

**BATHYPONTIA SARS (COPEPODA: CALANOIDA):  
EIGHT SPECIES, TWO NEW, FROM THE  
CARIBBEAN SEA AND GULF OF MEXICO**

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*Abstract.*—Eight species of *Bathypontia*, including two new species, are now known from the Caribbean Sea; six of these species have been recorded from the Gulf of Mexico. The two new species, *B. michelae* and *B. unispina*, are described, the distinctive characters of the eight species are discussed and figured, and a key to the females of the genus is included.

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Eight species of *Bathypontia*, including 2 new species, have been identified from samples collected by Dr. Harding Michel on 3 cruises of the PILLSBURY in the Caribbean Sea and Gulf of Mexico. Ten valid species have been previously described: *B. elongata* Sars 1905, *B. minor* (Wolfenden) 1906, *B. sarsi* Grice and Hulsemann 1965 (= *B. minor*: Sars 1907), *B. spinifera* Scott 1909, *B. elegans* Sars 1920, *B. longiseta* Brodsky 1950, *B. similis* Tanaka 1965, *B. longicornis* Tanaka 1965, *B. regalis* Grice and Hulsemann 1967, and *B. intermedia* Deevey 1973. Of these only the females are known for *B. longiseta* and *B. intermedia*, and only the males for *B. longicornis* and *B. regalis*. Four of these species have been recorded from these waters: *B. minor* (Wolfenden) and *B. similis* Tanaka by Park (1970) and *B. elongata* and *B. sarsi* (as *B. minor* Sars) by Owre and Foyo (1964, 1967, 1972). Other species now known from the Caribbean Sea are *B. elegans*, *B. spinifera*, and 2 new species of which only the females were collected. Six of these species are also known to occur in the Gulf of Mexico: *B. elongata*, *B. sarsi*, *B. spinifera*, *B. similis*, *B. minor*, and *B. michelae* n. sp.

The species most frequently noted was *B. similis*, with records of 25 females but no males. Ten specimens, including 3 males and 5 females, of *B. elongata* were taken; 5 males of *B. spinifera*; one female, one male, and one juvenile *B. elegans*; 2 females and one male *B. minor*; and a female, an immature female, and a male *B. sarsi*—as well as a female of one new species and 2 females of the other.

I am deeply indebted to Dr. Harding B. Owre Michel for the privilege of examining some of her samples from the Caribbean Sea and Gulf of Mexico. This work was partially supported by grant GA-36512 from the National Science Foundation.

The diagnosis of the genus remains as previously given (Deevey, 1973),



but the key to the species of females must be modified to include the new species. Also, although Sars described the *sarsi* female as 2.6 mm long and Scott the *spinifera* female as 3.3 mm long, it is now apparent that these species may be similar in size so size cannot be used as a key character to differentiate them.

Key to the Females of *Bathypontia*

- 1. Mature females over 4 mm long ..... 2
- Mature females less than 4 mm long ..... 3
- 2. Last segment of P5 at least twice as long as preceding segment, genital segment almost as long as 3 following segments .....  
..... *B. elegans* Sars
- Last segment of P5 little longer than preceding segment, genital segment slightly longer than following segment ..... *B. elongata* Sars
- 3. Th5 asymmetrical in dorsal view ..... 4
- Th5 symmetrical in dorsal view ..... 5
- 4. Left side of Th5 longer than right, apical spine of P5 as long as or longer than leg, no outer edge spines leg 1 ..... *B. longiseta* Brodsky
- Right side of Th5 longer than left, apical spine of P5 twice as long as distal segment, outer edge spines on exopod segment 3 of leg 1  
..... *B. similis* Tanaka
- 5. P5 with single apical spine, no accessory spine ..... 6
- P5 with apical spine and small accessory spine ..... 7
- 6. Apical spine ca. 4 times as long as distal segment of P5... *B. minor* (Wolfenden)
- Apical spine the same length as distal segment of P5 .....  
..... *B. unispina* n. sp.
- 7. P5 asymmetrical, small 2nd spine asymmetrically placed on the 2 legs ..... *B. intermedia* Deevey
- P5 symmetrical ..... 8
- 8. Th5 pointed in dorsal view, rounded in lateral view ..... 9
- Th5 pointed in dorsal and lateral view ... *B. sarsi* Grice & Hulsemann
- 9. Basal segment of 2nd maxilla with series of 1-1-2-3 bristles or setae, basal segment of maxilliped with 1 proximal, 1 middle and 3 distal spines (see Figs. 1f, 2b) ..... *B. michelae* n. sp.
- Basal segment of maxilla 2 with clusters of spinules and 1-2-3 bristles, basal segment of mxp with 1 middle and 2 distal spines (see Figs. 7f, g) ..... *B. spinifera* Scott

*Bathypontia michelae*, new species  
Figs. 1 and 2

*Holotype*.—Female, 3.25 mm long, collected on 3 November 1969. On 2



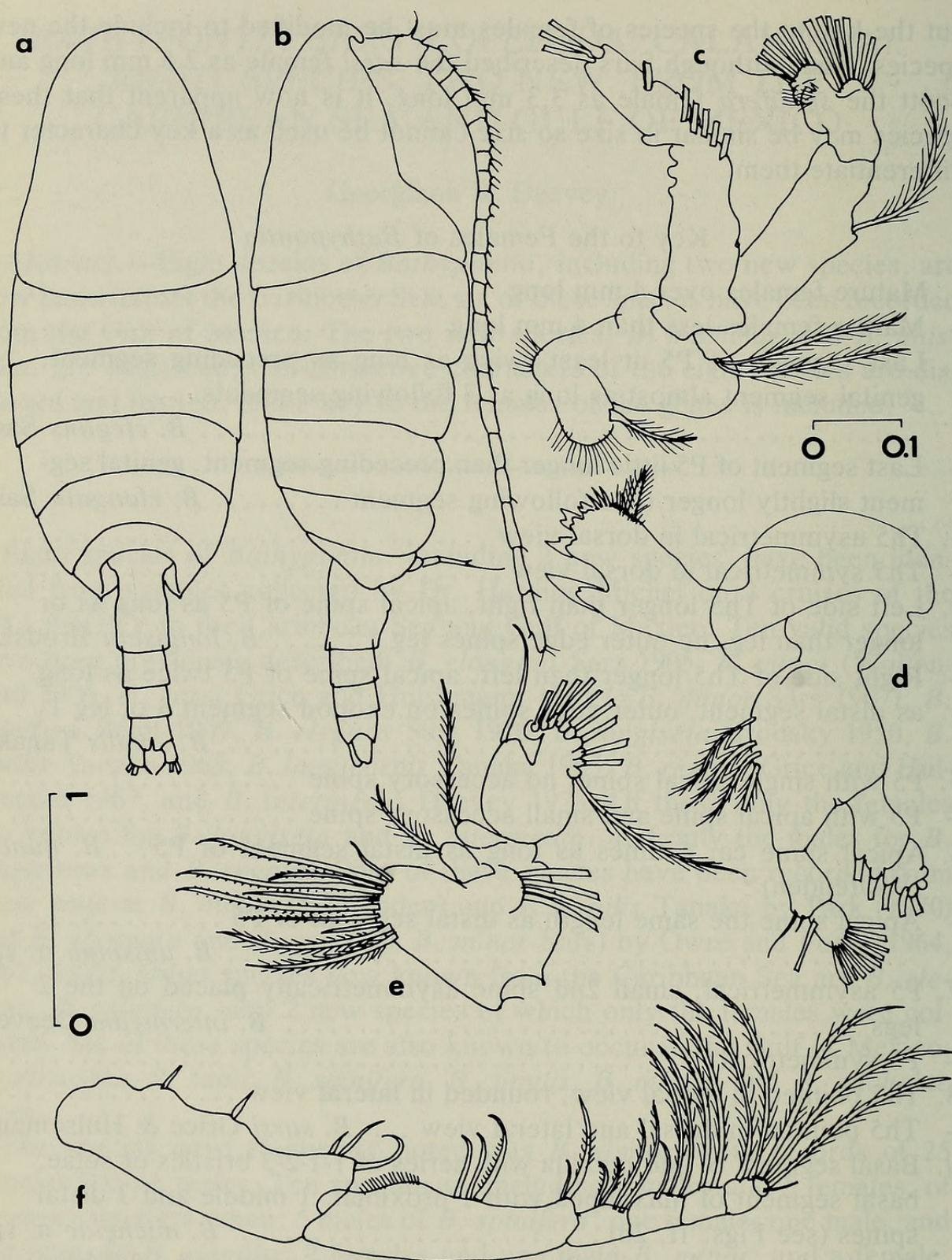


Fig. 1. *Bathypontia michelae*, female: **a** and **b**, Dorsal and lateral views; **c**, Antenna 2, longer setae cut off; **d**, Mandibular palp and blade; **e**, Maxilla 1, longer setae cut off; **f**, Maxilliped. Scale on left margin for **a** and **b**; at upper right for **c**-**f**. Scales in mm.



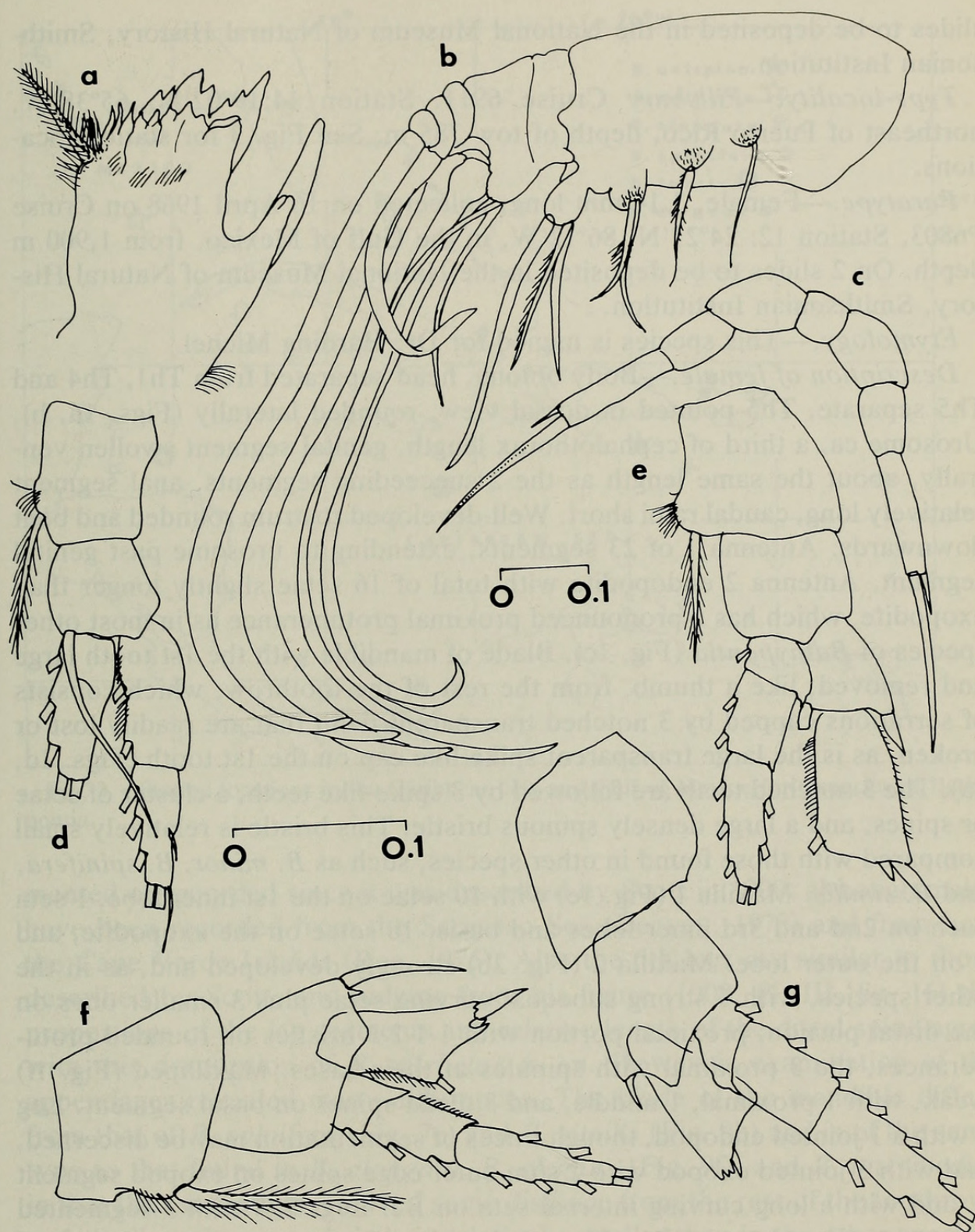


Fig. 2. *Bathypontia michelae*, female; a, Blade of mandible; b, Maxilla 2; c, 5th legs; d, Leg 1, setae cut off; e, Leg 2; f, Leg 3; g, Leg 4. (Scale at left for a, near center for b-g. Scales in mm.)



slides to be deposited in the National Museum of Natural History, Smithsonian Institution.

*Type-locality*.—*Pillsbury* Cruise 6911, Station 14:19°02'N, 65°38'W, northeast of Puerto Rico, depth of tow 785 m. See Fig. 3 for station locations.

*Paratype*.—Female, 3.14 mm long, collected on 16 April 1968 on Cruise P6803, Station 12: 24°21'N, 86°12'W, in the Gulf of Mexico, from 1,900 m depth. On 2 slides to be deposited in the National Museum of Natural History, Smithsonian Institution.

*Etymology*.—This species is named for Dr. Harding Michel.

*Description of female*.—Body oblong, head separated from Th1, Th4 and Th5 separate, Th5 pointed in dorsal view, rounded laterally (Figs. 1a, b). Urosome ca. a third of cephalothorax length, genital segment swollen ventrally, about the same length as the 2 succeeding segments, anal segment relatively long, caudal rami short. Well-developed rostrum rounded and bent downwards. Antenna 1 of 23 segments, extending to urosome past genital segment. Antenna 2 endopodite with total of 16 setae slightly longer than exopodite, which has a pronounced proximal protuberance as in most other species of *Bathypontia* (Fig. 1c). Blade of mandible with the 1st tooth large and removed, like a thumb, from the rest of the toothrow, which consists of serrations capped by 3 notched transparent teeth that are readily lost or broken, as is the large transparent spike-like cap on the 1st tooth (Figs. 1d, 2a). The 3 notched teeth are followed by 3 spike-like teeth, a cluster of setae or spines, and a large densely spinous bristle. This bristle is relatively small compared with those found in other species, such as *B. minor*, *B. spinifera*, and *B. similis*. Maxilla 1 (Fig. 1e) with 10 setae on the 1st inner lobe, 1 seta each on 2nd and 3rd inner lobes and basis, 10 setae on the exopodite, and 4 on the outer lobe. Maxilla 2 (Fig. 2b) strongly developed and, as in the other species, with 6 strong subequal curving setae plus 3 smaller ones on the distal portion; proximal portion with 1-1-2-3 bristles on rounded protuberances, the 3 proximal with spinules at their bases. Maxilliped (Fig. 1f) weak, with 1 proximal, 1 middle, and 3 distal spines on basal segment. Leg 1 with a 1-jointed endopod, though traces of segmentation may be discerned, and with 3-jointed exopod with 2 slim outer edge spines on exopod segment 3, and with a long curving internal seta on B2. Legs 2–4 with 3-segmented exopods and endopods. B1 of legs 1–3 with a plumose seta and a bunch of hairs; B1 of leg 4 bare, but B2 has a small outer spine. B2 of leg 3 with a long strong outer spine (Figs. 2d–g). Leg 5 (Fig. 2c) 3-jointed, symmetrical, with a long distal spine and a small 2nd outer spine; the distal segment is 75–80% of the length of the distal spine.

*Remarks*.—At first it was expected that these females would prove to be *B. spinifera*, since they were the right size and shape for that species and males were present. In fact, the *B. spinifera* female has not been docu-



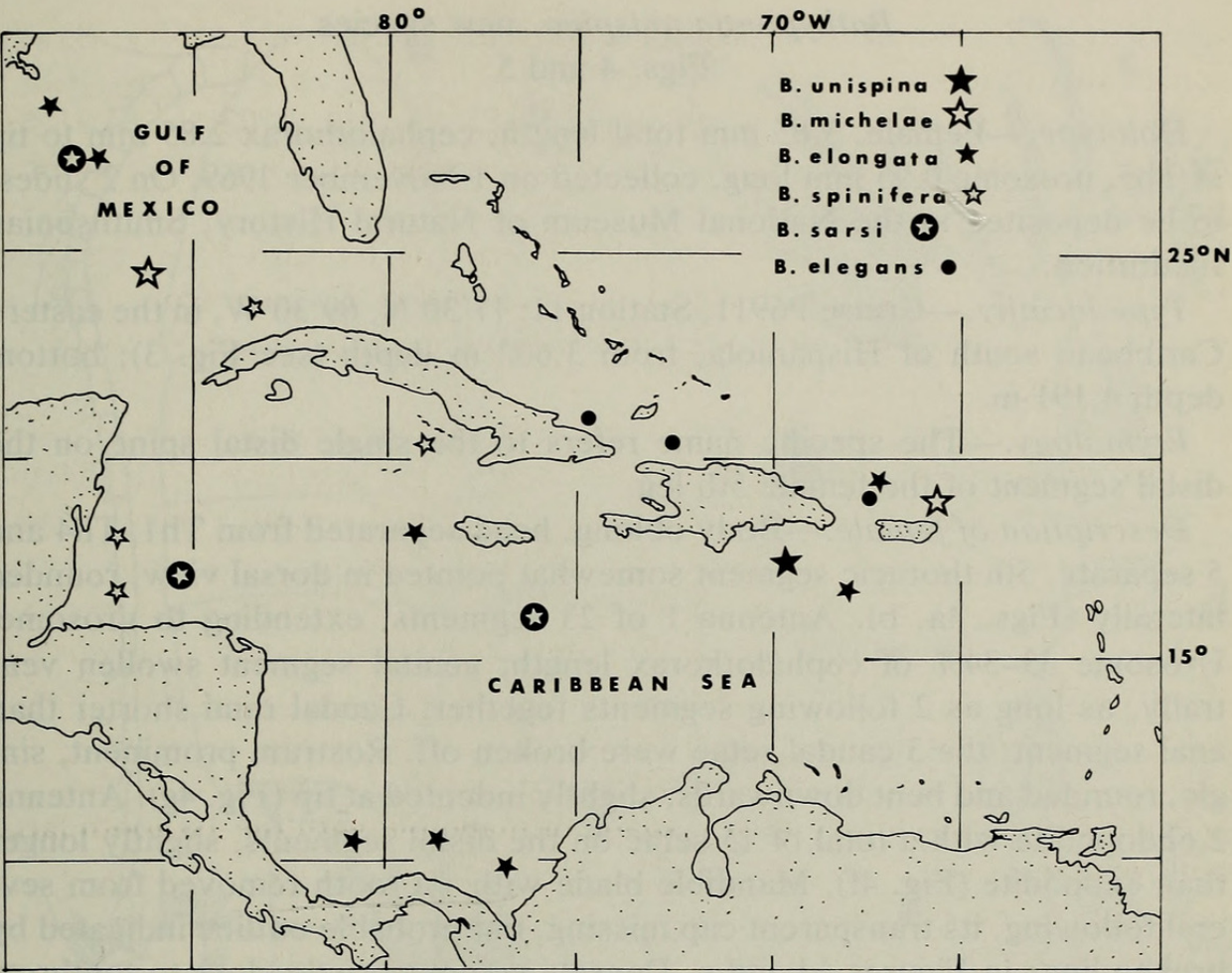


Fig. 3. Station locations in the Caribbean Sea and Gulf of Mexico for 6 species of Bathypontia.

mented or recorded since it was described by Scott in 1909, although males have been recorded from the Sargasso Sea (Deevey, 1973) and from near the Cape Verde Islands (Roe, 1975). Also the 5th legs are similar to those described by Scott, and judging from his figure (1909, Pl. III, fig. 16) the proportions of the leg segments and relative length of the distal spine agree with this description of *B. michelae* n. sp. However, examination of the appendages revealed many differences. The blade of the mandible differs from that of *B. spinifera* (Fig. 7e) and *B. similis* (Fig. 9h) and is of the same type as that found in *B. elongata*, *B. elegans* (Fig. 9f), and *B. intermedia*, in that the 1st tooth is removed some distance from the rest of the toothrow, and the densely setose bristle is relatively smaller than in the other species. Also the setation of the basal segment of the maxilla 2 and the maxilliped differs from that found in *B. spinifera* (Figs. 7f, g) and *B. similis* (Figs. 9f, i), and the endopod of leg 1 is 1-jointed, whereas it is 2-jointed in those species. *B. michelae* n. sp. appears to be most closely related to *B. sarsi* in the setation of the appendages, but the Th5 is rounded in lateral view and the distal spine of leg 5 is somewhat longer with respect to the distal segment.



*Bathypontia unispina*, new species

Figs. 4 and 5

*Holotype*.—Female, 3.65 mm total length, cephalothorax 2.85 mm to tip of Th5, urosome 0.95 mm long, collected on 1 November 1969. On 2 slides, to be deposited in the National Museum of Natural History, Smithsonian Institution.

*Type-locality*.—Cruise P6911, Station 11: 17°30'N, 69°30'W, in the eastern Caribbean south of Hispaniola, from 3,602 m depth (see Fig. 3); bottom depth 4,191 m.

*Etymology*.—The specific name refers to the single distal spine on the distal segment of the female 5th leg.

*Description of female*.—Body oblong, head separated from Th1, Th4 and 5 separate, 5th thoracic segment somewhat pointed in dorsal view, rounded laterally (Figs. 4a, b). Antenna 1 of 23 segments, extending to urosome. Urosome 33–34% of cephalothorax length; genital segment swollen ventrally, as long as 2 following segments together. Caudal rami shorter than anal segment; the 3 caudal setae were broken off. Rostrum prominent, single, rounded and bent downwards, slightly indented at tip (Fig. 4g). Antenna 2 endopodite with a total of 15 setae on the distal segments, slightly longer than exopodite (Fig. 4f). Mandible blade with 1st tooth removed from several following, its transparent cap missing, but probable outline indicated by broken lines in Figures 4d and e. Densely spinous bristle close to toothrow and relatively small. Mandible palp longer than blade with 5 setae on exopodite and 9 long and 1 short setae on endopodite. Maxilla 1 (Fig. 4c) with 9 setae of varying lengths on 1st inner lobe, 2nd and 3rd inner lobes and basis each with 1 seta, 10 setae on exopodite, and 4 on outer lobe. Maxilla 2 strongly developed (Fig. 5a), distal part with 6 strong subequal setae plus 3 shorter ones, proximal part with setae in sequence of 1-1-2-3, the 4 most proximal setae with spinules at their bases. Maxilliped (Fig. 4h) weak, basal segment with setae in sequence of 1-1-3. Leg 1 (Fig. 5b) with 1-segmented endopod, 3-segmented exopod, 2 outer edge spines on exopod segment 3; B2 with a distal internal long curving seta. Legs 2–4 with 3-segmented branches. B1 of legs 1–3 with a plumose seta and a bunch of hairs on the inner edge (Figs. 5b–d). B1 of leg 4 without seta or hairs (Fig. 5e). Legs 2 and 4 with sharp external denticle on B2. Leg 3 B2 with long slightly curved external spine almost as long as exopod segment 1 (Fig. 5d). Exopod segment 2 of leg 2 with a slightly longer outer edge spine than on segments 1 and 3. Plumose setae of legs 1–4 jointed. Leg 5 (Fig. 5f) 3-jointed, symmetrical, basal segment slightly longer than 2nd segment, 3rd segment slightly more than twice as long as 2nd segment, with a single long distal spine as long as the 3rd segment.

*Remarks*.—*B. unispina* n. sp. is similar in size to *B. intermedia*, but the



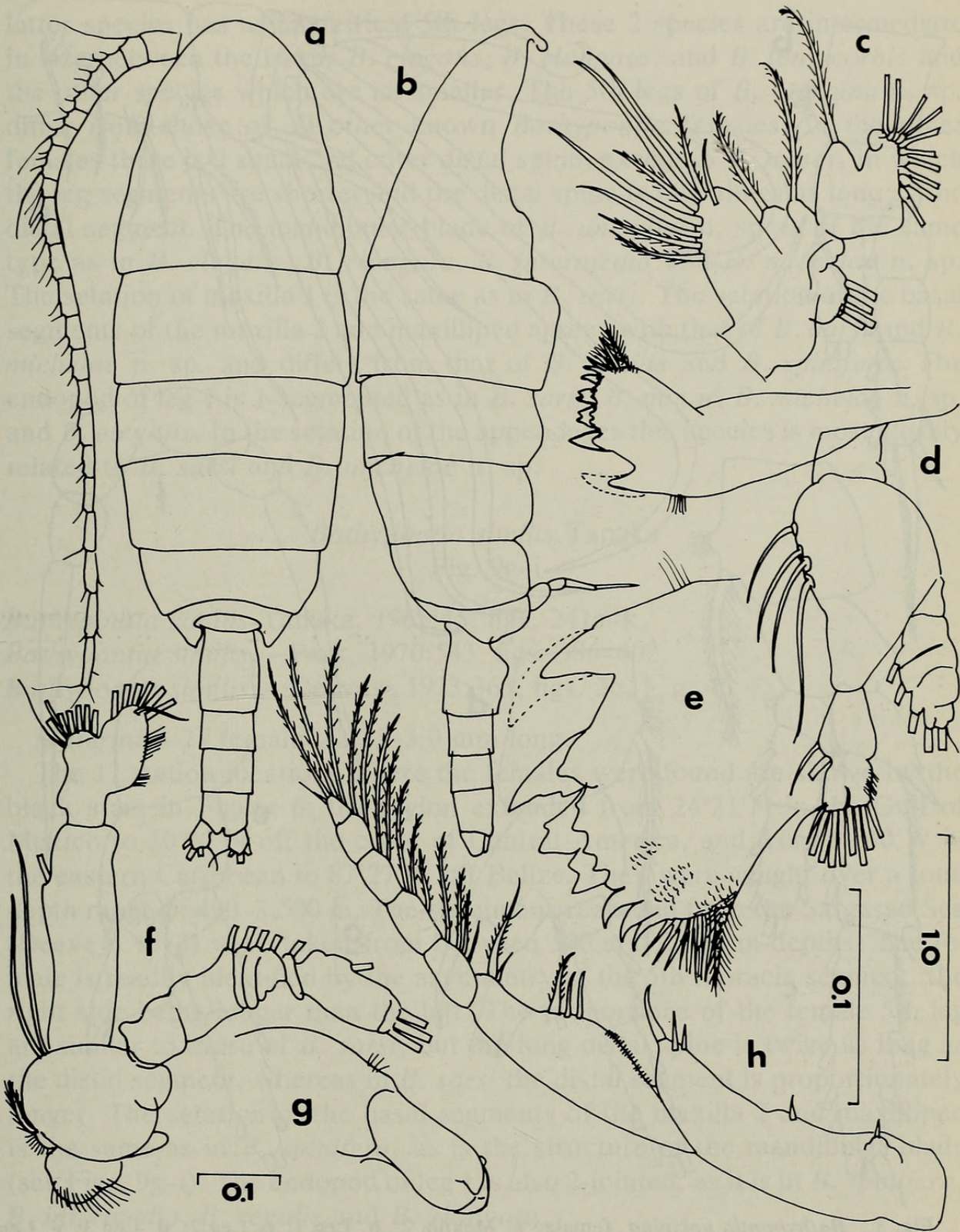


Fig. 4. *Bathypontia unispina*, female: **a** and **b**, Dorsal and lateral views; **c**, Maxilla 1, longer setae cut off; **d**, Palp and blade of mandible; **e**, Mandibular blade; **f**, Antenna 2, most setae cut off; **g**, Rostrum; **h**, Maxilliped. Outer scale on right for **a** and **b**, other scale for **c-h**. Scales in mm.



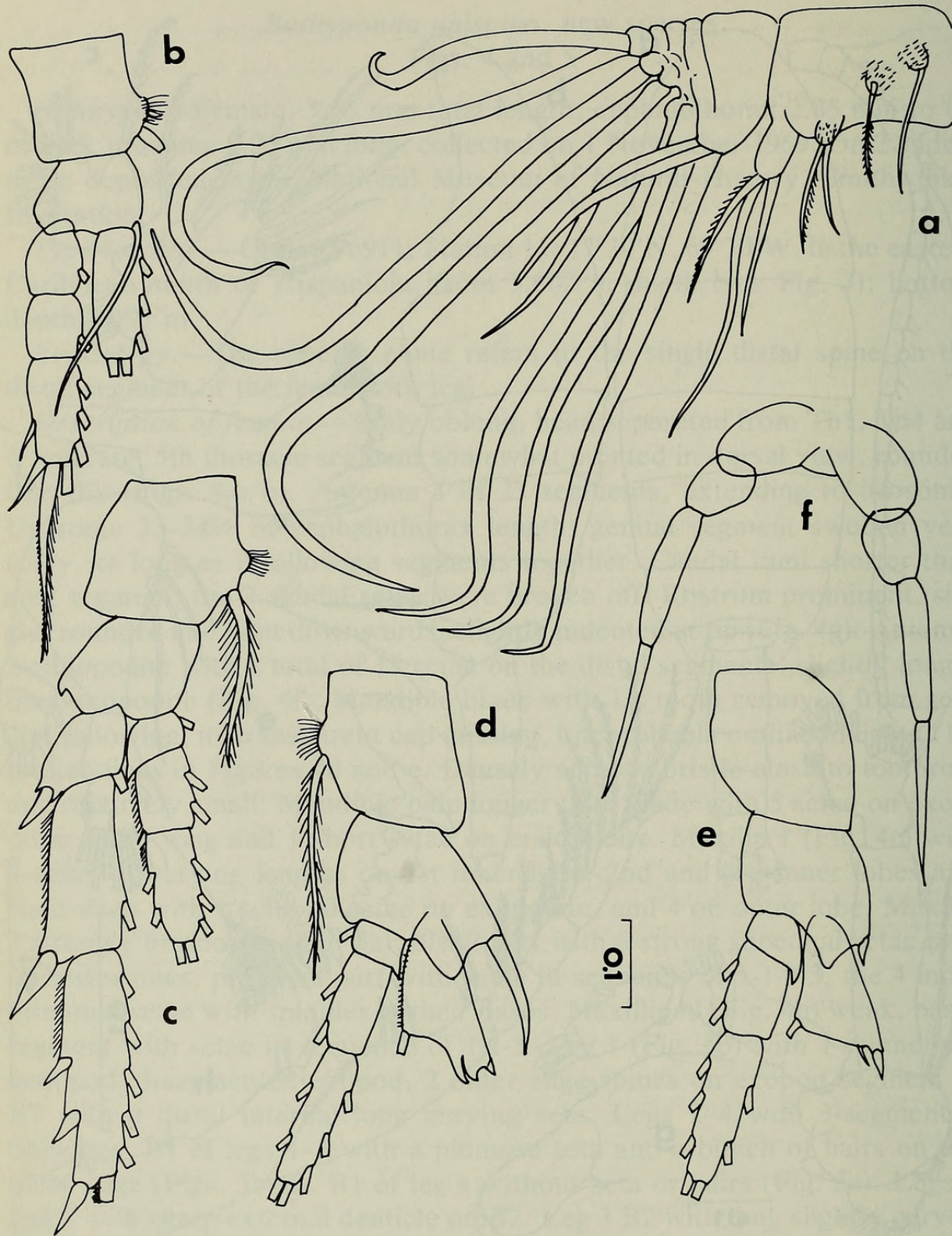


Fig. 5. *Bathypontia unispina*, female: a, Maxilla 2; b, Leg 1; c, Leg 2; d, Leg 3; e, Leg 4; f, 5th legs. Scale for a-f in mm.



latter species has asymmetrical 5th legs. These 2 species are intermediate in size between the larger *B. elegans*, *B. elongata*, and *B. longicornis* and the other species which are all smaller. The 5th legs of *B. unispina* n. sp. differ from those of all other known *Bathypontia* females. In the other females there is a small 2nd outer distal spine, except in *B. minor*, in which the leg segments are shorter and the distal spine is four times as long as the distal segment. The mandibular blade of *B. unispina* n. sp. is of the same type as in *B. elegans*, *B. elongata*, *B. intermedia* and *B. michelae* n. sp. The setation of maxilla 1 is the same as in *B. sarsi*. The setation of the basal segments of the maxilla 2 and maxilliped agrees with that of *B. sarsi* and *B. michelae* n. sp. and differs from that of *B. similis* and *B. spinifera*. The endopod of leg 1 is 1-segmented as in *B. sarsi*, *B. minor*, *B. michelae* n. sp. and *B. elegans*. In the setation of the appendages this species is most closely related to *B. sarsi* and *B. michelae* n. sp.

*Bathypontia similis* Tanaka

Fig. 9g-i

*Bathypontia similis* Tanaka, 1965:45, figs. 241a-k.

*Bathypontia similis*.—Park, 1970:543, figs. 386–402.

*Bathypontia similis*.—Deevey, 1973:365, figs. 3c, f, g, 4f.

*Material*.—25 females, 2.75–3.0 mm long.

The 17 station locations where the females were found are shown by the black stars in Figure 6; the region extended from 24°21'N in the Gulf of Mexico to 10°22'N off the coast of Central America, and from 61°30'W in the eastern Caribbean to 87°27'W off Belize. They were caught over a total depth range of 490–3,500 m. The specimens recorded from the Sargasso Sea (Deevey, 1973) were taken from between 500 and 2,000 m-depths. The female is readily identified by the asymmetry of the 5th thoracic segment, the right side being longer than the left. The proportions of the female 5th leg are similar to those of *B. sarsi*, but the long distal spine is twice as long as the distal segment, whereas in *B. sarsi* the distal segment is proportionately longer. The setation of the basal segments of the maxilla 2 and maxilliped is the same as in *B. spinifera*, as is the structure of the mandibular blade (see Figs. 9g–i). The endopod of leg 1 is also 2-jointed, as it is in *B. spinifera*, *B. intermedia*, *B. regalis* and *B. elongata*.

It is curious that so many females were caught and no males. Tanaka's (1965) description of the species was based on 4 females and 2 males. The only male documented since that time was taken in the Sargasso Sea (Deevey, 1973, Figs. 4f). Grice and Hulsemann (1967) listed *B. similis* from the Indian Ocean, but did not state the number or sex of the specimens.

*Distribution*.—Pacific coast of Japan, 2°38'S in the Indian Ocean, 10°–



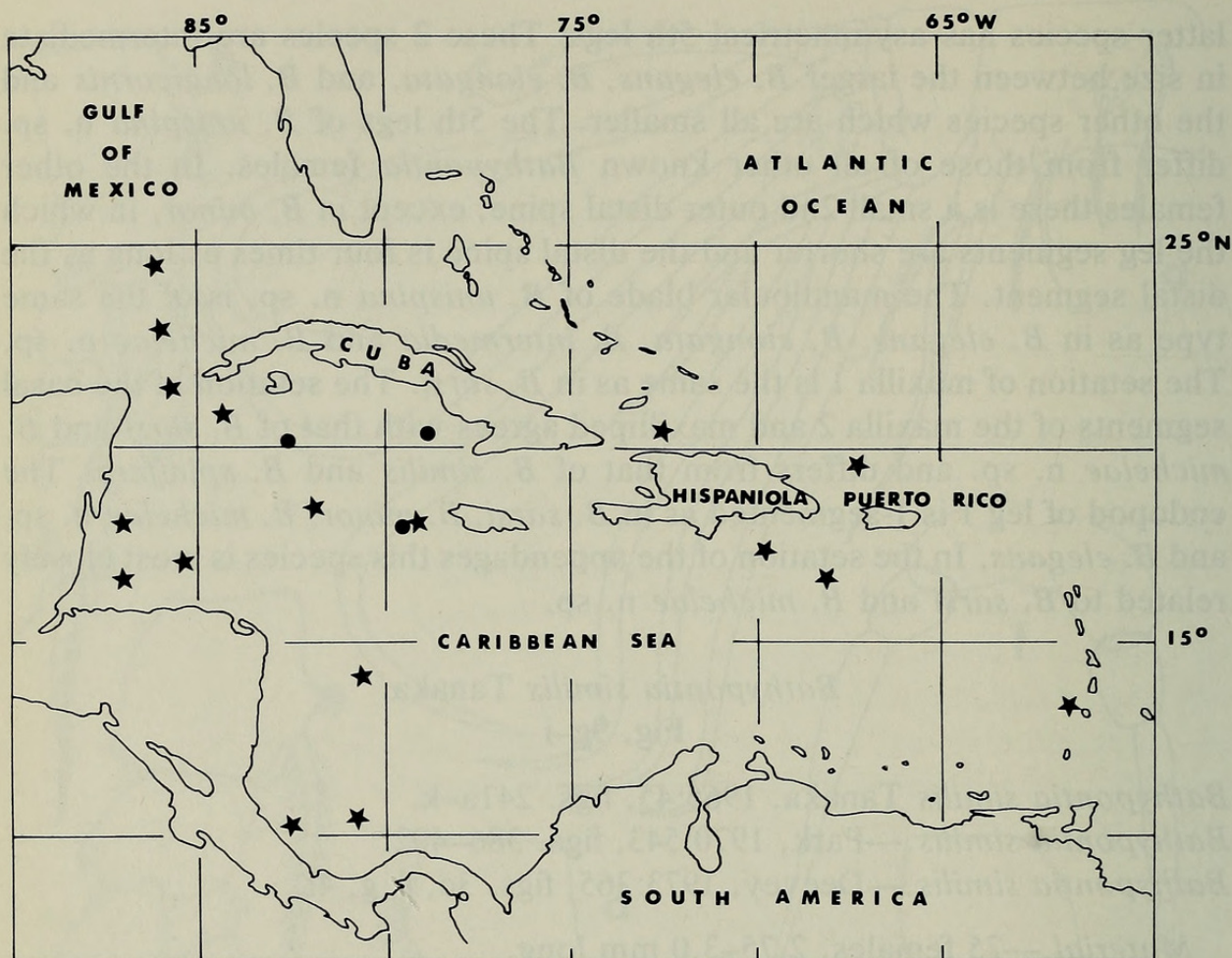


Fig. 6. Station locations for *Bathypontia similis* shown by black stars, for *B. minor* by black circles.

27°N in the Caribbean Sea and Gulf of Mexico, 32°10'N in the Sargasso Sea off Bermuda.

*Bathypontia spinifera* Scott

Fig. 7

*Bathypontia spinifera* Scott, 1909:183, pl. 3, figs. 1–16.

?*Bathypontia sarsi*.—Wheeler, 1970:12, figs. 77–90.

*Bathypontia spinifera*.—Deevey, 1973:367, figs. 4a, b, g.

*Bathypontia spinifera*.—Roe, 1975:364, figs. 31a–d.

*Material*.—5 males, 2.6–2.92 mm long.

Males 2.8–2.92 mm long were caught over a depth range of 750–3,000 m in the western Caribbean and the Florida Current north of Cuba (see the small open stars in Fig. 3) at: 20°04'N, 79°38.4'W; 16°40'N, 87°W; 18°10'N, 87°W; and 23°30'N, 83°30'W. A 2.6 mm male was collected at 27°N, 86°W in the Gulf of Mexico in a 1,000–1,500 m haul. The 4 males from the Sargasso Sea were taken from 500–2,000 m-depths. Roe's male was collected in a



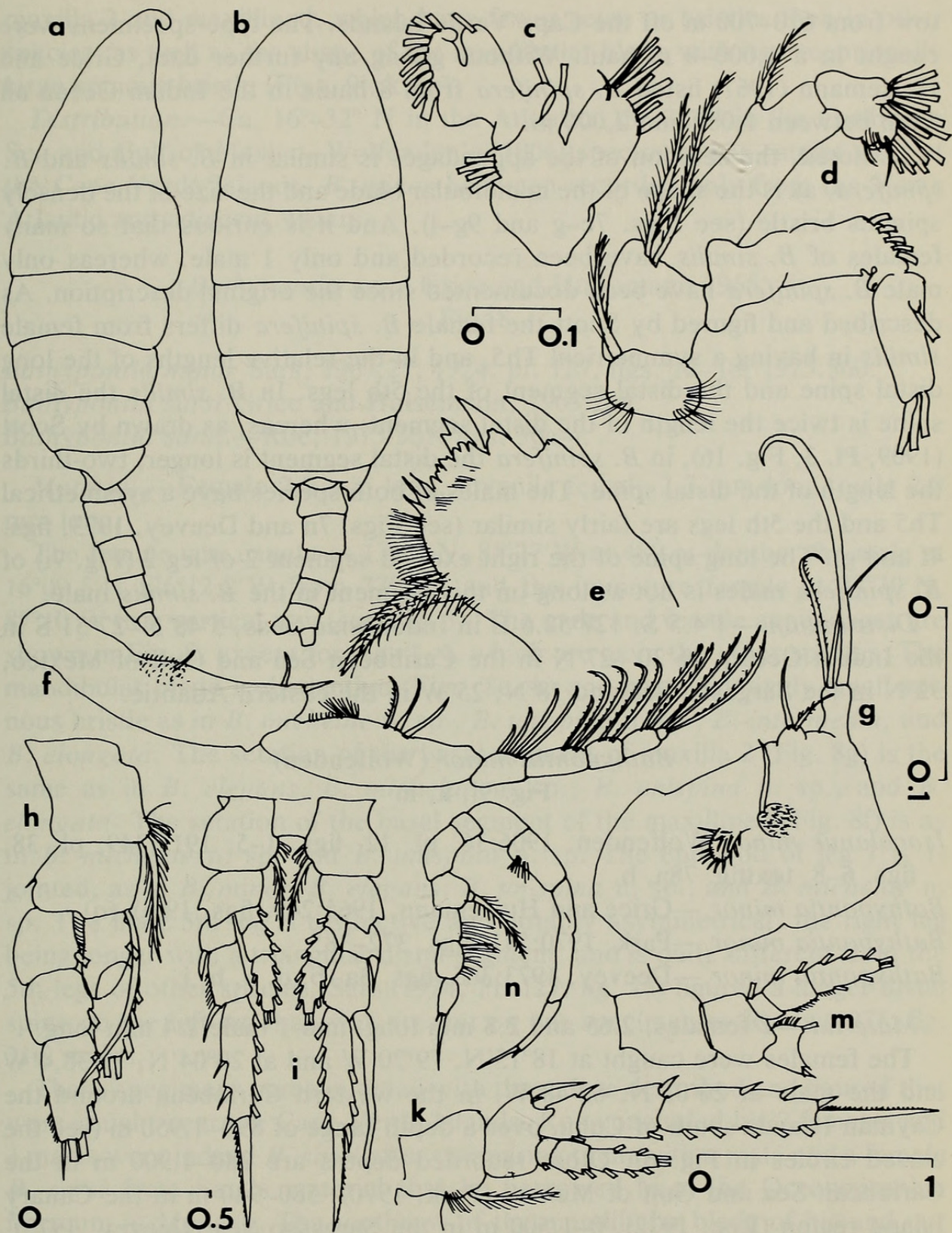


Fig. 7. *Bathypontia spinifera*, male: **a** and **b**, Lateral and dorsal views; **c**, Maxilla 1, setae cut off; **d**, Antenna 2, setae cut off; **e**, Blade of mandible; **f**, Maxilliped; **g**, Basal segments of maxilla 2; **h**, Leg 1; **i**, Leg 2; **k**, Leg 3; **m**, Leg 4; **n**, 5th legs. Scale at bottom right for **a** and **b**; at bottom left for **i**–**n**; on center right margin for **e**; upper center for **c**, **d**, **f**–**h**. Scales in mm.



tow from 610–700 m off the Cape Verde Islands. The type-specimens were caught in a 1,000–0 m haul. Without giving any further data, Grice and Hulsemann (1967) listed *B. spinifera* from 8 hauls in the Indian Ocean all from between 1,000 and 2,000 m.

As noted, the setation of the appendages is similar in *B. similis* and *B. spinifera*, as is the shape of the mandibular blade and the size of the densely spinous bristle (see Figs. 7c–g and 9g–i). And it is curious that so many females of *B. similis* have been recorded and only 1 male, whereas only male *B. spinifera* have been documented since the original description. As described and figured by Scott the female *B. spinifera* differs from female *similis* in having a symmetrical Th5, and in the relative lengths of the long distal spine and the distal segment of the 5th legs. In *B. similis* the distal spine is twice the length of the distal segment, whereas, as drawn by Scott (1909, Pl. 3, Fig. 16), in *B. spinifera* the distal segment is longer, two-thirds the length of the distal spine. The males of both species have a symmetrical Th5 and the 5th legs are fairly similar (see Figs. 7n and Deevey, 1973, figs. 4f and g). The long spine of the right exopod segment 2 of leg 2 (Fig. 7i) of *B. spinifera* males is not as long on this segment in the *B. similis* male.

*Distribution*.—1°4.5'S, 127°52.6'E in Indonesian Seas, 5°48'N–27°31'S in the Indian Ocean, 16°20'–27°N in the Caribbean Sea and Gulf of Mexico, 32°N in the Sargasso Sea and 18°N, 25°W in the eastern Atlantic.

*Bathypontia minor* (Wolfenden)

Fig. 9j, k, m

*Isocalanus minor* Wolfenden, 1906:36, pl. 12, figs. 1–5; 1911:349, pl. 38, figs. 6–8, textfig. 78a, b.

*Bathypontia minor*.—Grice and Hulsemann, 1965:249, figs. 19(e)–(q).

*Bathypontia minor*.—Park, 1970:541, figs. 372–385.

*Bathypontia minor*.—Deevey, 1973:365, figs. 3a, b, d, e, h, i.

*Material*.—2 females, 2.65 and 2.8 mm long, and 1 male 2.4 mm long.

The females were caught at 18°15'N, 79°20'W and at 20°04'N, 79°38.4'W and the male at 20°02'N, 82°48'W, in the western Caribbean around the Cayman Islands south of Cuba, over a depth range of 890–1,950 m (see the closed circles in Fig. 6). Other recorded depths are 980–1,900 m in the Caribbean Sea and Gulf of Mexico (Park, 1970), 580–940 m in the Canary Island region (Roe, 1972), 0–1,500 m in the Sargasso Sea (Deevey, 1973), 1,000 m in the North Atlantic (Grice and Hulsemann, 1965), and 0–1,500 m (Wolfenden, 1906). This species has not been recorded from as great depths as most of the other species.

*B. minor* is distinguished by the long distal spines on the male and female 5th legs, both sexes lacking a small second spine. The setation of the appendages is also distinctive, especially that of the basal segments of the



maxilla 2 and maxilliped, which have fewer setae or bristles than in other species, as well as the shape of the mandibular blade with its exceptionally large spinous bristle (Figs. 9j, k, m).

*Distribution*.—Ca. 16°–32° N in the Atlantic, 18°–22°N in the Caribbean Sea and Gulf of Mexico. Wolfenden's (1906) specimen was caught west of the Cape Verde Islands. *B. minor* has been recorded only from the North Atlantic and adjacent waters.

*Bathypontia sarsi* Grice and Hulsemann 1965

Fig. 8

*Bathypontia minor* Sars, 1907:27; 1924: pl. 127, figs. 12–18; 1925:360.

*Bathypontia sarsi* Grice and Hulsemann, 1965:249.

*Bathypontia sarsi*.—Roe, 1975:361, figs. 30a–i.

*Material*.—Female 2.9 mm long, juvenile female 2.3 mm long, male 2.8 mm long.

The female was caught at 17°18'N, 85°27'W at 480 m-depths, the male at 16°09.5'N, 76°12.2'W from 770 m, and the immature female at 27°30'N, 87°10'W in a vertical tow (see Fig. 3). The male and female appendages are shown in Fig. 8, except for legs 1–4, which are as in the other species. The mandibular blade is distinctive (Figs. 8e, k) and has a relatively small spinous bristle as in *B. michelae* n. sp., *B. unispina* n. sp., *B. intermedia*, and *B. elongata*. The setation of the basal segment of maxilla 2 (Fig. 8g) is the same as in *B. elegans*, *B. michelae* n. sp., *B. unispina* n. sp., and *B. elongata*. The setation of the basal segment of the maxilliped (Fig. 8f) is as in *B. michelae* n. sp. and *B. unispina* n. sp. The endopod of leg 1 is 1-jointed, as in *B. minor*, *B. elegans*, *B. unispina* n. sp., and *B. michelae* n. sp. The male 5th leg is distinctive and notably asymmetrical, the right leg being longer with a triangular distal segment, and is quite different from the 5th legs of other species. Sars (1924, Pl. 127, fig. 18) figured a longer distal spine on the left leg than was present on our specimen or Roe's (1975, fig. 31s) males.

These specimens agree in detail with those Roe described and figured that were caught near the Cape Verde Islands. Roe concluded his 2 females and 3 males were indeed *B. sarsi* after comparing them with a male and a female *B. sarsi* from Sars's material that he borrowed from the Oceanographic Museum in Monaco. The tooththrow of the mandibular blade of his and our specimens differs somewhat in shape from Sars's (1924, Pl. 127, fig. 16) figure of the mandible blade of his female. Sars's figure shows a blade more like that of *B. similis* and *B. spinifera*. As *B. minor* Sars, *B. sarsi* was previously recorded from these waters by Owre and Foyo (1964, 1967, 1972) and their photograph (1967, figs. 725) of the mandible blade also shows a large setose bristle and the shape of the blade more as in those 2 species.



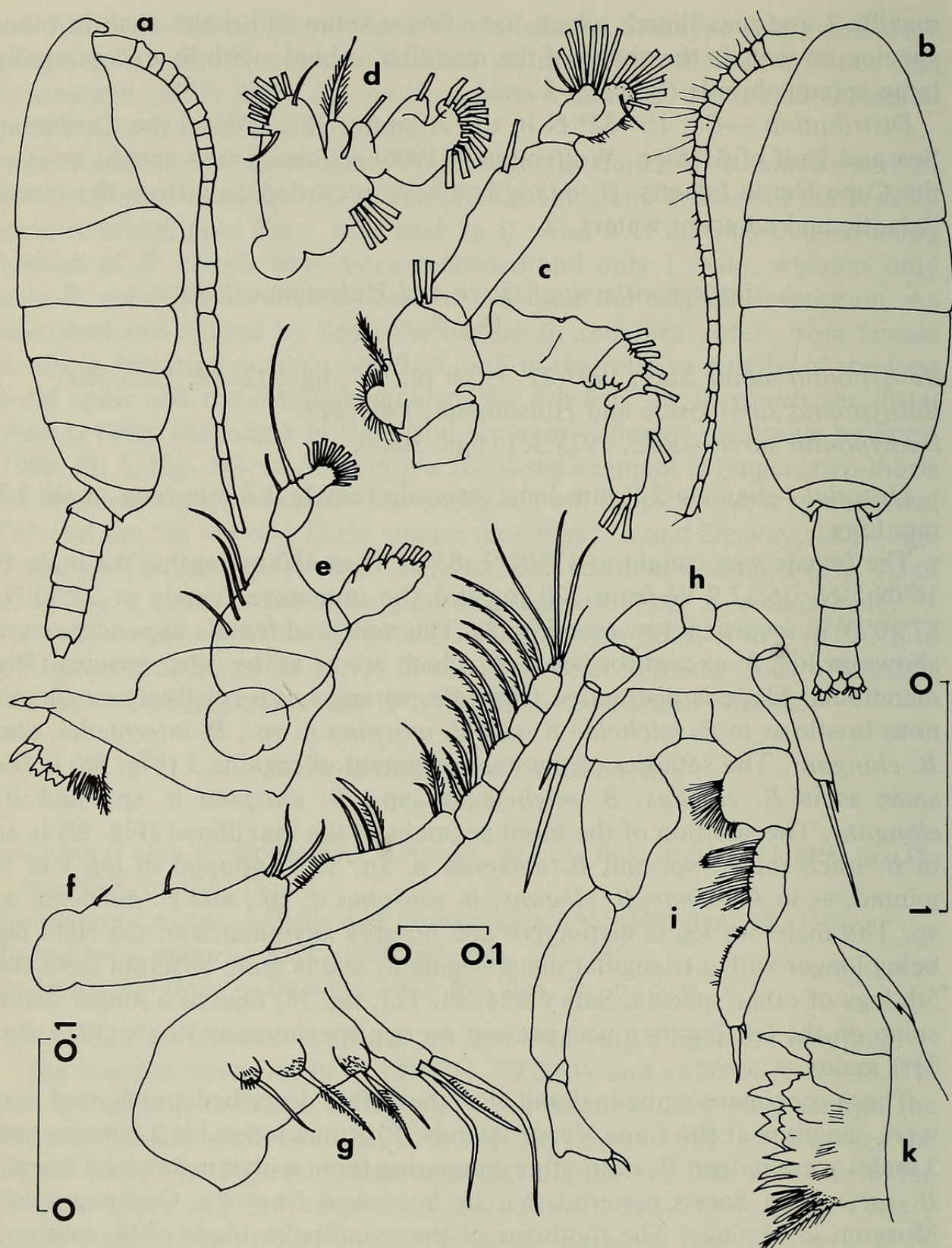


Fig. 8. *Bathypontia sarsi*: **a**, Lateral view of male; **b**, Dorsal view of female; **c**, Female antenna 2, setae cut off; **d**, Female maxilla 1, setae cut off; **e**, Female mandibular blade and palp, most setae cut off; **f**, Female maxilliped; **g**, Basal segments of female maxilla 2; **h**, Female 5th legs; **i**, Male 5th legs; **k**, Blade of female mandible. Scale on right margin for **a** and **b**; bottom left for **k**; lower center for **c**-**i**. Scales in mm.



Wilson (1950) has also recorded this species from the Pacific near the Philippines and from the China Sea off Formosa; his figure of the female 5th legs (1950, Pl. 22, fig. 303) could as easily represent the 5th legs of the *B. similis* female. Other records of this curiously rare and elusive species (Lysholm, Nordgaard and Wiborg, 1945; Grice and Hulsemann, 1967) have not been documented in any way.

*Distribution*.—Sars's specimens are believed to have been collected near the Azores, so the documented occurrence of *B. sarsi* is from 18° to ca. 36°N in the eastern Atlantic, and from 15°–27°30'N in the Caribbean Sea and Gulf of Mexico.

### *Bathypontia elongata* Sars

*Bathypontia elongata* Sars, 1905:24; 1924: pl. 126, figs. 1–17; 1925:356.

?*Isocalanus major* Wolfenden, 1906:37, pl. 12, figs. 6–11; 1911:347, pl. 38, figs. 3–5, textfig. 77.

*Bathypontia elongata*.—Farran, 1908:87, pl. 9, figs. 16, 17.

*Bathypontia elongata*.—Grice and Hulsemann, 1967:38, figs. 271–274.

*Bathypontia elongata*.—Deevey, 1973:367, figs. 4c–e, 5a, b, d, g, h.

*Material*.—5 females, 5.2–5.6 mm long, 3 males 4.9–5.2 mm long, and an immature male and an immature female, both ca. 4 mm long.

The 8 station locations where *B. elongata* was captured over a depth range of 485–1,700 m are indicated by the small black stars in Fig. 3. They ranged from 9°50'N off Central America and from 67°14'W in the eastern Caribbean to 28°12'N, 88°37'W in the Gulf of Mexico. Owre and Foyo (1972) have also reported this species from a depth of 435 m at 15°N, 64°W.

This species is distinctive largely because of its size and possibly because it lives at shallower depths than most of the other species. It has been recorded from the Atlantic, Pacific, and Indian Oceans by a number of investigators (Farran, 1908; Lysholm, Nordgaard, and Wiborg, 1945; Jespersen, 1940; Wilson, 1950; Vervoort, 1965; Grice and Hulsemann, 1967; Roe, 1972; Deevey, 1973).

*Distribution*.—In the Atlantic from the Gulf of Guinea at 1°30'N to 63°38'N south of Iceland, and in the Caribbean Sea and Gulf of Mexico, and also from ca. 5°–23°S in the eastern Pacific, and 18°N–12°S in the Indian Ocean.

### *Bathypontia elegans* Sars

Fig. 9a–f

*Bathypontia elegans* Sars, 1920:26; 1924: pl. 127, figs. 1–11; 1925:358.

*Bathypontia elegans*.—Deevey, 1973:369, figs. 5c, e, f, i–k.



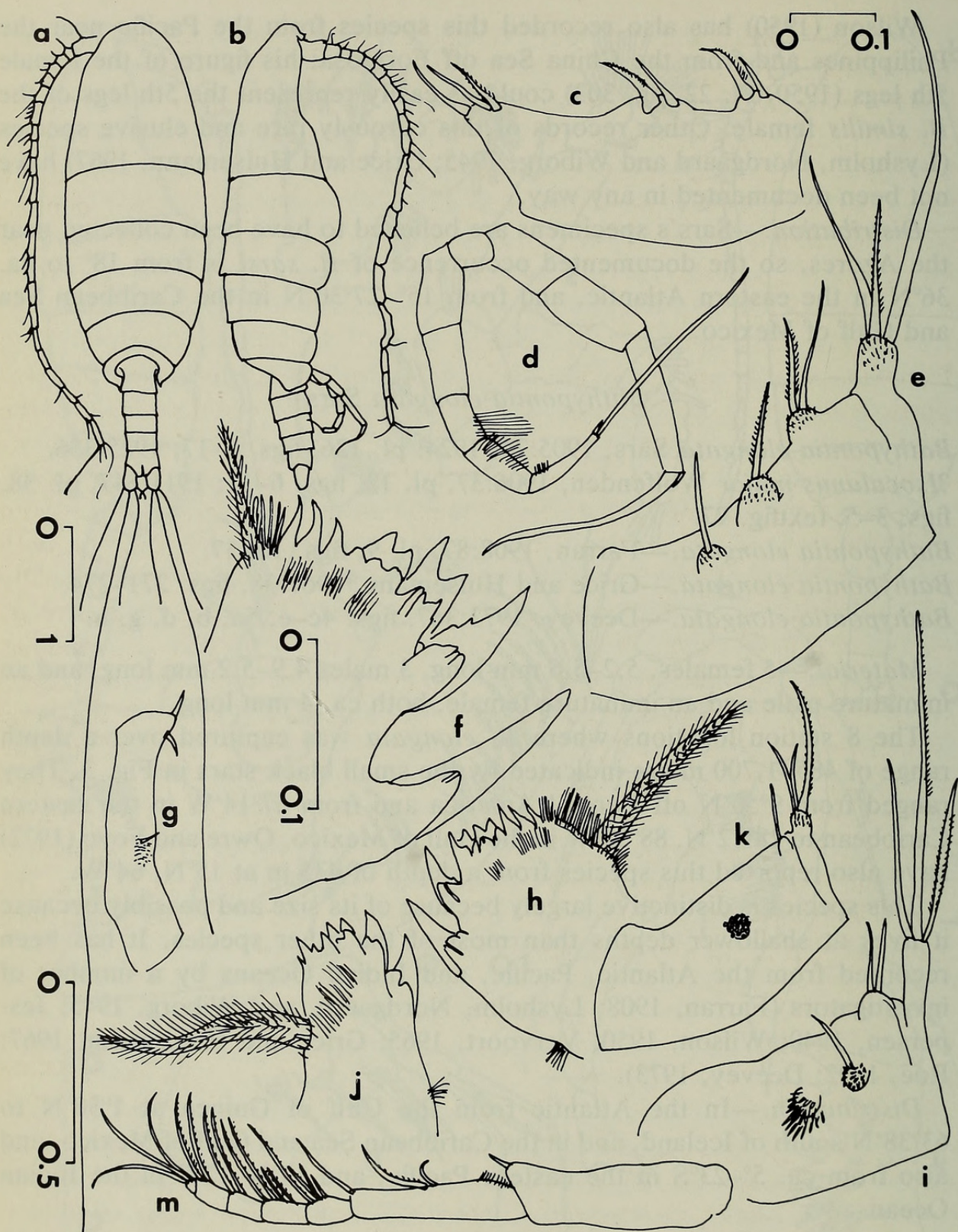


Fig. 9. *Bathypontia elegans*, a-f: a, Dorsal view of male with left antenna 1; b, Lateral view of male with right antenna 1; c, Basal segment of male maxilliped; d, Male 5th legs; e, Basal segments of male maxilla 2; f, Mandible blade of immature female. *Bathypontia similis* female, g-i: g, Basal segment of maxilliped; h, Mandible blade; i, Basal segments of female maxilla 2. *Bathypontia minor*, j-m: j, Blade of female mandible; k, Basal segments of female maxilla 2; m, Male maxilliped. Upper scale on left margin for a and b; at bottom left for d; on f for f; at top right for c-e, g, i, k, m. Scales in mm.



*Material*.—Male 4.2 mm long, female 4.2 mm long, and an immature female 3.4 mm long.

The male was caught at 19°15'N, 67°15'W, the female at 21°08'N, 74°42'W, and the immature female at 20°28'N, 72°30'W, over a depth range of 1,590–2,232 m (see the closed circles in Fig. 3). The females from the Sargasso Sea (Deevey, 1973) were found between 1,000 and 2,000 m-depths. The only other record of this species, since it was described by Sars, is Grice and Hulsemann's (1967) undocumented report of it as *B. major* from the Indian Ocean.

*B. elegans* is almost as large as *B. elongata*, but is easily distinguished from that species by the shape of the rostrum, the 5th legs, and the proportions of the urosome. In the *B. elegans* female the distal segment of the 5th legs is much longer in proportion to the distal spine than in the *B. elongata* female. The *B. elegans* male 5th legs (Fig. 9d) have exceptionally long distal spines; only the *B. minor* male has such long distal spines, but that species is much smaller and lacks the 2nd outer small spine on both 5th legs. The median seta on the male left caudal ramus is exceptionally long (Fig. 9a). The mandibular blade (Fig. 9f) is of the same type as in *B. elongata*, *B. intermedia*, *B. unispina* n. sp., and *B. michelae* n. sp., and has the 1st tooth removed from the rest of the toothrow and a small spinous bristle. The setation of the basal segments of maxilla 2 (Fig. 9e) is the same as in *B. elongata*, *B. sarsi*, *B. michelae* n. sp., and *B. unispina* n. sp. The basal segment of the maxilliped has 2-2-3 spines (Fig. 9c), more than in any other known species. The male leg 2 is asymmetrical, with a longer long spine on the right exopod segment 2 than on the left exopod segment 2, although it is not as exceptionally long as in the *B. spinifera* male (Fig. 7i).

*Distribution*.—19°–32°N in the western Atlantic, 33°–38°N in the eastern Atlantic, and 22°11'S in the Indian Ocean.

### Literature Cited

- Brodsky, K. A. 1950. Calanoida of the Far Eastern Seas and Polar Basin of the USSR (In Russian; Translated 1967). Keys to the fauna of the USSR, No. 35.—Zool. Inst. Acad. Sci. USSR, Moscow-Leningrad, 440 pp.
- Deevey, G. B. 1973. *Bathypontia* (Copepoda: Calanoida): Six species, one new, from the Sargasso Sea.—Proc. Biol. Soc. Wash. 86:357–372.
- Farran, G. P. 1908. Second report on the Copepoda of the Irish Atlantic Slope.—Fisheries, Ireland, Sci. Invest., 1906, II. (1908), 104 pp., 10 pl.
- Grice, G. D., and Kuni Hulsemann. 1965. Abundance, vertical distribution and taxonomy of calanoid copepods at selected stations in the northeast Atlantic.—Jour. Zool. 146 (2):213–262.
- , and ———. 1967. Bathypelagic calanoid copepods of the western Indian Ocean.—Proc. U.S. Nat. Mus. 122 (3583):1–67.
- Jespersen, P. 1940. Non-parasitic Copepoda.—The Zoology of Iceland 3 (33):1–166.
- Lysholm, B., O. Nordgaard, and K. F. Wiborg. 1945. Copepoda from the "Michael Sars"



- North Atlantic deep-sea expedition 1910.—“Michael Sars” North Atlantic Deep-Sea Exped. 1910. 5 (7):1–60.
- Owre, H. B., and M. Foyo. 1964. Report on a collection of Copepoda from the Caribbean Sea.—Bull. Mar. Sci. Gulf Carib. 14 (2):359–372.
- , and ———. 1967. Copepods of the Florida Current. Fauna Caribaea No. 1, Crustacea, Part 1: Copepoda.—Institute of Marine Science, University of Miami, p. 1–137, 900 figs.
- , and ———. 1972. Studies on Caribbean zooplankton. Description of the Program and results of the first cruise.—Bull. Mar. Sci. 22 (2):483–521.
- Park, T. 1970. Calanoid copepods from the Caribbean Sea and Gulf of Mexico. 2. New species and new records from plankton samples.—Bull. Mar. Sci. 20 (2):472–546.
- Roe, H. S. J. 1972. The vertical distributions and diurnal migrations of calanoid copepods collected on the SOND Cruise, 1965. I. The total population and general discussion.—Jour. Mar. Biol. Ass. U. K. 52:277–314.
- . 1975. Some new and rare species of calanoid copepods from the northeastern Atlantic.—Bull. Brit. Mus. (Nat. Hist.) Zool. 28 (7):297–372.
- Sars, G. O. 1905. Liste préliminaire des Calanoidés recueillis pendant les campagnes de S. A. S. le Prince Albert de Monaco, avec diagnoses des genres et des espèces nouvelles. Part 1.—Bull. Mus. Océanogr. Monaco, No. 26:1–24.
- . 1907. Notes supplémentaires sur les Calanoidés de la Princesse-Alice.—Bull. l’Inst. Océanogr. Monaco, No. 101:1–27.
- . 1920. Calanoidés recueillis pendant les campagnes de S. A. S. le Prince Albert de Monaco. (Nouveau supplément).—Bull. l’Inst. Océanogr. Monaco. No. 377:1–20.
- . 1924, 1925. Copépodes particulièrement bathypélagiques provenant des campagnes scientifiques du Prince Albert 1 de Monaco.—Résult. Camp. Scient. Prince Albert I, Fasc. 69, pls. 1–127 (1924), pp. 1–408 (1925).
- Scott, A. 1909. The Copepoda of the Siboga Expedition. Part I. Free-swimming, littoral and semi-parasitic Copepoda.—Siboga Exped., Monogr. No. 29a, 323 pp., 69 pls.
- Tanaka, O. 1965. The pelagic copepods of the Izu Region, Middle Japan. Systematic Account XIII. Parapontellidae, Acartiidae and Tortanidae.—Publ. Seto Mar. Biol. Lab. 12 (5):379–408.
- Vervoort, W. 1965. Pelagic Copepoda. Part II. Copepoda Calanoida of the families Phaennidae up to and including Acartiidae, containing the description of a new species of Aetideidae.—Atlantide Rep. No. 8:9–216.
- Wheeler, E. H., Jr. 1970. Atlantic deep-sea calanoid Copepoda.—Smithsonian Contrib. Zool., No. 55:1–31.
- Wilson, C. B. 1950. Copepods gathered by the United States Fisheries Steamer “Albatross” from 1887 to 1909, chiefly in the Pacific Ocean.—U. S. Nat. Mus. Bull. 100, 14 (4):1–441, 36 pls.
- Wolfenden, R. N. 1906. Plankton Studies. Part 2. Copepoda.—Rebman Ltd., London, pp. 25–44, pls. 8–14.
- . 1911. Die Marinen Copepoden der Deutschen Südpolar-Expedition 1901–1903. II. Die Pelagischen Copepoden der Westwinddrift und des Südlichen Eismeers mit Beschreibung mehrerer neuer Arten aus dem Atlantischen Ozean.—Deutsche Südpolar-Exped. 12 (Zool. 4):182–380, pls. 22–40.

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Deevey, Georgiana B. 1979. "Bathypontia Sars (Copepoda: Calanoida): eight species, two new, from the Caribbean Sea and Gulf of Mexico." *Proceedings of the Biological Society of Washington* 92, 724–742.

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