

**ELAPHOIDELLA FEDERICAE SPEC. NOV., A NEW HARPACTICOID  
COPEPOD FROM PHREATIC WATERS OF CORSICA  
(CRUSTACEA HARPACTICOIDA: CANTHOCAMPTIDAE\*)**

BY

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SUMMARY

A new species of harpacticoid copepod, *Elaphoidella federicae* n.sp. is described from male and female specimens collected from phreatic waters (wells) of Corsica. It belongs to the *gracilis* group of *Elaphoidella* as defined by Apostolov (1985), and differs from all described species in this group in the peculiar armature of the endopods of legs 2 to 5.

RÉSUMÉ

Des exemplaires mâles et femelles capturés dans les eaux phréatiques (puits) de Corse, permettent la description d'une espèce nouvelle de copépodes harpacticoïdes, *Elaphoidella federicae* n.sp. L'espèce appartient au groupe de *gracilis* tel qu'il a été défini par Apostolov (1985), se distinguant de toutes les autres espèces connues de ce groupe par l'armature caractéristique des endopodites des pattes 2-5.

During a recent investigation on the phreatic groundwater fauna of Corsica, by the "Dipartimento di Scienze Ambientali" of the University of L'Aquila (Italy), a new stygobiont species of the genus *Elaphoidella* sensu Apostolov (1985) was collected. Up to now only one species of *Elaphoidella* was known from Corsica, viz. *E. gracilis* (Sars, 1863), widespread both in subterranean and surface waters of the Palaearctic region. It is therefore of great interest to record a second species of the genus from this island, herein described as *Elaphoidella federicae* n.sp.

Family **Canthocamptidae** Sars, 1906; cf. Lang, 1948

Genus *Elaphoidella* sensu Apostolov, 1985

***Elaphoidella federicae* n.sp.** Figs. 1-16

Material.—1♀, (holotype), 10♀♀ and 12♂♂ (paratypes), completely dissected and mounted on slides in Faure's medium, fresh water well at Bravóna (Bastia) (type-locality); (depth: 3.5 m; water level from the soil surface: 0.60 m; water temperature: 12.9°C; pH; 7.0; bottom sedi-

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ment: fine sand; accompanying fauna: cyclopid copepods, syncarids, amphipods and water mites); 1 Apr. 1988, coll. F. Maurizi and A. Medusa. 25 ♀♀, 20 ♂♂ (paratypes), preserved in alcohol 70°C, brackish-water well at Porto Vecchio (depth: 1.0 m; water level from the soil surface. 0.60 m; water temperature. 12.4°C; pH: 6.9; bottom sediment: fine sand; accompanying fauna: cyclopid copepods, amphipods, ostracods, syncarids, Diptera larvae); 1 Apr. 1988, coll. F. Maurizi and A. Medusa.

Holotype and one female paratype kept in the collections of the Zoologisch Museum, Amsterdam, Netherlands (ZMA Co. 102.812, 102.813); other paratypes in the senior author's collections at the "Dipartimento di Scienze Ambientali", University of L'Aquila, Italy.

**Description.**—Based on mature female specimens length, excluding antennulae and caudal setae, 0.60-0.65 mm (mean: 0.62). Body subcylindrical, slender, tapering posteriorly. Thoracic somites without particular ornamentation; abdominal somites with some rows of thin spinules (dorsally) and one row of well developed spines along posterior margin (ventrally); anal somite with some rows of thin spinules dorsally and 4-6 well developed spines at the basis of each furcal ramus. Anal operculum convex and armed with 22-26 spinules along medial margin. Furcal rami subovoidal, elongated (length/width ratio: 1.64-1.70; mean: 1.66); outer margin with one long seta and 3-4 shorter spines; distal margin with 3 setae, outer seta 1.65-1.70 times longer than the corresponding inner one, medial seta longest; dorsal seta about as long as furcal ramus; lateroventral margin with 4 stout spines at 1/3 from the distal end.

Antennula: 8-segmented, aesthete on segment 4 short, not reaching tip of distal segment. Antenna: 3-segmented, exopod 1-segmented, with 2 distal and 2 subdistal setae.

Mouthparts as usual in genus.

Leg 1: both rami 3-segmented, endopod longer than exopod; first segment of the endopod about as long as the first two exopodal segments combined.

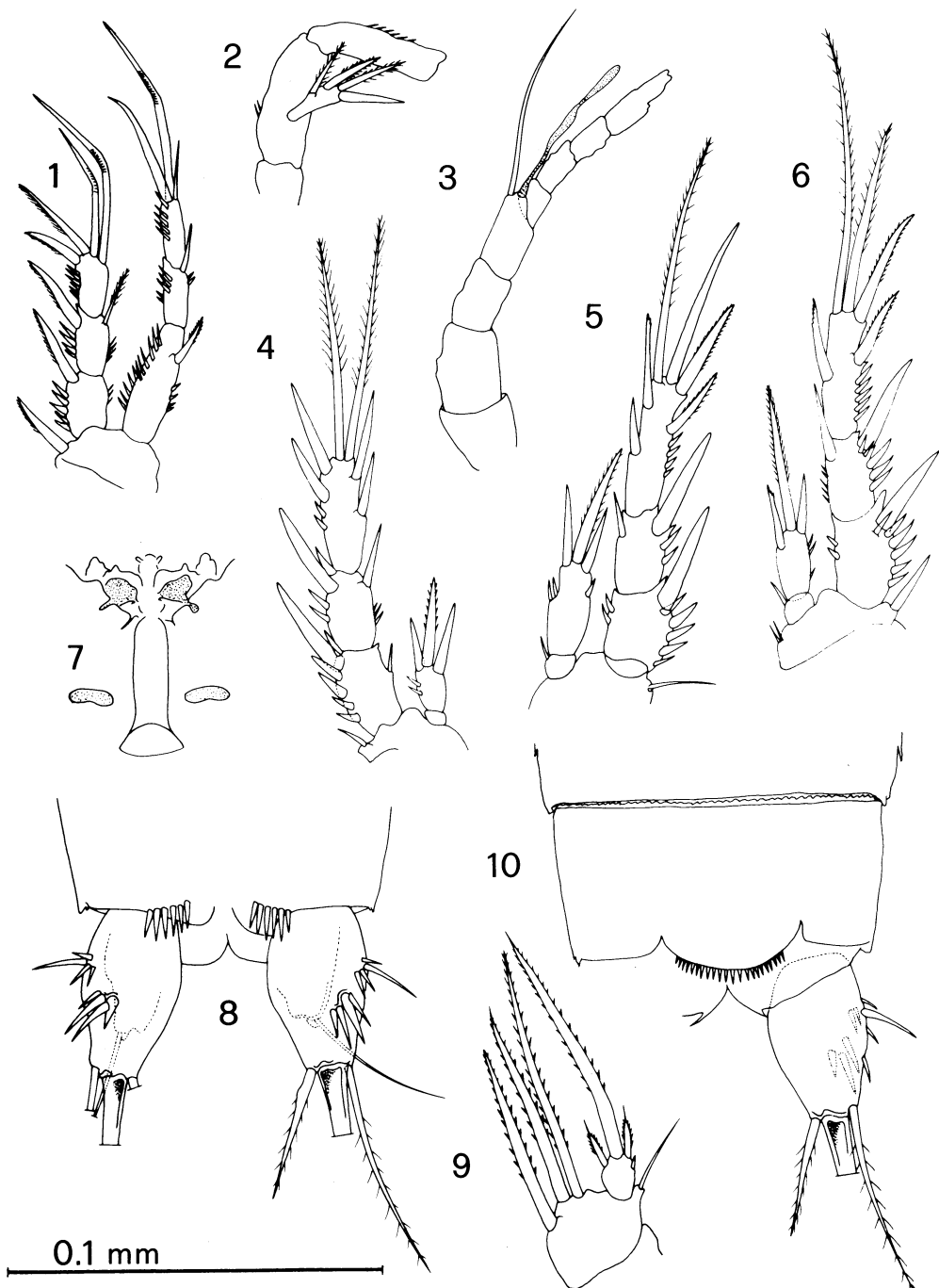
Legs 2 to 4, exopod 3-segmented, endopod 2-segmented. Setal formula of legs 1 to 4 listed below:

	exopod			endopod		
leg 1	0	1	022	1	1	120
leg 2	0	1	122	—	1	111
leg 3	0	1	222	—	1	111
leg 4	0	1	222	—	0	111

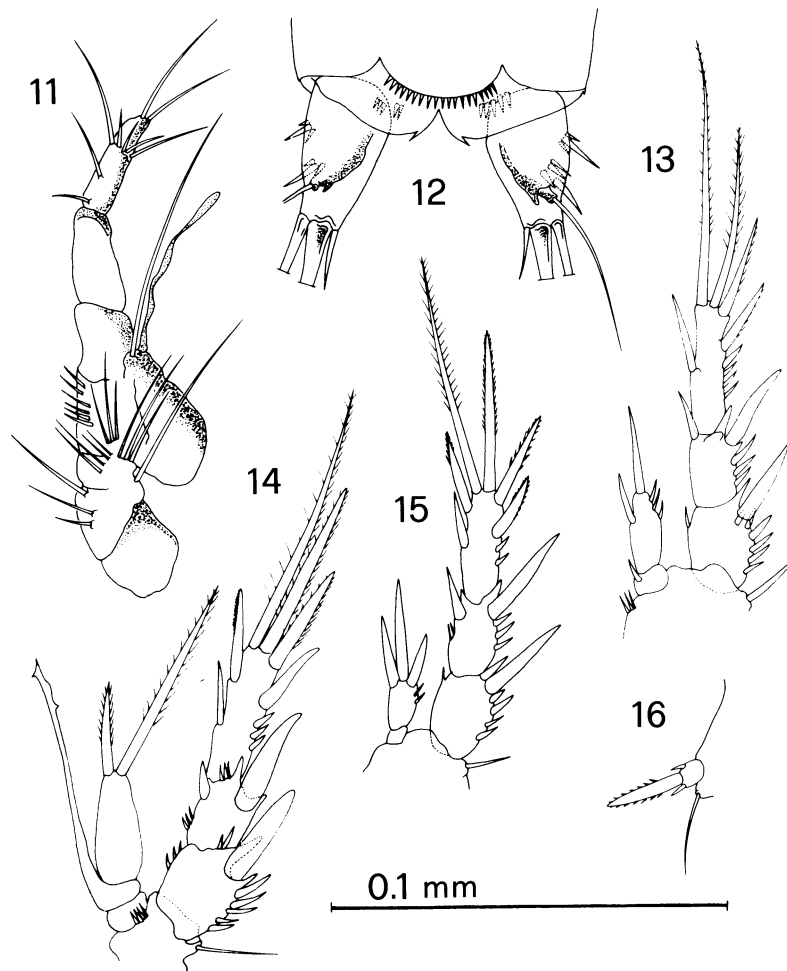
Leg 5: exopod subquadrangular in shape (length/width ratio: 1.36-1.39; mean: 1.38) and armed with 1 long distal spiniform seta and 2 subdistal short setae; on outer or inner margin of some specimens there are 1 or 2 short spinules; basiendopod with 3 long plumose setae.

**Male.**—Body length, based on mature specimens and excluding antennulae and caudal setae, 0.50-0.55 mm (mean: 0.51). Only antennula, legs 2, 3 and 5, and anal operculum differ from female. Body ornamentation as in female.

Antennula, 6-segmented and haplocer; aesthete on segment 3 not reaching tip of distal segment. Leg 2, endopod 2-segmented: segment 1 with 1 inner



Figs. 1-10. *Elaphoidella federicae* n.sp. (female holotype). 1, Pl; 2, antenna; 3, antennula; 4, P4; 5, P3; 6, P2; 7, "genital field"; 8, furcal rami, ventral view; 9, P5; 10, anal somite and furcal ramus, dorsal view.



Figs. 11-16. *Elaphoidella federicae* n.sp. (male paratype). 11, antennula; 12, furcal rami, dorsal view; 13,P2; 14,P3; 15,P4; 16,P5.

seta, segment 2 with 1 inner and 1 apical seta; exopod as in female. Leg 3, exopod 3-segmented; endopod medial segment with characteristic lanceolate spine, distal segment with 2 setae of different length, outer more than twice as long as inner one. Leg 5 with naked basiendopod, exopod subquadrangular (length/width ratio: 0.95-1.05; mean: 1.01), with 1 long, apical plumose spine and 2 subdistal setae. Anal operculum armed with stouter spines along the medial margin.

**Etymology.**—Specific epithet after Miss Federica Maurizi who collected the new species.

Affinities.—*E. federicae* n.sp. belongs to the *gracilis* group of *Elaphoidella* as defined by Apostolov (1985). Within this group the new species resembles most *E. damianae* Kiefer 1967, from groundwaters of Rumania, and *E. putealis* (Chappuis, 1925), known from groundwaters of Romania and Lebanon.

Shared with these species is the armature of the endopod of female legs 2 and 3, the armature of the anal somite and the shape of caudal rami. *E. federicae* n.sp. differs from the mentioned species as follows: from *E. damianae* in having the endopod of leg 4 (both in male and female) armed with 3 apical setae (versus 2 setae only), the anal operculum with more (22-26; versus 7) and smaller spines, and a different morphology of the exopod of leg 5; from *E. putealis* in having 3 setae on the basiendopod of female leg 5 (versus 4 setae), a different shape and length of the setae on the exopod of the same leg, and a different armature of the exopod of male leg 5.

#### REFERENCE

- APOSTOLOV, A., 1985. Etude sur quelques Copépodes Harpacticoïdes du genre *Elaphoidella* Chappuis, 1929 de Bulgarie avec une révision du genre. *Acta Mus. Maced. Sci. nat.*, **17** (6/145): 133-160.