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NEOHYSSURA ATLANTICA N.SP. FROM THE CAPE VERDE ISLANDS
(CRUSTACEA: ISOPODA: ANTHURIDEA)

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ABSTRACT

A fourth species of *Neohyssura* is described from a beach of a lagoon of Ilha do Sal (Cape Verde Islands). The species is blind and can easily be recognized by the oval, spinose outline of the telson and the spines on the uropodal endopod.

INTRODUCTION

Of the genus *Neohyssura* (family Hyssuridae) up to now only 3 species were known, viz. *N. irpex* (Menzies & Frankenberg, 1966), *N. skolops* Kensley, 1978 and *N. spinicauda* (Walker, 1901), occurring off the west coast of North America, off the South African coast, and in the Mediterranean, respectively (Negoescu & Wägele, 1984). The new species discovered by Prof. Dr. J.H. Stock in the Cape Verde Islands fills a gap in the hitherto known distribution area. Only 2 specimens have been collected. Their morphology is so obviously different from the 3 known species that despite the lack of more material a new species is based upon this material.

Abbreviations used in text and figures

A 1,2: antenna 1,2; Md: mandible; Mx: Maxilla 1; Mxp: maxilliped; P1-7: pereopods 1-7; Plp 1-5: pleopods 1-5; Tel: telson; Urp: uropod.

SYSTEMATICS

Neohyssura atlantica n.sp.

Figs. 1-4

Material

One immature adult, length 4 mm (holotype), 1 manca stage (paratype), length 2.5 mm. "Plancius" Expedition, Stn. 86-76: Republic of Cabo Verde, Ilha do Sal, Ponta Jalunga (= E of Santa Maria); method Karaman-Chappuis

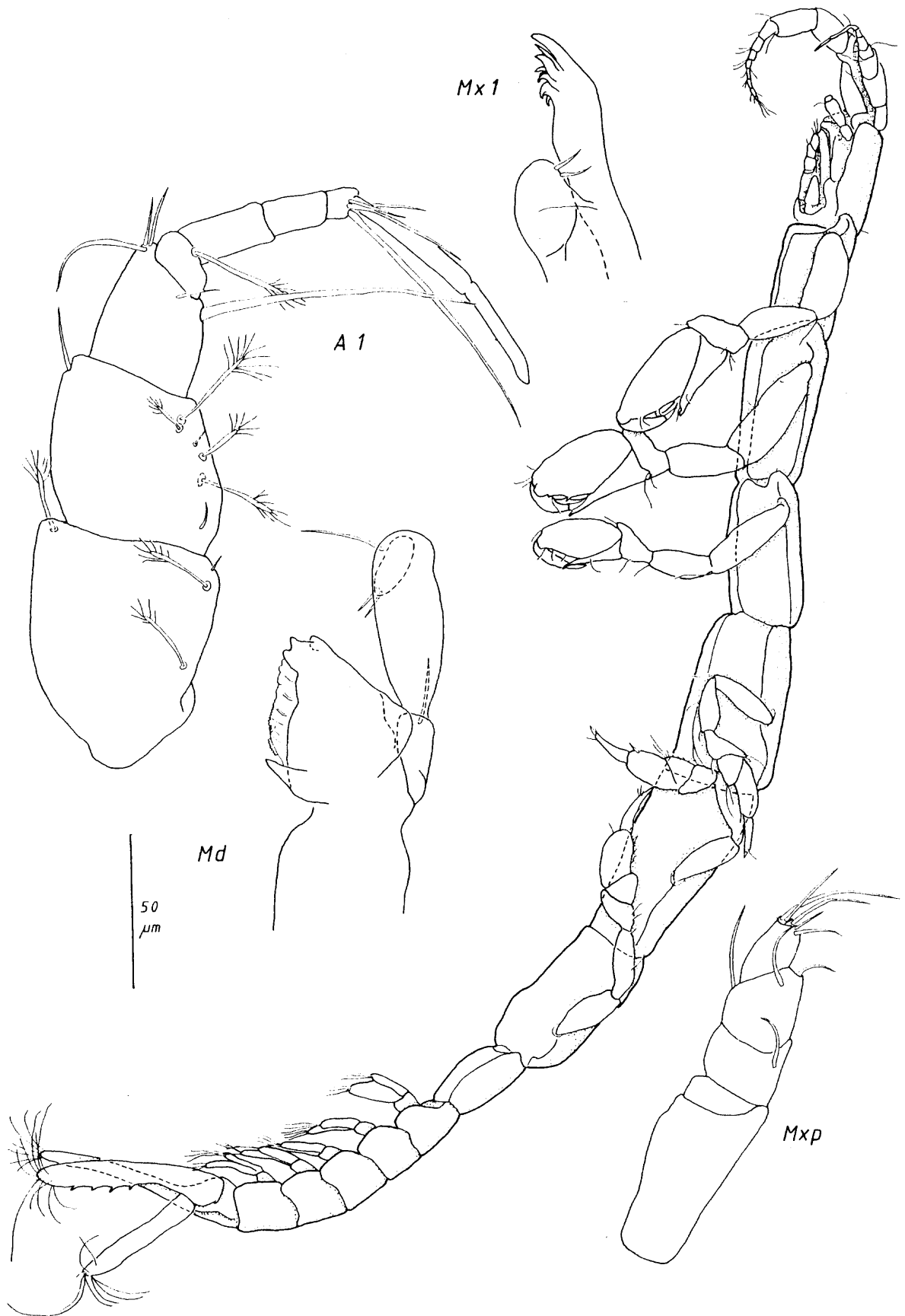


Fig. 1. *Neohyssura atlantica* n.sp.; paratype (manca stage) in lateral view and appendages of holotype (immature adult). For symbols see list of abbreviations. Scales applies to appendages only.

on shore of protected lagoon, closed off from the sea by large volcanic boulders; upper layer of sediment consisting of coarse sand and stones, lower layer of powdery, fine sand with galleries of mesofaunal Metazoa; full marine salinity; 26 Jan. 1986. Zoölogisch Museum, Amsterdam, cat. nr. ls. 105.299 a-b.

Description of the holotype

Body slender, length 4 mm, about 15 times longer than wide, without pigmentation. Cephalothorax quadrangular in dorsal view, eyes absent in the immature specimens studied. Pleonite 6 fused with telson, no fusion line visible (habitus of manca: fig. 1).

A1 (fig. 1) with 3 peduncular and 4 flagellar articles. First and second peduncular articles with 3 and 4 featherlike bristles, respectively, and single, short, simple seta; third peduncular article with 1 very long and 4 short simple setae; first flagellar article short, bearing 1 feather-like bristle; following articles longer, without setae; last article again short, with 4 setae and 1 aesthetasc.

A2 (fig. 2) with 5 peduncular and 8 flagellar articles; second and fifth peduncular articles longest, article 5 distally with 5 feather-like bristles and 4 simple setae; flagellar articles with 2 to 4 simple, short setae; last article bearing 5 setae.

Md with stout endite; pars incisiva with 2 notches, lamina dentata finely serrate, especially at the basal portion of the blade, pars molaris tapering to acute point; 3-segmented palp with 1 seta on first and 1 on the longer second article, last article short, bearing 2 setae (fig. 1). Medial endite of Mx short, with 2 apical setae, lateral endite distally with 7 medially directed, spine-like teeth (fig. 1) Basis of Mxp without endite, palp of 5 articles, last of which tiny and difficult to detect, bearing 3 setae; second palp article with 1 seta, third with 3, fourth with 2 setae.

Pereopods 1-3 remarkably large, with stout subchelae, pereopods 4-7 smaller and more delicate (see fig. 1: habitus of manca stage). P1 and P3 of similar size, P2 larger. Carpus of P1 in lateral view triangular in outline, posterior border with a row of cuticular scales, distal point protruding, bearing a slender spine with short setules; propodus long oval, palm with 3 spines, which interrupt a row of cuticular

scales (setation as in fig. 3).

Distoposterior point of carpus of P2 prolonged into a slender, bare stylet nearly as long as the carpus itself (in the manca stage this stylet is shorter). Palm of propodus with a basal and a distal straight portion, with an interjacent obtuse angle; margin armed with cuticular scales and 2 sensory spines (fig. 3). Carpus of P3 also with distal protruding point, but this part being much shorter and wider than in P2, with 2 setae; propodus of similar size as in P1, but wider; palm with row of cuticular scales and 2 sensory spines, basally a long, strong seta. P4-P7 shorter and weaker, without subchelae; ischium always with 3 long setae, merus on frontal margin with 2 setae, on posterior margin distally 1 spine and 1 seta; carpus nearly triangular in lateral view, with very short posterior margin bearing 1 seta and 1 feather-like bristle, anterior margin with cuticular scales, 1 spine and 1-2 setae; propodus oval, only 1 distal spine in P4-P6, 2 setulated spines in P7 (figs. 3, 4).

Pleopods 1-5 of similar size. Exopod of Plp 1 (fig. 2) with 10, endopod with 5 long swimming setae. Uropods not surpassing telson; endopod more than twice as long as sympod, medial margin with a row of 4 short spines, distal margin bearing 15 long setae and 2 feather-like bristles. Exopod as long as endopod, mediodorsal margin armed with 4 strong spines and basally with a further small spine, distal margin with 9 long setae and a few scattered smaller setae (fig. 2). Telson elongate-ovate, tapering to rounded apex, margins with 6-7 spines similar to those of the uropods (fig. 2).

DISCUSSION

N. atlantica n.sp. can easily be recognized by the form of the tail fan: both branches of the uropod and the telson are armed with marginal spines. Telsonic spines are also present in *N. spinicauda*, but in this species the telson is less broad, the lateral margins are distally concave (Amar, 1952; Wägele, 1981). In no other species spines have been described from the margins of the uropodal endopod. The exopod of *N. irpex* has 3, of *N. skolops* 4, of *N. spinicauda*, as in the

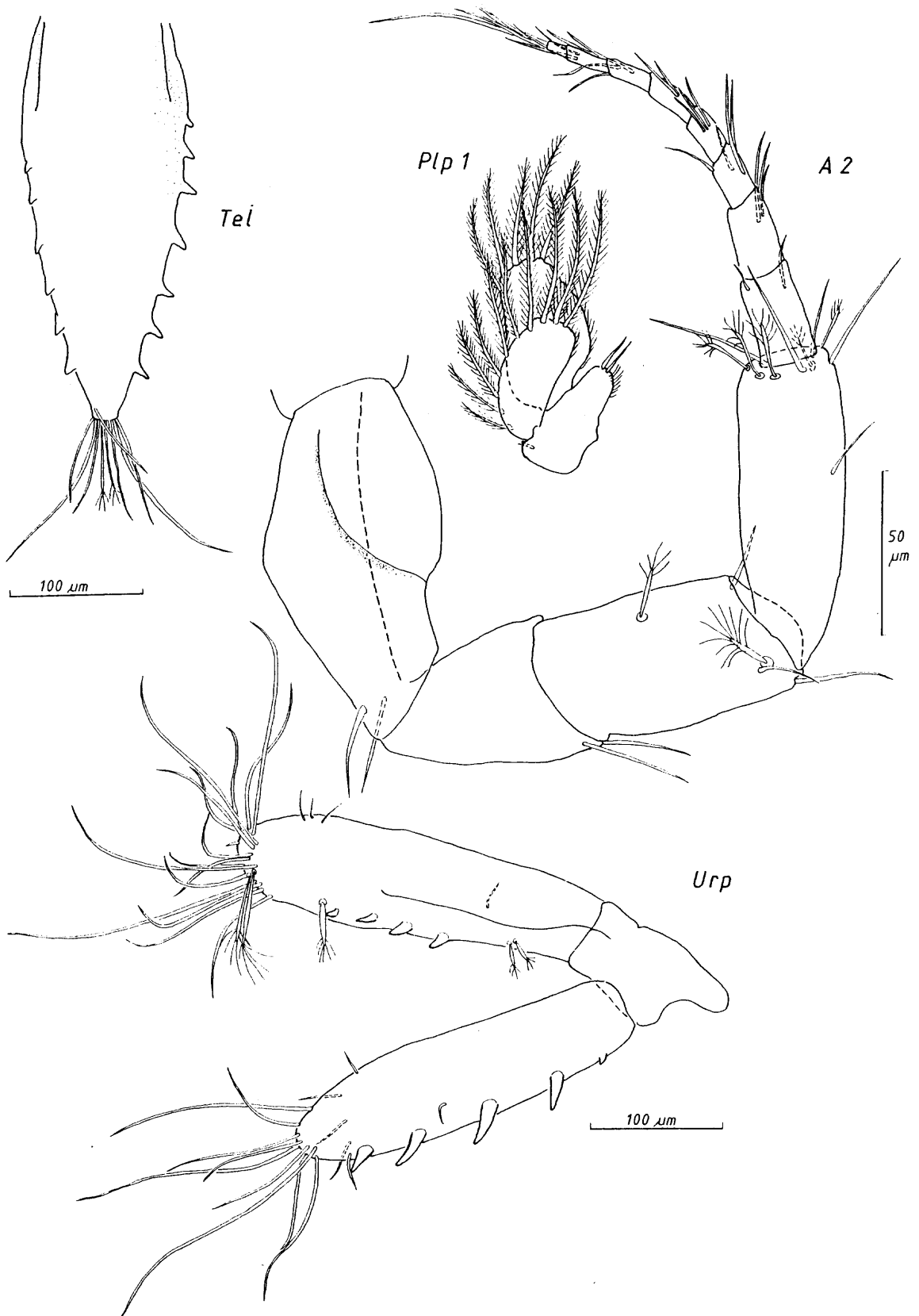


Fig. 2. *Neohyssura atlantica* n.sp., holotype.

new species, 5 spines (Menzies & Frankenberg, 1966; Kensley, 1978, 1982; Wägele, 1981). A long stylet of the carpus of P2 may be characteristic of the new species, but this feature is essentially also present in *N. spinicauda*, where the projection is shorter and wider; in *N. irpex* it has the size of the projection of P3 in *N. atlantica* n.sp. (P2 of *N. skolops* unknown). There exist more features in common between the Mediterranean *N. spinicauda* and *N. atlantica*: Flagellum of A1 with 4 articles (instead of possibly 3 or 5 articles as in the other 2 species), A2 with 8 (instead of 7) articles, last article of Mxp with 3 setae, pars molaris of Md acute. This might indicate a relationship between the Mediterranean and the eastern Atlantic species, but some features might, after thorough re-examination, turn out to be present in the other 2 species as well.

The species was discovered in samples with mesopsammal fauna on a beach, but it is to be doubted if this hyssurid has its natural habitat in sandy beaches. With a length of 4 mm and its worm-like body it could live in the interstices of coarse sediment, but, in contrast to the other well-adapted stygobiont Anthuridea (*Cyathura (Stygocyathura)*, *Curassanthura*, *Cruregens*: Wägele, 1982, 1985), the pleopods are not protected by an operculum and the tail fan is rather spread and not smooth.

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REFERENCES

- AMAR, R., 1952. Isopodes marins du littoral Corse.- Bull. Soc. zool. Fr., 77: 349-355.
- KENSLEY, B., 1978. The South African Museum's Meiring Naude cruises: 8. Isopoda Anthuridea.- Ann. S. Afr. Mus., 77 (1): 1-25.
- KENSLEY, B., 1982. Revision of the southern African Anthuridea (Crustacea, Isopoda).- Ann. S. Afr. Mus., 90 (3): 95-200.
- MENZIES, R.J. & D. FRANKENBERG, 1966. Handbook on the common marine isopod Crustacea of Georgia: 1-93 (Univ. Georgia Press, Athens).
- NEGOESCU, I. & J.W. WÄGELE, 1984. World list of the anthuridean isopods (Crustacea, Isopoda, Anthuridea).- Trav. Mus. Hist. nat. Grigore Antipa, 25: 99-146.
- WÄGELE, J.W., 1981. Study of the Hyssuridae (Crustacea: Isopoda: Anthuridea) from the Mediterranean and the Red Sea.- Isr. J. Zool., 30: 47-87.
- WÄGELE, J.W., 1982. The hypogean Panthuridae *Cruregens* Chilton and *Curassanthura* Kensley (Crustacea, Isopoda), with remarks on their morphology and adaptations.- Bijdr. Dierk., 52 (1): 49-59.
- WÄGELE, J.W., 1985. On the tethyan origin of the stygobiont Anthuridea *Curassanthura* and *Cyathura* (*Stygocyathura*), with description of *Curassanthura canariensis* n.sp. from Lanzarote (Crustacea, Isopoda).- Stygologia, 1 (3): 258-269.
- WALKER, A.D., 1901. Contribution to the Malacostracan fauna of the Mediterranean.- J. Linn. Soc. London, (Zool.), 28: 290-307.

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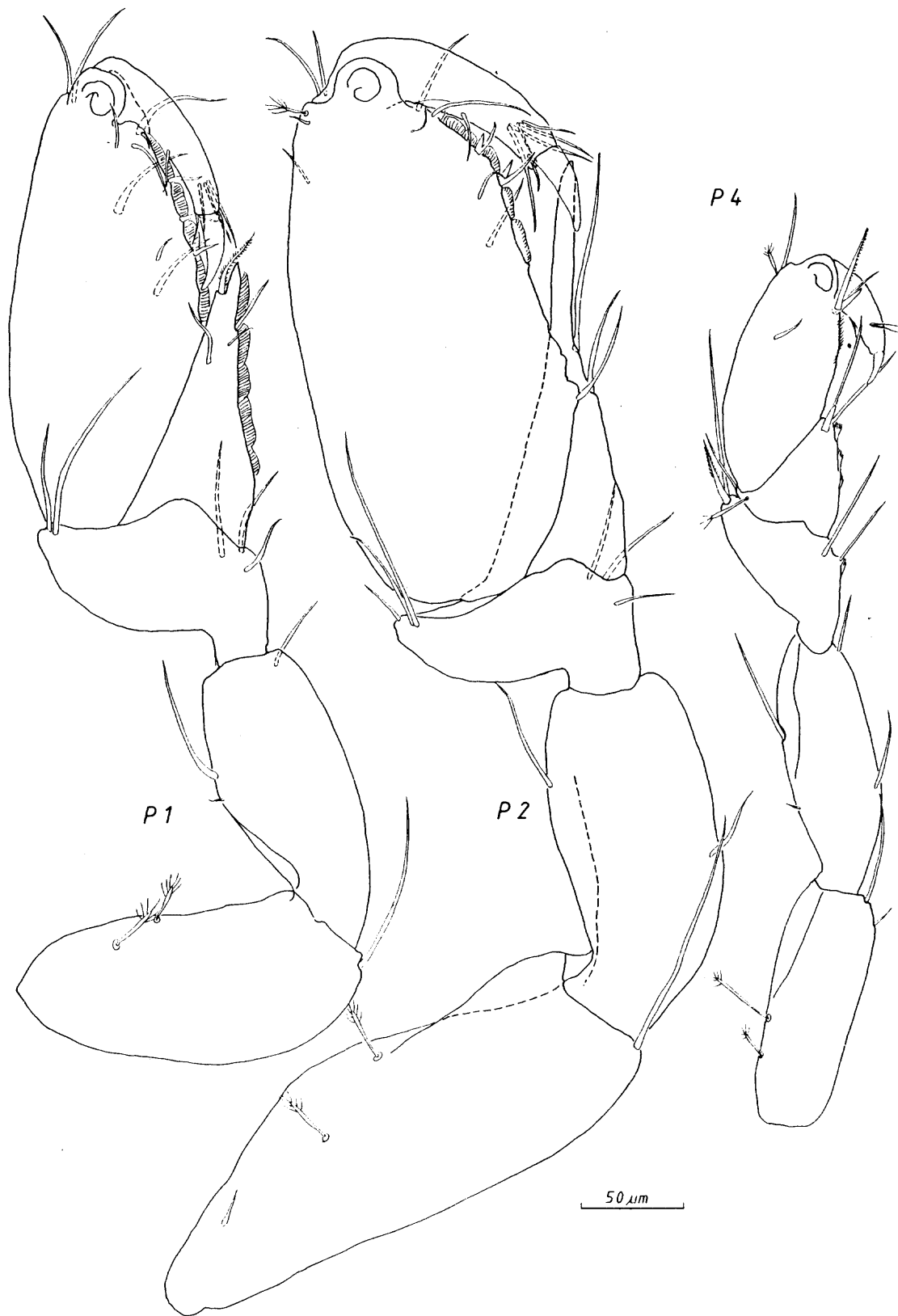


Fig. 3. *Neohyssura atlantica* n.sp., holotype.

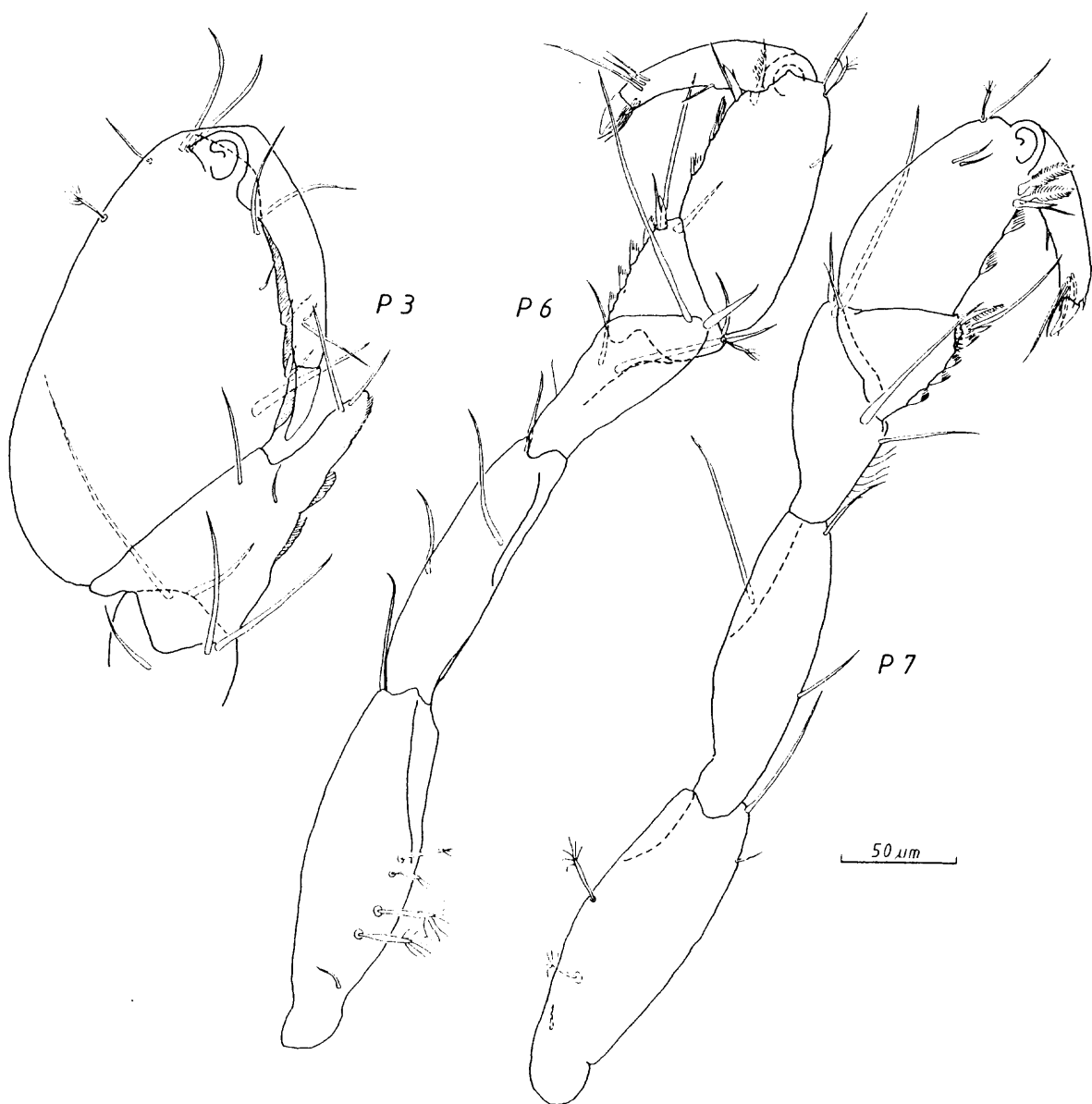


Fig.4. *Neohyssura atlantica* n.sp., holotype.

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