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PONTOSTRATIOTES ACANTHOFERENS NEW SPECIES (CRUSTACEA, COPEPODA, HARPACTICOIDA)

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PONTOSTRATIOTES ACANTHOFERENS ESPÉCIE NOVA (CRUSTACEA, COPEPODA, HARPACTICOIDA)

RESUMO

Descreve-se no presente trabalho ,em amostragem tomada no sudeste do Pacífico, da profundidade de 2.858 m até a superfície, *Pontostratiotes acanthoferens* n.sp. da família Cerviniidae (Harpacticoida, Copepoda).

ABSTRACT

Pontostratiotes acanthoferens n.sp. of the family Cerviniidae (Harpacticoida, Copepods) is described from a sample taken in the South East Pacific from a depth of 2858 m to the surface.

INTRODUCTION

The genus *Pontostratiotes* belongs to the family Cerviniidae of which nine species are known (Por, 1969), all of which collected from very deep waters (between 925 m and 4365 m).

The present addition to the family was caught by a Menzies trawl in a haul from the depth of 2858 m to the surface, by the USNS "Eltamin" at 13°19'S and 78°04'W in waters with a salinity around 34.7‰ and temperature about 2°C. The local depth was 5325 m.

Número especial em homenagem ao Prof. Dr. Paulo Sawaya, no ano jubilar de seu magistério.

DIAGNOSIS

Spiniform cephalic dorsal processes are serrulate laterally on both sides, but not at the tip; they are parallel and reach the middle of the third cephalothoracic segment. Thoracic segments 2, 3 and 4 have four dorsal median spines which are lateral. The first antennular segment is serrulate on the interior edge, where it also has a spine on the proximal third; externally and distally the segment has a prominent point and bears two protuberant contiguous processes in the middle more or less, of which the distal process is pointed and the proximal ends in a minute bifurcation; the dorsal aspect of the segment is covered with minute spines, which in the middle of the segment form a straight line and are otherwise distributed without apparent order.

The general spinulation, at least on the dorsal aspect is less concentrated than in the other spinose species.

DESCRIPTION OF THE SPECIES

Holotype: Deposited in the National Museum of Washington, D C., U.S.A.

Female: Length, 2.48 mm, including furcal rami.

Proportional lengths of the body segments, from cephalon to last abdominal segment and including the furca:

21: 2: 6: 7: 5: 4: 3: 3: 3: 3: 37 = 100

Cephalon, almost square, 0.63 mm long and 0.64 mm wide; pointed at the rostrum, where a pear-shaped subdivided process is present (a statoblast?). Laterally and anteriorly widened into blunt protruding corners, posteriorly into lateral barely developed serrulate retinacula and spines. The posterior margin of the cephalon is further armed with two long dorsal spiniform median processes, parallel one to the other and each having a pair of proximal small teeth on the internal margin and a row of minute teeth adorning the middle inner edge of the spine, slightly dorsal. The external margin of the process is serrulate, and in the arch between these processes there are small teeth. The tips of the processes are articulate and smooth.

First thoracic sgment: short but visible, smooth, without lateral winglike formations.

Second to fourth thoracic segments: very similar in aspect one to the other, with wing-like lateral expansions. On the posterior margins, dorsally, there are 4 median larger spines, and lateral to these, a row of marginal gradually smaller spines. On the wing-like process dorsally there is a pair of minute spines. Another pair of small spines is present in the dorso-median region of the third and fourth segments. The wing-like structures of these segments is serrulate along the lateral margins and end smoothly. Only the second segment has anterior expansions.

The serrulation of the internal edge of the expansions is feeble dorso-laterally and continuous. Retinacula of the second segment, larger and curved outwards, of the third and fourth segments, smaller. Serrulation of third and fourth thoracic segments similar.

Fifth thoracic segment: Similar to the abdominal segments, denticulate posteriorly on the dorsum and smooth ventrally.

Last thoracic and first abdominal segments separate dorsally by a denticulate margin, and ventrally fused, forming the genital segment.

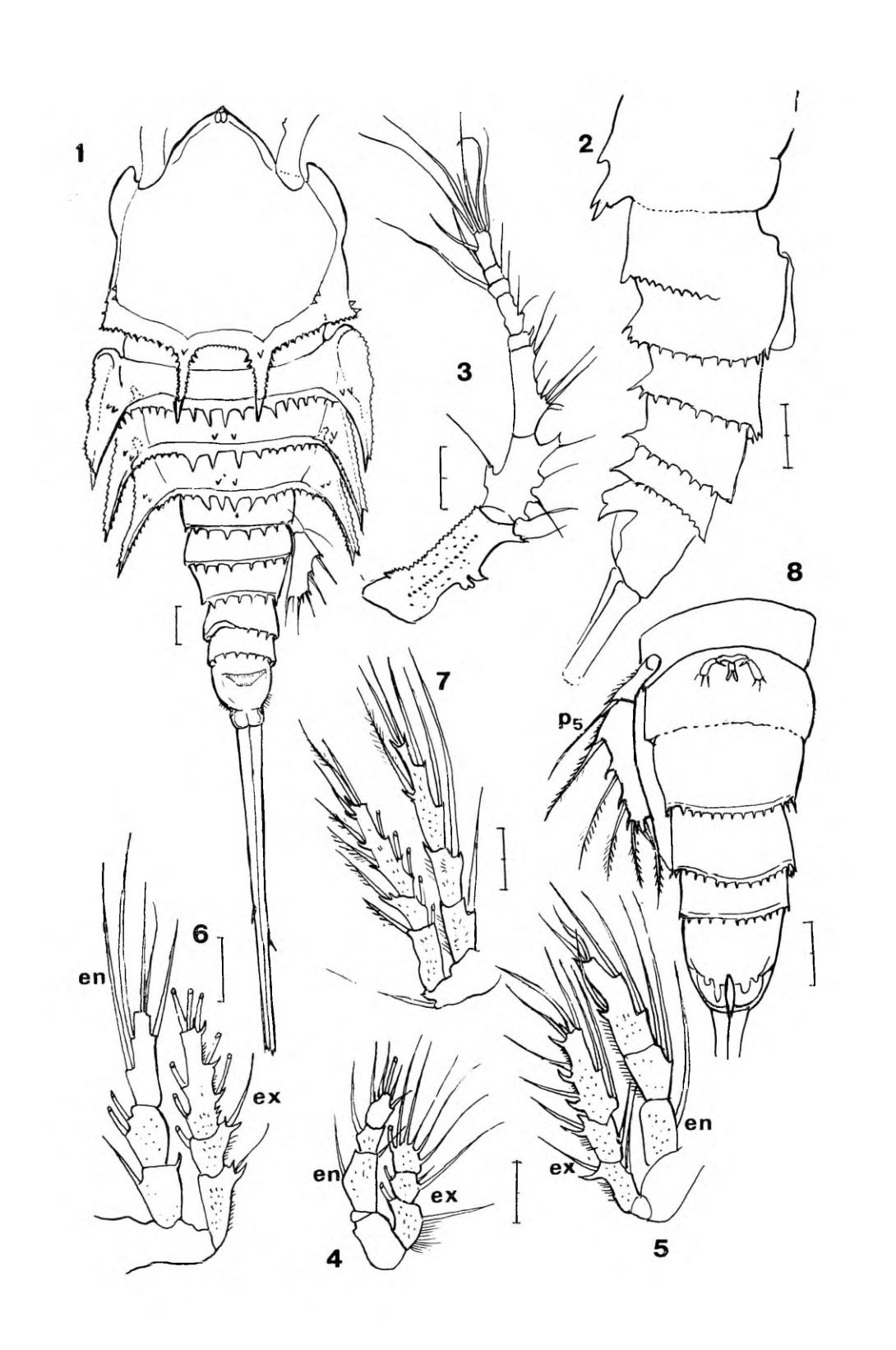
Third abdominal segment: asymmetrical in dorsal view, with a concavity on the left posterior border. The abdominal segments are denticulate on the dorsal and on the ventral posterior border, with exception of the last provided with dorsal teeth only.

Anal segment: pear-shaped with a ventro-lateral pointed posterior corner.

Furcal rami coalescent, long, 1.72 times the length of the body (cephalothorax and abdomen), with a ventral spine on the beginning of the distal third of each ramus. Furcal setae short and thin.

Antennula: 8-jointed, with joints in following proportionate lengths: 30 : 21 : 19 : 5 : 8 : 4 : 3 : 10 = 100. The first joint has the characteristics already described.

Antenna: biramous. Endopod 2-jointed; exopod 4-jointed. The endopod, when stretched out, longer than the exopod. First endopod joint with a short spine; second endopod joint with 6 terminal, long spines and 2 lateral short spines. First exopod joint with a long proximal seta and a short distal one. The second and third exopod joints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are much shorter than the others and are provided with a long seta each; the fourth exopod joint has 2 terminal setae.

Mandible: basipod hairy with 3 spines and a delicate seta; exopod 4-jointed with 3 last joints very short, the first with 2 long setae, the second and third with 1 seta each, and the fourth with 2 setae. Endopod, 1-jointed, with 9 setae, 2 proximal of which one is shorter, and 7 terminal long setae, all of the same length.

Maxillule: Arthrite with 10 spines and 2 delicate thin setae; coxa with 3 thick and 1 thin seta; basipod with 14 setae; exopod with 3 equally long setae, placed near to each other; epipod with 1 seta.

Maxilla: on the praecoxa, on the first endite 3 plumose setae and 2 smooth spines; on the second endite, 3 setae; first endite of coxa with 2 large and 1 small thin seta, and second endite with 1 large and 2 small setae; basipod with 1 large, strong and thick spine, 1 smaller spine and 1 thin seta; 3-jointed endopod with 4 long and 2 short setae on the first joint, 2 setae on the second, and 3 long and 2 thin setae on the third joint. The outer side is hairy.

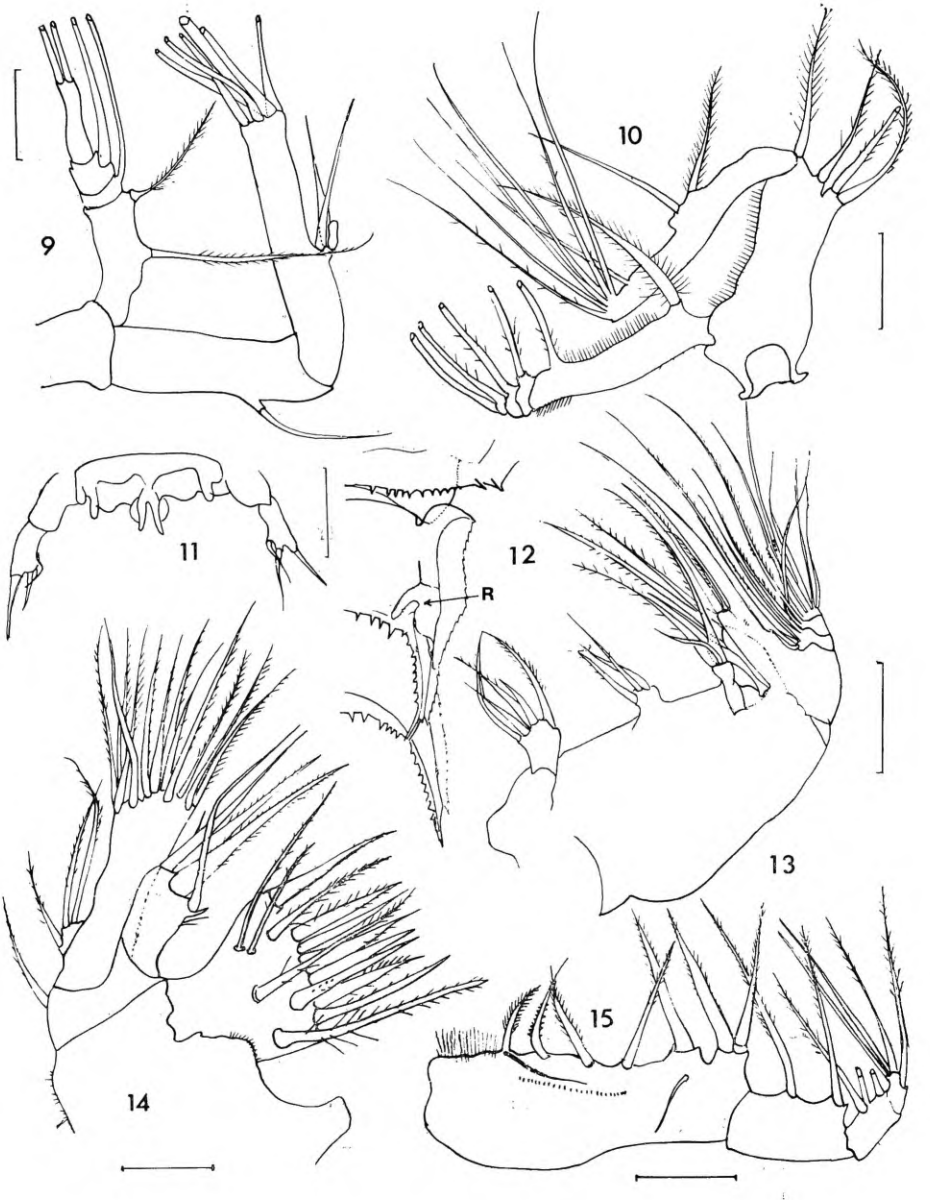
Maxilliped: praecoxa and coxa fused, with 4 short setae, 3 spines and 2 very thin setae; basis with 2 setae; 2-jointed endopod, the first joint with 3 setae, the second with 1 lateral and 3 terminal setae.

Legs 1 to 4 are biramous and each ramus is 3-jointed. The setation formula for each leg is:

	exopod	endopod
First leg:	1.1.222	1.1.221
Second leg:	1.1.223	1.2.221
Third leg:	1.1.223	1.2.221 (right); 1.2.321 (left)
Fourth leg:	1.1.323	1.1.221

Fig. 1 — Dorsal view of *Pontostratiotes acanthoferens* new species, female, general habitus.
Fig. 2 — Profile of last six segments of the body of *P. acanthoferens*.
Fig. 3 — Antennule of *P. acanthoferens*.
Fig. 4 — First leg of *P. acanthoferens* (en = endopod; ex = exopod).
Fig. 5 — Second leg of *P. acanthoferens* (en = endopod; ex = exopod).
Fig. 6 — Third leg of *P. acanthoferens* (en = endopod; ex = exopod).
Fig. 7 — Fourth leg of *P. acanthoferens* (en = endopod; ex = exopod).
Fig. 8 — Ventral view of abdomen of *P. acanthoferens*, and of right fifth leg (P5).

Scales: Figs. 1 to 8, scales = 0.10 mm.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First leg: the exopodal joints are approximately of the same length and size; the first endopodal joint more or less the same length as the other 2 joints together. The proportional lengths of the joints in legs 2, 3 and 4 are the same, the last joint of the endopod and of the exopod, always longer than the other two. The third exopodal segment has minute spines on the external side. All joints have hairy surfaces.

Fifth leg: uniramous, 2-jointed, with a fine distal external seta on the proximal joint. On the distal, 3 lateral and 2 terminal setae with a very fine one between them, and 1 spine at the base of each lateral and of the outer terminal seta.

Sixth leg: situated on the genital segment, near the genital opening, 2-jointed, with 2 terminal and 1 distal seta.

The setation of the legs is the characteristic setation of the genus, with the exception of the third pair of legs in which the endopod of the left leg is differently armed in relation to the endopod of the right leg.

DISCUSSION

As Por (1969) has stated the variability at the species level in this genus is mostly shown in the armature of the thoracic segments and of the first antennular joints. In the general aspect and in some details the species is very near to *P. scotti.* It differs in the spinulation of the cephalon and of the thoracic segments, especially in the second thoracic segment, which has 4 spines of the same length in this species and only 2 spines in *P scotti.* The length of the cephalic spines and the form of the posterior margin of the second segment of the thorax are different. The lateral wing-like expansions of the thoracic seg-

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Fig. 9 — Antenna of *P. acanthoferens.*
Fig. 10 — Mandibular palp of *P acanthoferens.*
Fig. 11 — Genital field and sixth pair of legs of *P. acanthoferens.*
Fig. 12 — Wing-like structures of second and third thoracic segments (right side) with retinacula (R) of third segment seen through wing-like structure of second segment.
Fig. 13 — Maxilla of *P acanthoferens.*
Fig. 14 — Maxillule of *P acanthoferens.*
Fig. 15 — Maxilliped of *P acanthoferens.*

Scales: Figs. 9 to 15, scales = 0.05 mm.

ment are broader in this species than in *P. scotti*. The first thoracic segment is visible though short, but in *P. scotti* it is seen with difficulty. The cephalon is not laterally serrulate as in *P. scotti*. The fifth leg is 2-jointed, not 3-jointed as in *P. scotti*. There are also differences in the first antennular joint.

The cephalon and the lateral expansions of the second thoracic segment, as well as its serrulation, relate the present species to *P. microserrulatus* Por, but, distinguish it from the other species. It differs from *P. microserrulatus* in the aspect of the first antennular joint, in the length of the dorsal cephalic spines, in the aspect of the furca, etc.

Por (1969) says that the number of setae in different mouth appendages seems to be constant in the genus. With the present species this does not occur as the setation of the basipod of the maxillule, of the maxilliped, and of the maxilla differ from all other known species. The mandible's setation is the same as in *P. scotti's, P. glaber's,* and *P. microserrulatus'* The setation of the antennula is similar to that of *P. horrida.*

The greek name of the new species refers to its carrying (= *ferens*) spines (= *acanthos*).

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