilla 2; 6. pleopod II (♂); 7. pleopod II (♀); 8. pleopod III;  
 9. maxilla 1.

membrane; each half with the distal margin slightly directed inward and armed with three setulae; two longer setae are implanted on a protuberance at the 1/6 distal of each half.

Second pleopod (♂): sympod narrow and with a slightly pointed mediiodistal corner; endopod slender and completely recurved, with a claw-like distal part, which overreaches the tip of the sympod; exopod reduced to a small subovoidal lobe.

Second pleopod (♀) rounded, about as long as wide, with a slight-median notch, and armed with 4 distal setulae.

Pleopod 3, not sexually dimorph, and consisting of an exopod curved inward and with an apical setula, and a large endopod, irregularly rounded.

Pleopod 4, also similar in both sexes and consisting of a 1-segmented, naked rudiment.

All specimens lacking in the uropods.

Affinities – *Microcharon ullae* n. sp. falls into the group of the fresh-water species in which the female pleopod 2 is armed with 4 setulae.

Contained in this group at present are the following species: *M. major* Karaman 1954, from Yugoslavia and Bulgaria (Cvetkov, 1967); *M. phreaticus* Coineau & Botosaneanu 1973, from Cuba; *M. herrerae* Stock 1977, from West Indian islands; *M. othrys* (Argano & Pesce 1979, from northern Greece and *M. raffaellae* Pesce, from Iran. All the above species live in phreatic, subterranean waters (wells).

Within this group, the new species is close to *M. major* and *M. othrys* because of the 6-segmented first antenna and the pointed sympod of the male second pleopod.

*M. ullae* n. sp. differs from the above species as follows:

– from *M. major* in the quite different shape of the male pleopod 1, in the shorter female pleopod 2 and in having pectinated spines on the outer endite of the first maxilla (versus the same spines are naked).

– from *M. othrys* in the different armature of the first antenna, in the different shape of both the first and second male pleopods, in the stouter pleopod 3 and, at last, in the armature of the outer endite of the first maxilla.

Distribution and ecology – At present, *M. ullae* n. sp. is known only from the island of Rhodes, Greece.

The new species lives both in phreatic and hyporheic subterranean waters. In particular, it was collected: 1) from fresh-water wells near Tholos and Paradission (water level from the soil surface: 4.5-5.0 m; water depth: 2.3-2.5 m; temperature of H<sub>2</sub>O: 15.5°C; pH : 6.9-7.0; bottom se-

diment composed of thin organogenic sandstone) in association with other isopods as *Proasellus coxalis* (Dollfus) as well as with cyclopid copepods [*Eucyclops serrulatus* (Fischer); *Tropocyclops prasinus* (Fischer)]; harpacticoid copepods (*Nitocrella* sp.); amphipods (*Bogidiella* sp.); ostracods; water mites; gastropods; turbellarians; oligochaetes and some mosquito larvae.2) from hyporheic habitat at Arhipolis (temperature H<sub>2</sub>O:15.1°C;pH:7) in association with cyclopid copepods (*Eucyclops serrulatus*); amphipods (*Bogidiella* sp.) and water mites.

#### Authors Addresses:

Prof. Dr Giuseppe Lucio Pesce  
 Istituto di Zoologia  
 Università degli Studi  
 Piazza Regina Margherita n. 7  
 67100 L'Aquila (Italy)

#### LITERATURE

- Argano R. & G. Pesce (1979). Microparasellids from phreatic waters of Greece (Isopoda, Asellota). – *Crustaceana*, 37 (2):173-183
- Coinneau N. (1971). Les Isopodes interstitiels: documents sur leur écologie et leur biologie. *Mém. Mus. nat. Hist. nat. Paris*, (A) 64:1-170
- Coinneau N. & L. Botosaneanu (1973). Isopodes interstitiels de Cuba. Résultats des expéditions biospéologiques cubano-roumaines à Cuba:191-220
- Karaman S. (1954). Weitere Beiträge zur Kenntnis der Microparaselliden Mazedoniens, das Genus *Microcharon* Karaman. *Fragm. Balcanica*, 1 (12):107-112
- Karaman S. (1958). Weitere Beiträge zur Kenntnis der Amphipoden und Isopoden Jugoslawiens und Griechenlands. *Biol. Glasnik*, 11:11-22
- Pesce G. L. (1978/79). The first Microparasellid from subterranean waters of Iran, *Microcharon raffaellae* n. sp. (Crustacea, Isopoda). *Vie et Milieu*, 28-29, fasc. 2, sér. C (in press).
- Pesce G. L. (in press). Ricerche faunistiche in acque sotterranee freatiche della Grecia meridionale ed insulare. *Quaderni Mus. Speleol. „V. Rivera“*, L'Aquila, Italy.
- Stock J. H. (1977). Microparasellidae (Isopoda, Asellota) from Bonaire. *Stud. Fauna Curacao and other Caribb. Isl.*, 168:69-91

## РЕЗИМЕ

### ***Microcharon ullae* n. sp., нов микропаразит од подземните води на островот Родос (Грција) (Isopoda: Asellota)**

Ѓузепе Л. Пеше

Во овој прилог авторот дава опис на еден нов микропаразит од родот *Microcharon*, кој е најден во фреатичните и хипореичните води на островот Родос, Грција. Тоа е *Microcharon ullae* n. sp. Во систематски поглед новиот вид ѝ припаѓа на групата слатководни микрокарони, кај кои вториот плеопод при женката е вооружен со 4 сетули. Како негови најблиски сродници се двата балкански претставника на групата: *Microcharon major* Karaman од Македонија и од Бугарија и *M. othrys* Argano et Pesce од Северна Грција.

Од *Microcharon major* Karaman новиот вид се разликува во формата на првиот плеопод при мажјакот, по покусиот втор плеопод при женката како и по чешеловидните (наместо неназабени) трнови на надворешниот ендит од првата магзила.

Од *Microcharon othrys* Argano et Pesce новиот вид се разликува во арматурата на првата антена, во формата на првиот и вториот плеопод при мажјакот, по појакиот трет плеопод и најпосле во арматурата на надворешниот ендит од првата магзила.