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**ANTHURIDEAN ISOPODS (CRUSTACEA: ISOPODA:
ANTHURIDEA) FROM THE EASTERN ATLANTIC OCEAN (OFF
IBERO-MOROCCAN COASTS). III. *LEPTANTHURA COMMUNIS*
NEW SPECIES**

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Abstract. A new species of anthuridean isopod, *Leptanthura communis* n. sp., is described from Atlantic Ocean (off Ibero-Moroccan Bay).

Résumé. On décrit une espèce nouvelle d'isopode anthuridé, *Leptanthura communis* n. sp., dans l'Océan Atlantique (golfe ibéro-marocain).

Key words: Isopoda, Anthuridea, Leptanthuridae, *Leptanthura communis* new species, Eastern Atlantic Ocean, off Ibero-Moroccan Bay.

INTRODUCTION

A new species, *Leptanthura communis* is described from the Eastern Atlantic, off the Ibero-Moroccan Bay, collected by the French BALGIM 84 cruise. The present paper completes my previous studies on the anthuridean isopod fauna of the Eastern Atlantic (Negoescu, 2005, 2006).

MATERIAL AND METHODS

The French oceanographical cruise BALGIM 84, organised by the Muséum National d'Histoire Naturelle (Paris), under the direction of Dr. Philippe Bouchet, collected material within the period May 22–June 22 1984 aboard R. V. „Cryos” in Atlantic and Mediterranean waters on both sides of the Gibraltar Strait, at depths between 115 and 2110 m. BALGIM is the abbreviation for „Benthos – Atlantic – Gibraltar – Mediterranean”. The material has been sorted by the Centre National de Tri d'Océanographie Biologique (CENTOB Brest).

The material studied in this paper was collected from one station, off the Ibero-Moroccan Bay, at a depth of 364 m (Fig. 1). The specimens were preserved in 70% ethanol and dissected parts were mounted on slides in 50:50 ethanol:glycerin solution. The material is preserved in the Muséum National d'Histoire Naturelle (Paris) and in the „Grigore Antipa” National Museum of Natural History (Bucharest).

Abbreviations used in text: C – cephalothorax; P – pereopod; Pln – pleon; Tel – telson; l – left; r – right; MNHN - Muséum National d'Histoire Naturelle, Paris; MGAB – Muzeul Național de Istorie Naturală „Grigore Antipa”, București („Grigore Antipa” National Museum of Natural History, Bucharest).

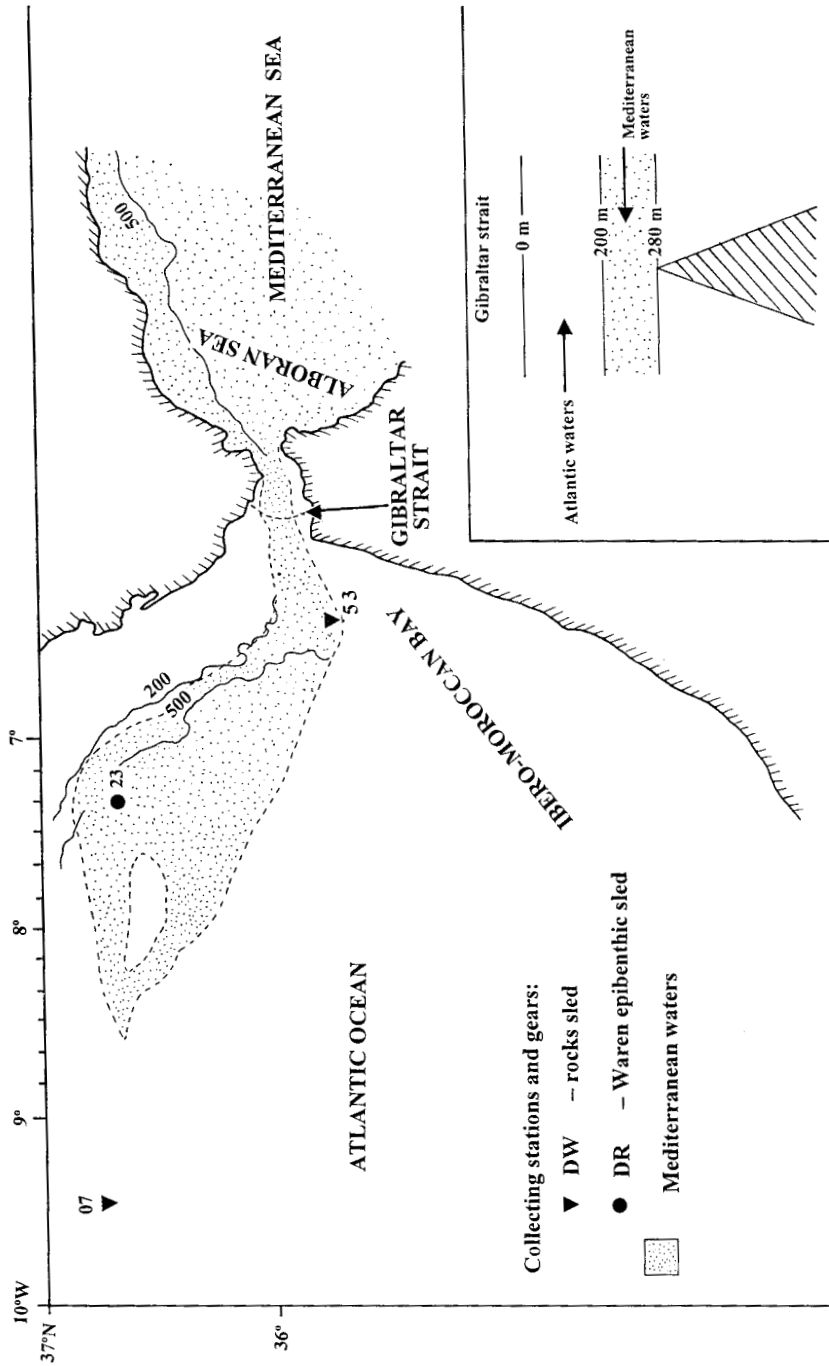


Fig. 1 – Map of the studied area: collecting stations. Mediterranean waters (outflow in contact with the bottom of the bay) – punctuated (according to the maps provided by CENTOB, Brest, November 1986) (modified after Negoescu, 2006).

RESULTS AND DISCUSSIONS

Family Leptanthuridae Poore, 2001

Leptanthura Sars, 1897***Leptanthura communis*** n. sp.

(Figs 2-11)

Material. 3 specimens: *holotype* non-ovigerous female (dissected, one slide) No. MNHN-Is 5982; *allotype* adult male (dissected, one slide) No. MGAB-ISP 903; *paratype*: 1 non-ovigerous female, No. MGAB-ISP 904. *Type locality*: E Atlantic Ocean, BALGIM 84, RV „Cryos”, st. DW 53, 35°41' N, 6°30.5' W, 364 m, bottom with mud, foraminiferans, pteropods, 3.06.1984.

Etymology. The species is named after its common aspect, with absent spectacular outer morphological features (in Latin *communis*, *is* = common, banal).

Description of non-ovigerous female (holotype) (Figs 2-6)

Integument thin, smooth, unpigmented.

Body (Fig. 2 A): length 3.7 mm, about 13.2 times longer than greatest width; proportions: $C=1<2=3<4>5=6>7<Pln\approx Tel$. *Cephalothorax* 1.3 times longer than greatest width; rostrum small, acute, not exceeding anterolateral lobes. Eyes absent. *Pereonite* 4 longest, and 7 shortest (shorter than cephalothorax or telson). *Pleon* 1.6 times longer than greatest width, 1.3 times longer than pereonite 7 and 1.2 times longer than telson; pleonites 1-5 subequal, 6 longest, dorsally, with incision on posterior margin.

Telson (Figs 2 A, 6 A): 2 times longer than greatest width, linguiform, with parallel margins, tapering in the distal third to a rounded apex, with four apical fine setae (broken); dorsally in the distal third a pair of fine short setae. At the base of pleotelson a large vesicle of statocyst with particles of sediment inside.

Antennula (Fig. 3 A): peduncle article 1 1.5 times longer than articles 2 and 3 together; article 2 and 3 subequal; distolaterally article 2 with two plumose sensory setae and article 3 with a comb of seven long setae. Flagellum of two articles; article 1 3.8 times longer than article 2; article 2 apically with four broad aesthetascs.

Antenna (Fig. 3 B): distolaterally articles 4 and 5 of peduncle with two, respectively with three long setae, each. Rudimentary flagellum of three articles, with aesthetascs, together shorter than article 5 of peduncle.

Mandible missing.

Maxilla (Fig. 2 B): lateral endite sharp with about 15 teeth and three hooks.

Maxilliped (Fig. 2 C): basis 2.4 times longer than palp with one distomedial long seta; endite absent. Palp of two articles; article 1 with one lateral seta and four distomedial setae; article 2 minute with 4 apical long setae.

Pereopods (Figs 4, 5): P1 longest and strongest, P2 longer than P3-P7, P3 equal in length with P5; P7 shorter than P6. P1 (Fig. 4 A, B): ventrally merus with a row of about five setae and carpus with four setae and distoventrally one simple sensory spine; propodus enlarged, 1.3 times longer than greatest width; palm with straight margin and proximally a prominent rounded thumb-like process, mesially six sensory spines, five hand-like, one bifide, and one strong long seta; laterally three setae (one proximal, two distal ones) and medially two distal and one proximal seta. P2 and P3 (Fig. 4 C, D) quite similar in shape: ventrally merus with fringed

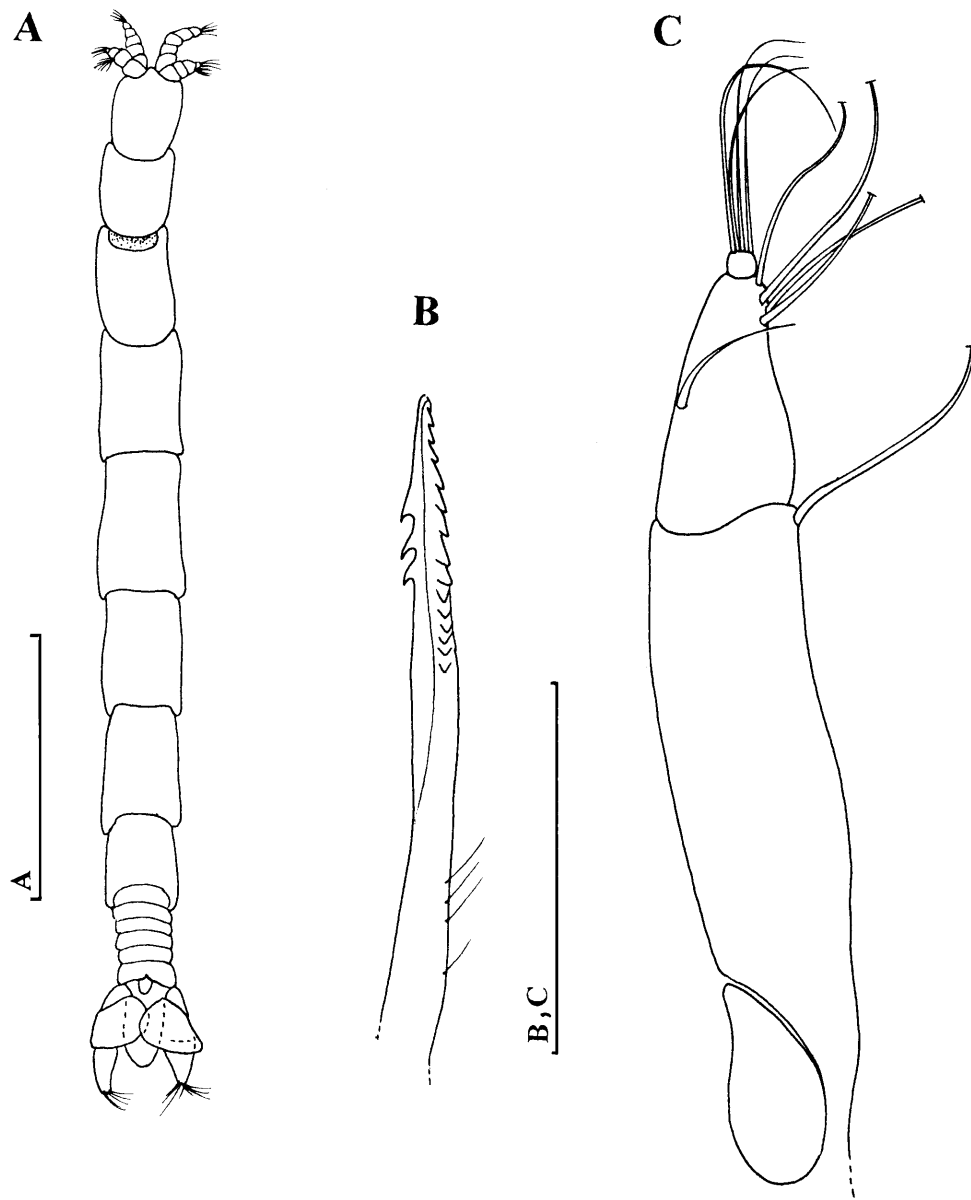


Fig. 2 – *Leptanthura communis* n. sp., non-ovigerous female holotype. A, dorsal view; B, maxilla; C, maxilliped. Scale (in mm): A 1; B, C 0.1.

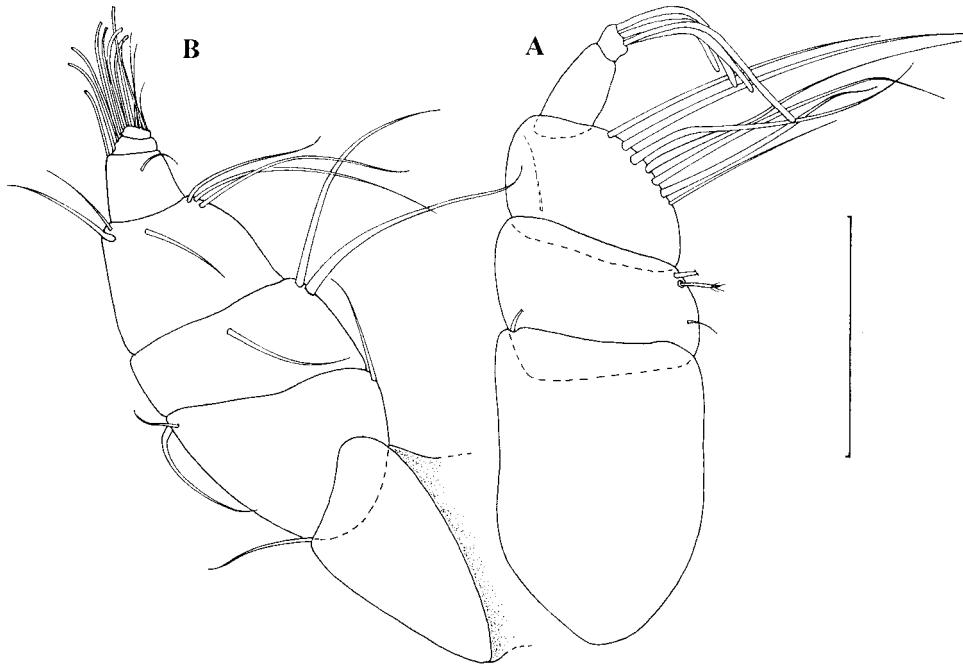


Fig. 3 – *Leptanthura communis* n. sp., non-ovigerous female holotype. A, antennula (r); B, antenna (r). Scale (in mm): 0.1.

margin and a row of six setae (P2); carpus with one simple sensory spine and fringed margin; propodus broad oval, 1.4 times in P2 and in P3 1.6 times longer than greatest width, ventrally margin of palm without thumb-like process, with five in P2 and in P3 four simple sensory spines decreasing in length towards distal end. P4 is missing. P5-P7 (Fig. 5) quite similar in shape: ventrally ischium with two setae (three in P6) and merus with three setae (four in P6); distoventrally carpus with one simple sensory spine and two setae; propodus elongate oval, 1.7 and 2 (P5-P6) and 2.3 (P7) times longer than wide, ventrally margin with two unequal simple sensory spines in P5-P6 and one simple sensory spine in P7. In P1-P3 and P5 propodus is slightly longer than dactylus (and unguis together) (1.1-1.2 times), in P6 propodus is almost equal in length with dactylus, and in P7 dactylus is slightly longer than propodus (1.3 times).

Pleopod 1 (Fig. 6 B): sympod with three retinacula. Exopod operculiform, 2.2 times longer than wide, 1.1 times longer and 2.5 times wider than endopod, surrounded distally by 12 fine plumose setae. Endopod 4.9 times longer than wide, distally with six fine plumose setae.

Pleopod 2 : exopod distally with six plumose setae, and endopod with four ones.

Uropod (Fig. 6 C, D): sympod rectangular, 2 times longer than wide, 1.4 times longer than endopod, distomedially with one plumose seta and laterally with a row of about seven plumose setae. Endopod pyriform, elongate, 2.5 times longer than greatest width, tapering to a rounded apex; surrounded by about 11 simple long

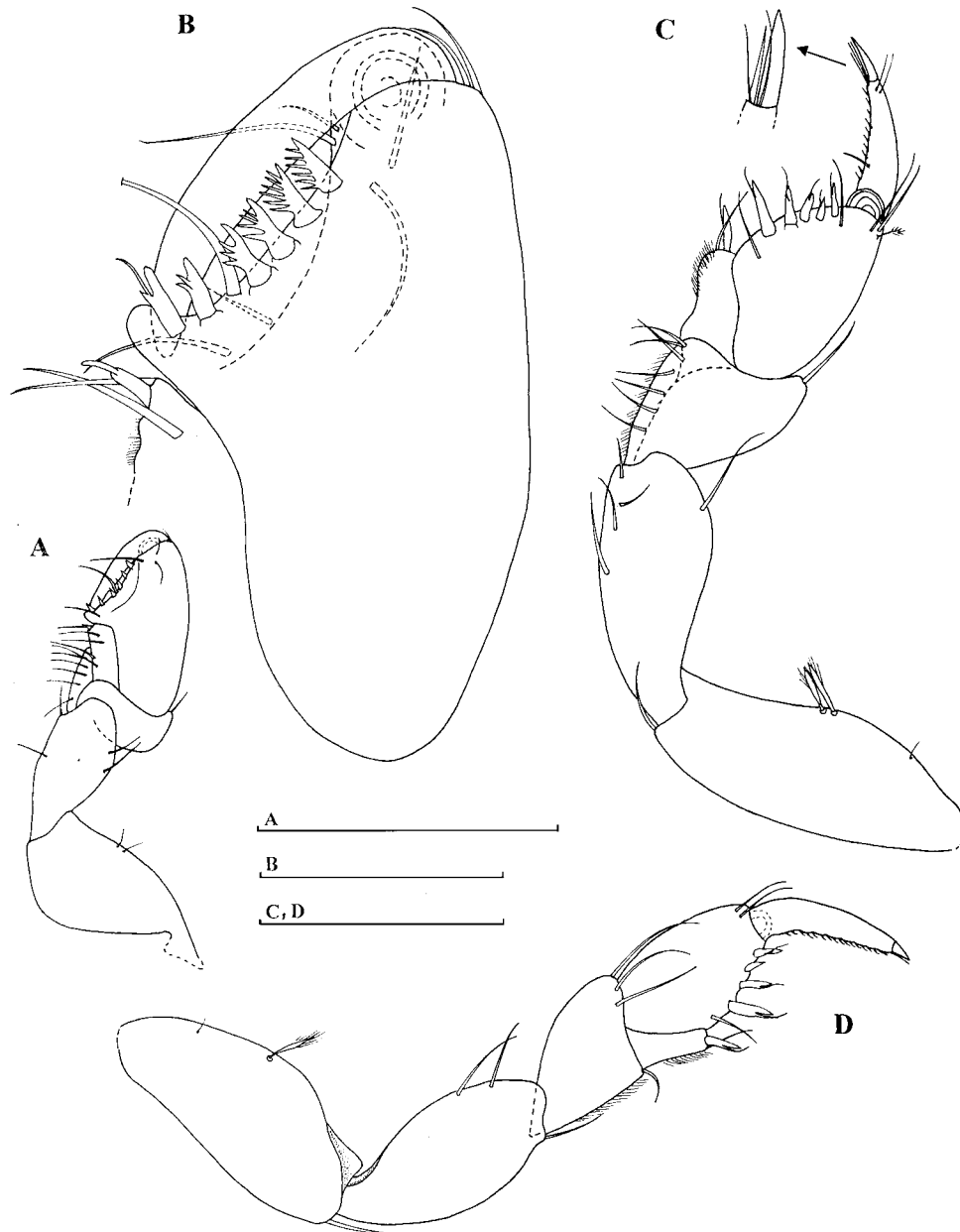


Fig. 4 – *Leptanthura communis* n. sp., non-ovigerous female holotype. Pereopods (r): A, 1; B, 1: distoventral part of carpus, propodus, dactylus; C, 2; D, 3. Scale (in mm): A 0.5; B 0.1; C, D 0.2.



Fig. 5 – *Leptanthura communis* n. sp., non-ovigerous female holotype. Pereopods (r): A, 5; B, 6; C, 7. Scale (in mm): 0.2.

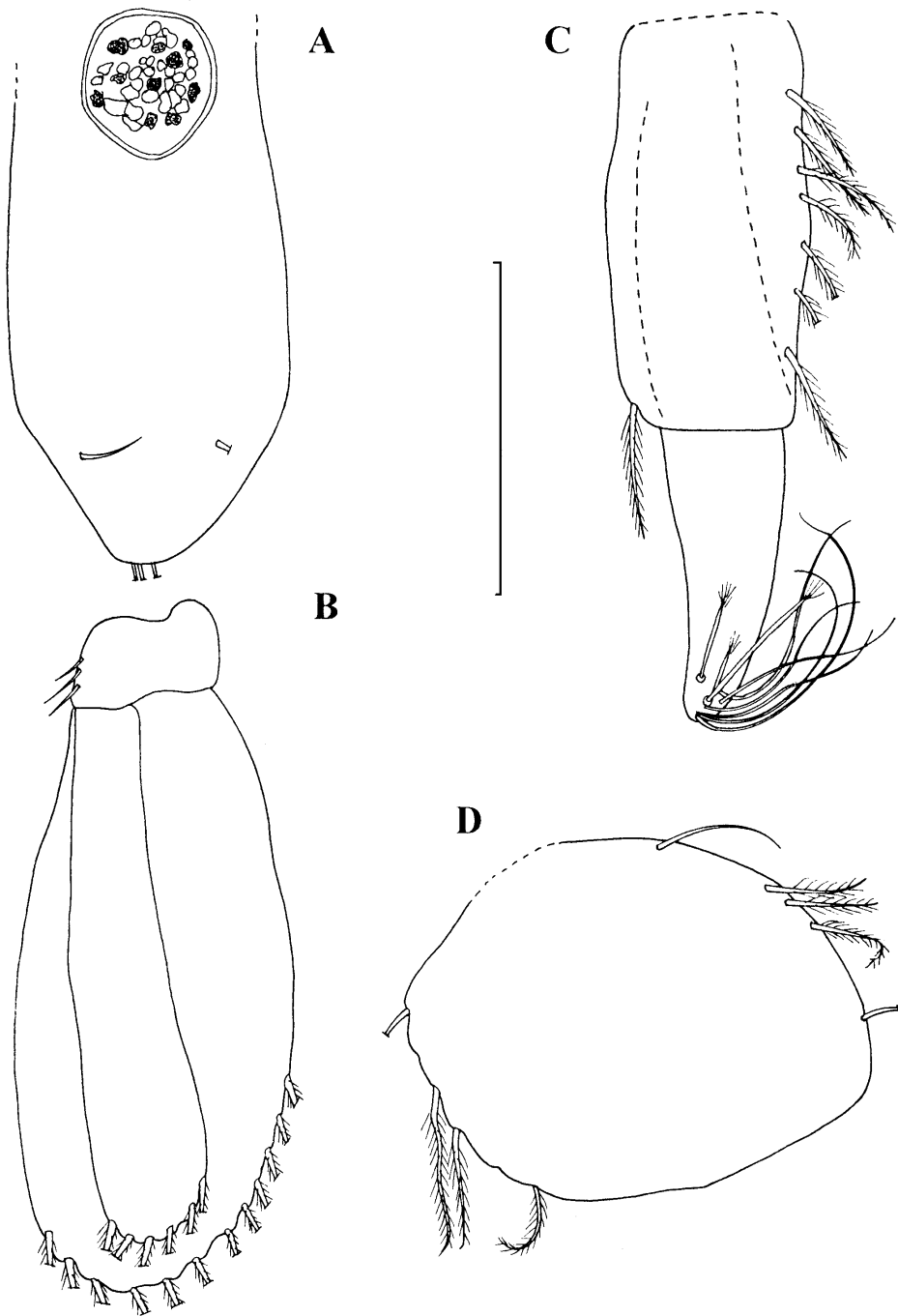


Fig. 6 – *Leptanthura communis* n. sp., non-ovigerous female holotype. A, telson (setae cut off); B, pleopod 1 (setae cut off); C, sympod and endopod of uropod (r); D, exopod of uropod (r). Scale (in mm): 0.2.

setae; subapically three plumose sensory setae. Endopod extends by about one half its length beyond apex of telson (Fig. 2 A). Exopod broadly oval, 1.1 times wider than long, shorter than sympod, fringed with some plumose and simple setae (11 ?). Exopods folded over telson, covering each other slightly medially.

Description of adult male (allotype) (Figs 7-11)

Compared to the female the adult male shows some different morphological features.

Body (Fig. 7 A): length 5 mm. Ventrally pereonites without protuberances.

Pleon 1.8 times longer than pereonite 7 and 1.6 times longer than telson.

Telson (Fig. 11 A-C) like in female; four apical setae, the median ones long.

Antennula (Fig. 7 B, C): peduncle article 1 as long as 2 and 3 together; distally article 1 with six fine setae. Flagellum of 11 articles extends slightly beyond cephalothorax; articles 2 to 11 decreasing in size, with many long filamentous aesthetascs disposed in circles.

Antenna (Fig. 7 D, E): distolaterally articles 4 and 5 of peduncle with three long setae, each. Flagellum of four articles, with aesthetascs, together shorter than article 5 of peduncle.

Mandible (Fig. 8 A): palp shorter than pars incisiva; article 2 of palp 1.2 times longer than articles 1 and 3 together; article 3 with two apical bristles.

Maxilla (Fig. 8 B) with about 11 teeth and *maxilliped* (Fig. 8 C) similar to that of female.

Pereopods (Figs 9, 10): P1 longest and strongest, P4 shortest, P2, P3 and P7 longer than P4-P6. P1 (Fig. 9 A-C): propodus enlarged, 1.6 times longer than greatest width, palm proximally with an acute thumb-like process, mesially palm with eight simple sensory spines, medially two dense rows of about 14, and respectively ten simple long setae, distal ones longest. P2 and P3 (Fig. 9 D-G) quite similar in shape, P2 longer: propodus elongate oval, 2 times and respectively 2.4 times longer than greatest width, ventrally with five and respectively four unequal simple sensory spines. P4-P7 (Fig. 10): carpus distoventrally with one simple sensory spine; propodus elongate oval, 2.4 (P4), 2.2 (P5), 3 (P6) and 2.7 (P7) times longer than wide, ventrally margin with two simple sensory spines. In P1 propodus is longer than dactylus (and unguis together) (1.4 times), in P3, P4, P6 and P7 propodus is about equal in length with dactylus, and in P2 and P5 propodus is shorter than dactylus (0.8 times).

Pleopod 1 (Fig. 11 F): exopod operculiform, 2.7 times longer than wide, 1.2 times longer and 2.2 times wider than endopod, surrounded distally by 15 plumose setae. Endopod 5.2 times longer than wide, distally with eight plumose setae. *Pleopod 2* (Fig. 11 G, H): sympod with three retinaculae; exopod with transversal suture, distally with 13 long plumose setae, and endopod with five ones. *Appendix masculina*, articulating in the proximal fourth of endopod, like a simple rod, distally rounded, extending beyond endopod with 18.4% of his length.

Uropod (Fig. 11 D, E): sympod rectangular 2.5 times longer than wide, 1.2 times longer than endopod. Endopod pyriform elongate, 2.8 times longer than greatest width, surrounded distally by about nine simple long setae and medially by three long plumose setae. Exopod broadly oval, 1.4 times wider than long, with about nine plumose setae.

Length of other specimen: non-ovigerous female - 5 mm.

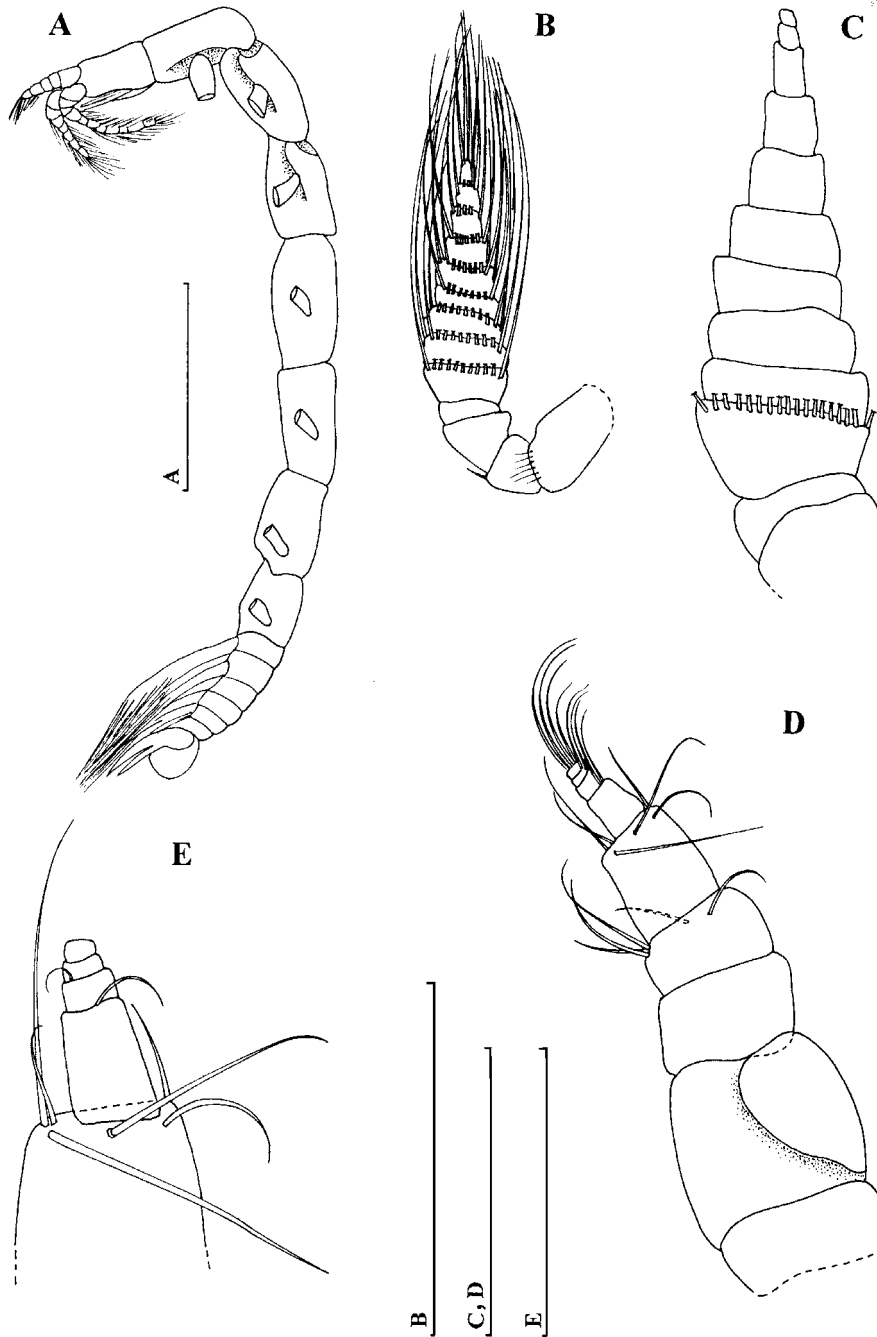


Fig. 7 – *Leptanthura communis* n. sp., adult male allotype. A, lateral view (pereopods cut off); B, antennula (some aesthetascs cut off); C, antennular flagellum (aesthetascs omitted); D, antenna; E, antenna: distal extremity of article 5 of peduncle and flagellum (setae omitted). Scale (in mm): A 1; B 0.5; C, D 0.2; E 0.1.

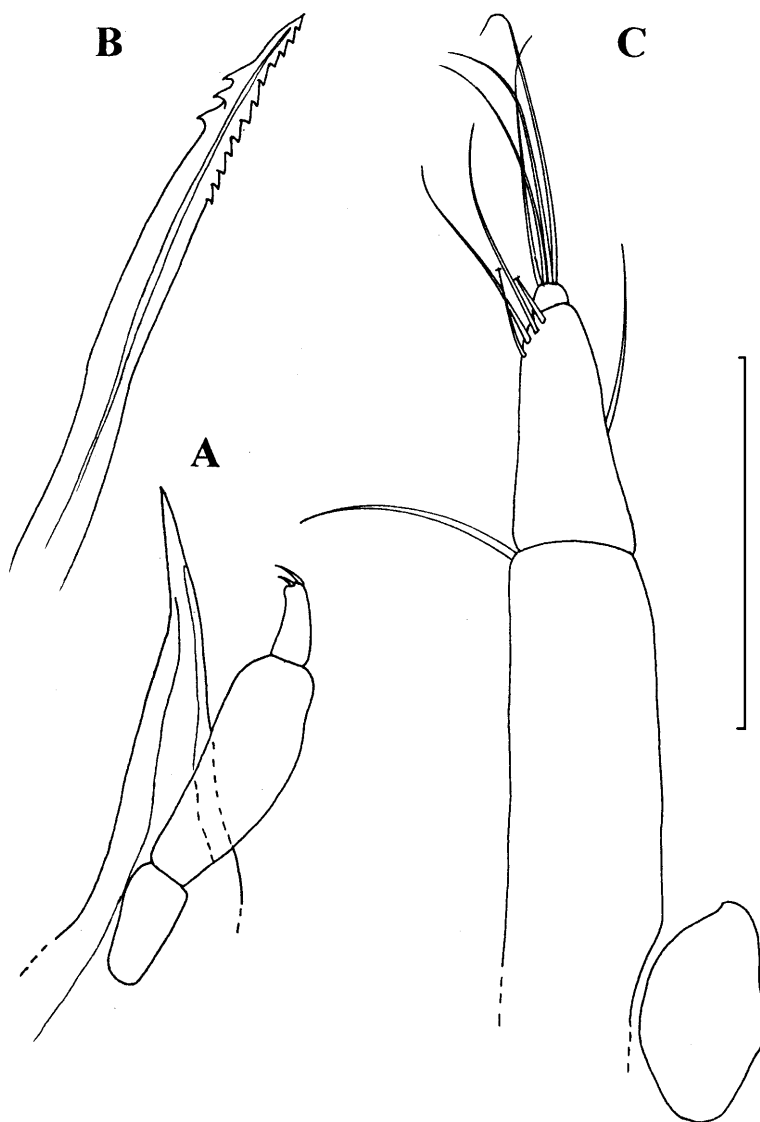


Fig. 8 – *Leptanthura communis* n. sp., adult male allotype. A, mandible; B, maxilla; C, maxilliped. Scale (in mm): 0.1.

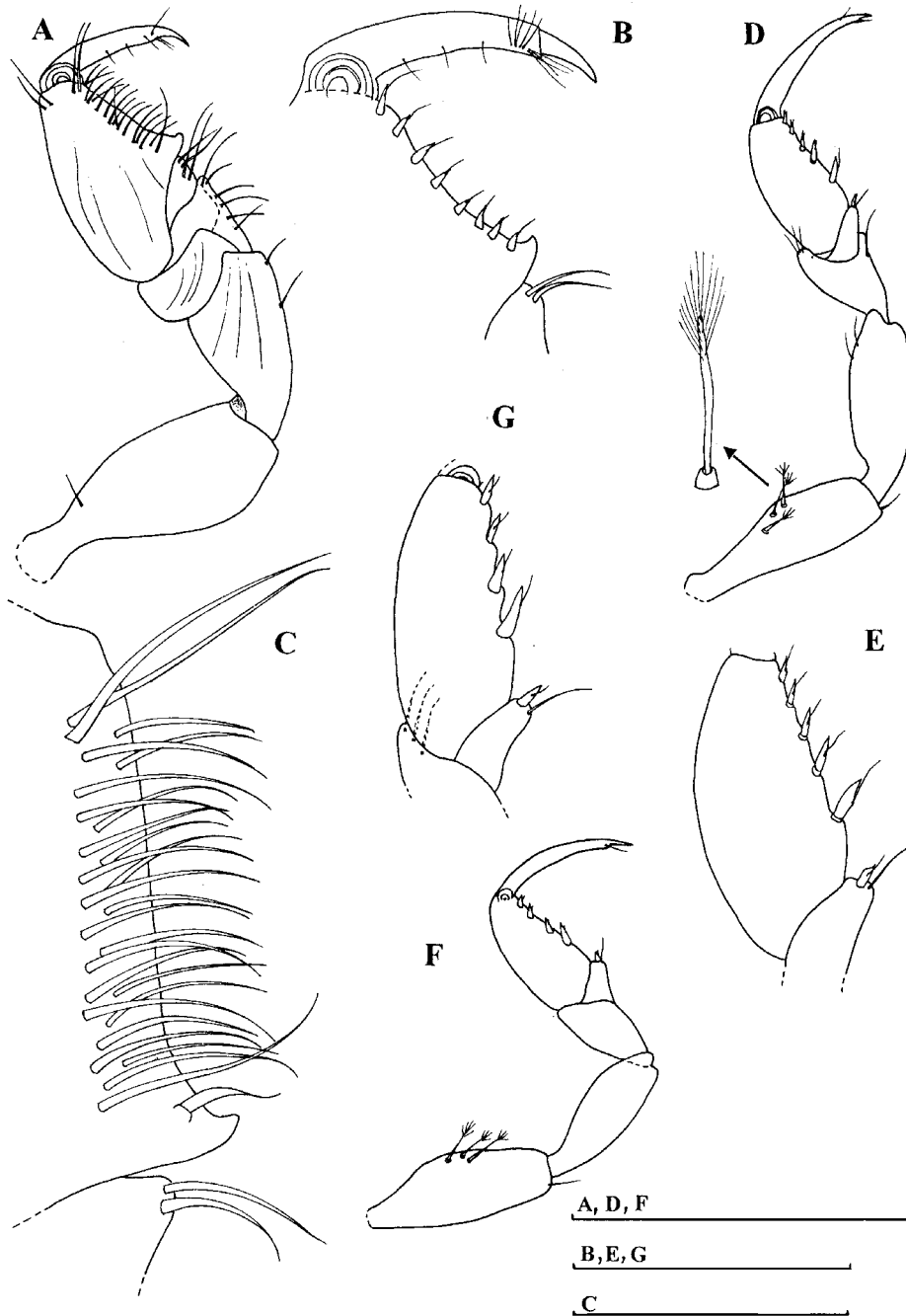


Fig. 9 – *Leptanthura communis* n. sp., adult male allotype. Pereopods (1): A, 1; B, 1: distoventral part of carpus, margin of propodus palm (mesial view), dactylus; C, 1: medial margin of propodus palm; D, 2; E, 2: distoventral part of carpus, propodus; F, 3; G: carpus, propodus. Scale (in mm): A, D, F 0.5; B, E, G 0.2; C 0.1.

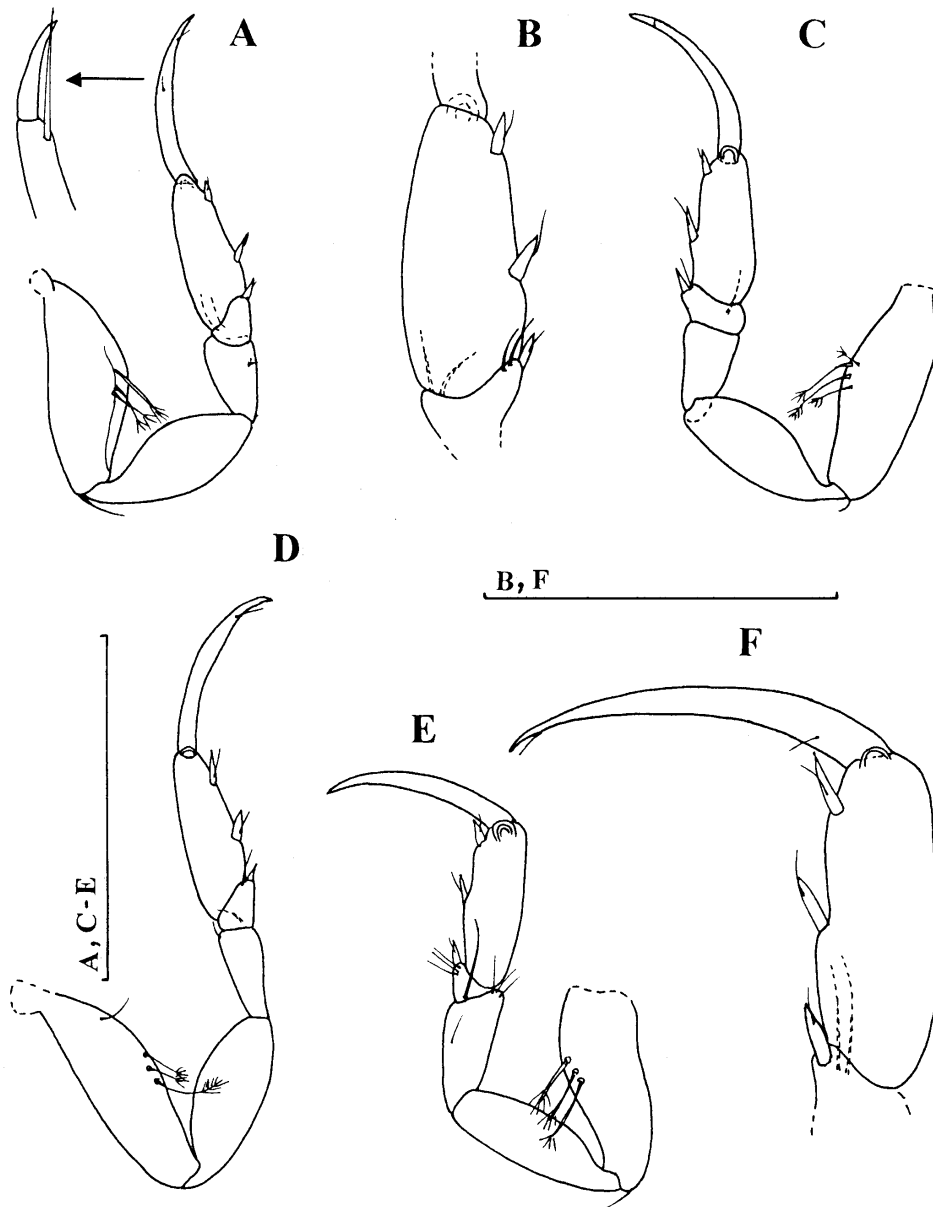


Fig. 10 – *Leptanthura communis* n. sp., adult male allotype. Pereopods (l): A, 4; B, 4: distal part of carpus, propodus; C, 5; D, 6; E, 7; F, 7: distal part of carpus, propodus, dactylus. Scale (in mm): A, C-E 0.4; B, F 0.2.

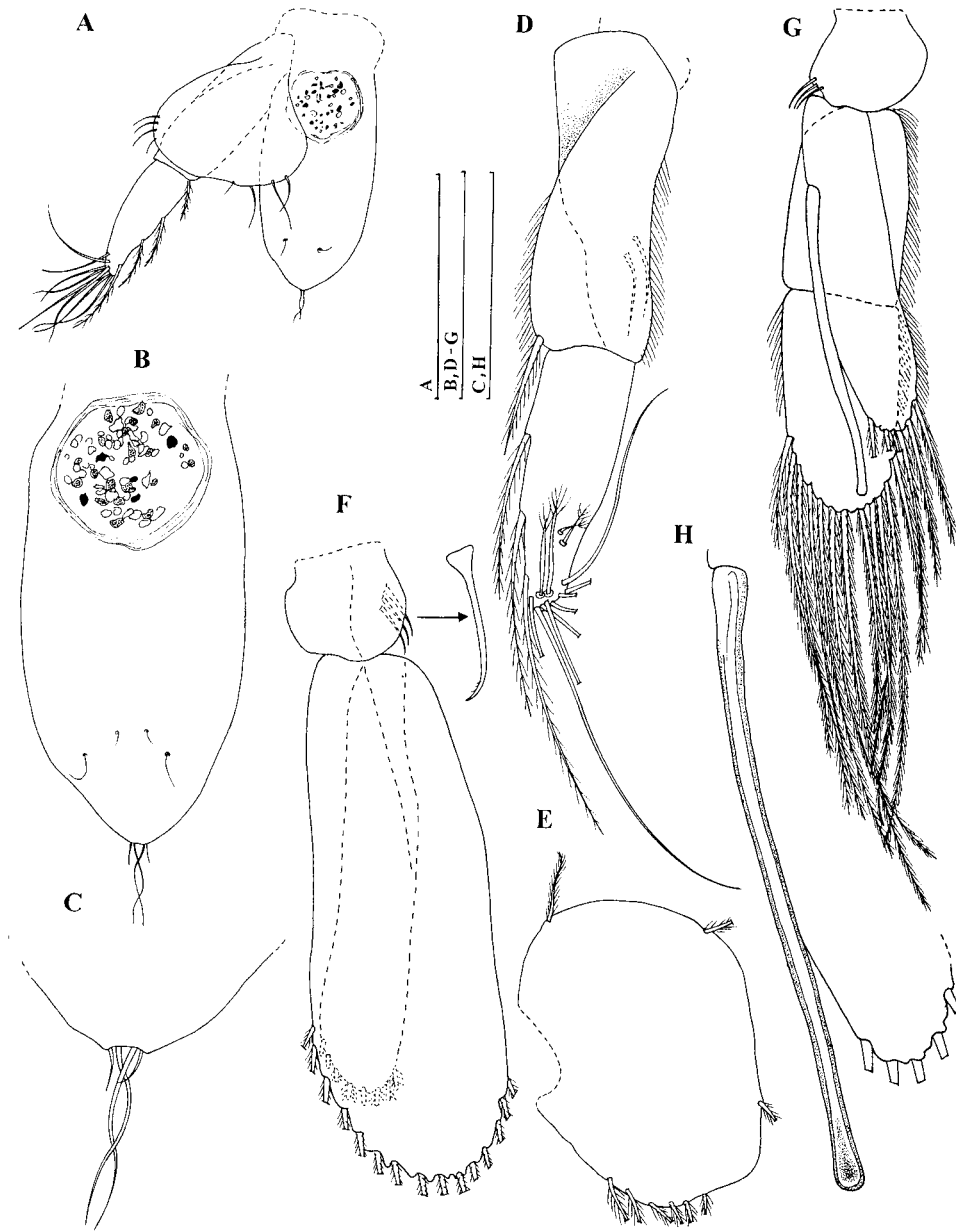


Fig. 11 – *Leptanthura communis* n. sp., adult male allotype. A, telson and uropod (l); B, telson; C, distal part of telson; D, sympod and endopod of uropod (r); E, exopod of uropod (r) (setae cut off); F, pleopod 1 (l) (setae cut off); G, pleopod 2 (r); H, appendix masculina. Scale (in mm): A 0.4; B, D-G 0.2; C, H 0.1.

Remarks on sexual dimorphism.

The male differs dimorphically from the female in the following features: pleon longer; antennular and antennal flagellum with more articles and more aesthetascs; P1 propodus palm with different number and aspect of spines and setae, with proximally prominent acute thumb-like process; propodus more elongate in all pereopods; presence of *appendix masculina* in pleopod 2; pleopods more elongate and with more setae; sympod and endopod of uropod more elongate and exopod wider, endopod medially with three long plumose setae.

Remarks on affinities between the new species and other species of Leptanthura. In Eastern Atlantic Ocean - Bay of Biscay, Ibero-Moroccan Bay, off Gibraltar Strait – there were recorded the species *Leptanthura affinis* (Bonnier, 1896), *L. chardyi* Negoescu, 1992, *L. tenuis* (Sars, 1872), *L. truncata* Richardson, 1911, *L. victori* Negoescu, 1985. *Leptanthura communis* n. sp. differs from these species and from the other species of the genus by a combination of morphological characters, namely: small sized, ventral pereonites without protuberances in male, antennula article 3 of peduncle with distolateral comb of seven long setae and flagellum of two articles, length/width ratio and number of spines in propodus of pereopods, shape of telson, length of appendix masculina. In some aspects it approaches to *L. tenuis* by small size, antennula flagellum of 11 articles in male, same number of spines in propodus and carpus P3-P6 (see Wägele, 1981). The *Leptanthura communis* n. sp. is in some aspects similar also to *L. guianae* described by Kensley (1982) from West Atlantic (Guiana Basin); this species has also: rather small size (4.5-7 mm), propodus P1 in male with eight spines and about 21 setae, pereopods 4-7 propodus with two spines, same shape of uropodal exopod in male. *L. guianae* differs by: propodus P1 and P2, in female with more spines, eight, respectively seven, and in carpus of P4-P7, two ones; appendix masculina slightly longer.

Comparatively with other species it was recorded at a rather small depth (364 m).

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ISOPODA ANTHURIDEA (CRUSTACEA: ISOPODA: ANTHURIDEA) DIN ESTUL
OCEANULUI ATLANTIC (LARGUL COASTELOR IBERO-MAROCANE). III.
LEPTANTHURA COMMUNIS SPECIE NOUĂ

REZUMAT

Materialul studiat provine din estul Oceanului Atlantic, largul coastelor ibero-marocane, fiind colectat în timpul expediției franceze BALGIM 84, cu vasul „Cryos”, dintr-o stație de la adâncimea de 364 m.

Din cadrul familiei Leptanthuridae este descrisă atât femela cât și masculul speciei noi *Leptanthura communis*, care prezintă afinități morfologice cu speciile *L. tenuis* (Sars, 1872), răspândită la coastele Europei, din Marea Nordului până în largul Strâmtoarei Gibraltar (0-1500 m), și *L. guianae* Kensley, 1982 din vestul Atlanticului, bazinul Guiana (516-1487 m).

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