

TWO NEW SPECIES OF *QUANTANTHURA* FROM BRASIL
(CRUSTACEA, ISOPODA, ANTHURIDAE)

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Abstract.—Two new species of the anthurid isopod genus *Quantanthura* are described. *Q. menziesi* was taken from 31 stations ranging from Cape Orange in the north to Cape Santo Agostinho in the south, in depth ranges from 1.4-94.0 m. *Q. brasiliensis* was recorded from only two stations, one close to Rio de Janeiro, and one further north, in 21 and 166 m. This is only the second record of the genus, and the first from the Atlantic. The genus *Quantanthura* is redefined.

The present work is based on dredged material collected chiefly by the Department of Oceanography of the Federal University of Pernambuco, Brasil. Since 1965 several oceanographic surveys of the Brazilian continental shelf have been carried out, between Amapá (latitude 04°40'N) and São Paulo (latitude 24°23'S), by the Directory of Hydrography and Navigation (Diretoria de Hidrografia e Navegação) and by the Superintendent of Development of the North-east (Superintendência de Desenvolvimento do Nordeste) (see Fig. 1). Further oceanographic and ecological data are obtainable from Cavalcanti & Kempf (1970), Kempf (1970), Coelho & Koenig (1972), and Mabesoone, Kempf, & Coutinho (1972).

Type-material has been deposited in the National Museum of Rio de Janeiro, and the United States National Museum.

Family Anthuridae

Quantanthura Menzies & George

Diagnosis.—Eyes present or absent. Antennular flagellum of 5-7 articles. Antennal flagellum of 9 articles. Mandibular palp 3-segmented; lacinia, molar, and incisor well developed. Maxilliped 6-segmented, third segment very short; endite present. Pereopod 1 larger than pereopods 2 and 3, propodus broad. Pereopods 4-7 with rectangular carpus, not underriding propodus. Pleopod 1 exopod operculiform. Pleonites 1-5 fused, pleonite 6 free. Telson indurate, with 2 basal statocysts. Marsupium of 4 pairs of oostegites.

Remarks.—Menzies & George (1972) indicated that some species of both *Anthelura* and *Ananthura* should be placed in *Quantanthura*. The genus *Ananthura* (type-species *A. sulcicauda*) has been synonymised with *Anthelura* by Kensley (1978). *Anthelura* differs from *Quantanthura* as here

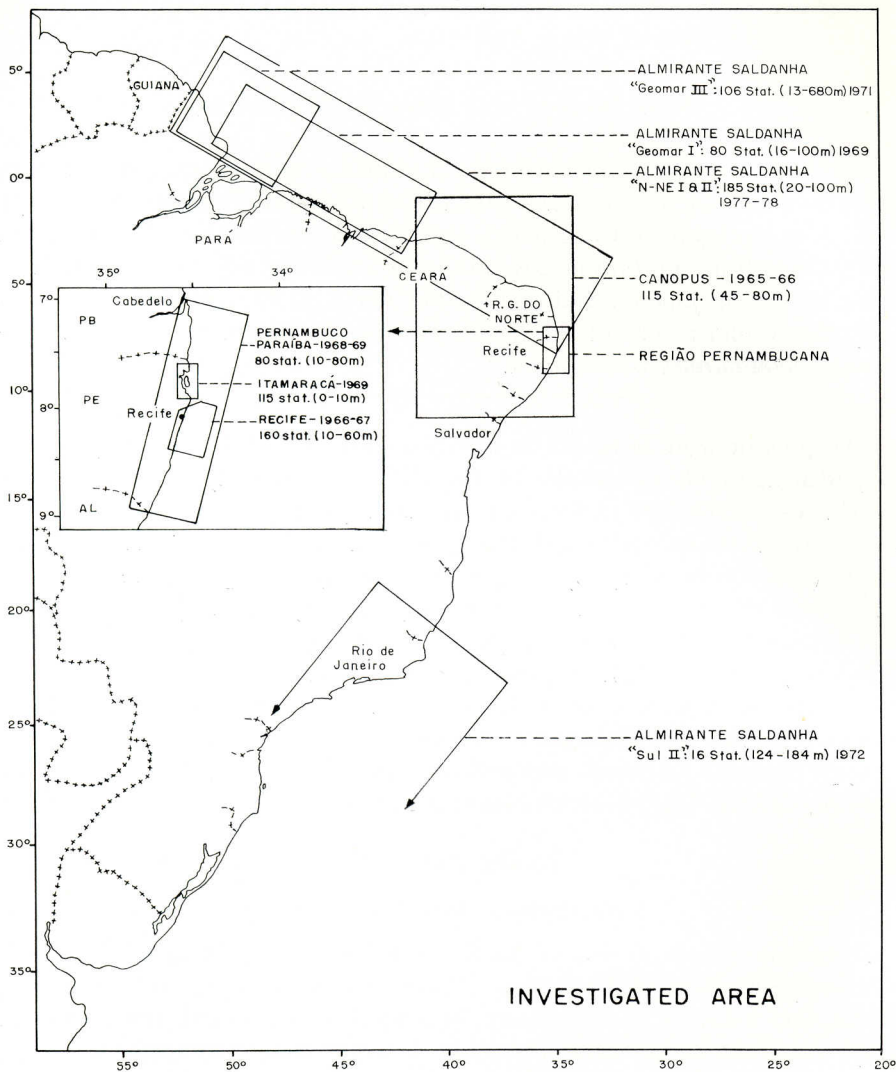


Fig. 1. Map showing oceanographic survey areas.

defined in 2 major generic characteristics, viz. in having a 5-segmented maxilliped, and in having pleonites 1-6 free.

Quantanthur menziesi, new species

Figs. 2, 3

Description.—♀. Integument, except for uropods and telson, hardly indurate. Cephalon with tiny dorsolateral eyes; rostrum short, not extending

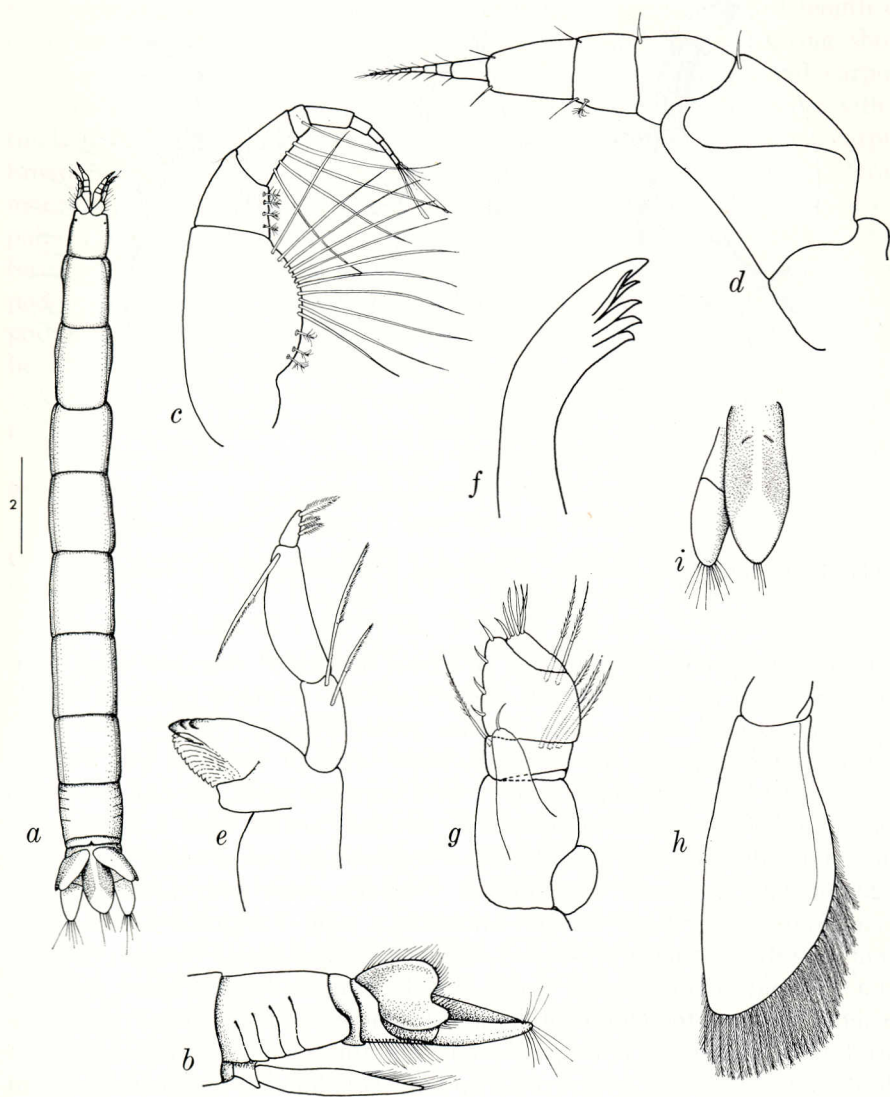


Fig. 2. *Quantanthura menziesi*: a, Female in dorsal view; b, Pleon in lateral view; c, Antennule; d, Antenna; e, Mandible; f, Apex of maxilla; g, Maxilliped; h, Pleopod 1 exopod; i, Telson and uropodal basis and endopod.

beyond square anterolateral corners. Cephalon and pereonites 1 and 2 with dorsolateral keel, becoming obsolete on posterior pereonites. Body proportions: $C < 1 < 2 > 3 < 4 = 5 = 6 > 7$. Pleonites 1-5 fused, sutures laterally visible; pleonite 6 free, with small middorsal notch in posterior margin.

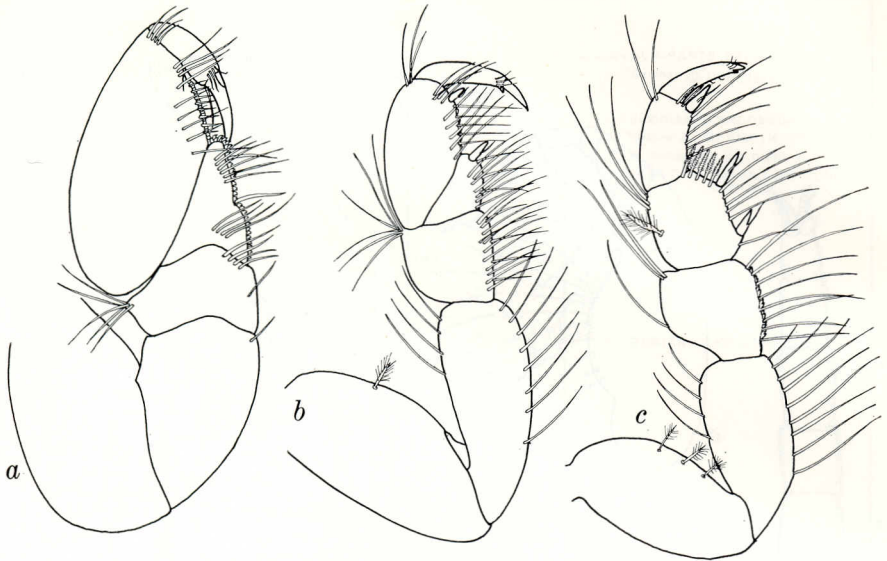


Fig. 3. *Quantanthura menziesi*: a, Pereopod 1; b, Pereopod 2; c, Pereopod 7.

Telson dorsally convex, with low proximal middorsal rounded ridge, flattened in distal third to rounded apex; 2 slit-like statocyst openings visible at about proximal third; ventral surface gently convex.

Antennular peduncle 4-segmented, basal segment broadest and longest, with several elongate simple setae; fourth segment small, set obliquely into apex of third; flagellum of 5 articles, terminal article with 2 aesthetascs. Antennal peduncle 5-segmented, second segment longest, dorsally grooved to accommodate antennule; flagellum of 9 articles, each with distal group of setae protected by basal flange. Mandibular palp 3-segmented, basal segment two-thirds length of second segment, with 2 distal elongate fringed setae; second segment with single distal elongate fringed seta; terminal segment one-quarter length of middle segment, with 3 fringed spines on distal half; incisor of 3 cusps; lacinia margin with 12 serrations; molar bluntly lobed. Maxilla with 6 distal spines. Maxilliped 6-segmented, second segment longest, third segment very narrow, wedge-shaped, fourth segment with 3 elongate distally fringed setae on outer surface, fifth segment with 4 short setae on mesial margin, 2 elongate fringed setae on outer surface, sixth segment narrow, set obliquely into fifth, with 5 distal setae; thin-walled endite present on inner surface, with few distal setae. Pereopod 1 unguis half length of dactylus; propodal palm almost straight, bearing fringe of tiny square scales and single row of simple setae; carpus triangular, distally

rounded, posterior margin scalloped, armed with close-set short scales and finely-fringed setae. Pereopods 2 and 3 similar, unguis one-third length of dactylus; posterior margin of propodus, carpus, and merus bearing short blunt scales. Strong posterodistal sensory spine on propodus and carpus. Pereopods 4-7 similar, unguis one-fifth length of dactylus; propodus with 2 finely-fringed spines and strong sensory spine at posterodistal corner; carpus broad, 5-sided, not underriding propodus, with 2 sensory spines on posterior margin, and 5 or 6 finely-fringed distal spines. Brood pouch formed by 4 pairs of oostegites on pereonites 2-5. Exopod of pleopod 1 indurate, operculiform, with numerous distal plumose setae; endopod one-third width of exopod and only slightly shorter, with 7 or 8 distal plumose setae. Uropodal exopod with deep notch distally, fringed with setae; endopod extending slightly beyond telsonic apex, distally rounded.

Etymology.—The species is named for the late Dr. Robert J. Menzies, in recognition of his assistance to the second author.

Material.—Holotype: Salinópolis, 00°29'S, 47°24'W, 21 m, sta. SALD 2533, ♀ 16.2 mm, National Museum of Rio de Janeiro.

Paratypes.—Natal, sta. SALD 1656, 05°41'S, 35°05'W, 23 m, ♀ 16.8 mm; Cape Santo Agostinho, sta. REC 154, 08°21'S, 34°45'W, 37 m, ♀ 14.5 mm; São Luis, sta. SALD 1743A, 00°51'S, 43°41'W, 75 m, ♀ 17.0 mm; Camocim, sta. SALD 1723, 02°00'S, 41°01'W, 73 m, ♀ 17.6 mm, USNM 171259; Tocantins Mouth, sta. SALD 2443, 00°39'N, 47°13'W, 43 m, ♀ 16.3 mm USNM 171260; Tocantins Mouth, sta. GM III 148, 01°47'N, 47°49'W, 60 m, 7♀ ♀ 17.0 mm, USNM 171261.

Additional material.—Cape Orange, sta. GM III 182, 04°40'N, 50°40'W, 78-80 m, ♀; Cape North, sta. GM III 189, 03°50'N, 49°55'W, 69-77 m, ♀; sta. GM III 190, 03°42'N, 49°49'W, 86-92 m, ♀; sta. GM III 191, 03°34'N, 49°43'W, 82-94 m, ♀. Amazon Mouth, sta. SALD 177 3A, 02°28'N, 48°13'W, 85 m, ♀; sta. SALD 2447, 02°24'N, 48°24'W, 85 m, ♀; sta. SALD 2471, 02°16'N, 47°47'W, 84 m, 2♀ ♀. Tocantins Mouth, sta. SALD 2438, 00°48'N, 47°05'W, 70 m, ♀; sta. GM I 45, 01°32'N, 47°34'W, 67 m, ♀; sta. GM III 218, 02°09'N, 47°25'W, 92 m, ♀. Salinópolis, sta. SALD 1804B, 01°00'S, 45°21'W, 21 m, 3♀ ♀; sta. SALD 2533, 00°29'S, 47°24'W, 21 m, 2♀ ♀. Cape Gurupi, sta. GM I 33, 00°11'S, 46°49'W, 29 m, 2♀ ♀; sta. GM I 34, 00°21'S, 46°58'W, 30 m, 2♀ ♀; sta. GM I 42, 01°28'S, 46°51'W, 80 m, ♀. Turiaçu, sta. SALD 1751, 00°37'S, 44°40'W, 44 m, ♀; sta. GM I 29, 00°38'N, 45°52'W, 75 m, ♀. São Luis, sta. SALD 1872, 01°20'S, 43°33'W, 50 m, ♀. Tutoia, sta. SALD 1731, 02°30'S, 41°51'W, 24 m, 2♀ ♀; sta. SALD 1817A, 02°07'S, 42°26'W, 73 m, ♀. Camocim, sta. SALD 1721, 02°25'S, 40°50'W, 24 m, ♀; sta. CAN 06, 02°11'S, 39°53'W, 60-65 m, ♀. Cape Bacopari, sta. SALD 1655, 06°04'S, 34°59'W, 25 m, ♀. Ponta de Pedras, sta. PB/PE 23, 07°33'S, 34°41'W, 20 m, ♀; sta. ITA 39, 07°46'S, 34°47'W, 1.4 m, 2♀ ♀.

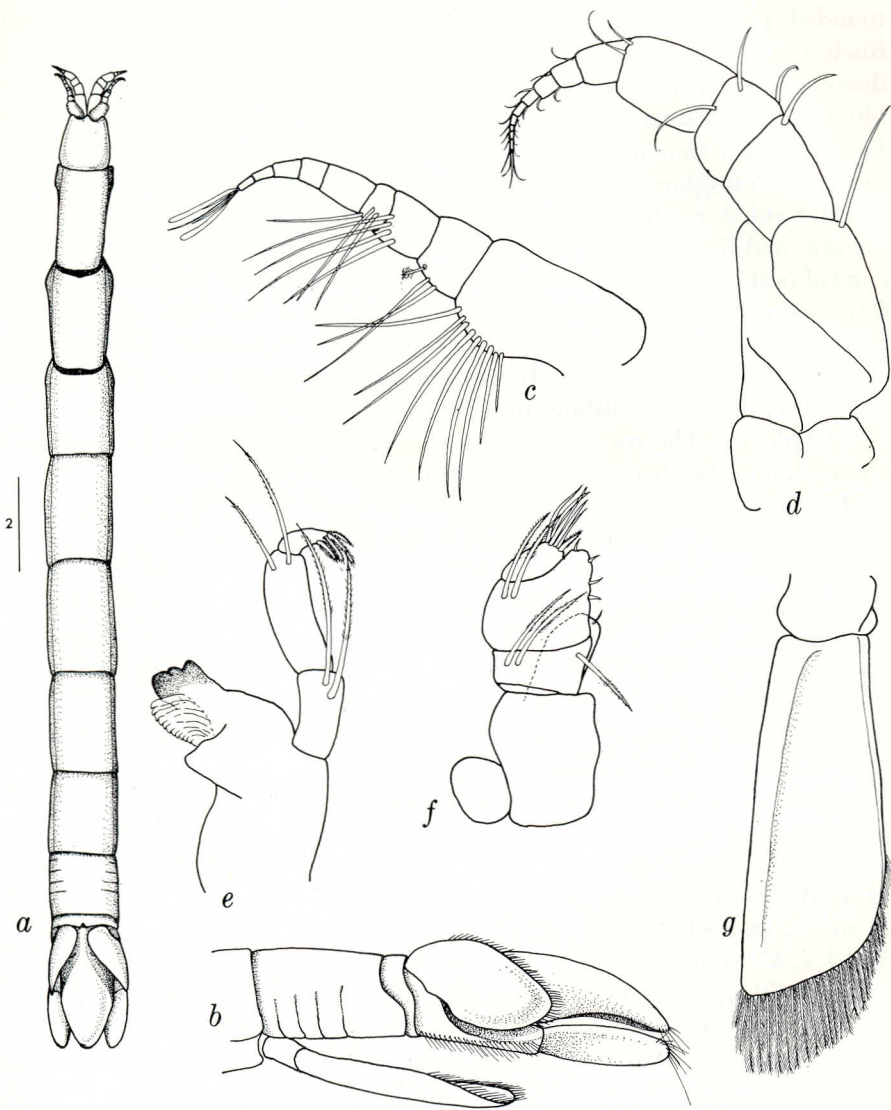


Fig. 4. *Quantanthura brasiliensis*: a, Female in dorsal view; b, Pleon in lateral view; c, Antennule; d, Antenna; e, Mandible; f, Maxilliped; g, Pleopod 1 exopod.

Quantanthura brasiliensis, new species

Figs. 4, 5

Description.—♀. Integument, except for uropods and telson, hardly indurate. Cephalon lacking eyes; low rounded rostrum not extending beyond

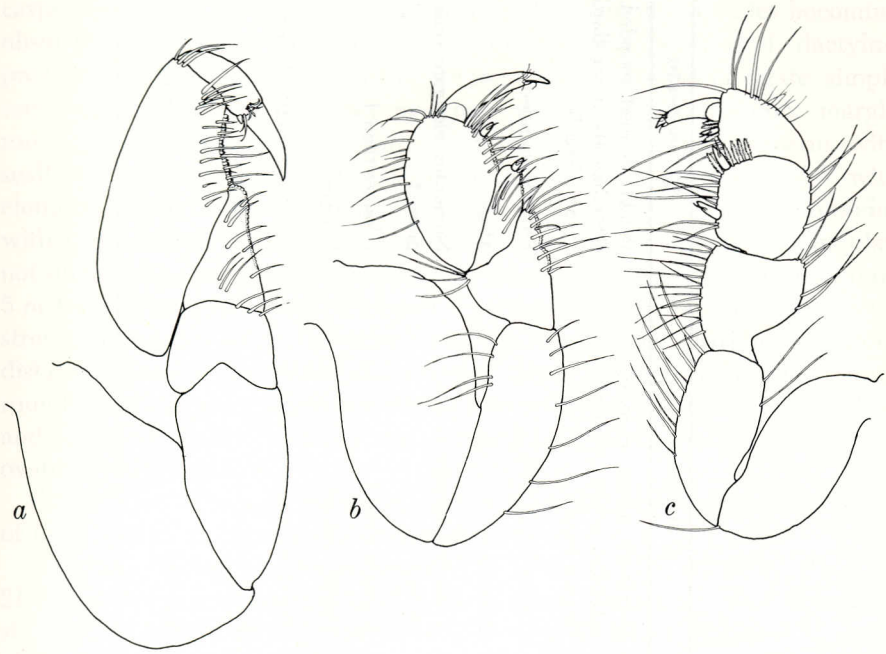


Fig. 5. *Quantanthura brasiliensis*: a, Pereopod 1; b, Pereopod 2; c, Pereopod 7.

anterolateral corners. Body proportions: $C < 1 = 2 > 3 < 4 < 5 > 6 > 7$. Pleonites 1-5 fused, sutures visible laterally; pleonite 6 free, with small middorsal notch in posterior margin. Telson with short proximodorsal ridge, distal two-thirds strongly convex, apex rounded; two proximal statocysts with slit-like openings; ventral surface gently concave.

Antennular peduncle 4-segmented, basal segment longest and broadest, with several elongate simple setae on ventral surfaces of all 4 segments; flagellum of 5 articles with 2 distal aesthetascs. Antennal peduncle 5-segmented, second segment strongly grooved to accommodate antennule; flagellum of 9 articles. Mandibular palp 3-segmented, first and second segments with 2 elongate finely fringed setae each; terminal segment with 4 distal fringed spines; incisor of 3 cusps; lacinia with 11 or 12 serrations; molar bluntly rounded. Maxilla with 6 distal spines. Maxilliped 6-segmented, third segment narrow, wedge-shaped, fourth segment with 3 elongate setae; sixth segment short, set obliquely in outer distal angle of fifth segment, with 5 simple setae and 1 short fringed seta; thin-walled endite on inner surface tipped with single seta. Pereopod 1 unguis almost half length of dactylus, with tiny supplementary spine at base; propodal palm gently concave, with border of short fringed scales and several setae;

Table 1. Comparison of species of *Quantanthura*.

	<i>Q. globitelson</i>	<i>Q. menziesi</i>	<i>Q. brasiliensis</i>
Proximodorsal ridge of telson	Weakly defined, rounded, extending about half telsonic length	Relatively strong, rounded, extending about two-thirds telsonic length	Weakly defined, rounded, extending about one-third telsonic length
Telsonic apex	Narrowly rounded	Narrowly rounded	Broadly rounded
Eyes	Absent	Present	Absent
Basal antennular segment	Elongate setae absent	Numerous elongate setae present	Numerous elongate setae present
Mandibular palp segments	1 and 2 subequal	2 longer than 1	2 longer than 1
Pereopod 1, propodal palm	Convex	Slightly convex	Concave
Pereopod 2 unguis	One-sixth length of dactyl	One-third length of dactyl	One-third length of dactyl
Pleopod 1 exopod, anterior surface	Ridge near mesial margin	Ridge absent	Ridge near mesial margin
Uropodal exopod	Broadly ovate, outer margin sinuous	Notched	Ovate, outer margin not sinuous

carpus triangular, distally rounded, with border of rounded scales becoming obsolete proximally. Pereopod 2 unguis one-third length of dactylus; propodus with squat posterodistal sensory spine, several elongate simple setae on anterior and posterior margins; carpus narrow, posterior margin rounded, with squat sensory spine and several simple setae; merus with scalloped posterior margin and several simple setae. Pereopods 4–7 with elongate simple setae on propodus, carpus, merus, and ischium; propodus with posterodistal sensory spine and 3 fringed spines; carpus rectangular, not underriding propodus, with 2 strong sensory spines on posterior margin, 5 or 6 distal fringed spines. Pleopod 1 exopod indurate, operculiform, with strong groove on outer (anterior) surface near mesial margin, numerous distal plumose setae. Uropodal exopod ovate, fringed with setae, apex rounded, folding over telson and fitting into hollowed proximal area of telson and uropodal basis, reaching distal margin of basis; endopod narrowly ovate, distally rounded.

Etymology.—The specific name derives from Brasil, the country of origin of both species of *Quantanthura* described here.

Material.—Holotype: Piauí, sta. SALD 1730, 02°37'S, 41°27'W, 21 m, ♀ 21.9 mm, National Museum of Rio de Janeiro. Paratype: San Sebastião, sta. SUL II DG-04, 24°23'S, 44°34'W, 166 m, ♀ 17.3 mm, National Museum of Rio de Janeiro.

Discussion.—Menzies & George (1972) placed *Anthelura truncata* (Hansen, 1916) from abyssal depths in the Davis Straits in *Quantanthura*, but the descriptions provided by Hansen (1916), Barnard (1925), and Menzies (1962) do not give sufficient details to place this species with certainty. The pleonal structure appears to be similar to *Quantanthura* as here defined, but pleonite 6 is not delineated. Hansen's figure of the maxilliped (1916, pl. 15, Fig. 2g) indicates by a dotted line a possible narrow wedge-shaped third segment as is seen in *Quantanthura*, but no endite is shown.

Quantanthura globitelson was recorded from the abyssal depths of the Peru-Chile Trench of the eastern Pacific, while both the present species are from shallow water in the western Atlantic. The main differences between *Q. globitelson* and the 2 new species are summarised in Table 1. As *Q. brasiliensis* was recorded from only 2 stations, speculation on the distribution of both species is difficult. Considering the number of stations sampled between depths of 20 and 100 meters, it is possible that *Q. brasiliensis* has a deeper distribution than *Q. menziesi*, and/or it is a rarer species.

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