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SUPPLEMENTARY DESCRIPTION
OF THE MYODOCOPID OSTRACOD
EUPHILOMEDES MULTICHELATA
FROM THE GREAT BAHAMA BANK

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The original description of *Philomedes multichelata* Kornicker, 1959, was based solely on males collected in the vicinity of the Bimini Islands, Great Bahama Bank. Some details of the carapace and appendages, of value in taxonomic classification, were not included in the original description. To remedy these omissions, the holotype and paratypes have been restudied and described more completely in this paper. In addition, a female of the species, obtained from sediment in the Bimini area, is described and illustrated.

E. M. Poulsen (1962, p. 343) proposed the genus *Euphilomedes* for species of the subfamily Philomedinae having the following diagnostic characters: Maxilla with three endites; some of the secondary claws of the furca alternating with main claws; frontal organ not ringed, and shell without small horns at dorsal margin. *Philomedes multichelata* Kornicker, 1959, which agrees with the above diagnosis, is herein referred to *Euphilomedes*.

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Family Cypridinidae Baird, 1850

Subfamily Philomedinae G. W. Müller, 1912

Genus *Euphilomedes* Poulsen, 1962

Philomedes (part).—Müller, 1912.—Skogsberg, 1920.
Euphilomedes Poulsen, 1962.

TYPE SPECIES.—*Euphilomedes nodosa* Poulsen, 1962, by subsequent designation, Kornicker (1967).

GENERIC CHARACTERS.—Only a few additions are needed to Poulsen's diagnosis of the genus (1962, pp. 359–361) as amended by Kornicker (1967) to include *E. multichelata*.

Sixth limb: The end joint of *E. multichelata* is comprised of two lobes; the proximal lobe bears a short, slender, hirsute bristle followed by three stout, plumose bristles.

Seventh limb: The male of *E. multichelata* bears only five bristles on the seventh limb (4 distal, 1 lateral), the same number as reported on *E. oblonga* (Juday, 1907).

Euphilomedes multichelata (Kornicker, 1959)

FIGURES 1–6

Philomedes multichelata Kornicker, 1959, pp. 230–232, figs. 46, 3A, B; 50, A–E; 51, A–D.

HOLOTYPE.—Specimen no. 686Z-6, Columbia University, Department of Geology. Gender: male.

PARATYPES.—USNM 112940, 10 males.

HYPOTYPE.—USNM 112985, 1 female.

TYPE LOCALITY.—Holotype and paratypes were collected at night off the end of the Lerner Marine Laboratory on North Bimini, B.W.I. The female described in this paper (USNM 112985) was from sediment approximately a mile east of the Bimini Islands.

DIAGNOSIS (revised).—*Euphilomedes* with five primary claws and six to nine (usually eight) secondary claws. Second joint of exopodite of sixth limb bilobed, with small bristle followed by three large bristles on proximal lobe. Seventh limb of male with one lateral and four distal bristles. Anterior surface of valves with irregular polygons distributed in shingle-like pattern.

DESCRIPTION OF MALE.—Shell (figs. 1, 3*l*): oval, elongate with greatest height near middle, prominent rostrum and broad rostral incisure (figs. 1*a*, *b*); anterior margin of rostrum and anteroventral margin of shell with scalloped outline formed by crescent-like marginal denticulations. Anterior surface of valves with irregular polygons distributed in shingle-like pattern (fig. 1*c*). Posterior dorsal margin with linear hinge depressed below outline of shell; hinge not visible

in lateral view except by transmitted light. Posterior hinge element of each valve consisting of angular sclerotized process (figs. 1*e*, *h*); medial hinge element straight; anterior hinge element not prominent. Left valve broadly overlapping right valve along anterodorsal margin (fig. 1*b*). Fifteen or more individual muscle scars clustered near middle of valve (fig. 1*a*); large scar situated some distance above others.

Inner lamella broad, terminating at each end of dorsal hinge. Line of concrescence about half-way between middle and outer margin of inner lamella. Selvage with wide, corrugated, lamellar prolongation, having fringe of slender spines along outer margin; no parallel striations observed on inner lamella. Six or seven long hairs, some bearing secondary spines, forming row on inner lamella behind rostrum (figs. 1*d*, *i*); inner lamella below rostrum with small hair followed by wide space and then about four hairs (fig. 1*f*); about 16 hairs on posteroventral part of inner lamella (figs. 1*e*, *h*).

Marginal pore canal with minute tapered hair between first and second crescent-like denticulation on anteroventral margin of rostrum; another pore canal with minute hair near 12th to 15th denticle (figs. 1*d*, *i*). Additional marginal pore canals more or less evenly spaced along ventral and posteroventral margin. Hairs with either pointed or blunt ends distributed on rostral surface (fig. 1*g*), some forming row near margin of shell; long slender hairs with pointed ends forming row that is closer to edge posteriorly and is near ventral and posteroventral margins of valves; additional hairs coming from normal pore canals; a long tapered hair projects backward from base immediately behind posterior hinge element of each valve (figs. 1*e*, *h*).

Dimensions: Holotype length 1.04 mm, height 0.60 mm, width 0.57 mm. Length of specimens ranges between 0.96–1.04 mm (Kornicker, 1959, p. 231).

First antenna (fig. 2*a*): First joint with about seven clusters of short hairs on lateral surface. Second joint with clusters of long hairs on medial surface; spines projecting from ventral margin and distally with a dorsal and lateral bristle; a distal ventral bristle observed only on one of five specimens examined; all bristles bare or with short hairs distally, none with wreaths of long hairs. Third joint with one ventral and two dorsal bristles, the longer dorsal bristle provided with wreath of long hairs near middle and short hairs distally; other dorsal bristle bare or with short hairs distally; ventral bristle with short hairs on most specimens. Fourth joint with two dorsal bristles, each with wreaths of long hairs, and one short and three long ventral bristles subdistally; bristles bare or with short hairs distally. Fifth joint inferred to be inserted ventrally between

fourth and sixth joints, bearing sensory bristle with broad base and provided with numerous filaments. Sixth joint bears distally a long dorsal bristle, which is bare or with short hairs distally. End joints with five slender bristles and two long stout c- and f-bristles.

Second antenna (figs. 2*b*, *c*): Exopodite: first joint elongate with small medial spine distally; second joint about one-third length of first; third joint about twice length of second; distal margins of second to eighth joints with medial comb of short spines; basal spines not observed. First joint without bristle; bristle of second joint about three-fourths length of joint, bearing short marginal spines. Bristles on joints three to eight bearing natatory hairs, without marginal spines. End joint provided with four stout bristles with natatory hairs, and two short slender bristles without hairs. Endopodite 3-jointed; first joint with five short basal bristles and one long distal bristle, all bare, except for single spine observed near middle of long bristle on some specimens; second joint elongate, with two bristles provided with short spines (one specimen had three bristles on one appendage only); third joint elongate, arcuate, with two short bare annulate bristles and about five serrated ridges near tip (appendage which had three bristles on second joint had only one short bristle near tip of third joint).

Mandible (figs. 2*d-f*): No coxale endite. Basale: ventral margin with four short slender bristles with short spines, and two long bristles with wreaths of long hairs. Dorsal margin with three bristles, one near middle and two at distal corner, middle bristle and one of two at distal corner bearing short spines distally. Medial surface with five short bristles proximally near ventral corner and one short bristle at middle near ventral margin. Exopodite (fig. 2*e*) almost reaching middle of first endopodite joint with two terminal bristles, distal about one-half length of proximal bristle, both with short hairs distally on some specimens; tip of joint with blunt hirsute process. Endopodite: first joint with one bare short bristle and three long hirsute ventral bristles distally. Second joint dorsal margin with proximal group of two, and distal group of six bare bristles; ventral margin with two bare bristles distal to middle, one short annulate bristle, and two clawlike bristles subdistally. End joint (fig. 2*f*) with two large subequal claws, one short dorsal claw, and three bare annulate bristles. Medial surfaces of basale and first and second joints of endopodite provided with groups of hairs.

Maxilla (figs. 2*g*, *h*): Very small. Exopodite with one proximal and two distal bristles; proximal bristle bare, annulate, about one-third length of longest distal bristle; longest distal bristle with hairs, annulate, longer than combined length of second and third joints of endopodite; second distal bristle nonannulate, semitransparent, with

few stiff spinelike hairs, about one-half length of other distal bristle. Coxale with bare, annulate anterior bristle distally. Three small endites, each with about five bare, nonannulate, semitransparent bristles (crowding of bristles makes accurate count difficult); one bare, annulate bristle about same length as proximal bristle of exopodite, located near base of third endite. Anterodistal end of basale with long, stout, annulate bristle with long hairs; posterodistal end with bare, nonannulate, semitransparent bristle. Distal ends of first and second endopodite joints with about 14 bare, nonannulate semitransparent bristles; one bare, nonannulate, semitransparent bristle located medially near middle of first endopodite joint; second semitransparent bristle located medially on distal margin. Surface of endopodite and basale with long hairs; precoxal with fringe of long hairs along anterior margin; endopodite surface with short spines.

Fifth limb (figs. 3*a*, *b*): Epipodial appendage with about 39 plumose bristles. First endite with two bare bristles, one long; second endite with one long, stout bristle and about four shorter, semitransparent bristles of varying length, all bare; third endite with one long, stout, annulate bristle provided with short hairs, and about eight bare, shorter, semitransparent bristles. First exopodite joint with about seven bare, semitransparent bristles; second exopodite joint with one broad bladelike and three or four stubby, semitransparent bristles, all bare; third exopodite joint with long, annulate, plumose bristles on outer lobe and about three bare, semitransparent bristles of unequal lengths on inner lobe; end joints with about six bristles, two longest bristles hirsute, annulate, one stout bristle also annulate, but without hairs, remaining three bare and semitransparent.

Sixth limb (fig. 3*c*): Protopodite: first endite with one bristle, bare or with short spines; second endite with one bare, proximal bristle and three terminal bristles; third endite with six terminal bristles, three medial, three lateral; fourth endite with five bristles. Second joint of exopodite narrow with two lobes, distal lobe provided with five stout plumose bristles, proximal lobe with three stout, plumose bristles followed by one short bristle; no bristles in place of epipodial appendage. Surface with clusters of short hairs; joint separations not well marked.

Seventh limb (figs. 3*d*, *e*): Cleaning bristles: four in distal group, two ventral, two dorsal, each with two to four bells; one proximal bristle with two or three bells; bristles bare or with short marginal spines. Terminal comb: fan shaped with marginal teeth (in side view teeth difficult to see, and fan gives false appearance of being single large tooth). One small fan-shaped comb with slender marginal spines on each side of terminal comb. Long slender peg with rounded end, and sharp spine opposite terminal comb.

Copulatory organ (fig. 3*i*): Long, slender, divided into three lobes, each hirsute with two annulate bristles; one lobe with large curved tooth.

Furca (figs. 3*f-h*): Each lamella with 12 to 14 (usually 13) claws consisting of 5 primary and 7 to 9 secondary claws; primary claws numbers 1 and 2 followed by 3 to 5 (usually 4) secondary claws, 1 primary claw, 3 to 5 (usually 4) secondary claws, and finally 2 small primary claws; medial and lateral rows of teeth on first 3 primary claws; lateral sides of proximal 2 primary claws each with comb of

TABLE 1.—*Distribution of primary (P) and secondary (S) claws on furcal lamellae*

Specimen	Claw														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
686Z-A Left	P	P	S	S	S	S	P	S	S	S	S	P	P		13
Right	P	P	S	S	S	S	P	S	S	S	S	P	P		13
686Z-12 Left	P	P	S	S	S	S	P	S	S	S	S	P	P		13
686Z-13 Left	P	P	S	S	S	S	P	S	S	S	S	P	P		13
Right	P	P	S	S	S	S	S	P	S	S	S	S	P	P	14
686Z-14 Left	P	P	S	S	S	S	P	S	S	S	S	P	P		12
Right	P	P	S	S	S	P	S	S	S	S	P	P			12
686Z-4 ?	P	P	S	S	S	S	P	S	S	S	S	S	P	P	14
686Z-B Left	P	P	S	S	S	S	P	S	S	S	S	P	P		13
Right	P	P	S	S	S	S	P	S	S	S	S	P	P		13
686Z-R Left	P	P	S	S	S	S	P	S	S	S	S	P	P		13
Right	P	P	S	S	S	S	P	S	S	S	S	P	P		13
686Z-J Left	P	P	S	S	S	S	P	S	S	S	S	P	P		13
Right	P	P	S	S	S	S	P	S	S	S	S	P	P		13
686Z-H Left	P	P	S	S	S	S	P	S	S	S	S	P	P		13
Right	P	P	S	S	S	S	P	S	S	S	S	P	P		13
686Z-K Left	P	P	S	S	S	S	P	S	S	S	S	P	P		13
Right	P	P	S	S	S	S	S	P	S	S	S	S	P	P	14
686Z-L Left	P	P	S	S	S	S	P	S	S	S	S	P	P		13
Right	P	P	S	S	S	S	P	S	S	S	S	P	P		13

short spines extending obliquely onto lamella; secondary claws with spines along anterior and posterior margins. Primary claw number 1 with cluster of long hairs near base; lateral surface of each lamella with numerous clusters of short hairs. The distribution of primary and secondary claws on several specimens is shown in table 1.

Eyes: Lateral eyes large; about 17 ommatophores visible in side view, each weakly divided by a suture into two parts (fig. 3*k*). Medial eye pigmented (fig. 3*j*).

Frontal organ (fig. 3*j*): Elongate, two jointed; short spines on surface of end joint and distal end of basal joint.

DESCRIPTION OF FEMALE.—Shell (figs. 4, 5*a,b*): oval in lateral view, highest near middle, widest behind middle; prominent rostrum, broad rostral incisure (figs. 4*a-c*). Rostrum anterior margin and shell anteroventral margin with scalloped outline formed by crescent-like marginal denticulations of flange (figs. 4*f*, 5*b*). Posterior one-third of dorsal margin with linear hinge depressed below outline of shell (fig. 4*i*); posterior hinge element of each valve with angular sclerotized process; straight medial hinge element; anterior hinge element not prominent. Left valve broadly overlaps right valve along antero-dorsal margin (fig. 4*b*). Numerous muscle scars in front of middle of valve, located more anterior than on male (figs. 4*a*, *e*). Shell surface with irregular polygons distributed in shingle-like pattern, anterior to muscle scars (figs. 4*e*, 5*a*).

Inner lamella broad, with vestibule; line of concrescence (identified as inner margin of clear zone of inner lamella) near middle of inner lamella anteriorly and ventrally, coming closer to outer margin posteriorly (figs. 4*f-h*). Selvage with wide, corrugated, lamella prolongation with fringe of slender spines along margin. Faint striations along anteroventral inner lamella. About six long hairs, bearing secondary spines, in row on inner lamella behind rostrum (figs. 4*f*, 5*b*). Small tapered hair on inner lamella below rostrum (figs. 4*f*, 5*b*) followed by four hairs with secondary spines. Numerous tapered hairs on posteroventral part of inner lamella (fig. 4*g*). Numerous radial pore canals and false radial pore canals along anterior, ventral, and posterior margins (figs. 4*f-h*). Hairs with blunt and pointed ends (fig. 4*d*), scattered on rostral surface; tapered hairs of various lengths in row along ventral and posteroventral margins; additional hairs in normal pore canals, scattered over shell surface. Long tapered hair projecting backward from behind posterior hinge element of each valve (fig. 4*g*).

Dimensions: Length 1.07 mm, height 0.66 mm, width 0.51 mm.

First antenna (fig. 5*c*): First and second joints with surface hairs. Second joint with distal bristles, one dorsal, one lateral bristle. Third joint with one ventral and one dorsal bristle, dorsal bristle with short hairs. Fourth joint with two dorsal bristles and one short and two long bristles near ventrodistal corner. End joints with eight bristles.

Second antenna (figs. 5*d-h*): Exopodite with nine joints (fig. 5*e*); first joint elongate without bristle; second to ninth joints trapezoidal decreasing in width distally, without basal spines. Distal margin of second joint only with comb of long spines or stiff hairs (fig. 5*h*). Second and third joints each with bristles with denticulation along ventral margin, no natatory hairs (fig. 5*g*); fourth to eighth joints with long bristles with natatory hairs; ninth joint with four bristles (fig. 5*f*): long bristle with natatory hairs; shorter bristles bare, one about one-

third length of long bristles, two extremely short. Endopodite with two joints (fig. 5*d*): basal joint with a long stout bristle with wreath of hairs and a short, bare annulated bristle (additional bristles normally present on this joint in subfamily were not observed); distal joint elongate with stout terminal bristle with wreath of long hairs near middle.

Mandible (figs. 5*i, j*): Coxal endite large, bifurcate, with rows of spines. Basale: ventral margin of left appendage with four short bristles followed by one long bristle near distal end; right appendage with two additional bristles near middle (fig. 5*j*), one with base on medial side, other on lateral side; dorsal margin of both appendages with three bristles, one near middle and two at distal corner; medial surface with one bristle at middle near ventral margin and four shorter bristles near proximoventral corner; short spines and long hairs on ventral margin near proximal end. Exopodite short with two bristles and hairy process at tip, inner bristle with short marginal hairs. Endopodite: distal end of first joint with two long and two short bristles ventrally; dorsal margin of second joint with proximal group of two and distal group of about five bristles; ventral margin with two subdistal bristles and distally with one short, annulate bristle and two clawlike bristles; distal joint with two long, stout claws of subequal length and three bare, annulate bristles. Medial surface of basale and second joint of endopodite with hairs.

Maxilla (figs. 5*k, 6a-c*): Precoxa and coxa with marginal fringe of fine hair, anterior margin of coxa with one short, bare, annulate bristle. Basale with three distal bristles: anterior bristle with wreaths of long hairs, medial bristle bare, posterior bristle broken off at base of specimen examined. Anteroventral margin of first endopodite joint with annulate bristle with wreath of hairs near middle and marginal hairs. Terminal end of endopodite with 13 bristles (fig. 6*b*). Exopodite with two long bristles and one short bristle (fig. 5*k*). Three endites (fig. 6*c*): first endite with six bristles; second endite with four bristles; third endite with six distal bristles and one proximal bristle.

Fifth limb (figs. 6*d-f*): Main tooth of first joint of exopodite comprised of several constituent teeth (fig. 6*d*): distal tooth rectangular; following tooth longer, slender with few low secondary teeth; next tooth shorter than distal tooth, slender, pointed with few secondary teeth proximally; next tooth short, bare. Spine with row of secondary spines along dorsal margin following fourth tooth. Triangular tooth anterior to rectangular distal tooth low, curving upward. Distal margin of first joint with two centrally located bristles with wreath of stiff hairs near middle; lateral margin with low node, bearing short bristle with wreath of stiff hairs near middle (fig. 6*d*). Second joint with large tooth with low crenulations along inner curvature; two

bristles on base near posteroproximal margin, one spinose, one bare (fig. 6e). Third joint with two long, plumose bristles on outer margin and two or three on inner margin. End joints with about seven bristles. Endites with numerous bristles.

Sixth limb (figs. 6g-h): Protopodite: first endite with one short, annulated, bare bristle; second endite with three terminal bristles with wreath of stiff hairs near middle, and one short, annulated, bare bristle on posterior margin; third endite with six terminal bristles, all with wreath of stiff hairs near middle; fourth endite of left sixth limb with five bristles, all with wreath of stiff hairs near middle, right sixth limb with bifurcating bristle resulting in total of six bristles on endite (fig. 6h). Second joint of exopodite with two distinct lobes; distal lobe with five bristles on left sixth limb, six on right, all with wreaths of stiff hairs; proximal lobes on both limbs with three long, stout, plumose bristles followed closely by one short, bare, annulate bristle.

Seventh limb (fig. 6i): Quite similar to male. Terminal comb consisting of fan with marginal teeth, in side view appearing as large single tooth. Small fan with marginal teeth located on each side of terminal comb. Slender peg and sharp spine opposite comb. Four of five distal bristles and one proximal bristle; bristles bare or with short marginal spines distally.

Frontal organ (fig. 6j): 2-jointed; apparent additional joints near proximal end probably resulting from wrinkles and folds.

Eyes (fig. 6j): Median eye well developed, pigmented; lateral eyes absent.

Furca: Missing from specimen.

Eggs: About five oval eggs in brood pouch.

REMARKS.—*Euphilomedes multichelata* is closely related to *Euphilomedes oblonga* (Juday, 1907). Specimens of the latter were unavailable for study. According to the description and figure by Juday (1907, p. 145, pl. 20, fig. 6), *E. oblonga* has fewer secondary claws (5 claws) on the caudal furca than *E. multichelata* has. In order to determine whether the difference in number of secondary claws could be due to variability in that character, the number of secondary claws on the furca was counted on 11 specimens of *E. multichelata* (table 1). No specimen examined had fewer than seven secondary claws, most had eight, a few nine; consequently it is concluded that *E. multichelata* and *E. oblonga* are distinct.

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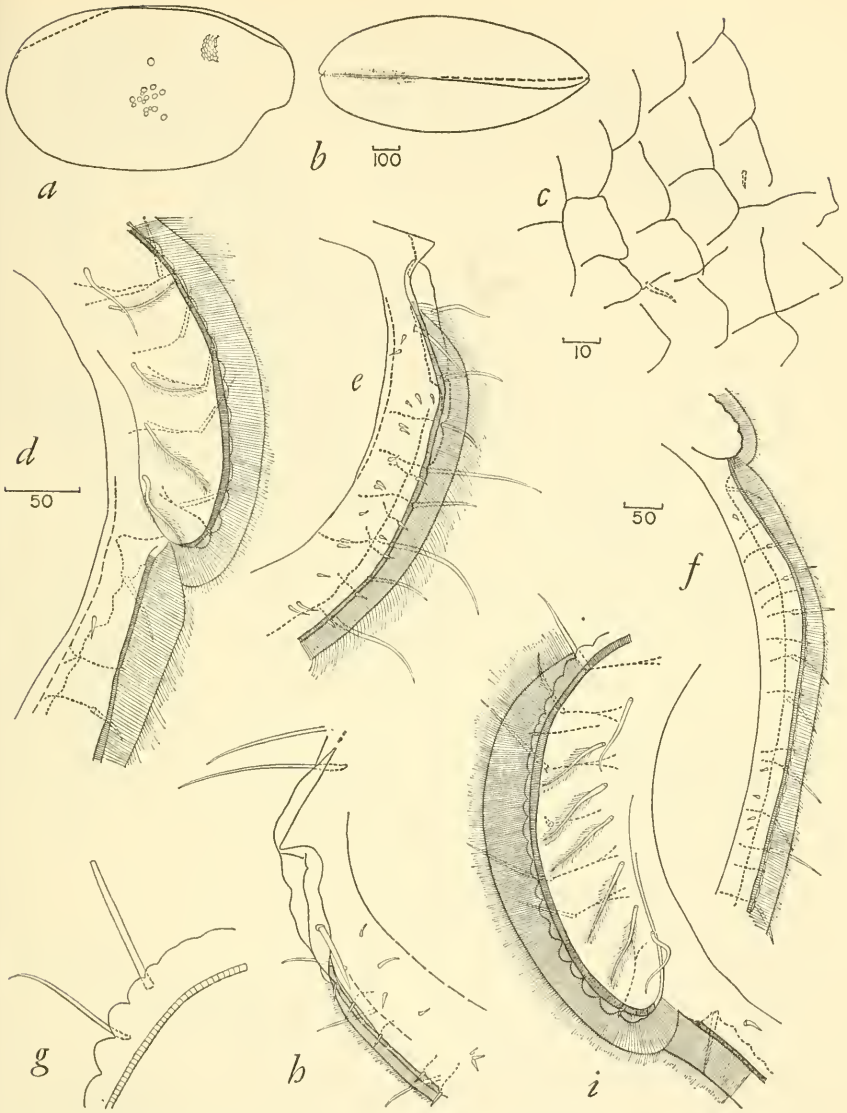


FIGURE 1.—*Euphilomedes multichelata*, male: *a*, right lateral view, showing position of muscle spots and scalelike appearance of reticulations on anterior part of shell (holotype); *b*, dorsal view of shell, anterior on right (holotype); *c*, detail of surface pattern, anterior part, right valve from inside (686Z-12); *d*, medial view, anterior extremity, left valve (686Z-13); *e*, medial view, posterior extremity, right valve (686Z-12); *f*, medial view, anteroventral margin, left valve (686Z-13); *g*, detail of blunt, tapered hair on rostrum of right valve from inside (686Z-12); *h*, medial view, posterodorsal part, left valve (686Z-13); *i*, medial view rostrum, right valve (686Z-13). (Same scale, in microns: *a*, *b*; *c*, *g*; *d*, *e*, *h*, *i*; *f*.)

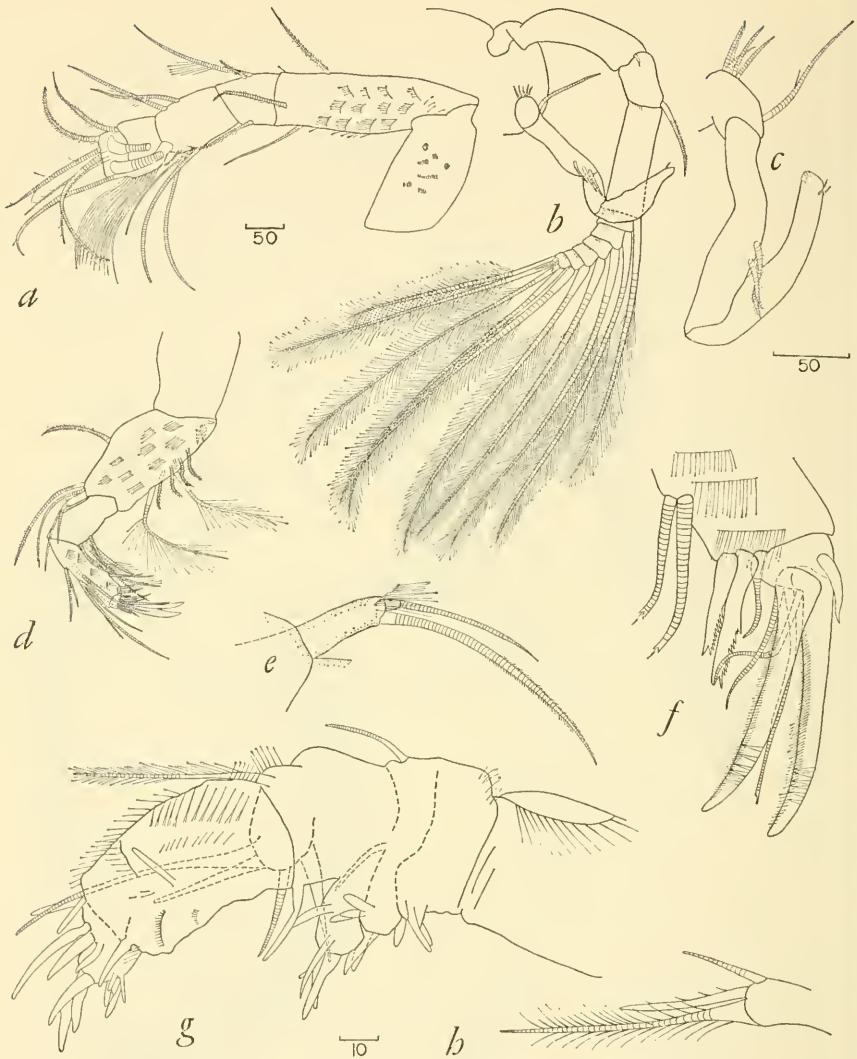


FIGURE 2.—*Euphilomedes multichelata*, male: *a*, lateral view, left first antenna (686Z-12); *b*, medial view, right second antenna (686Z-14); *c*, medial view endopodite, right first antenna (686Z-13); *d*, lateral view, left mandible (686Z-12); *e*, medial view exopodite, left mandible (686Z-13); *f*, medial view, distal end, left mandible (686Z-14); *g*, medial view, right maxilla (686Z-13); *h*, medial view, exopodite of left maxilla (686Z-13). (Same scale, in microns: *a*, *b*, *d*; *c*; *e*-*h*.)

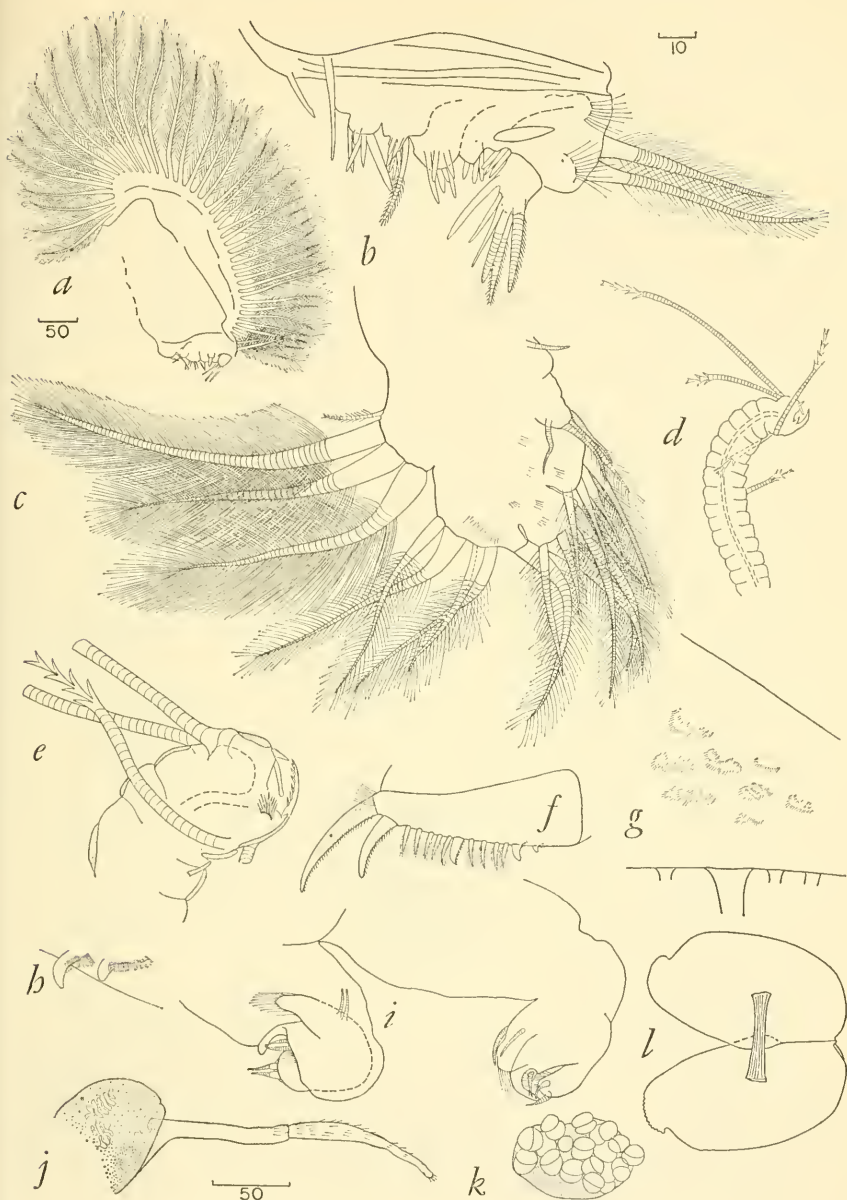


FIGURE 3.—*Euphilomedes multichelata*, male: *a*, 5th limb (686Z-14); *b*, distal end, 5th limb (686Z-13); *c*, medial view, left 6th limb (686Z-12); *d*, distal part, 7th limb (686Z-14); *e*, distal end, 7th limb (686Z-13); *f*, medial view, right lamella of furca (686Z-13); *g*, lateral view, right lamella of furca showing surface hairs (686Z-13); *h*, lateral view, two proximal primary claws on left lamella of furca (686Z-13); *i*, copulatory organ (686Z-13); *j*, frontal organ and medial eye (686Z-13); *k*, lateral eye (686Z-14); *l*, opened valves showing position of adductor muscles, left valve at top (686Z-12). (Same scale, in microns: *a, f, k*; *b, c, e, g-i*; *d, j*; *l*.)

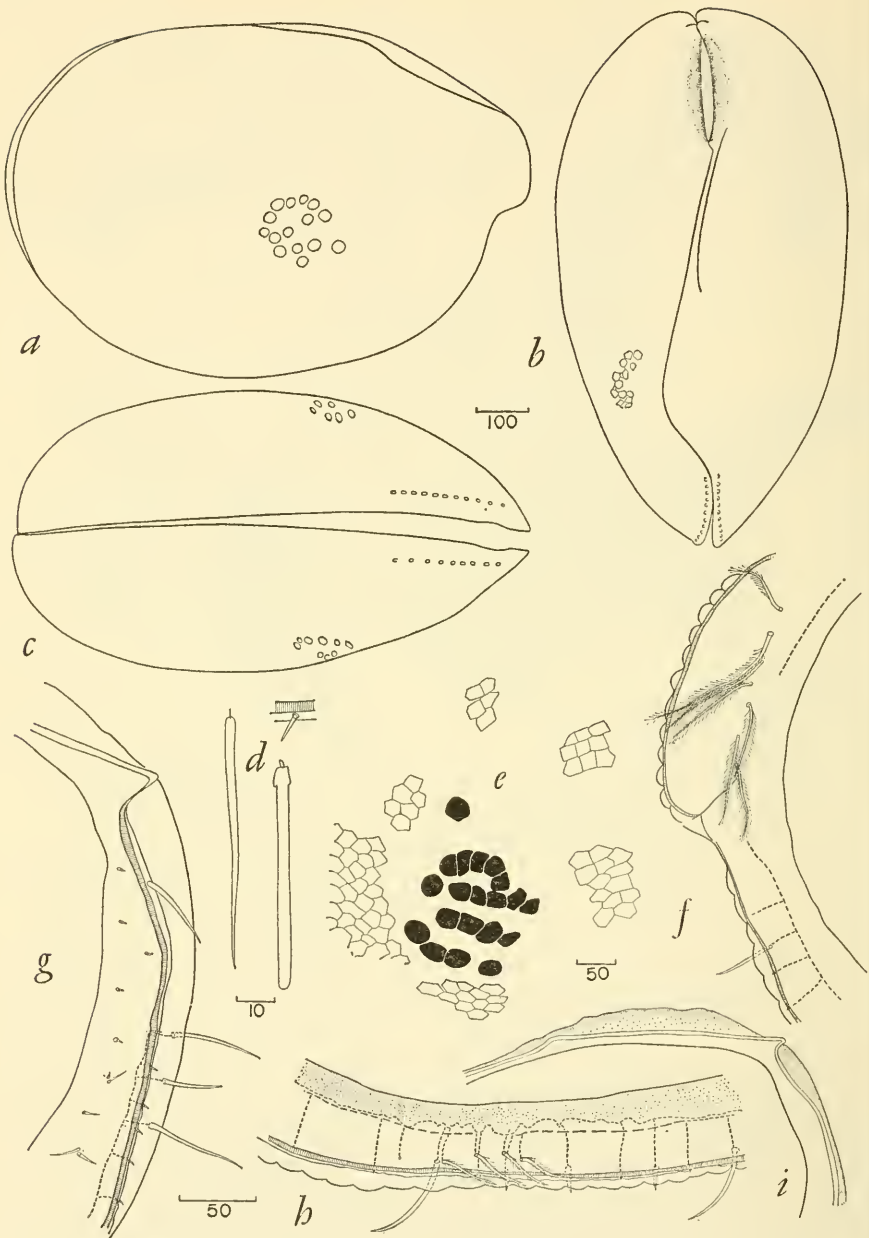


FIGURE 4.—*Euphilomedes multichelata*, female (USNM 112985): *a*, lateral view, showing muscle scars; *b*, dorsal view with polygons shown on right valve; *c*, ventral view, anterior to right; *d*, three hairs from shell: long tapered hair from posterior margin, short tapered hair from radial pore canal on posterior margin, blunt hair from rostrum; *e*, muscle scars and portions of ornamentation in vicinity of scars, right valve from inside, anterior to left; *f*, medial view, anterior right valve; *g*, medial view, posterior right valve; *h*, medial view, ventral section, right valve; *i*, medial view, hinge section, right valve. (Same scale, in microns: *a-c*; *d*; *e,i*; *f-h*.)



FIGURE 5.—*Euphilomedes multichelata*, female (USNM 112985): *a*, medial view, polygons of left valve anterior to adductor muscle attachment, anterior of valve to right; *b*, medial view, anterior left valve; *c*, lateral view, right first antenna; *d*, endopodite, second antenna; *e*, medial view, right second antenna; *f*, detail of 8th and 9th joints of second antenna; *g*, detail of sections of bristles on 2nd, 3rd, and 4th joints of 2nd antenna; *h*, detail showing comb of stiff hairs or spines on distal margin of 2nd joint of second antenna; *i*, lateral view, left mandible; *j*, lateral view of basale of right mandible; *k*, medial view, exopodite of maxilla. (Same scale, in microns: *a, d, f-h, k; b, c, i, j; e.*)

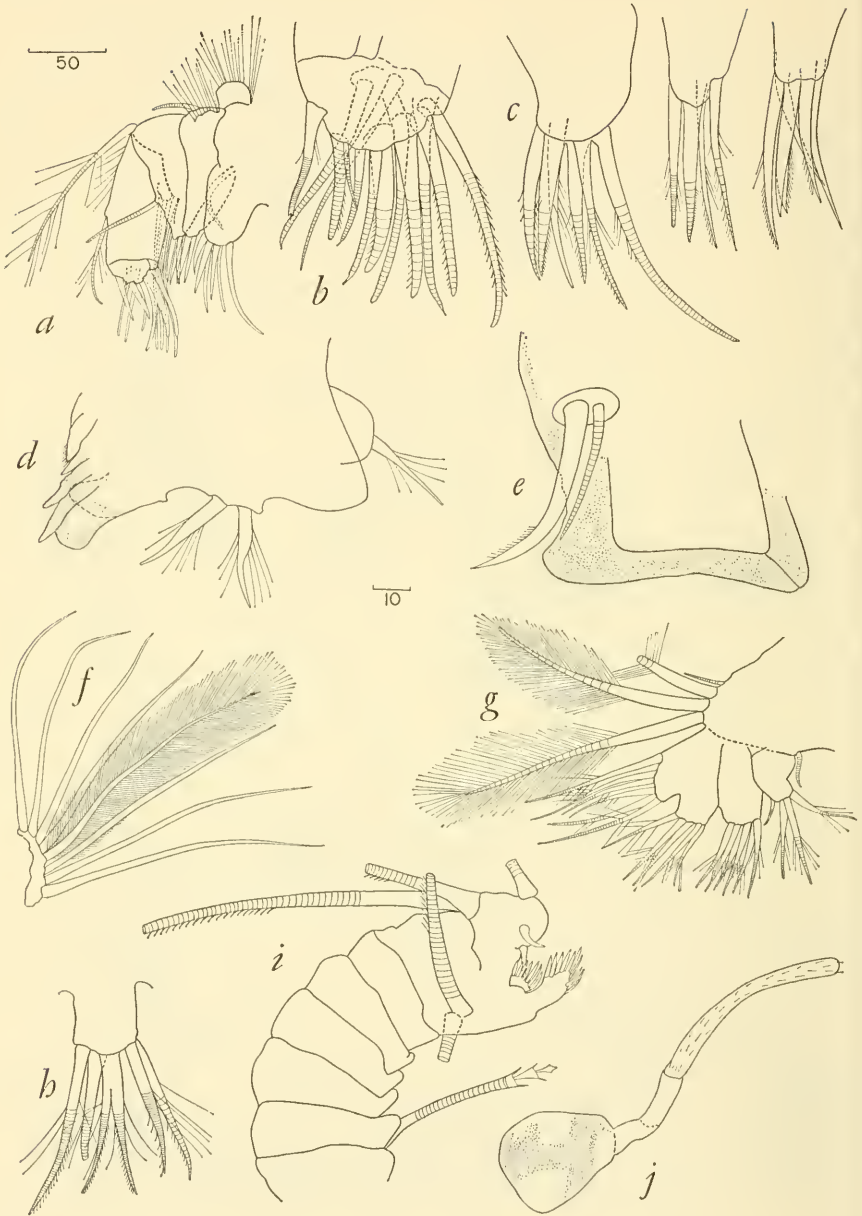


FIGURE 6.—*Euphilomedes multichelata*, female (USNM 112985): *a*, medial view, right maxilla; *b*, medial view, distal end, endopodite of maxilla; *c*, medial view, endites I, II, III of maxilla; *d*, posterior view, 1st joint of right 5th limb; *e*, posterior view, 2nd joint of right 5th limb; *f*, part of epipodial appendage of 5th limb, fine hairs shown on one bristle, other bristles similar; *g*, lateral view, left 6th limb; *h*, medial view, 4th endite, right 6th limb; *i*, distal end, 7th limb; *j*, medial eye and frontal organ. (Same scale, in microns: *a, f, g, j*; *b-e, h, i*.)