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# On the genera *Meximaera*, *Ruffomaera* gen. nov., *Maeropsis* and *Ceradocus* from Atlantic coasts (Amphipoda: Melitidae)

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*Melitid amphipods belonging to the* Maera–Ceradocus*-group are re-examined from the Atlantic coast using material from the collection in the Smithsonian Institution (Washington):* Ruffomaera *gen. nov. is established for* Maera williamsi*, furthermore* Meximaera briani *sp.nov.,* Maeropsis *cf.* perrieri *and* Ceradocus breweri *(transferred from* Gammarus*) are described and illustrated.*

**Keywords:** *Meximaera*, *Ruffomaera*, *Maeropsis*, *Ceradocus*, Atlantic coasts

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## INTRODUCTION

The large and unwieldy genus *Maera* Leach, 1815 (Amphipoda: Melitidae) has been reviewed by the present author in a series of papers and its species have now been placed in several well defined new or re-established genera. However, there still remains a number of taxa, which for various reasons could not be included in these revisions. The present paper contains some of these, which were found to be present in the collections of the US Museum of Natural History in Washington DC. They are described below.

## TAXONOMY

Abbreviations used: A1,2, antenna 1 & 2; art, article; b, breadth, width; Cx, coxal plates; Ep, epimeral plates; flag., flagellum; Gn1,2, gnathopods 1 & 2; IP, inner plate; l, length; Md, mandible; Mx1,2, maxillae 1 & 2; Mxp, maxilliped; OP, outer plate; P 3–7, peraedopods; ped., peduncle; T, telson; U1–3, uropods 1–3; Us, urosome.

### Genus *Meximaera* Barnard, 1969

Barnard, 1969: 209

#### DIAGNOSTIC CHARACTERS

Eyes round–oval. Body smooth. Mandible palp art 1 without tooth-shaped distal prolongation, art 3 slender, linear. Mx 2 inner plate setose terminally, sometimes also laterally. Gnathopods ovoid, subchelate, similar in shape, symmetrical, palmar corner weak. Gnathopod 2 dactylus outer margin smooth. Peraeopod dactyli simple. U3 with subequal rami, distally tapering, outer ramus minutely biarticulate. Ep 1–3 smooth, with posterodistal tip. Telson cleft, distally excavated.

Type species: *M. diffidentia* Barnard, 1969.

Included species: *M. diffidentia, M. briani* sp. nov.

### *Meximaera diffidentia* Barnard, 1969

**Figure 1**

*Meximaera diffidentia* Barnard, 1969: 209–211, figures 21 & 22

*Maera caroliniana* Bynum & Fox, 1977: 11–14

#### MATERIAL EXAMINED

US National Museum of Natural History (USNM) 281153 North Atlantic, Gulf of Mexico, Florida. Crystal Bay, 16 km offshore, 0.46 m–2.17 m depth.

Barnard (1969) erected a new genus for this species mainly because of the presence of lateral setae on Mx2; these are clearly drawn by Barnard (loc. cit., figure 22), while they are less obvious in the illustrations of Bynum & Fox (1977, figure 6H). In the large series from Florida in the collections of the Washington Museum Mx2 has a quite rich lateral setation in all specimens. Furthermore, both Barnard (1969) and Bynum & Fox (1977) describe only males and Barnard stressed that the female is unknown. In the sample from Florida there are a few ovigerous females, which are morphologically identical to the males (already well described by the earlier authors), except the shape of the gnathopod propodi, which is somewhat more rounded in the females (Figure 1).

### *Meximaera briani* sp. nov.

**Figures 2–5**

#### TYPE MATERIAL

Holotype male 4 mm in alcohol: USNM 261135. Ascension Islands, shelly beach. Bottom, coral pool 07°59.36′S

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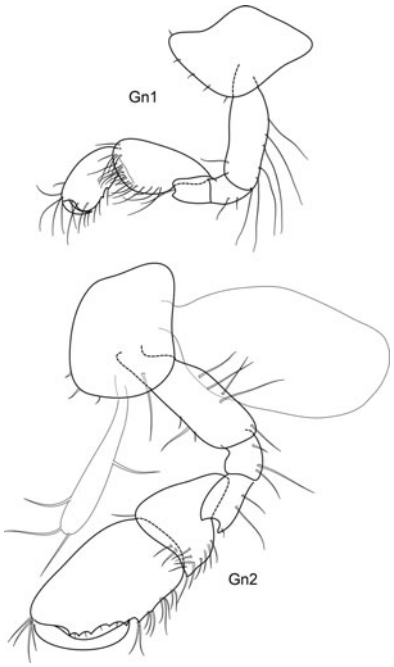


**Fig. 1.** *Meximaera diffidentia* Barnard, 1969: female. Gn1,2, gnathopods 1 & 2.

14°23.54′W, col. Manning *et al.*, 23. May 1971. STA: No. RBM ASC-19.

Paratype female 4.3 mm with 1 egg, in alcohol, same locality. Type locality: Ascension Islands.

ADDITIONAL MATERIAL

USNM 261136. Ascension Islands, shelly beach. Bottom, coral pool, 07°59.36′S 14°23.54′W, coll. Manning *et al.*, 13. July 1976. STA: No. ASC-5F. 1 male incomplete.

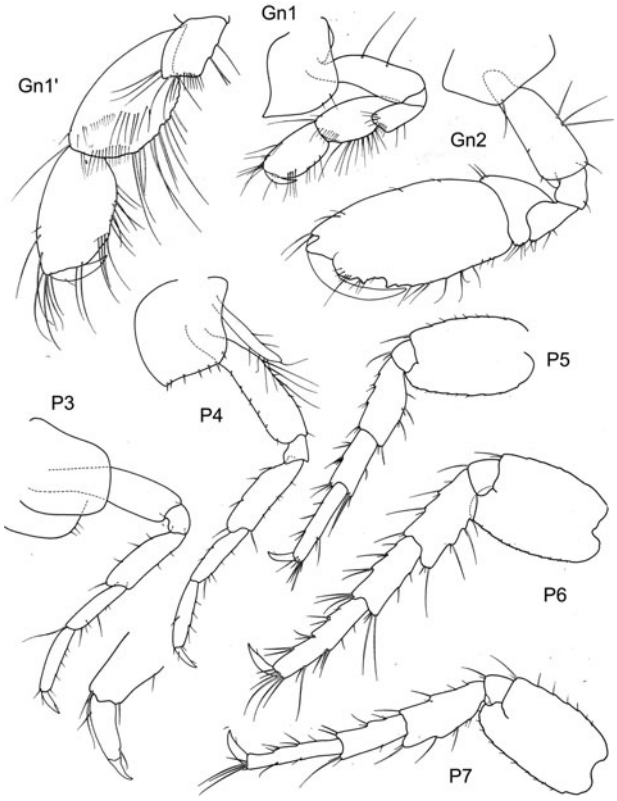


**Fig. 3.** *Meximaera briani* sp. nov.: Gn1, gnathopod 1; Gn1', dactylus to merus enlarged; Gn2, gnathopod 2; P3–7, peraeopods 3–7.

USNM 261134. Ascension Islands, shelly beach. Bottom, coral pool. 07°59.36′S 14°23.54′W, 0.8 m, coll. Chamberlain, 1 August 1980. STA: No. GMBL 8048. 2 males 4 mm.

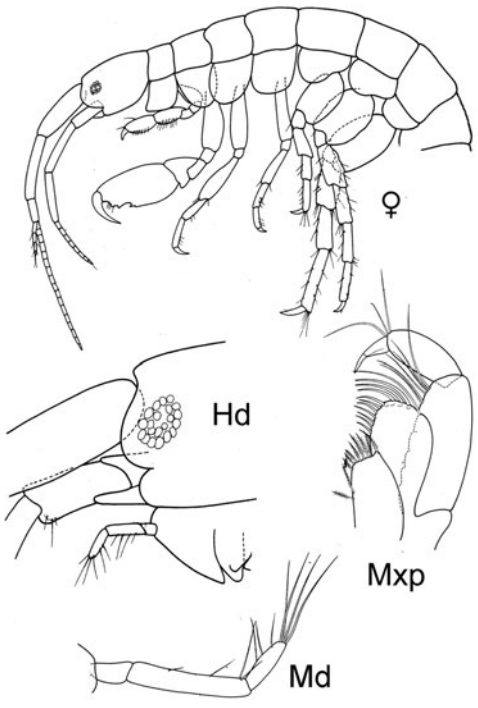


**Fig. 2.** *Meximaera briani* sp. nov.: habitus female. Hd, head; Md, mandible palp; Mxp, maxilliped.

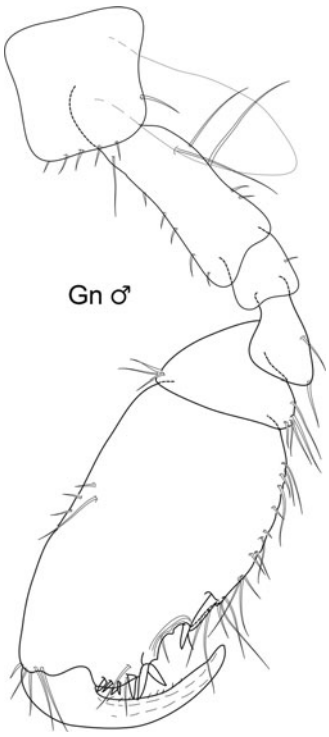


**Fig. 4.** *Meximaera briani* sp. nov.: Gn2, gnathopod 2 male.

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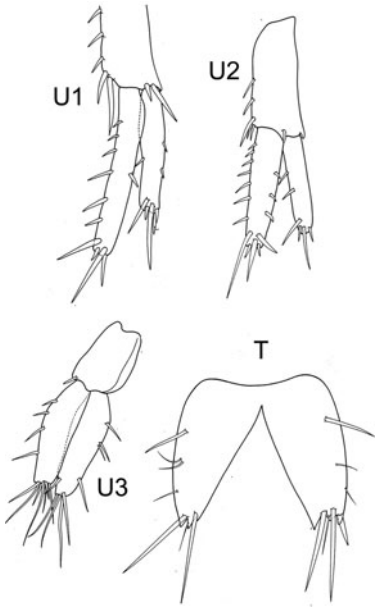


**Fig. 5.** *Meximaera briani* sp. nov.: U1–3, uropods 1–3; T, telson.

USNM 261133. Ascension Islands, shelly beach. Bottom, coral pool. 07°59.36′S 14°23.54′W, coll. Chamberlain, August 1980. STA: No. GMBL 80–25, 1 male 4.5 mm.

USNM 261135. Ascension Islands, shelly beach. Bottom, coral pool. 07°59.36′S 14°23.54′W, coll. Manning *et al.*, 23 May 1971. STA: No. RBM ASC-19, 1 adult 4 mm, 2 immature.

DESCRIPTION

Length: 4–4.5 mm.

Habitus: body smooth. Head about same length as first two body segments. Lateral cephalic lobes rounded, with notch, anteroventral corner rounded.

Head: eyes round.

Antenna: A1 longer than A2, shorter than half body length, peduncle = length of flagellum, peduncle article 1 = article 2. Flagellum up to 17 arts, accessory flagellum 4 arts. Antenna 2 slender, gland cone reaching 1/3–1/2 of art 3. Art 4 longer than art 5, flagellum longer than art 5, with 8 articles.

Mouthparts: Md palp art 1 not produced, longer than wide; art 2: art 3 = 11:5, art 2 with few setae, art 3 distally with 4 setae, laterally with 2–3. Mxp inner plate reaching about half length of outer plate, which reaches about 2/3 of palp article 2. Mx2 inner plate with setae only terminally.

Gnathopod 1: not sexually dimorphic. Cx1 anterodistally somewhat protruding, corner acute. Basis l:b > 3, few longer setae posteriorly. Merus posteroventrally rounded, no distal tooth-shaped prolongation. Carpus triangular, inferior margin rounded, l:b < 5:2. Propodus oval to rectangular, as broad as carpus, but shorter, hind margin straight, l:b = 1.8, palm oblique, defined.

Gnathopod 2 female: not dimorphic in size or shape. Cx2 quadrangular, basis with some longer setae on posterior margin, merus posterodistally without sharp tooth; carpus triangular, cup-shaped, l:b = 1, carpus: propodus = 1:4. Propodus broadened, hind margin rounded, beset with few setae; palm defined, subdistally a shallow excavation, followed distally by two smaller ones, proximally by one quite shallow one, beset with several setae. Near dactylus-insertion a hump beset with setae.

Gnathopod 2 male: symmetrical and similar to female (the central excavation is a bit deeper).

Peraeopods: P3,4 very similar in shape, P4 smaller. P5–7 robust, basis rounded, with posterodistal lobe reaching end of ischium. Dactyli not bifid, on inner margin one stiff seta.

Pleon: dorsally smooth. Ep1 posterodistal corner rounded, Ep2 corner blunt. Ep3 with small posterodistal tooth, posteriorly smooth.

Uropods: U1 peduncle inferior margin no subproximal strong spine, subequal rami < peduncle; U2 subequal rami about as long as peduncle; U3 rami subequal, distally and also marginally beset with long and thin spine-shaped setae, the longest ones 1/2 length of ramus.

Telson: about as long as wide, lobes apically somewhat concave, beset with 2 long and strong spines and 1 shorter one; the longest spines not surpassing 2/3 of telson-length. Outer margin with one strong seta and some fine setae.

ETYMOLOGY

This species is dedicated to the late Brian Kensley, former curator of Crustacea at the USNM, for his always welcoming and friendly support during my visits.

REMARKS

I expected to be able to identify the present species as *Maera leopoldinae* Mateus & Mateus, 1986, as their figures of the male Gn1–2 suggest, if one surmises that there was some damage to the illustrated gnathopods. But Mateus & Mateus (loc. cit.) describe the ovigerous females of *M. leopoldinae* as having no excavation on the gnathopod palm. As the type material of *M. leopoldinae* is apparently no longer extant, that species has to remain a species dubia.

I have placed the present species in the genus *Meximaera* in spite of the lack of any setae on the lateral margin of Mx2. This has been done, because all the other crucial features (cf. the diagnosis) match well.

### *Ruffomaera* gen. nov.

Type species: *Maera williamsi* Bynum & Fox, 1977

DIAGNOSTIC CHARACTERS

Eyes reniform. Urosomites dorsally dentate. Mandible palp art 1 without tooth-shaped distal prolongation, art 3 slender, linear, equal to art 2. Mx2 inner plate setose only terminally. Gnathopods subchelate, similar in shape, without palmar corner. G2 in adult males symmetrical. Gnathopod 2 dactylus outer margin smooth. Peraeopod dactyli simple. U3 with subequal rami, distally truncated. Ep1, Ep2 with small tooth posterodistally, Ep3 serrate. Telson fully cleft, distally excavated, beset with long robust setae.

ETYMOLOGY

A combination of the surname of Sandro Ruffo, meticulous examiner of this group, with *maera*.

Included species: *Ruffomaera williamsi* (Bynum & Fox, 1977)

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***Ruffomaera williamsi* (Bynum & Fox, 1977) comb. nov.**
*Maera williamsi* Bynum & Fox, 1977: 6–11, figures 4–6.

Holotype: RF-72-84-1 male 5.5 mm, USNM 152741.
Allotype: RF-85-1 ov. female 7 mm, USNM 152742.
Additional paratype is said by the authors to be be at the Natural History Museum of Ottawa, but is lacking there.
Type locality: Lockwood's Folly Inlet, North Carolina. Muddy shelly bottom, 15 m depth.

## ADDITIONAL MATERIAL

USNM 189934 1 specimen 7 mm off North Carolina, 35°20′30°° N 75°21′36″W; suction samples.

## REDESCRIPTION

Length: 7–10 mm.
Habitus: peraeon and pleon segments 1–3 smooth, urosomite 1 with one dorso-medial and a pair of adjacent teeth, urosomite 2 with two pairs of dorsal teeth.
Head: Eyes narrowly reniform, brown. Cephalic lobe rounded, cheek notched. Antenna 1 art 1 shorter art 2, art 3 < half of art 1, sparsely setose. Accessory flagellum with 5 articles. A2 shorter than A1, peduncle article 4 > art 5, gland cone reaching half art 3.
Mouthparts: upper lip anteriorly thickened; Md molar large, triturative, incisor and lacinia mobilis well developed, palp art 1 twice as longe as wide, distally not lengthened, art 2 subequal to art 3 in length (see Bynum & Fox figure 6D, but not Figure 5B). Lower lip outer lobes rounded, medially setose, mandibular lobes elongate, inner lobes large, apicomedially setose. Mx1 inner plate much shorter than outer one, with apical plumose setae, outer plate with toothed spines. Mx2 plates subequal in length, inner plate with numerous apical setae in 2 rows, few very fine hairs medially. Mxp inner plate truncate and distally somewhat excavated, reaching about 2/3 of outer one or half of palp art 2.
Gnathopod 1: not sexually dimorphic. Cx1 anterodistally acutely lengthened and pointed; propodus elongate, slim, palm oblique, well defined; carpus triangular, much longer than propodus.
Gnathopod 2: symmetrical. Cx2 rectangular, about as long as wide; propodus sexually dimorphic: in ovigerous females it is convex, in adult males straight to convex and beset with many spine-shaped robust setae; carpus triangular, as wide as propodus, about as long as wide; merus apically tooth-shaped.
Peraeopods 5–7 basis posteriorly serrate, posterodistal lobe lacking or very small. Coxal gills on segments 2–6.
Epimeron 1 with posterodistal upturned tooth; epimeron 2 posterodistal corner with one small tooth, another one along the convex posterior margin; epimeron 3 serrate.
Uropod 1 peduncle with large spur distally, inner ramus slightly longer than outer, both shorter than peduncle. U2 rami somewhat unequal, inner ramus longer than peduncle, outer ramus subequal to peduncle. U3 peduncle about 1/3–1/2 of inner ramus, rami elongate, distally truncate, inner one slightly longer, outer one with minute second article.
Telson cleft to base, lobes distally tapering, excavated, distomedially with 4 long spine-shaped setae, length of the longest about half to more than full telson-length.
Female: little sexual dimorphism, see gnathopod 2.

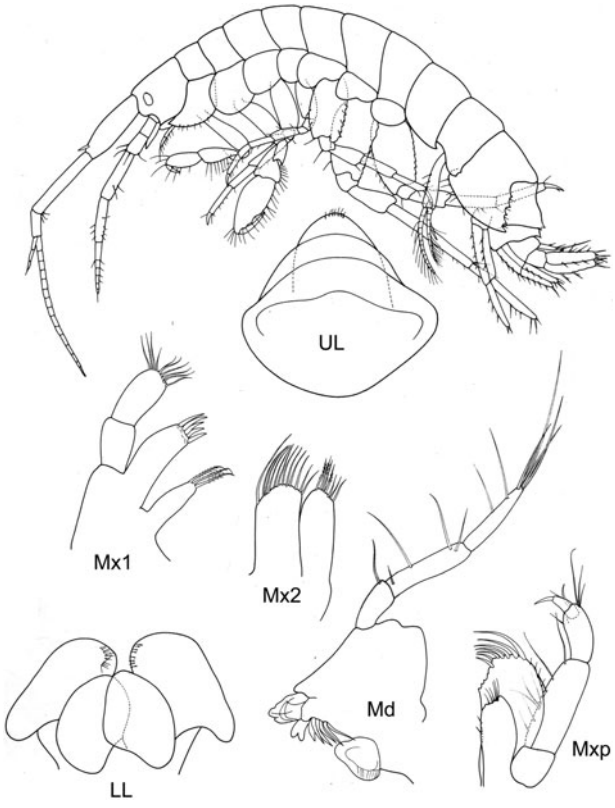


**Fig. 6.** *Ruffomaera* cf. *williamsi* (Bynum & Fox, 1977): habitus male. Mx1,2, maxilla 1,2; UL, upper lip; LL, lower lip; Md, mandible, Mxp, maxilliped.

## REMARKS

In Krapp-Schickel, 2000: 425 this species was given to *Anamaera* and synonymized with *Anamaera hixoni* Thomas & Barnard, but I am grateful to Sara LeCroy who pointed out that this was an error.

Bynum & Fox, 1977 described their *Maera williamsi* as 'belonging to *Linguimaera* Pirlot, should it be revived, as suggested by Barnard 1972'. This Pacific genus *Linguimaera* was finally revived by Krapp-Schickel (2003), but all known species have strongly asymmetrical male second gnathopods; although similar to *Linguimaera* in the form of the epimeral plates, the reniform eyes and the elongate and distally truncate rami of U3, *Maera williamsi* deviates from *Linguimaera* furthermore in the dorsal teeth on urosomites 1 and 2 (always smooth in *Linguimaera*).

Thomas & Barnard, 1985 erected a new genus *Anamaera* by describing their Atlantic species *Anamaera hixoni* Thomas & Barnard, 1985. They define the genus as having a smooth body, Md palp art 2 = art 3, Gn1 of melitid form (*sensu* Barnard, meaning carpus > propodus, palm short and oblique); Gn2 of male asymmetrical. Ep1 with shallow posterodistal excavation, Ep2,3 posterior margin serrate. Telson fully cleft, lobes pointed, cuspidate, with apical spines.

*Maera williamsi* shares some characters with *Anamaera hixoni*: serrate Ep3, shape of third uropods and telson, the length of the articles of the mandible palp. But in *M. w.* the adult males have symmetrical second gnathopods and the urosomites 1,2 have dorsal dentation (both unlike *Anamaera* and *Linguimaera*).

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After Lowry & Springthorpe, 2005: 239 the character of asymmetrical second gnathopods in males is typical for mate-guarding amphipods and seems therefore a highly evoluted apomorphy.

### *Ruffomaera* cf. *williamsi* (Bynum & Fox, 1977)
### Figures 6–8

In the collection of Richard Heard there is one specimen found from Pine Cay, Turks and Caicos Islands (Caribbean Sea), 9.4. 1989, inside fringe reef with rubble, 15 feet depth.

DESCRIPTION

Length: 4.5 mm.

Habitus: peraeon and pleon segments 1–3 smooth, urosomite 1 with one small dorso-medial tooth, urosomite 2 with one small dorsal tooth.

Head:

Eyes round. Cephalic lobe rounded, no notch found.

Antenna 1 art 1 subequal art 2, art 3 < half of art 1, sparsely setose.

Accessory flagellum with 3 articles. A2 shorter than A1, peduncle article 4 > art 5, gland cone reaching half art 3.

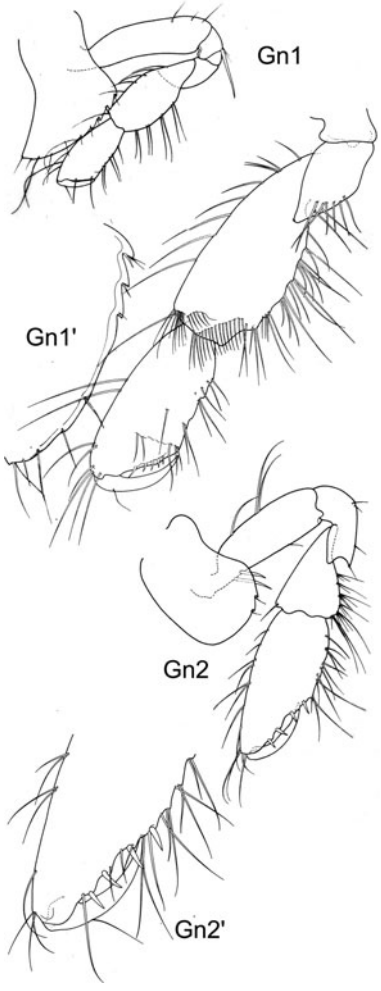


**Fig. 7.** *Ruffomaera* cf. *williamsi* (Bynum & Fox, 1977): Gn1, 2, gnathopods 1 & 2; Gn1', Gn2', enlarged.

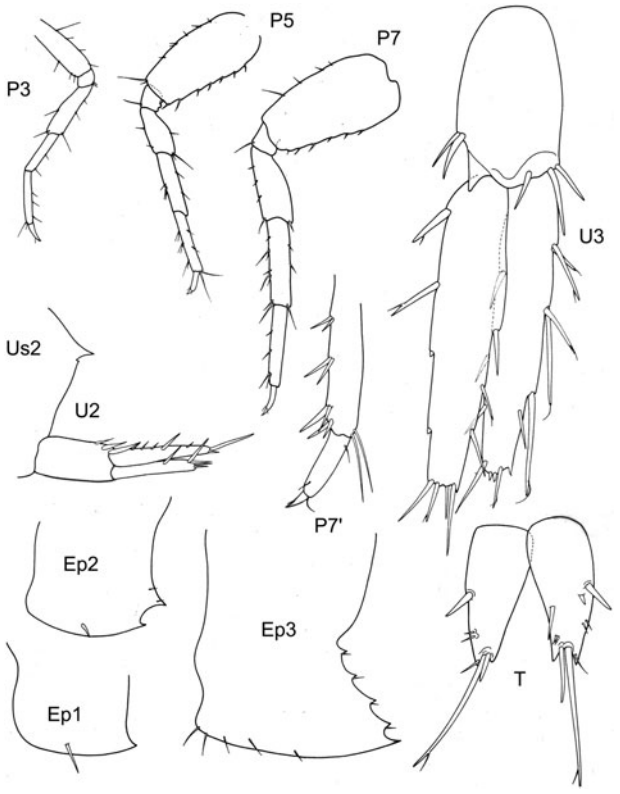


**Fig. 8.** *Ruffomaera* cf. *williamsi* (Bynum & Fox, 1977): P3, 5, 7, peraeopods 3, 5 & 7; P7', enlarged; U2, U3, uropods 2 & 3; Us2, urosome 2; Ep1–3, epimeral plates 1–3; T, telson.

Mouthparts: upper lip anteriorly thickened; Md palp art 1 longer than twice the breadth, distally not lengthened, art 2 > art 3 (see Figure 6 and Bynum & Fox, Figure 5B). All other parts similar to *R. williamsi.*

Gnathopod 1: not sexually dimorphic. Cx1 anterodistally acutely lengthened and pointed; propodus elongate, distad widening, palm oblique, well defined; carpus triangular, much longer than propodus, about twice as long as wide, clearly wider than propodus.

Gnathopod 2: symmetrical. Cx2 rectangular, much longer than wide, propodus not sexually different: palm concave, beset with few spine-shaped robust setae; carpus triangular, somewhat wider than propodus, longer than wide; merus apically tooth-shaped.

Peraeopods 5–7 basis distad narrowing, posteriorly beset with spine-shaped setae, but not serrated, posterodistal lobe lacking.

Epimeron 1 with posterodistal upturned tooth; epimeron 2 posterodistal corner with one posterodistal tooth, another one larger and more acute along the posterior margin; epimeron 3 serrate.

Uropod 1 peduncle similar to that of *A. williamsi*. U2 rami somewhat unequal, both rami longer than peduncle. U3 peduncle about 1/2 of inner ramus, rami elongate, distally truncate, inner one slightly longer, outer one with minute second article.

Telson cleft to base, lobes distally tapering, excavated, distomedially with one short, one medium and one long spine-shaped seta, length of the longest about as long as lobe itself (see Figure 7 and Bynum & Fox 1977, Figure 5K).

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REMARKS

Bynum & Fox describe their species *Maera williamsi* with males up to 9–9.5 mm and ovigerous females of 7–10 mm. In fact, first the authors had smaller material in hand, as they start their description with the explanation that drawings of 'subadult material' were already finished when they found the larger material, which they describe verbally without full illustration. Checking their holotype slides these clearly deal with the larger material.

The herewith described and figured specimen differs not only by its smaller size, but also by round–oval (versus strongly reniform) eyes, the concave palm on gnathopod 2, the mandibular palp with art 3 shorter than art 2 (cf. Bynum & Fox, Figure 5), by smaller dorsal teeth on the urosome segments and by slightly different epimeral plates 1 and 2 with more prominent teeth. All these differences could be explained by allometric growth, but the specimen could also belong to a closely related smaller species. LeCroy (2000) describes on p. 103 figure 142 an unnamed *Maera* species which is also close to *M. williamsi* but shows some small differences in the shape of Gn2, U1,2 and T.

### *Maeropsis* Chevreux
### *Maeropsis* Chevreux, 1927: 104

DIAGNOSTIC CHARACTERS

Eyes reniform. Body smooth. Mandible palp art 1 with tooth-shaped distal prolongation, art 3 slender, linear. Mx2 inner plate setation also laterally, proximal half of margin hairy. Gnathopods subchelate, both with well defined palmar corner. Gnathopod 2 dactylus outer margin smooth, palm with small U-shaped excavation, palmar corner with tooth-shaped elevation. Peraeopod dactyli simple. U3 with sub-equal rami, distally truncated, no second article on outer ramus visible. Ep 1–3 smooth, with posterodistal tip. Telson cleft, distally incised, outer end of incision clearly longer than inner one; one short robust seta inserted in incision, on outer margin subdistally one spine-shaped seta, medially and proximally a weaker one.

Type species: *M. perrieri* Chevreux, 1927.

Included species: *M. brevispina* (Kim & Kim, 1991); *M. griffini* (Berents, 1983); *M.* sp. nov., Krapp-Schickel, 2008a; *M. perrieri* Chevreux, 1919; *M. rathbunae* (Pearse, 1908); *M. revelata* (Krapp, Marti & Ruffo, 1996); *M. serratipalma* (Nagata, 1965); *M. tethis* (Lowry & Springthorpe, 2005).

### *Maeropsis* cf. *perrieri* Chevreux, 1927
### Figure 9

MATERIAL EXAMINED

USNM acc. no. 275759 (not yet catalogued), 1 female 7 mm, 2 juveniles 6–6.5 mm.

This species was never reported again after the description 80 years ago. Barnard & Barnard 1983: 621 report an oblique facial row of setae on the inner plate of Mx2 (the drawing in the original description is not very clear), but this is not the case in the present material; however, the marginal setation is clearly reaching about the middle of the inner plate.

The material: illustrated here is a female of 7 mm, while Chevreux had only three males of 12.5, 11.5 and 9.5 mm length. The propodus of Gn2 is distally widened in the males of Chevreux, while it has parallel margins here. All other morphological details are matching well, only the distal incision on the telson lobes is not regularly U-shaped, as illustrated in Chevreux (very small sketch), but the outer margin of the incision is much longer.

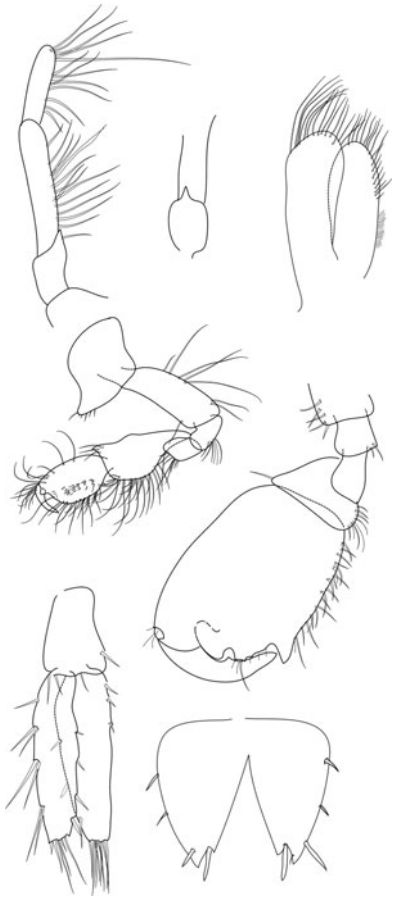

**Fig. 9.** *Maeropsis* cf. *perrieri* Chevreux, 1927: Mdp, mandible palp; Mx2, maxilla 2; Gn1,2, gnathopods 1 & 2; U3, uropod 3; T, telson.

There is another Atlantic species belonging to this genus and quite closely related: *M. rathbunae* (Pearse). Ruffo, Krapp & Gable (2000) redescribed this species as lacking an excavation on the second gnathopod in both sexes, with deeply U-shaped incised telsonic lobes, with a long spine-shaped seta sitting there and a telson which is longer than wide.

The species dubia *Maera excavata* Mateus & Mateus, 1986 is illustrated with a quite similar second gnathopod but belonging to a male of 4.7 mm. Third uropods show that the specimen was juvenile, but the shape of the telson is different: it is clearly longer than wide and has a long distal spine similar to *Maeropsis rathbunae*.

### *Ceradocus* Costa
### *Ceradocus* Costa, 1853: 170

DIAGNOSTIC CHARACTERS

Pleosomites and urosomites often toothed or denticulate. Mandible article 1 tooth-shaped lengthened, Maxilla 2 medially setose, with oblique facial row of setae. Male Gn2 usually asymmetrical (one side of male form, other of female form). Peraeopod dactylus simple.

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Uropod 3 extended, peduncle and rami elongate. Telson deeply to fully cleft, usually with 1–2 or more long apical robust setae.

Type species: *Ceradocus orchestiipes* Costa, 1853.

Included species: *C. breweri* (Kunkel, 1910), *C. capensis* Sheard, 1939, *C. chevreuxi* Sheard, 1939, *C. chiltoni* Sheard, 1939, *C. circe* Lowry & Springthorpe, 2005, *C. cotonensis* Appadoo & Myers, 2006, *C. crenatipalma* Ledoyer, 1979, *C. dooliba* Barnard, 1972, *C. greeni* Appadoo & Myers, 2006, *C. haumuri* Barnard, 1972, *C. hawaiensis* Barnard, 1955, *C. inermis* Hirayama 1986, *C. koreanus* Kim & Kim, 1989, *C. laevis* Oleröd, 1970, *C. mahafalensis* Ledoyer, 1979, *C. natalensis* Griffiths, 1974, *C. oliveri* Appadoo & Myers, 2006, *C. orchestiipes* Costa, 1853, *C. oxyodus* Berents, 1983, *C. paucidentatus* Barnard, 1952, *C. ramsayi* (Haswell, 1879), *C. rubromaculatus* (Stimpson, 1856), *C. sellickensis* Sheard, 1939, *C. serratus* (Bate, 1862), *C. sheardi* Shoemaker, 1948, *C. shoalsi* Appadoo & Myers, 2006, *C. shoemakeri* Fox, 1973, *C. spinicauda* (Holmes, 1908), *C. spinifer* Ledoyer, 1973 (doubtful syn. with very sparsely described *Maera diversimanus* Miers, 1884), *C. tattersalli* Ledoyer, 1982, *C. worree* Berents, 1983, *C. yandala* Berents, 1983.

### *Ceradocus breweri* (Kunkel, 1910) comb. nov.
**Figures 10–11**

*Gammarus breweri* Kunkel, 1910: 59–61, figure 22.

MATERIAL EXAMINED (ALL STORED UNDER `*MAERA WILLIAMSI*´)

USNM 174953 1 specimen dissected on permanent slide, off Florida, North Atlantic Ocean, 29°28′N 80°57′W, 20 m depth, 4 September 1977.

USNM 174954 1 specimen dissected on permanent slide, off Florida, North Atlantic Ocean, 29°28′N 80°57′W, 20 m depth, 4 September 1977.

USNM 174955 1 specimen in alcohol, off Florida, North Atlantic Ocean, 29°28′N 80°57′W, 20 m depth, 4 September 1977.

USNM 174956 1 specimen in alcohol, off Florida, North Atlantic Ocean, 29°28′N 80°57′W, 20 m depth, 4 September 1977.

USNM 174957 1 specimen in alcohol, off Florida, North Atlantic Ocean, 30°57′N 79°58′W, 183 m depth, 30 August 1977.

USNM 174958 2 species in alcohol, 1 specimen dissected on permanent slide, off Florida, North Atlantic Ocean, 29°31′N 80°40′W, 18 m depth, 4 September 1977.

REDESCRIPTION (ORIGINALLY DESCRIBED AFTER A SINGLE FEMALE, AND NEVER REPORTED AGAIN)

Length 7–8 mm.

Habitus: peraeon and pleon dorsally smooth, urosome segments 1,2 dorsodistally with one medial tooth.

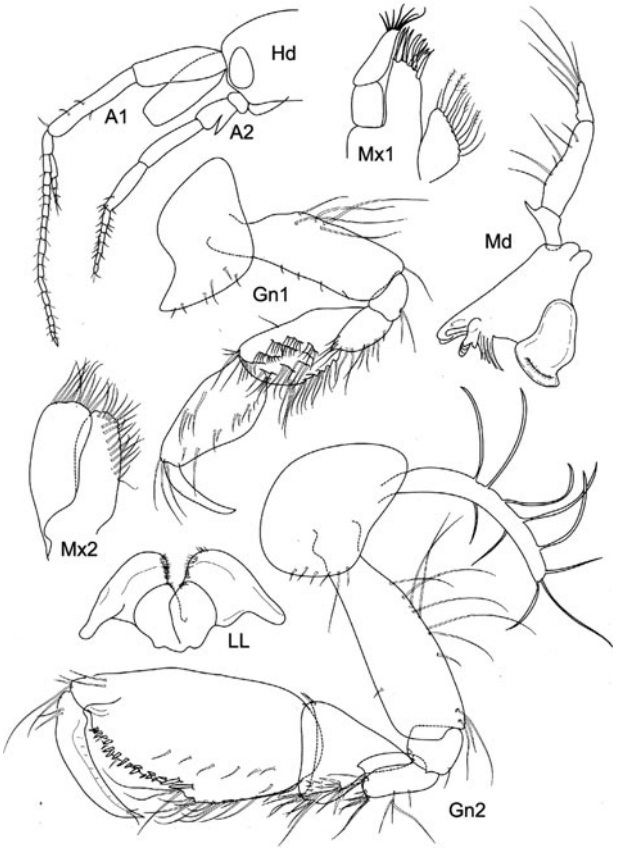


**Fig. 10.** *Ceradocus breweri* (Kunkel, 1910): Hd, head; A1,2, antennae 1 & 2; Mx1,2, maxillae 1 & 2; Md, mandible; LL, lower lip; Gn1,2, gnathopods 1 & 2.

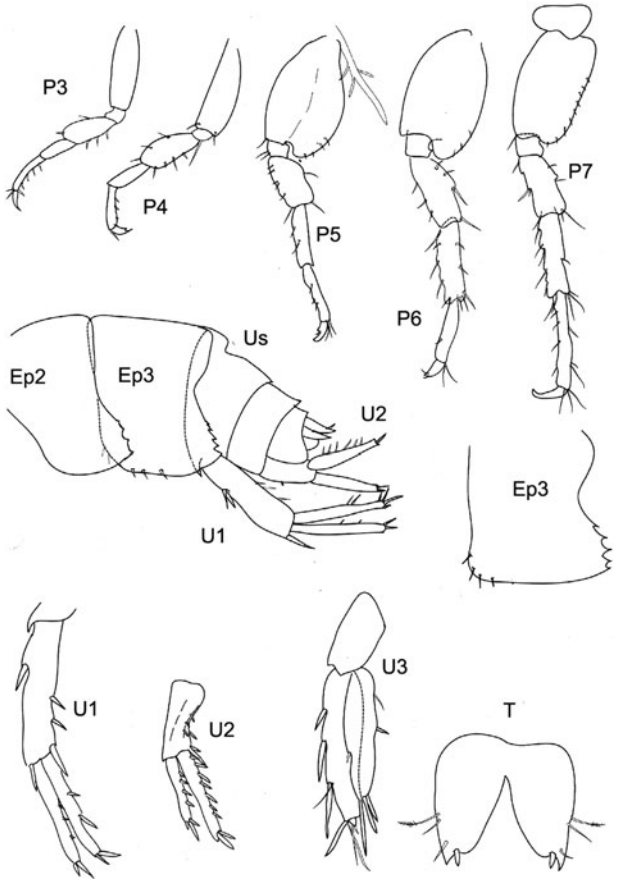


**Fig. 11.** *Ceradocus breweri* (Kunkel, 1910): P3–7, peraeopods 3–7; Ep2,3, epimeral plates 2 & 3; U1,2,3, uropods 1, 2 & 3; Us, urosome; T, telson.

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Head:

Eyes: rounded to egg-shaped. Cephalic lobe rounded, cheek not notched. Antenna 1 more than half body length, peduncle about as long as flagellum, peduncle art 1 scarcely shorter art 2, flagellum about 15–17 arts, accessory flagellum with 4–6 arts; A2 < A1, gland cone reaching nearly to end of peduncle art 3, flagellum somewhat longer than peduncle art 5, 6–8 arts.

Mouthparts: Md palp art 1 distally produced into tooth-shaped process, art 3 about half length of art 2, apically beset with long setae; molar rather large. Mx1 palp with 2 arts, the distal one more than twice as long as broad; outer plate with forked and simple spine-shaped robust setae, inner plate triangular with fine pinnate setae along inner margin and apex. Mx2 plates of nearly equal size, apically rounded, inner plate with midfacial row of setae and marginal one. Mxp palp with 4 arts, art 3 twice as long as wide, distally widening, art4 conical, with unguiform spine; inner plate hardly reaching half of palp art 2.

Gnathopod 1: Cx1 longer than wide, antero-distally produced, basis on posterior margin with many long setae, merus distally pointed, carpus and propodus subequal, palm oblique, not very clearly defined, as propodus hind margin is regularly rounded and propodus is about twice as long as wide, dactylus longer than half of propodus.

Gnathopod 2: asymmetrical, different in size, but similar in shape. Cx2 rhomboidal, about as long as wide, basis again with many long setae posteriorly, merus rectangular with antero-distal corner sharp, carpus regularly triangular, about as long as wide, less wide than propodus, which is somewhat similar to Gn1, but more robust, palm beset with many short spine-like setae, hind margin with long slender ones, palm oblique, corner well defined, dactylus a bit longer than half length of propodus.

Peraeopods 3 & 4 small, merus thickened.

Peraeopods 5–7 basis widened and rounded, in P5,6 with well developed posterodistal lobe, which is about rectangular in P7.

Epimera 1 & 2 with wide serration on posterior margin, Ep3 densely serrated.

Urosome segments 1–3 dorso-medially with one tooth.

Uropod 1 rami subequal, peduncle about same length as rami; U2 peduncle shorter than rami, which are somewhat unequal; U3 in many specimens missing, the figured one is from a juvenile: rami somewhat unequal, broadened, with long spine-like setae marginally and distally, outer ramus with minute second article.

Telson cleft to base, lobes distally tapering, shallow excavated, with one spine-like robust seta sitting in excavation, two simple and one plumose setae on outer margins.

Female: little sexual dimorphism.

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