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NEW BATHYAL ISOPODA FROM THE CARIBBEAN WITH OBSERVATIONS ON THEIR NUTRITION

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INTRODUCTION AND ACKNOWLEDGMENTS

In this paper 5 new species including 1 new genus of marine Isopoda are described. All were collected by the R/V VEMA, Cruise 8, 1955-56 with a single trawl using the closing-opening Epibenthic Trawl (Menzies, in press) from bathyal depths (680 fms.) in the Caribbean Sea at 16° 59.1' N. Latitude and 79° 07.9' W. Longitude (South of Jamaica). The substratum consisted of pteropod and foraminiferal ooze.

In addition to isopods, the trawl contained polychaete worms, a few ophiuroids and several amphipods.

The specimens have been deposited in the Museum of Comparative Zoology (abbreviated MCZ) whose publication of this manuscript is appreciated.

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ECOLOGY AND NUTRITION

The "stomach" contents of *Acanthocope spinosissima* Menzies (this paper, p. 2) which packed the gastric mill to swelling consisted foremost of bacteria-size and shape particles and some globular bodies, possibly protozoans. Next in abundance were

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the parapodial setae of some species of polychaete annelid, some demospongiae spicules, a few empty small foraminiferal tests, some diatom tests and a few tintinnoid loricae. These observations suggest that *Acanthocope spinosissima* is both carnivorous and a detrital feeder with possibly some selectivity in its nutrition.

SYSTEMATIC DESCRIPTION

ACANTHOCOPE SPINOSISSIMA n. sp.

Figure 1

Synonyms. None.

Diagnosis. Front concave. Dorsum with three pairs of spines on somites 5-7 inclusive. First antenna with 10 articles, first swollen and spinulate at margins, second to fourth subequal in length, fifth longest, about 3 times the length of fourth. Pleotelson long spinulate apical spine. Uropoda uniramous, peduncle and ramus subequal in length, maxilliped with 7 coupling hooks. Coxal plates and lateral margins of body spinulate. Mandibular palp with one or two articles, last article much elongated.

Measurements. Holotype, length 8 mm., width 2 mm.

Type. Deposited in the MCZ, Cat. No. 12665.

Distribution. Known only from type locality.

Composition and affinities. Of the known species, *A. spinosissima* resembles *A. spinicauda* Beddard (1886) most. It differs from that species most obviously in having its pleotelsonal spines curved cephalad rather than caudad.

The type of this genus is *A. spinicauda* Beddard and although Beddard shows the uropoda as having five articles this is surely an error as is the apparent lack of fusion of the hinder peraeonal somites. The genus is close to *Eurycope* Sars (1864) and *Storothyngura* Vanhöffen (1914). It differs from both in having uni- and not biramous uropoda and in having a markedly pointed (spinelike apex) pleotelson and not a rounded or bifurcating one. The following species appear to belong to the genus:

- Acanthocope spinicauda* Beddard
- Acanthocope acutispina* Beddard
- Acanthocope atlantica* (Beddard)
- Acanthocope intermedia* (Beddard)

All are from bathyal or abyssal depths of the sea.

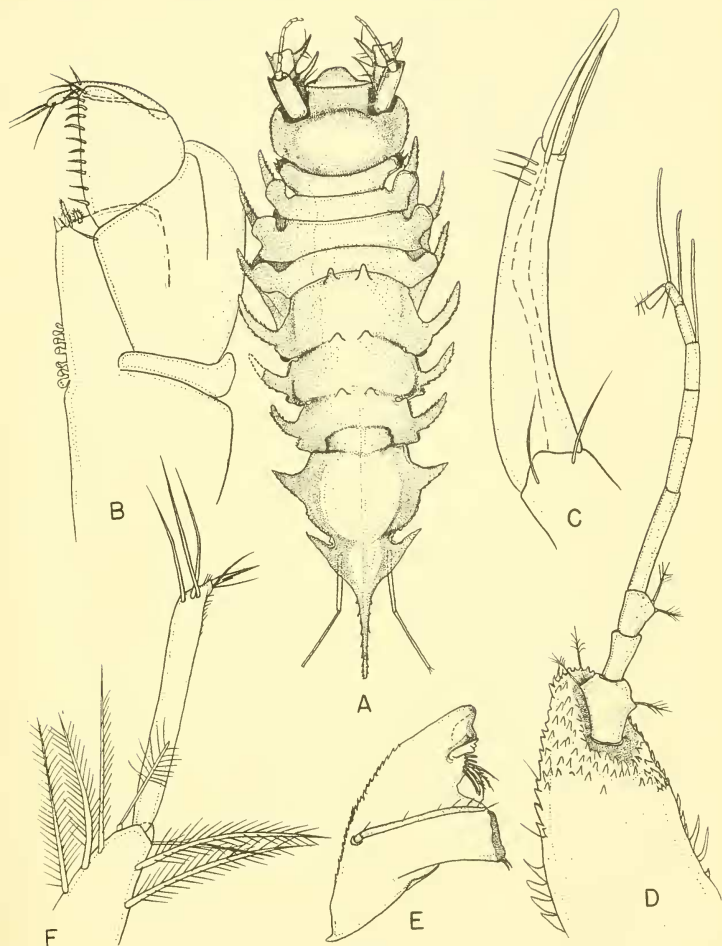


Figure 1

Figure 1. *Acanthocope spinosissima* n. sp., holotype female length 8 mm., A, toto; B, maxilliped; C, first pereopod; D, first antenna; E, left mandible; F, seventh pereopod.

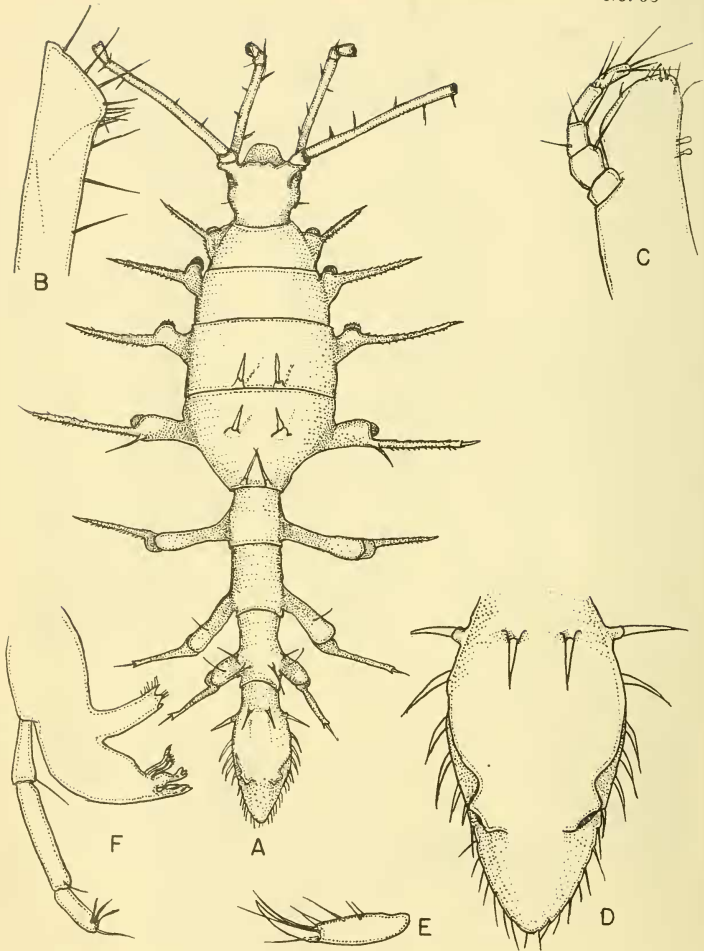


Figure 2

Figure 2. *Dendrotion hanseni*, n. sp., holotype male, length 3.5 mm. *A*, toto; *B*, first pleopod; *C*, maxilliped; *D*, pleotelson; *E*, gnathopod; *F*, left mandible.

DENDROTION HANSENI, n. sp.

Figure 2

Synonyms. None.

Diagnosis. Lateral processes spinulate. Third peraeonal somite with one pair of dorsal spines; fourth somite with two pairs of dorsal spines; seventh somite and pleotelson with one pair of dorsal spines, pleotelson with 10-11 spinelike setae on lateral margins followed by a fringe of smaller setae around apex. Maxilliped with two coupling hooks. Apex of male first pleopod with four setae.

Measurements. Holotype male, length 3.5 mm., width 0.8 mm.

Type. Deposited in the MCZ, Cat. No. 12666.

Distribution. Known only from type locality.

Composition and affinities. The genus contains only two species, the type, *D. spinosum* G.O. Sars (1897), which was collected from the Hardanger Fjord at Mosterhaven, Norway, at 150 fathoms and the new one herein described. Previously the genus had been known only from Norway.

Genus NEOANTHURA, n. g.

Synonyms. None.

Diagnosis. Anthuridae with piercing and sucking mouth parts. Eyes lacking. First antenna with seven articles; second antenna with six articles comprising flagellum. Maxilliped composed of a single lanceolate article. All six pleonal somites clearly marked dorsally, statoecyst lacking. Pleon not indurated. First two pairs of peraeopoda subchelate, others less so but with carpo-propod over-ridden by merus.

Type species. *Neoanthura coeca*, new species.

Composition and affinities. This genus contains only the type species. It is most closely related to *Paranthura* Bate and Westwood (1866) from which it differs principally in having a uni- and not a triarticulate maxilliped.

NEOANTHURA COECA, n. sp.

Figure 3

Synonyms. None.

Diagnosis. Mandibular palp triarticulate, lack setae. Apex of

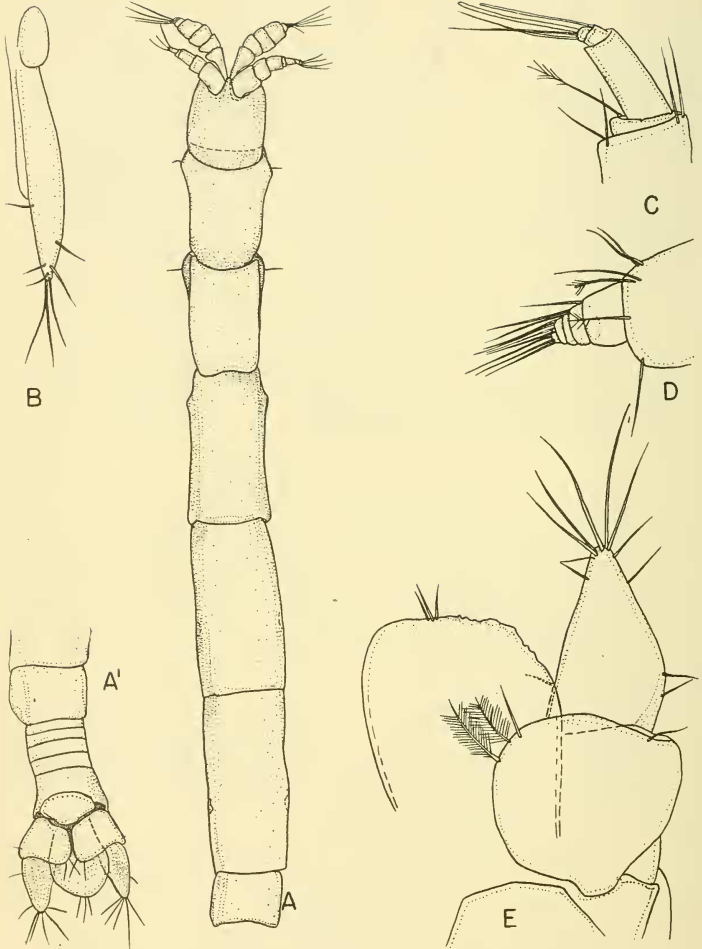


Figure 3

Figure 3. *Neanthura coeca*, n.g., n. sp., holotype female. *A-A'*, toto; *B*, maxilliped; *C*, first antenna; *D*, second antenna; *E*, uropod and telson.

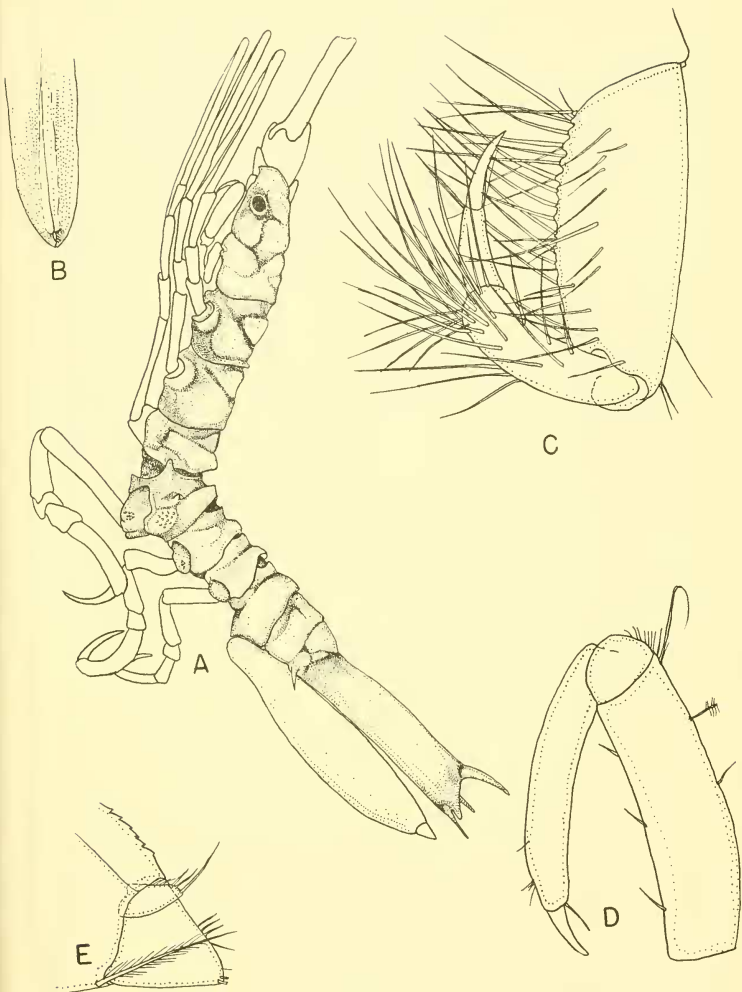


Figure 4

Figure 4. *Antarcturus annaoides*, n. sp., holotype male. A, lateral view; B, penis; C, gnathopod; D, seventh pereopod; E, inner view of apex of uropod.

pleotelson rounded with only three setae. Margins of uropodal rami smooth with few setae. Frontal margin of cephalon pointed. Maxilliped with seven setae. Body smooth, glistening, a pair of setae present at lateral margins of first two peraeonal somites.

Measurements. Holotype female, length 3.75 mm.; width 0.25 mm.

Type. Deposited in the MCZ, Cat. No. 12667.

Distribution. Known only from type locality.

Composition and affinities. Unique.

ANTARCTURUS ANNAOIDES n.sp.

Figure 4

Synonyms. None.

Diagnosis. An *Antarcturus* with dorsum of body and pleotelson without spines. Eyes present. Coxal plates without lateral spines. Pleotelson with a pair of spines at anterolateral border and a similar pair at posterolateral angles as well as a horn-like spine on dorsum at midline of posterior border. Dactyls present on peraeopoda one and seven. Second antenna exceeds two times the length of the body. Ventral surface of body without spines.

Measurements. Male holotype, length 13 mm., width 2.0 mm.; second antenna 25 mm. long.

Type. Deposited in MCZ, Cat. No. 12668.

Distribution. Known only from type locality.

Composition and affinities. The species' closest relative appears to be *Antarcturus anna* (Beddard 1886), described in the "Challenger" report from 600 fathoms off the Rio de la Plata. It differs from that species in lacking a marginally serrated pleotelson and in lacking armed coxal plates.

LANIRELLA CARIBBICA, n. sp.

Figure 5

Synonyms. None.

Diagnosis. Front with median setiferous horn. Pleotelson with three spines at lateral border, and four on dorsal surface. First peraeonal somite with three dorsal spines. Second peraeonal somite with 7 spines on dorsum, third with 9; fourth with 9; fifth to seventh with 2. Maxilliped with two coupling hooks. First antenna with 13 articles.

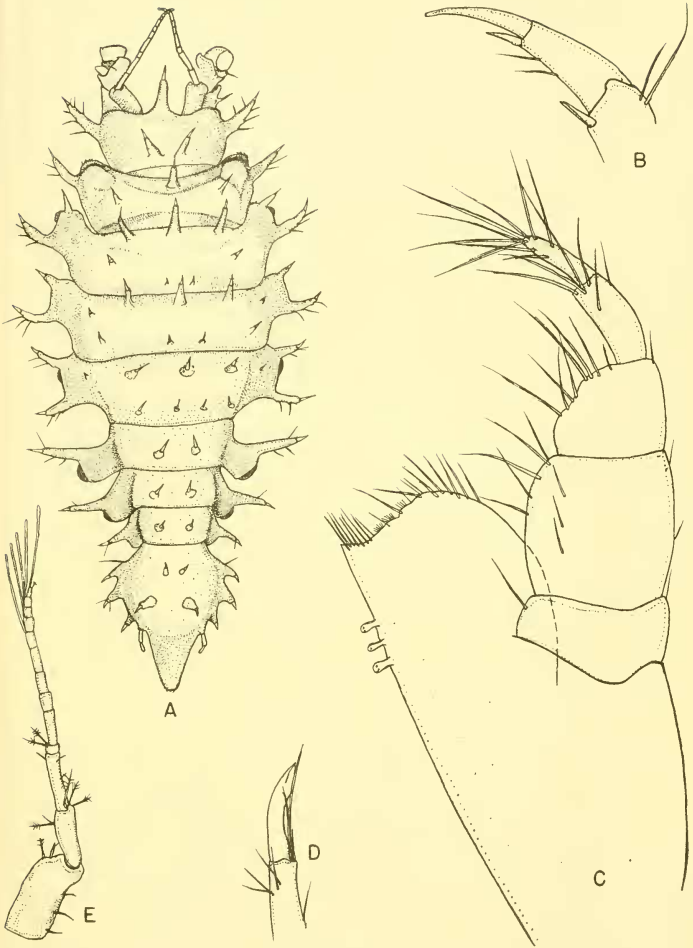


Figure 5

Figure 5. *Ianirella caribbica*, n. sp. A, type toto; B, dactyl first peraeopod; C, maxilliped; D, dactyl seventh peraeopod; E, first antenna.

Measurements. Holotype female, length 5.5 mm.; width 2.4 mm.

Type. Deposited in the MCZ, Cat. No. 12669.

Distribution. Known only from type locality.

Affinities. This species, being dorsally spined, is most closely related to *Ianirella nansenii* Bonnier (1896), a species collected by the "Caudan" from 950 meters depth north of the Azores at 40°38' E. Longitude and 44°17' N. Latitude. It differs markedly from that species in having 3, not 4 spines at each pleotelsonal border and 3 rather than 1 spine on the dorsum of the first peraeonal somite.

LITERATURE CITED

BEDDARD, F. E.

1886. Report on the Isopoda collected by H.M.S. "Challenger" during the years 1873-76, pt. 2. "Challenger" Reports, Zoology, vol. 17, 175 pp., 25 pls.

BONNIER, J.

1896. Edriophthalones. in Res. Sci. Campagne du Caudan dans le Golfe de Gascogne. Ann. Univ. Lyon, vol. 26, pp. 527-689, pl. 33.

MENZIES, R. J.

1956. New abyssal tropical Atlantic isopods with observations on their biology. In press. Am. Mus. Nat. History.

SARS, G. O.

1897. An account of the Crustacea of Norway. II, Isopoda. pp. 1-270.
1899. 100 pls. Bergen.