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A new species of *Cymadusa* Savigny, 1816 (Crustacea: Amphipoda: Ampithoidae) from northeastern Brazil

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Abstract - A new species of the amphipod family Ampithoidae Stebbing, 1899 is described from the northeastern Brazilian waters. The new described taxon is grouped in the genus *Cymadusa* Savigny, 1816, since it presents all the diagnostic characteristics of the genus. The examined material was collected by scuba diving in the Rocas Atoll, off Rio Grande do Norte state coast, Camamu Bay and Todos os Santos Bay, Bahia state. The new species described here is close to *C. filosa* Savigny, 1816, type species of the genus, by presenting anterior margin of gnathopod 1 poorly setose, male gnathopod 2 densely setose, with palmar corner not defined by a spine and dactylus subequal in length to palm, being considered part of the *C. filosa* complex. Among the species of this complex, the one which most resembles to the new taxon is *C. imbroglio* Rabindranath, 1972, which is distinguished by the absence of both the trapezoid process in the palm and spine at the palmar corner in the gnathopod 2. This is the second species of the genus *Cymadusa* recorded from Brazilian waters.

Key words: Amphipods, Camamu Bay, Rocas Atoll, Taxonomy,Todos os Santos Bay

Introduction

The Amphipoda belong to the Superorder Peracarida, a crustacean group with direct development, incubating the eggs in a marsupium ventral to the thorax formed from thin plates called oostegites. Amphipoda includes, currently, about 7.000 species grouped into four suborders: Senticaudata, Gammaridea, Hyperiidea and Ingolfiellidea, according to Lowry and Myers (2013).

The amphipods from the family Ampithoidae Stebbing, 1899 are among the most abundant associated to the phytal substrates (Nelson 1979; Edgar 1983a, b; Duffy, 1990). Despite this, there are only six ampithoid species recorded until now from Brazil, grouped in three genera: *Ampithoe* Leach, 1814, *Cymadusa* Savigny, 1816 and *Sunampithoe* Bate, 1857 (Wakabara and Serejo, 1998; Serejo and Licínio, 2002). It shows the paucity of taxonomic studies about the group in Brazil.

The family Ampithoidae is characterized by presenting the following characters: corophioidean diagnostic characters; outer lobe of lower lip usually with notch; inner ramus of uropod 3 as short as the outer ramus, wide and apically setose, or outer ramus of uropod 3 with 1-2 recurved thick setae diverging from the ramus axis (Barnard and Karaman, 1991). As concerns the genus *Cymadusa*, only *C. filosa* Savigny, 1816 (type species of the genus)

is recorded from Brazilian waters. Another species, *Grubia sardenta* Oliveira, 1953, described with material from Guanabara Bay, 1 m depth, was synonymized to *C. filosa* by Peart (2004), despite some morphological differences between the two species. The type series of this material is currently lost and the description and illustrations made by Oliveira (1953) are not well detailed. Thus, it is still necessary to analyze materials of collections from this species type locality, to confirm or not the validity of the species described by Oliveira.

The species of the genus *Cymadusa*, can be easily recognized among the other Ampithoidae, by presenting uropod 1 with long and sharp distoventral spike (spur), on the tip of the peduncle, between the basis of rami. According to Peart (2007), species of *Cymadusa* tend to be bigger, brighter and more colorful than other amphipods. Genus *Cymadusa* has accessory flagellum on antenna 1, as the easer way to distinguish this genus from all others. However, despite the abundance and size of individuals, the genus taxonomy remains ambiguous, because of inadequate definitions and descriptions. Peart (2004) defined a species complex around *C. filosa*, including six species with strongly setose antennae and gnathopods. However, some of these species do not present these appendages too much setose, as illustrated by the author herself.

In this paper, we describe a new species of *Cymadusa*, the second one recorded from Brazilian waters, and the first one known from the Rocas Atoll, as for the northeastern Brazilian coast. This species is part of the *C. filosa* complex since it presents antennae and posterior margin of merus, carpus and propodus, and palm of gnathopods 1 and 2, besides anterior margin of propodus of gnathopod 2 well setose.

Material and Methods

The examined material was collected on sublittoral algae by scuba diving at the northeastern Brazilian coast. The type material is from the Rocas Atoll Biological Reserve (03º52'S / 033º48'W). The collections were made from October 2000 to November 2001, during the project Oceanic Islands Diversity – Rocas Atoll, coordinated by the Departamento de Invertebrados, Museu Nacional, Universidade Federal do Rio de Janeiro. This atoll is located at the peak of a seamount, about 150 km west of the Fernando de Noronha archipelago and 267 km northeast of the Rio Grande do Norte State. The algae samples were anesthetized with 5-10% ethanol and washed in a 0.5mm mesh sieve. Some paratypes were also collected using the same methodology at the Camamu Bay (13º56'S / 39º06'W) and Todos os Santos Bay (12°46'22"S / 38°33'32"W), both in the Bahia State coast. All the examined material for this study is preserved in 70% ethanol. For the taxonomic study, the appendages and mouthparts of the dissected specimens were mounted on glycerol gel slides and drawn under an optical microscope with camera lucida, Motic BA-310. Illustrations were digitalized in CorelDraw X5, using a Wacon Intuos 4 tablet. All the material is deposited at the Crustacea Collection of the Departamento de Zoologia, Universidade Federal do Rio de Janeiro (DZUFRJ), and the Crustacea Collection of Museu Nacional (MNRJ).

The setae classification used on this work follows the one proposed by Watling (1989) and the gnathopods 2 palm nomenclature was based on Poore and Lowry (1997).

List of abbreviations used in figures: Hd: Head; LL: Lower lip; UL: Upper lip; Mp: Maxilliped; Mx1-2: Maxillae 1-2; Md: Mandible; Gn1-2: Gnathopods 1-2; P3-7: Pereopods 3-7; Ep1-3: Epimeral plates 1-3; U1-3: Uropods 1-3; T: Telson; Af: Accessory flagellum; m: male; f: female.

Results

Order Amphipoda Latreille, 1816

Suborder Senticaudata Lowry and Myers, 2013

Family Ampithoidae Stebbing, 1899

Genus *Cymadusa* Savigny, 1816

Genus diagnosis: Antenna 1 longer than antenna 2, accessory flagellum with 1-2 articles. Mandibular palp 3-articulate. Lower lip outer lobe notched. Gnathopod 1 smaller or subequal to gnathopod 2. Gnathopod 1 palm of propodus acute. Pereopods 3 and 4 with basis and merus narrow. Uropod 1 with distoventral spur long and acute. Uropod 3 rami short and broad. Uropod 3 outer ramus with two recurved robust setae. Modified from Peart (2004).

Type species: Cymadusa filosa Savigny, 1816

Genus composition: Genus is composed by 36 species: *Cymadusa alyxis* Hughes & Lowry, 2009; *C. aungtonyae* Peart, 2002; *C. brevidactyla* (Chevreux, 1907); *C. cavimana* (Sivaprakasam, 1970); *C. chalongana* Peart, 2002; *C. chuawe* Peart, 2007; *C. compta* (Smith, 1873); *C. crassicornis* (Costa, 1853); *C. elegantis* Peart, 2007; *C. filosa* Savigny, 1816; *C. grossimana* Ledoyer, 1984; *C. hawaiensis* (Schellenberg, 1938); *C. heronensis* Peart, 2007; *C. hoeyae* Hughes & Lowry, 2009; *C. imbroglio* Rabindranath, 1972; *C. jigurru* Peart, 2007; *C. khbanardi* Hughes & Lowry, 2009; *C. ledoyeri* Peart, 2004; *C. lunata* Myers, 1985; *C. mariabyrneae* Hughes & Lowry, 2009; *C. microphthalma* (Chevreux, 1901); *C. munnu* Poore & Lowry, 1997; *C. oceanica* J.L. Barnard, 1955; *C. panwa* Peart, 2002; *C. pathyi* Asari, 1998; *C. peartae* sp. nov.; *C. pemptos* Peart, 2007; *C. pilipes* (Ledoyer, 1984); *C. setosa* (Haswell, 1879); *C. smilodonta* Hughes & Lowry, 2009; *C. tattersalli* Peart, 2004; *C. thagaay* Peart, 2007; *C. tishana* Peart, 2007; *C. uncinata* (Stout, 1912); *C. vadosa* Imbach, 1967; and *C. wistari* Peart, 2007.

Cymadusa peartae sp. nov.
(Figs. 1-4)

Material examined: Holotype: 1 female, 8.5 mm length, in glycerol gel slides, dissected and drawn, Rocas Atoll, Rio Grande do Norte State, Brazil, F.B. Pitombo, R. Barroso coll., 25 December 2000, subtidal, from washed algae, DZUFRJ 4937. Paratypes: 1 female, in glycerol gel slides, dissected and drawn, Camamu Bay, Bahia State, Brazil, 13°56'S / 39°06'W, A.O. Almeida coll., 24 April 2004, subtidal, from washed algae, DZUFRJ 4938; 5 females, in ethanol 70%, Camamu Bay, Bahia State, Brazil, 13°56'S / 39°06'W, A.O. Almeida coll., 24 March 2005, subtidal, from washed algae, DZUFRJ 4939; 11 females, 3 males, in ethanol 70%, Todos os Santos Bay, Bahia State, Brazil, 12°46'22"S / 38°33'32"W, O. Falcão coll., 22 May 1997, subtidal, from washed algae, MNRJ 15770; 3 females, in ethanol 70%, Rocas Atoll, Rio Grande do Norte State, Brazil, F.B. Pitombo, R. Barroso coll., 25 December 2000, subtidal, from washed algae, MNRJ 23407; 5 females, in ethanol 70%, Rocas Atoll, Rio Grande do Norte State, Brazil, F.B. Pitombo, R. Barroso coll., 21 December 2000, subtidal, from washed algae, MNRJ 23408; 2 females, in ethanol 70%, Camamu Bay, Bahia State, Brazil, 13°56'S / 39°06'W, A.O. Almeida coll., 24 April 2004, subtidal, from washed algae, DZUFRJ 4940; 1 male, dissected and drawn, 7.1 mm length, Camamu Bay, Bahia State, Brazil, 13°56'S / 39°06'W, A.O. Almeida coll., 24 April 2004, subtidal, from washed algae, DZUFRJ 4941; 1 female, in ethanol 70%, Camamu Bay, Bahia State, Brazil, 13°56'S / 39°06'W, A.O. Almeida coll., 24 April 2004, subtidal, from washed algae, DZUFRJ 4942; 1 male, in ethanol 70%, Rocas Atoll, Rio Grande do Norte State, Brazil, F.B. Pitombo, R. Barroso coll., 25 December 2005, subtidal, from washed algae, DZUFRJ 4943.

Etymology: This species is dedicated to Dr. Rachel Peart, for her great contribution to the knowledge of the ampithoid amphipods.

Diagnosis: Antenna 1 poorly setose, with accessory flagellum 1-articulate; antenna 2 not strongly setose; upper lip with facial setae; mandibular palp 3-articulate, all articles fully covered with small slender setae; gnathopod 1 smaller than gnathopod 2, poorly setose, with small and subacute merus, carpus subtriangular; gnathopod 2, merus, carpus and propodus densely setose, without palmar spine, dactylus subequal in length to palm; epimeral plate 3 rounded; uropod 1, rami bearing stout setae with accessory setae; uropod 2, peduncle with 2 stout setae with accessory seta, rami bearing

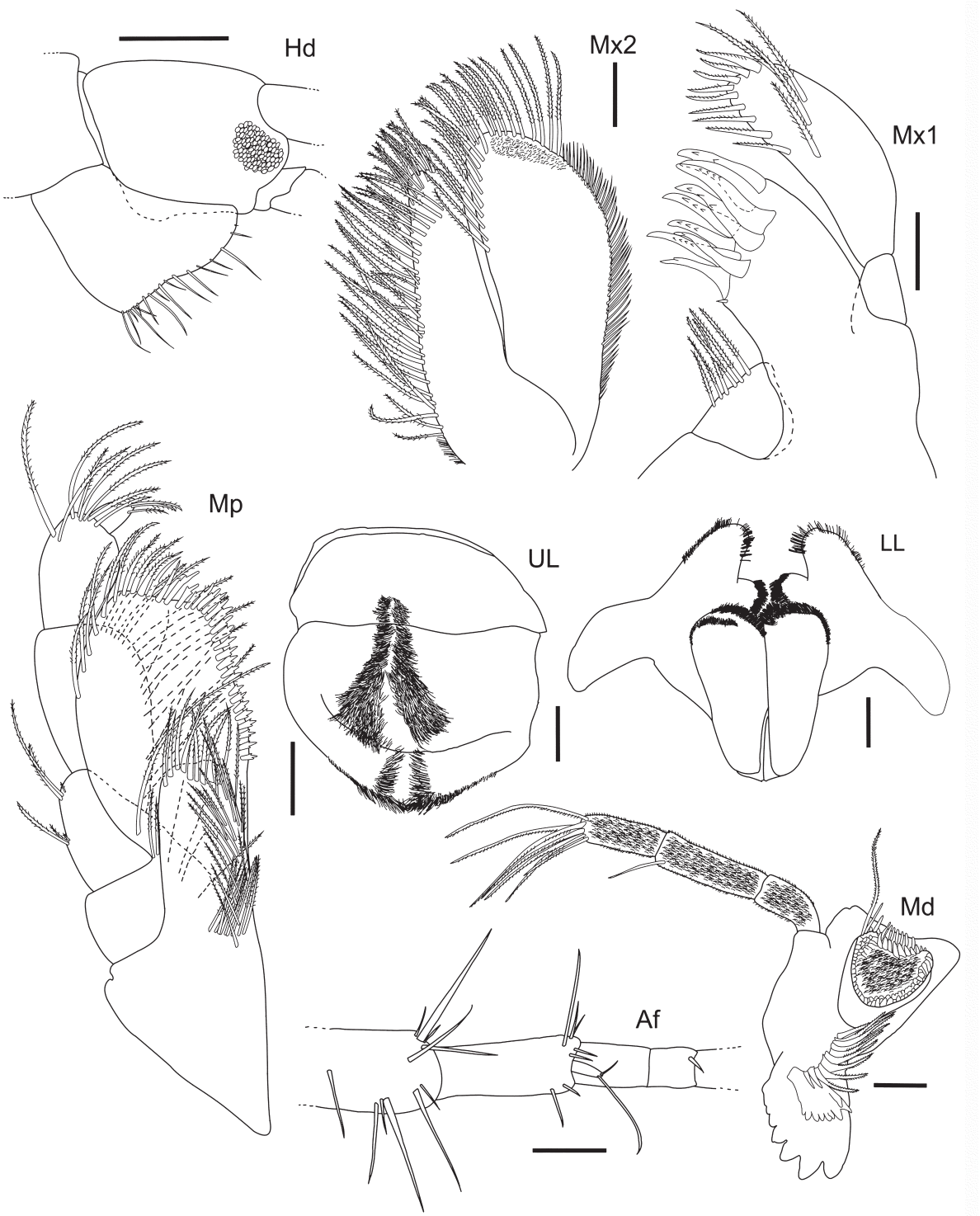

Figure 1. *Cymadusa peartae* sp. nov.: holotype, female, 8.5 mm, Rocas Atoll, Rio Grande do Norte State, Brazil, F.B. Pitombo, R. Barroso coll., 25 December 2000, in algae, DZUFRJ 4937. Scale bars: 0.5 for Hd; 0.1 mm for the remainder.

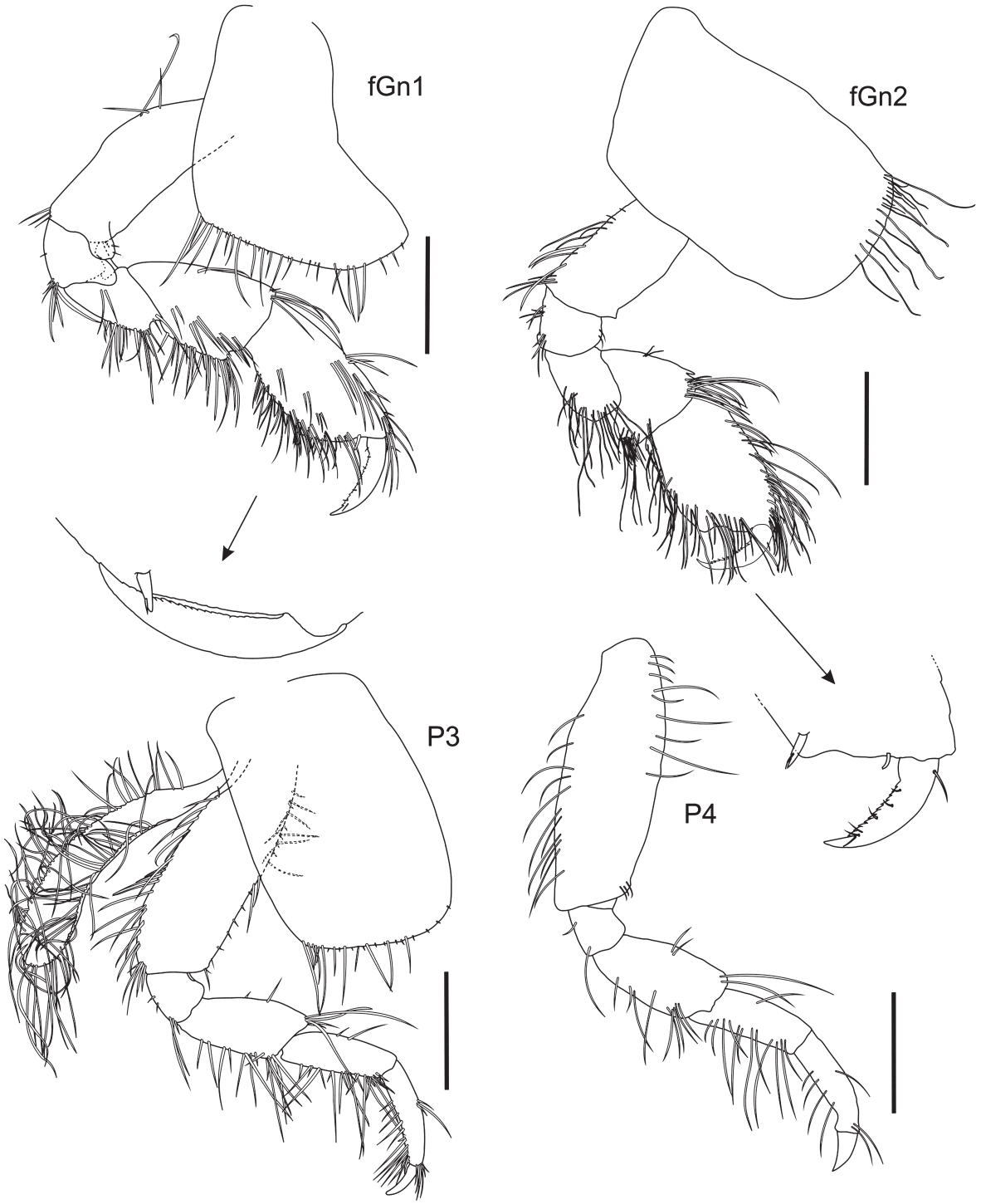

Figure 2. *Cymadusa peartae* sp. nov.: holotype, female, 8.5 mm, Rocas Atoll, Rio Grande do Norte State, Brazil, F.B. Pitombo, R. Barroso coll., 25 December 2000, in algae, DZUFRJ 4937. Scale bars: 0.5 mm for Gn1-2 and P3. Paratype, female, Camamu Bay, Bahia State, Brazil, A.O. Almeida coll., 24 April 2004, in algae, DZUFRJ 4938. Scale bars: 0.5 mm for P4.

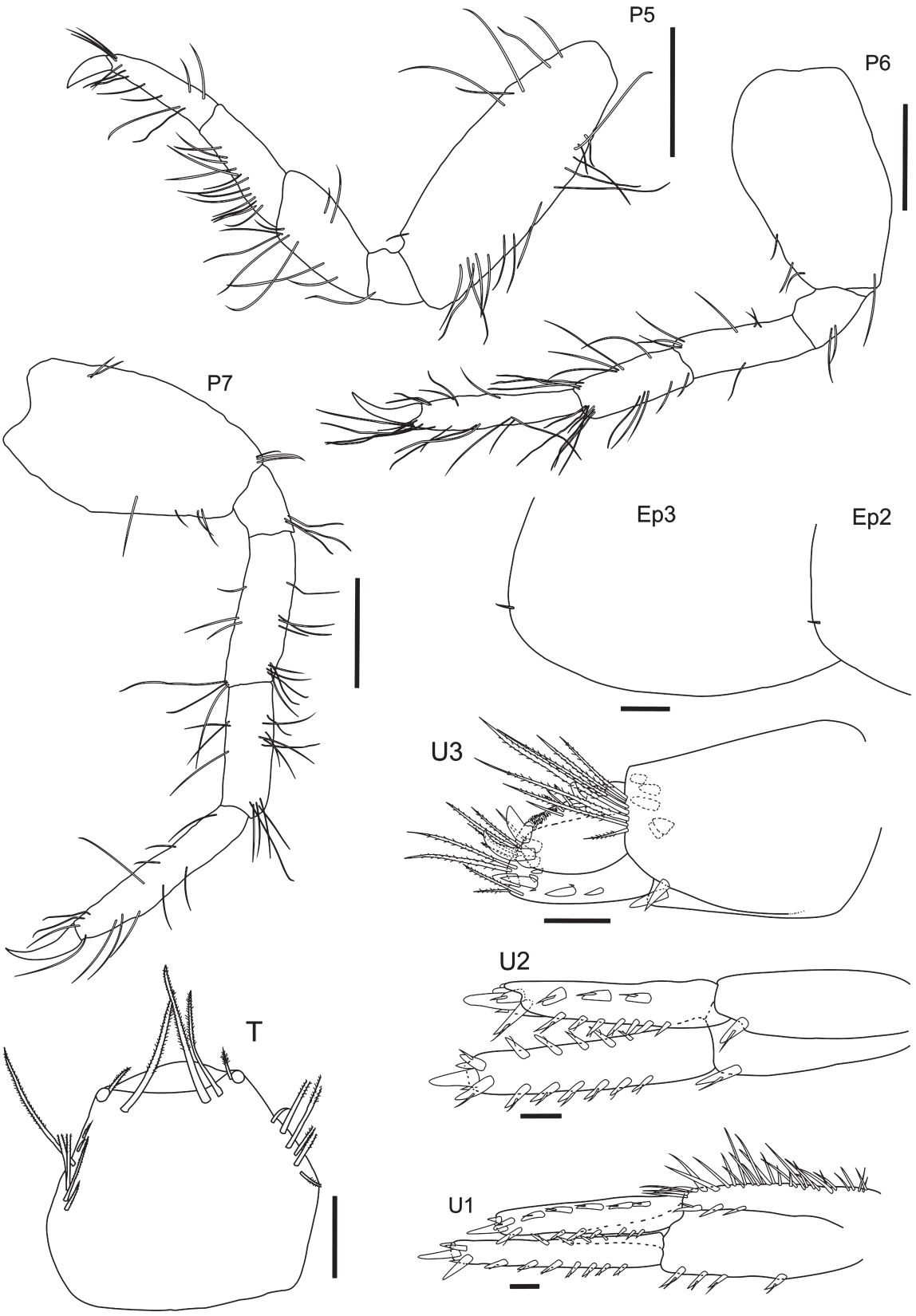

Figure 3. *Cymadusa peartae* sp. nov.: holotype, female, 8.5 mm, Rocas Atoll, Rio Grande do Norte State, Brazil, F.B. Pitombo, R. Barroso coll., 25 December 2000, in algae, DZUFRJ 4937. Scale bars: 0.1 mm for Ep2-3, U1-3, and T. Paratype, female, Camamu Bay, Bahia State, Brazil, A.O. Almeida coll., 24 April 2004, on algae, DZUFRJ 4938. Scale bars: 0.5 mm for P5-7.

Figure 4. *Cymadusa peartae* sp. nov.: paratype, male, 7.1 mm, Camamu Bay, Bahia State, Brazil, #03, A.O. Almeida coll., 24 April 2004, on algae, DZUFRJ 4941. Scale bars: 0.5 mm.

stout setae with accessory seta; uropod 3, inner ramus small, dorsal margin covered by small setules, bearing two proximal stout setae apically obtuse; telson with apical concavity.

Description: Based on holotype female (DZUFRJ 4937). Head, eyes present, well developed, round, lateral cephalic lobe, well developed, broadly rounded. Antenna 1, flagellum 52-articulate, longer than antenna 2, poorly setose; accessory flagellum 1-articulate. Antenna 2, flagellum 30-articulate. Upper lip rounded and apically setose. Lower lip apically notched with thin setose margin; inner lobe bigger than outer lobe; apically setose. Mandible molar triturative with long plumose accessory seta; incisor and lacinia mobilis multi-cuspidate; palp 3-articulate covered with small setules, article 1 about 2X longer than wide, article 2 about 3.2X longer than wide with a simple slender seta on its angle, article 3 about 2.7X longer than wide with seven long plumose setae at the apical margin. Maxilla 1 inner plate small and subtriangular with six slender plumose setae at the inner margin, without apical setae; outer plate with eight multi-cuspidate robust setae at the apical margin; palp 2-articulate, article 2 with nine stout plumose setae at the apical margin and four slender plumose facial setae. Maxilla 2 with outer plate 1.6X wider and slightly longer than inner plate; inner plate, marginal and facial rows of plumose setae present; outer plate with row of slender simple setae at the outer margin, plumose setal row at the apical and inner margin, subapical surface covered by small setules. Maxilliped, inner plate 1.8X longer than wide, with plumose setae at the inner and apical margin; outer plate 1.6X longer than wide, 1.5X longer than inner plate, with trifid robust setal row on the inner margin and plumose setae on the distal and outer margin; palp 4-articulate, 1.4X longer than outer plate, article 1 small and subrectangular, article 2 subtriangular with 2 small plumose setae and 4 bigger plumose setae on the outer margin, article 3 subrectangular, article 4 subrectangular with eight distally plumose setae, nail with three small plumose setae.

Gnathopod 1 smaller than gnathopod 2; posterior margin of merus, carpus and propodus poorly setose; coxa produced and lobate forward, ventral margin setose; basis 2.2X longer than wide, subrectangular, shorter and slender than coxa; ischium small and subacute; merus 1.6X longer than wide, small and subacute; carpus 1.3X longer than wide; propodus 1.8X longer than wide, dactylus subequal to palm, serrated, with slender simple setae; palm with acute angle. Gnathopod 2 not strongly setose; coxa anteroventral margin setose; basis 1.6X longer than wide, subrectangular; ischium slightly wider than long, small and subrectangular; merus, carpus, and propodus, posterior margin densely setose; merus 1.2X longer than wide, small and subacute; carpus slightly wider than long, subtriangular; propodus subrectangular, 1.4X longer than wide, 1.7X longer than carpus, palmar spine absent, palm acute and slightly sinuous; dactylus, inner margin serrate, subequal in length to palm.

Pereopod 3, basis, merus, carpus, and propodus with setose posterior margin; coxa subrectangular, about 1.6X longer than wide, ventral margin setose; basis narrow 2.5X longer than wide; ischium small and subrectangular; merus narrow, 1.7X longer than wide; carpus 2.5X longer than wide slightly smaller than merus; propodus 4.6X longer than wide. Pereopod 4 with setose ventral margin, narrow basis 2.7X longer than wide, ischium small and subrectangular, narrow merus 1.7X longer than wide, carpus 2.3X longer than wide smaller than merus, propodus 3.3X longer than wide. Pereopod 5 with setose ventral margin, narrow basis 2.6X longer than wide, ischium small and subrectangular, narrow merus 1.6X longer than wide, carpus 2.5X longer than wide smaller than merus, proprodus 4X longer than wide. Pereopod 6 with subquadrate basis, ischium small and subrectangular, merus 2.9X longer than wide larger than carpus, carpus subrectangular 2.4X longer than wide, propodus 5.3X longer than wide larger than the other articles. Pereopod 7 with subquadrate basis, ischium small and subrectangular, merus 2.9X longer than wide, larger than carpus, carpus subrectangular 2.6X longer than wide, propodus 5.6X longer than

wide, larger than the other articles.

Epimeral plates 2 and 3 rounded, with small slender setae on the posterior margin. Uropod 1, peduncle with long and sharp distoventral spike (spur); peduncle about 2.3X longer than wide, with four stout setae with accessory seta on the dorsal margin, three stout setae with accessory seta on the dorsolateral margin and slender setal row on the ventral margin; outer ramus slightly longer than inner ramus, with seven stout setae with accessory seta on the dorsal margin, three simple setae and one stout seta with accessory seta on the dorsolateral margin, five stout setae on the apical margin; inner ramus with four stout setae with accessory seta and three simple setae on the dorsolateral margin and six stout setae with accessory setae on the ventral margin, two stout setae on the apical margin. Uropod 2 peduncle about 2X longer than wide, one stout seta with accessory seta on the dorsal margin, one stout seta with accessory seta on the dorsolateral margin; outer ramus slightly longer than inner ramus, six stout setae with accessory seta on the dorsal margin, five stout setae with accessory seta on the dorsolateral margin, three stout setae and two stout setae with accessory seta on the apical margin. Uropod 3, peduncle about 1.2X longer than wide, with seven stout setae and seven plumose setae; outer ramus 1.3X shorter than inner ramus; inner ramus with two proximal stout setae, four simple setae and small cover of slender setae on the dorsal margin, two stout setae on the extremity; outer ramus with two curved thick setae, four stout setae, four small setae on the ventral margin, nine long plumose setae on the apical extremity. Telson rounded and concave; two nodes at the apical extremity with one plumose seta; three long plumose setae on the apical margin; 11 plumose setae and two small simple setae on the lateral margins.

Sexually dimorphic characters: Based on paratype male (DZUFRJ 4941) (Fig. 4). Gnathopod 1, coxa strongly produced and lobate forward, ventral margin setose, merus, carpus, and propodus with posterior margin densely setose; basis 2.3X longer than wide, subrectangular; ischium 1.2X longer than wide, small and subacute; merus 1.5X longer than wide, small and subacute; carpus 1.5X longer than wide; propodus 1.7X longer than wide; dactylus slightly longer than palm. Gnathopod 2, posterior margin of merus, carpus and propodus, and anterior margin of propodus densely setose, basis 3.1X longer than wide, subrectangular; ischium slightly longer than wide, small and subacute; merus 1.3X longer than wide; carpus 1.8X wider than long; propodus more robust than in female, suboval, 1.3X longer than wide, 1.5X longer than carpus, palm acute, sinuous, more excavated than in female, densely setose, defined by palmar corner, without stout seta or spine; dactylus curved, subequal in length to palm, outer margin naked, inner margin minutely serrate, with one small stout seta near articulation with propodus.

Geographic distribution: The species is known from the Rocas Atoll, its type locality (03º52'S / 033º48'W), and for the Bahia State coast (Camamu Bay and Todos os Santos Bay) (Fig. 5).

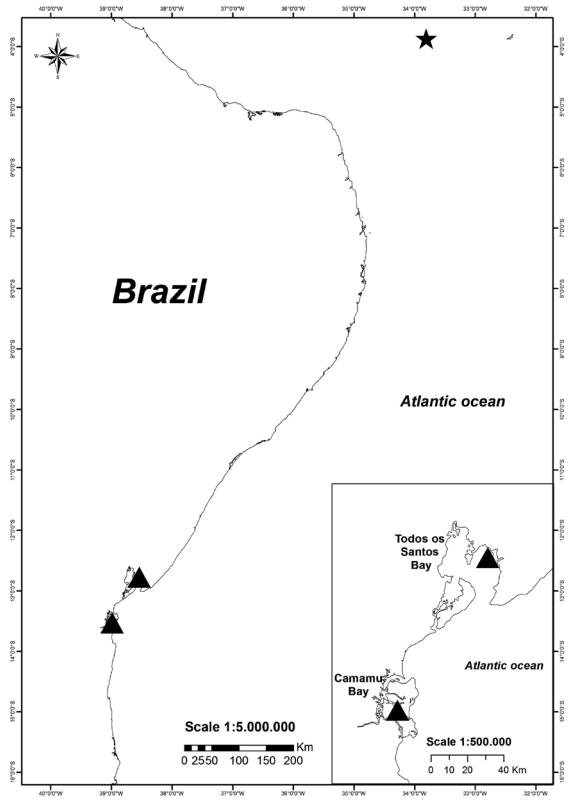

Figure 5. Distribution of *Cymadusa peartae* sp. nov. Star: Type locality, Rocas Atoll, Rio Grande do Norte State, Brazil; Triangles: occurrence of paratypes (Distribution map by Danielle P. Cintra).

Discussion

Morphological differences among the species grouped in the *C. filosa* complex, including the new species described in this paper, are restricted to few characters, such as number of segments in the accessory flagellum of antenna 1, setation on antenna 2 and gnathopods 1 and 2, length and shape of merus and carpus of gnathopod 1, presence of a spine defining the palmar corner of gnathopod 2, and length ratio between dactylus and palm of gnathopod 2 (Tab. 1).

Cymadusa peartae sp. nov. resembles *C. filosa* by presenting gnathopod 1 poorly setose, palmar spine of gnathopod 2 absent, dactylus subequal to the gnathopod 2 palm, however *Cymadusa peartae* sp. nov. differs from *C. filosa* by the following characters (*C. filosa* characters in parenthesis): accessory flagellum 1-articulate (2-articulate), antenna 2 poorly setose (densely setose); gnathopod 1 merus small and subacute (long and acute); gnathopod 1 carpus subtriangular (elongate and subrectangular); gnathopod 2, merus and carpus posteriorly setose, propodus densely setose (all segments densely setose).

Cymadusa peartae sp. nov. resembles *C. ledoyeri*, from Madagascar, by presenting gnathopod 1 poorly setose, gnathopod 1 merus small and subacute, gnathopod 1 carpus subtriangular, gnathopod 2 poorly setose, palmar spine of gnathopod 2 absent, but differs from *C. ledoyeri* by the following characters (*C. ledoyeri* characters in parenthesis): accessory flagellum 1-articulate (2-articulate); dactylus subequal to gnathopod 2 palm.

Cymadusa peartae sp. nov. resembles *C. tattersalli*, from Westerns Australia and Madagascar, by presenting gnathopod 1 carpus subtriangular, however the new species differs from *C. tattersalli* by the following characters (*C. tattersalli* characters in parenthesis): accessory flagellum 1-articulate (2-articulate); antenna 2 poorly setose (densely setose); gnathopod 1 not strongly setose (densely setose); gnathopod 1 merus small and subacute (small and rounded); gnathopod 2 not strongly setose (densely setose); palmar spine of gnathopod 2 absent (present); dactylus subequal to gnathopod 2 palm (smaller).

Cymadusa peartae sp. nov. resembles *C. imbroglio*, from India, Fiji, Australia, Tasmania, and New Caledonia, by presenting accessory flagellum 1-articulate, antenna 2 not strongly setose; male gnathopod 1, coxa strongly

Table 1. Diagnostic characters of the species in the *C. filosa* complex. Af: accessory flagellum; A1-2: antennae 1-2; Gn1-2.

	Af	A2	Gn1	Gn1 merus	Gn1 carpus	Gn2	Gn2 palmar spine	Gn2 Dactylus X palm	Distribution
C. filosa	2	Densely setose	Poorly setose	Long/ acute	Elongate/ subrectangular	Densely setose	Absent	Subequal	Mediterranean sea, Madagascar, New Caledonia
C. ledoyeri	2	Unknown	Poorly setose	Small/ subacute	Subtriangular	Poorly setose	Absent	>	Madagascar (Tuléar)
C. tattersalli	2	Densely setose	Densely setose	Small/ rounded	Subtriangular	Densely setose	Present	<	Western Australia, Madagascar
C. imbroglio	1	Poorly setose	Poorly setose	Small/ subacute	Subtriangular	Poorly setose	Present	Subequal	India (Gulf of Mannar), Fiji, Australia, Tasmania, New Caledonia
C. setosa	2	Poorly setose	Poorly setose	Long/ acute	Elongate/ Subrectangular	Densely setose	Present	<	Australia (New South Wales), Florida, Puerto Rico, Hawaii, New Caledonia, S-India
C. vadosa	2	Poorly setose	Poorly setose	Small/ rounded	Subtriangular	Poorly setose	Absent	Subequal	Vietnam (Bay of Nha-Trang), New Caledonia
C. peartae sp. nov.	1	Poorly setose	Poorly setose	Small/ subacute	Subtriangular	Poorly setose	Absent	Subequal	Northeastern Brazil

produced and lobate forward, not strongly setose, merus small and subacute, carpus subtriangular; gnathopod 2, dactylus subequal to gnathopod 2 palm, however *Cymadusa peartae* sp. nov. differs from *C. imbroglio* by the following characters (*C. imbroglio* characters in parenthesis): gnathopod 2 densely setose (poorly setose), propodus 1.4X longer than wide (1.1X), palm sinuous but without processes (bearing a stout trapezoid process), palmar corner defined, subquadrate (with a strong subacute spine).

Cymadusa peartae sp. nov. resembles *C. setosa*, from Australia, Florida, Puerto Rico, New Caledonia, and India, by presenting antenna 2 poorly setose, gnathopod 1 poorly setose, but differs from *C. setosa* by the following characters (*C. setosa* characters in parenthesis): accessory flagellum 1-articulate (2-articulate); gnathopod 1 merus small and subacute (long and acute); gnathopod 1 carpus subtriangular (elongate and subrectangular); gnathopod 2 densely setose (strongly setose); palmar spine of gnathopod 2 absent (present); dactylus subequal to gnathopod 2 palm (smaller).

Cymadusa peartae sp. nov. resembles *C. vadosa*, from Vietnam and New Caledonia, by presenting antenna 2 poorly setose, gnathopod 1 poorly setose, gnathopod 1 carpus subtriangular, gnathopod 2 poorly setose, palmar spine of gnathopod 2 absent, dactylus subequal to gnathopod 2 palm, however *Cymadusa peartae* sp. nov. differs from *C. vadosa* by the following characters (*C. vadosa* characters in parenthesis): accessory flagellum 1-articulate (2-articulate); gnathopod 1 merus small and subacute (small and rounded).

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