

## FOUR NEW AND UNUSUAL AMPHIPODS FROM THE GULF OF MEXICO AND CARIBBEAN SEA

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*Abstract.*—Four new species of amphipods from the Gulf of Mexico and Caribbean Sea are described. These new species are *Atylus urocarinatus*, *Eusiroides yucatanensis*, *Megaluropus myersi*, and *Seba tropica*.

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A number of unusual and in some cases rare amphipods have been discovered among collections from the Gulf of Mexico and Caribbean Sea. Four of these which belong to rather small and poorly known genera are described as new in this paper. They are, nonetheless, quite distinctive and represent important taxonomic discoveries which aid in our understanding of amphipod distributions within the two regions. A general discussion of these diverse taxa is not practical. Each species will, however, be treated individually within each description in an effort to help define them phylogenetically.

A short diagnosis to the families and genera of each new species is presented before each description. A brief listing of synonymies of the genera is also included when applicable. Neither the diagnosis nor synonymies are meant to be complete but are provided to help define the new species taxonomically.

### Illustrations and Descriptions

The following method of lettering is used to designate the various structures illustrated and follows the system initiated by J. L. Barnard (1970a). The capital letter in the figure designates a specific structure. Lower case letters preceding the capital letter identify specific individuals. Lower case letters or numbers following the capital letter modifies the description of the part. **A** = antenna, **B** = labrum (upper lip), **C** = coxa, **D** = dactyl or pereopod, **E** = epimeron, **F** = accessory flagellum, **G** = labium (lower lip), **H** = head, **I** = inner plate or inner ramus, **J** = epistome, **K** = eye, **L** = palp, **M** = mandible, **N** = gnathopod, **O** = outer plate or outer ramus, **P** = pereopod, **Q** = mandibular molar, **R** = ramus, **S** = maxilliped, **T** = telson, **U** = uropod, **V** = urosome, **W** = pleon, **X** = maxilla, **Y** = prebuccal complex, **Z** = mandibular incisor; **a** = anterior, **b** = without, **c** = setae, **d** = finger hinge, **e** = dactyl of gnathopod, **f** = female, **h** = holotype, **i** = inner, **j** = juvenile, **k** = cuticle, **l** = left, **m** = male, **n** = palmar corner, **o** = opposite or other side, **p** = dorsal, **q** = one half side, **r** = right, **s** = setae

removed, **t** = spine, **u** = flattened, **v** = ventral, **w** = palm, **x** = medial, **y** = article. Synonyms are based on those of J. L. Barnard, 1969a.

### Atylidae

*Diagnosis*.—Body compressed; urosome carinate, urosomites 2–3 fused; mandible with 3-articulate palp.

*Remarks*.—This family was synonymized with Dexaminidae by J. L. Barnard, 1970b, and subsequently reestablished by Bousfield, 1973 as a monogeneric (*Atylus*) family.

### *Atylus* Leach, 1815

*Nototropis* Costa, 1853:170; *Epidesura* Boeck, 1861:659; *Paratylus* Sars, 1895:462; *Anatylus* Bulycheva, 1955:205.

*Diagnosis*.—That of the family.

### *Atylus urocarinatus*, new species

Figs. 1, 2

*Description*.—Male 5.3 mm. Head with distinct blunt rostrum; eyes large, well developed, suboval, with some clear ommatidia; cephalic lobes produced, corners rounded, inferior antennal sinus shallow, rounded; urosomite 1 with dorsal carina, fused urosomites 2–3 also with carina. Antenna 1: Length ratios of peduncular articles 1, 2, 3 = 51:30:19; flagellum with 24 articles, poorly setose; accessory flagellum uniarticulate with 2 terminal setae. Antenna 2: Article 3 and 4 of peduncle with dorsal clumps of setae, article 5 less setose and 1.4 times as long as 4, ventral edge of article 4 with 5 spines, article 5 with 4 spines; flagellum with 19 articles, poorly setose. Upper lip: Unproduced, distally rounded. Mandible: Molar tritulative with accessory setae, molar flake on left; 3 accessory blades on the left, 2 on the right; multilobe lacinia mobilis also present on both; incisor well developed with 6 rounded teeth; palp with 3 articles on length ratios 13:70:92; article 2 spiculate, medioventral edge of article 2 with 4 plumose setae, 4 elongate terminal setae. Lower lip: Inner lobes present but weakly produced; mandibular process of outer lobes elongate and linear, distomedial edge of outer lobes with 3 setae each. Maxilla 1: Inner plate quadrate with 4 terminal setae; outer plate with 10–12 spine teeth; palp biarticulate, distal article elongate with 5 terminal spines and 2 subterminal setae. Maxilla 2: Inner plate with 1 stout, plumose, medial setae followed by mediodistal row of normal setae; outer plate larger than inner with stout terminal setae; 5 laterobasal setae also present. Maxilliped: Inner plate apically rounded with 10 plumose setae on mediodistal edge; outer plate with 7 chisel teeth grading

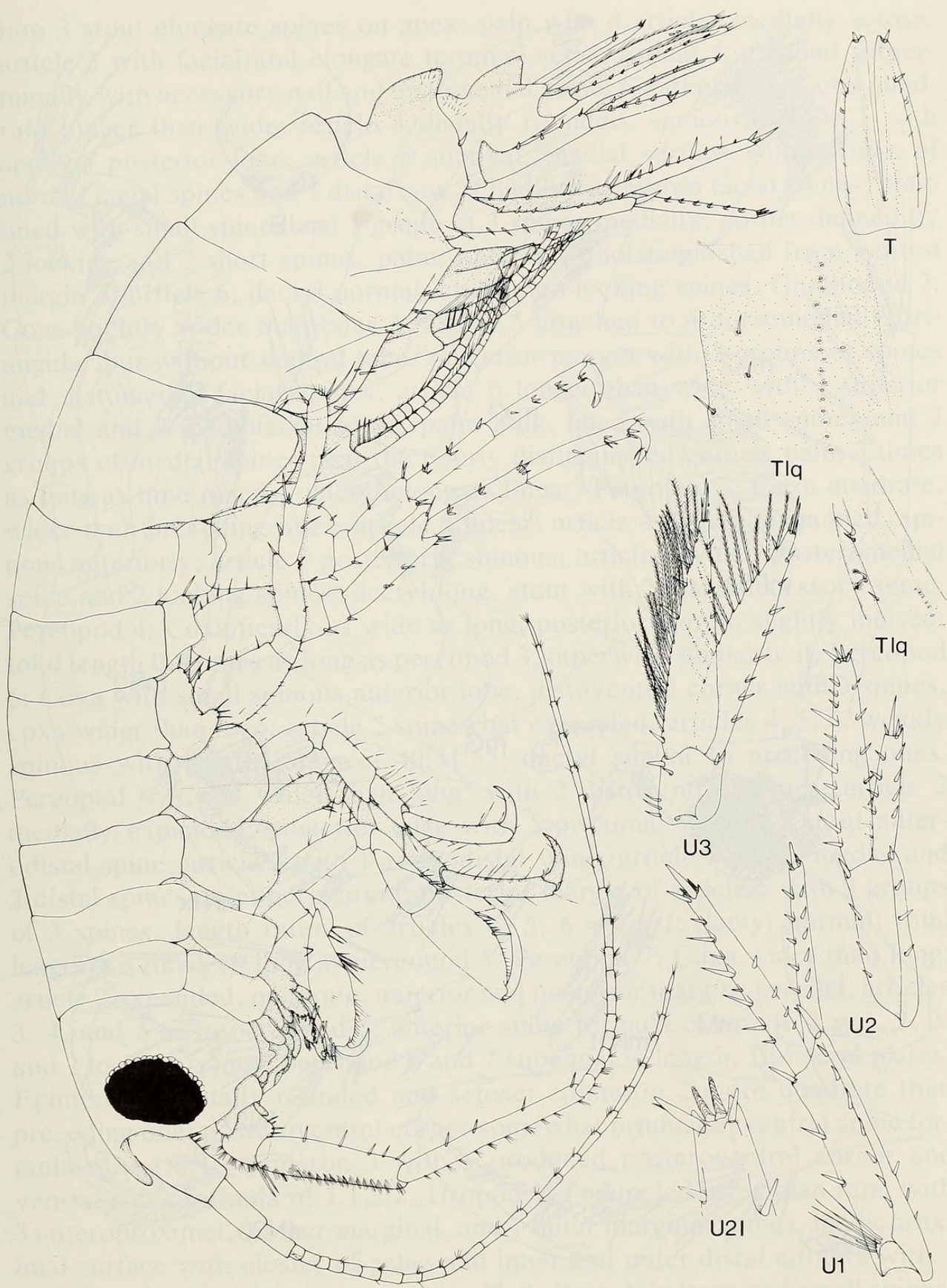


Fig. 1. *Atylus urocarinatus*, male 5.30 mm.

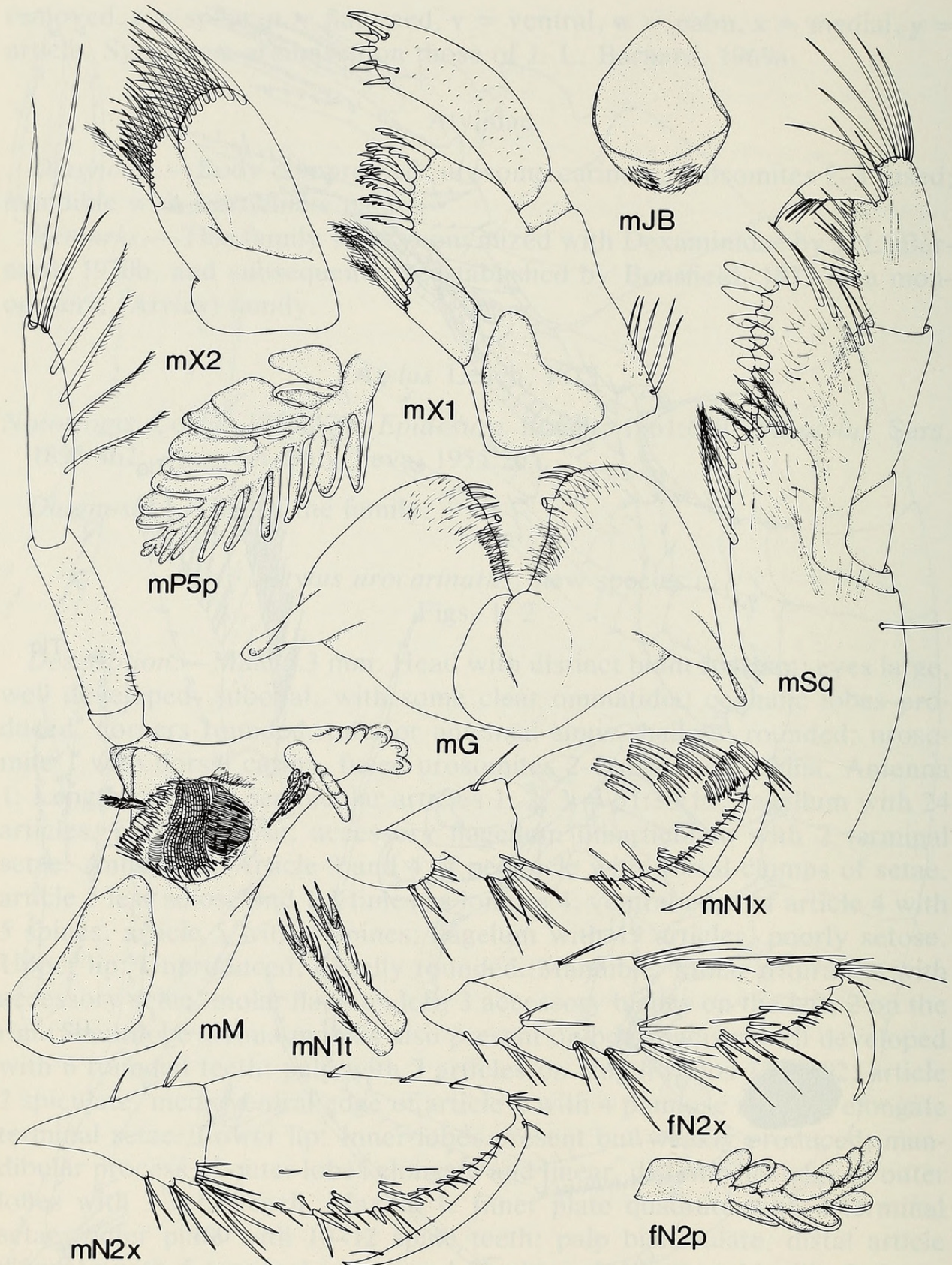


Fig. 2. *Atylus urocarinatus*, m = male 5.30 mm; f = female 5.20 mm.

into 3 stout elongate spines on apex; palp with 4 articles medially setose, article 3 with facial and elongate terminal setae, article 4 attached subterminally with accessory nail and distomedial setae. Gnathopod 1: Coxa quadrate longer than wide; article 4 distally rounded, spinous; article 5 with spinous posterior lobe; article 5 suboval, medial surface with 4 rows of normal facial spines and 1 distal row of highly sculptured facial spines; palm lined with small spines and 1 group of 3 spines medially, corner defined by 2 locking and 2 short spines, palm otherwise undistinguished from ventral margin of article 6; dactyl normal, closing on locking spines. Gnathopod 2: Coxa slightly wider than coxa 1; article 5 attached to 4 dorsomedially, triangular but without ventral lobe, posterior margin with 3 groups of spines and distomedial facial spines; article 6 longer than wide with 3 superior medial and 3 mediofacial setae; palm long, lined with small spines and 2 groups of medial spines near the poorly distinguished corner, palm 3 times as long as hind margin; dactyl elongate linear. Pereopod 3: Coxa quadrate, wider than preceding ones; article 2 linear; article 4 distally expanded, spinous anteriorly; article 5 posteriorly spinous; article 6 with 1 posteromedial spine and 2 locking spines; dactyl long, stout with 2 distal accessory setae. Pereopod 4: Coxa nearly as wide as long, posterior margin slightly incised; total length 0.9 times as long as pereopod 3, otherwise similar to it. Pereopod 5: Coxa with small spinous anterior lobe, distoventral corner with 3 spines, coxa wider than long; article 2 somewhat expanded, articles 4, 5, 6, weakly spinous with length ratios of 40:31:55; dactyl similar to preceding ones. Pereopod 6: Coxa wider than long, with 2 distoventral spines, article 2 medially expanded, posterior edge with 5 proximal spines, 1 stout anterodistal spine; article 3 with 1 anterodistal spine; article 4 with 1 medial and 2 distal spines on either margin; posterior margin of article 5 with 3 groups of 3 spines; length ratios of articles 4, 5, 6 = 1:1:1; dactyl normal; total length 1.3 times as long as pereopod 5. Pereopod 7: Coxa wider than long; article 2 expanded, quadrate, anterior and posterior margins parallel; articles 3, 4, and 5 as in pereopod 6; anterior spine formula of article 6 = 1, 3, 3, and 2 locking spines; pereopod 6 and 7 subequal in length. Epimeral plates: Epimeron 1 distally rounded and setose; epimeron 2 more quadrate than preceding one; posteroventral corner somewhat produced, ventral spine formula of 1,1,2,1; epimeron 3 with a produced posteroventral corner and ventral spine formula of 1,1,2,2. Uropod 1: Peduncle longer than rami with 3 anteroproximal, 3 inner marginal, and 7 outer marginal spines, medioproximal surface with cluster of setae and inner and outer distal corners with 1 inter-ramal spine each; inner ramus with 9 alternately large and small spines, inner margin with 4 medial spines, apex with 1 stout and 2 sculptured spines; outer ramus with 6 inner and outer marginal spines and 4 terminal spines, (two of these sculptured); rami subequal in length. Uropod 2: Peduncle with

4 inner and outer marginal spines; inner ramus 1.6 times as long as outer, inner margin with 11 spines, outer margin with 5 spines and 4 short terminal spines (of these two medial most sculptured); outer ramus with 4 inner and outer marginal spines and 4 terminal spines (one of these stout and elongate). Uropod 3: Peduncle short, with 3 slender medioproximal setae, 2 distomedial and 1 distolateral spines; rami subequal in length, foliaceous along inner margins; inner margin of inner ramus with 6 spines, outer margin with 3 distal spines, apex with a group of short slender spines; outer ramus with 3 inner marginal and 8 outer marginal spines, apex same as inner ramus. Telson: Deeply cleft, each lobe with 1 distolateral and 1 terminal spine; lobes with laterally exposed setulose ridge; dorsoproximal surface of each lobe with medial row of minute pits. Gills: Gill of coxa 7 essentially simple, with secondary lobes; gill of coxa 6 simple spatulate; gills 2–5 pinnate, gill of coxa 2 more reduced; coxa 1 without gill.

*Female*.—Like the male except in structure of gnathopod 2. Article 6 of the gnathopod is more linear and has a shorter palm than the male. The female gnathopod has more medifacial spines and a more setose article 2 than the male. Gnathopod 1 of the female is smaller than that of the male. Brood plates present on pereopods 2–5.

*Types*.—Holotype, USNM 172174, male, 5.20 mm. Allotype USNM 172175, female, 5.30 mm and a paratype series, USNM 172176, of 10 specimens.

*Type-locality*.—All types from Port Mansfield, Texas, depth 1 m.

*Material examined*.—The types and specimens from Lizardo Lagoon, Mexico; Corpus Christi Bay, Texas; and upper Laguna Madre, Texas.

*Distribution*.—Gulf of Mexico south of Laguna Madre, 1 m depth.

*Relationships*.—This species is very close to a New Zealand species *A. taupo* J. L. Barnard, 1972. *Atylus urocarinatus* differs from *A. taupo* in that it has a slightly more elongate and slender rostrum, the cephalic lobe is more produced and quadrate, and the eyes have clear ommatidia on posterior margins only. Proximal articles of antenna 2 in *A. urocarinatus* have dorsal rows of short setae and a number of spines on the ventral margin which are lacking in *A. taupo*. Gnathopods in these two species are very similar in ornamentation and structure. Article 5 of gnathopod 1 in *A. urocarinatus* is shorter with a more pronounced posterior lobe, although less spinous; article 6 is shorter, more oval with a distal row of highly sculptured spines not apparent in *A. taupo*. The palm of gnathopod 1 is also shorter and lacks the proximobasal spines of *A. taupo*. Spination of the uropods differs in these two species.

Both *A. taupo* and *A. urocarinatus* show close affinities with the Norwegian species *A. swammerdami* (Milne Edwards, 1830) as J. L. Barnard (1972a) previously pointed out. Dorsal carination of urosome, head, and complexly pinnate gills are all very similar in these three species.

*A. homochir* (Haswell, 1885) from Australia is somewhat similar to this group, except for the produced anteroventral corner of the head, simple gills, and more blunt rostrum.

*Ecological information.*—All specimens of *Atylus urocarinatus* were collected at shallow depths in *Thalassia* beds. *A. taupo* has been collected in New Zealand from rocks and as plankton on littoral benthos. Ovigerous females of *Atylus urocarinatus* were taken throughout the year.

### Eusiridae

*Diagnosis.*—Body smooth, pleon with dorsal carina; pleosome powerful; eyes large; inferior antennal sinus sharply incised; accessory flagellum small, usually with 2 articles; epimeral plate 3 generally serrate behind; telson cleft.

#### *Eusiroides yucatanensis*, new species

Figs. 3, 4

*Description of female.*—6.0 mm, head with evanescent rostrum; eyes large and suboval, with orange ommatidia; ventral edge of head covered by coxa 1. Antenna 1: Exceeding length of antenna 2; first 3 articles successively shorter; accessory flagellum with one article as long as first article of primary flagellum; primary flagellum with 40+ articles. Antenna 2: Article 5 of peduncle subequal to article 4; peduncle as long as flagellum; flagellum with 35 articles. Upper lip: Epistome normal, unproduced; labrum, rounded, apically setose. Mandible: Molar process produced, without spines or setae; accessory blades 3, lacinia mobilis with 5 cusps, present on both mandibles; palp 3-articulate, article 2 medially expanded with 5 medial setae, article 3 subequal to article 2, with 3 medial and 4 apical setae. Lower lip: Inner lobes present, somewhat reduced; outer lobes normal, apically setose. Maxilla 1: Inner plate with one apical seta, one-half the length of article 2; article 2 with 7 setae. Maxilla 2: Inner plate medially inflated, twice as wide as outer, with 7 medial spines; outer plate with 11 distal setae. Maxilliped: Inner plate with 3 chisel spines and several short setae; outer plate armed with numerous setae on medial and apical edges and posteromedial surfaces; palp expanded and well developed, article 2 produced mediodistally and armed with numerous setae, palp article 4 normal. Gnathopod 1: Coxa produced forward, with posteromedial spine and 2 mediofacial setae; article 2 normal, with 5 medial setae and 7 distal spines; article 3 produced anteriorly, article 4 produced posterodistally, with 7 distal spines; article 5 produced posterodistally with mediofacial setae, posterior edge setose; article 6 subovate, palm unproduced, armed with 5 stout spines, 2 locking spines delineating palm; article 7 normal. Gnathopod 2: Coxa subquadrate, with 1 posteromedial spine and 2 mediofacial setae; article 3 produced anteriorly;

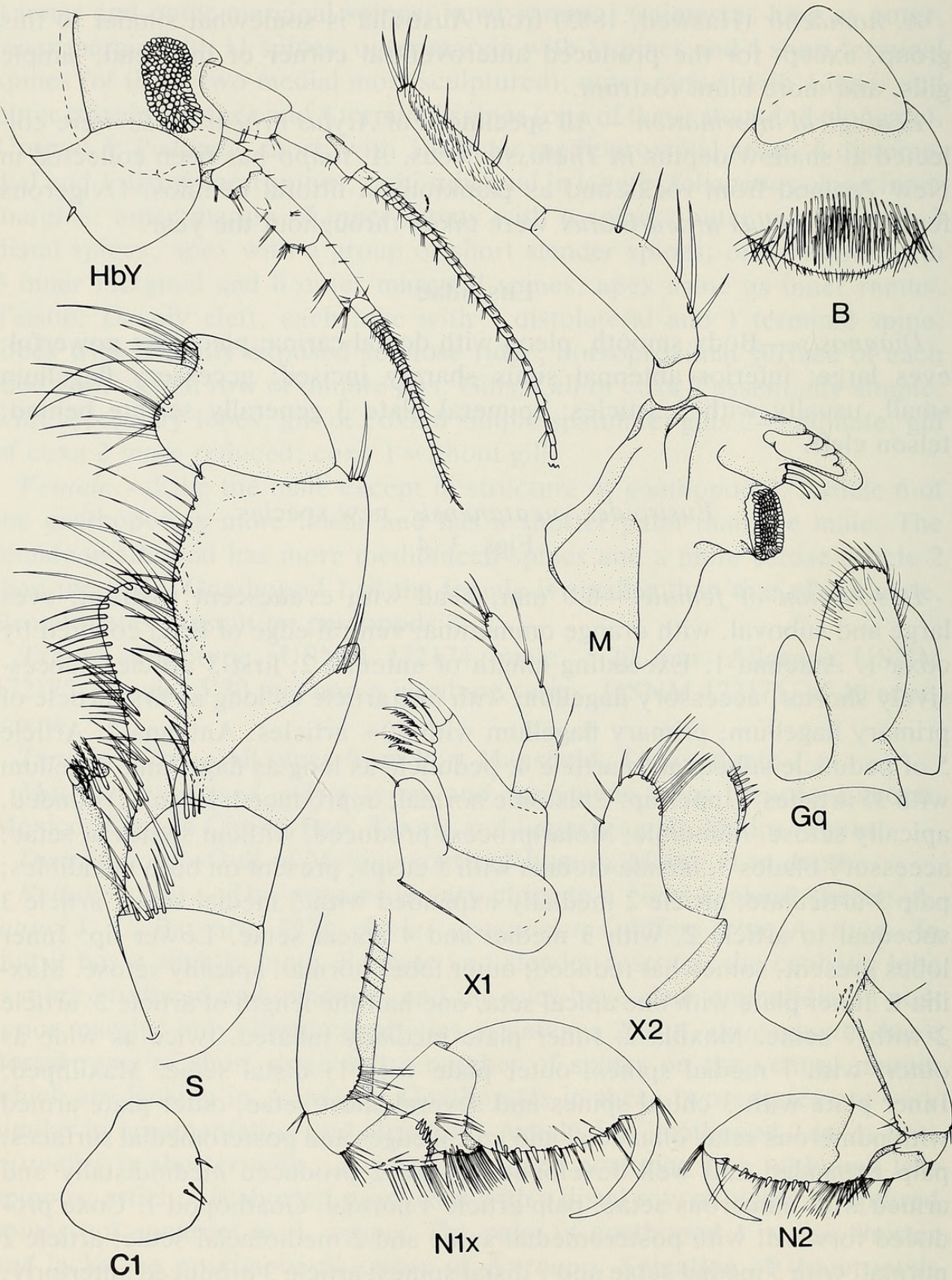


Fig. 3. *Eusiroides yucatanensis*, female 6.0 mm.

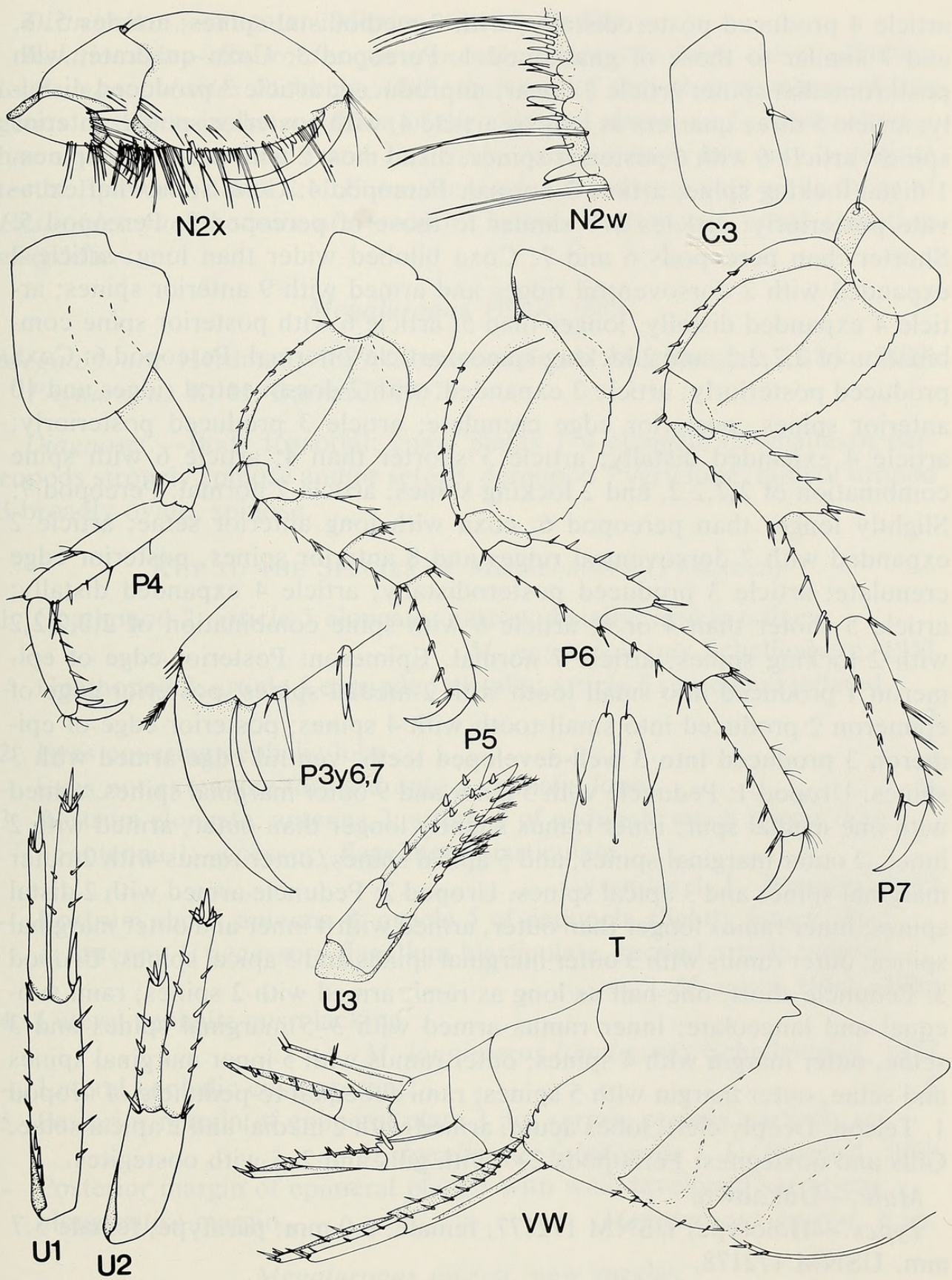


Fig. 4. *Eusiroides yucatanensis*, female 6.0 mm.

article 4 produced posterodistally, with 7 mediobasal spines; articles 5, 6, and 7 similar to those of gnathopod 1. Pereopod 3: Coxa quadrate, with posteromedial spine; article 2 linear, unproduced; article 3 produced distally; article 5 three quarters as long as article 4, with posterior spines, anterior spines; article 6 with 6 posterior spines, distal most 2 with accessory spines, 1 distal locking spine; article 7 normal. Pereopod 4: Coxa somewhat excavate posteriorly; articles 2–7 similar to those of pereopod 3. Pereopod 5: Shorter than pereopods 6 and 7. Coxa bilobed wider than long; article 2 expanded with 2 dorsoventral ridges and armed with 9 anterior spines; article 4 expanded distally, longer than 5; article 6 with posterior spine combination of 2,2,2,2, and 2 locking spines; article 7 normal. Pereopod 6: Coxa produced posteriorly; article 2 expanded, with 2 dorsoventral ridges and 10 anterior spines, posterior edge crenulate; article 3 produced posteriorly; article 4 expanded distally; article 5 shorter than 4; article 6 with spine combination of 2,2,2,2, and 2 locking spines; article 7 normal. Pereopod 7: Slightly longer than pereopod 6; coxa with long anterior setae; article 2 expanded with 2 dorsoventral ridges and 8 anterior spines, posterior edge crenulate; article 3 produced posterodistally; article 4 expanded distally; article 5 shorter than 4 or 6; article 6 with spine combination of 2,2,2,2,2 with 2 locking spines; article 7 normal. Epimeron: Posterior edge of epimeron 1 produced into small tooth with 2 medial spines; posterior edge of epimeron 2 produced into small tooth with 4 spines; posterior edge of epimeron 3 produced into 3 well-developed teeth, ventral edge armed with 3 spines. Uropod 1: Peduncle with 5 inner and 9 outer marginal spines, armed with one medial spur; inner ramus slightly longer than outer, armed with 2 inner, 2 outer marginal spines, and 5 apical spines, outer ramus with 2 outer marginal spines and 3 apical spines. Uropod 2: Peduncle armed with 2 distal spines; inner ramus longer than outer, armed with 4 inner and outer marginal spines; outer ramus with 3 outer marginal spines and 3 apical spines. Uropod 3: Peduncle short, one-half as long as rami, armed with 2 spines; rami subequal and lanceolate; inner ramus armed with 3–5 marginal spines and 3 setae, outer margin with 4 spines; outer ramus with 5 inner marginal spines and setae, outer margin with 5 spines; rami subequal to peduncle of uropod 1. Telson: Deeply cleft, lobes acute, armed with 2 medial and 2 apical setae. Gills and oostegites: Pereopods 2–7 with gills and 2–5 with oostegites.

*Male*.—Unknown.

*Types*.—Holotype, USNM 172177, female, 6.0 mm; paratype, female 5.7 mm, USNM 172178.

*Type-locality*.—Station 41-60 Smithsonian-Bredin Caribbean Expedition IV, Espiritu Santo Bay, Quintana Roo, Mexico, water depth 0.5–3 m, 6 April 1960.

*Material examined*.—The types.

*Distribution*.—Yucatan, Mexico, Caribbean Sea.

*Relationship*.—*Eusiroides yucatanensis* appears to have closer affinities to *E. monoculoides* Stebbing, 1888, than any of the other members of this genus. It differs in the condition of the epimeral plates, as *E. monoculoides* has a serrate epimeron 3 and *Eusiroides yucatanensis* has only 3 distinct teeth. Epimeron 1 and 2 of *E. monoculoides* are also serrate while those of *Eusiroides yucatanensis* are smooth. Telson setation and coxal spination also differ.

*Megaluropus* Hoek, 1889

*Megalonoura* Herdman, 1889 (nomen nudum); *Megaluropus* Hock, 1889; *Phylluropus* K. H. Barnard, 1932.

*Diagnosis*.—Body fossorial; coxal plates 1–4 elongate (3 smallest); pereopods strongly spinose and/or setose, pereopod 7 very long; rami of uropod 3 broadly ovate, spinose.

KEY TO THE SPECIES OF *MEGALUROPUS* (FEMALES)

1. Gnathopod 2: article 5 elongate, narrow distally; article 6 linear . . .  
..... *M. namaquaeen* Schellenberg, 1953
- Gnathopod 2: article 5 expanded distally; article 6 somewhat inflated  
..... 2
2. Eyes covering cephalic lobe ..... 3
- Eyes not extending forward onto a cephalic lobe ..... 4
3. Rostrum elongate; antenna 2: article 5 of peduncle much longer than  
4; antenna 1: accessory flagellum uniarticulate .....  
..... *visendus* J. L. Barnard, 1969
- Rostrum short; antenna 2: article 5 of peduncle slightly longer than  
4; antenna 1: accessory flagellum biarticulate, second article minute  
..... *M. agilis* Hoek, 1889
4. Lateral cephalic cusp lacking .....  
..... *M. longimerus longimerus* Schellenberg, 1925
- Lateral cephalic cusp present ..... 5
5. Posterior margin of epimeral plate 3 not serrate or only partially so  
..... *M. longimerus falciformis* J. L. Barnard, 1969
- Posterior margin of epimeral plate 3 with well-developed serrations  
along entire margin ..... *Megaluropus myersi*, n.sp.

*Megaluropus myersi*, new species

Figs. 5, 6, 7

*Description*.—Female, 4.20 mm. Rostrum short, acute; lateral cephalic lobe with sharp anterior cusp; eyes large, reniform; body normal for genus;

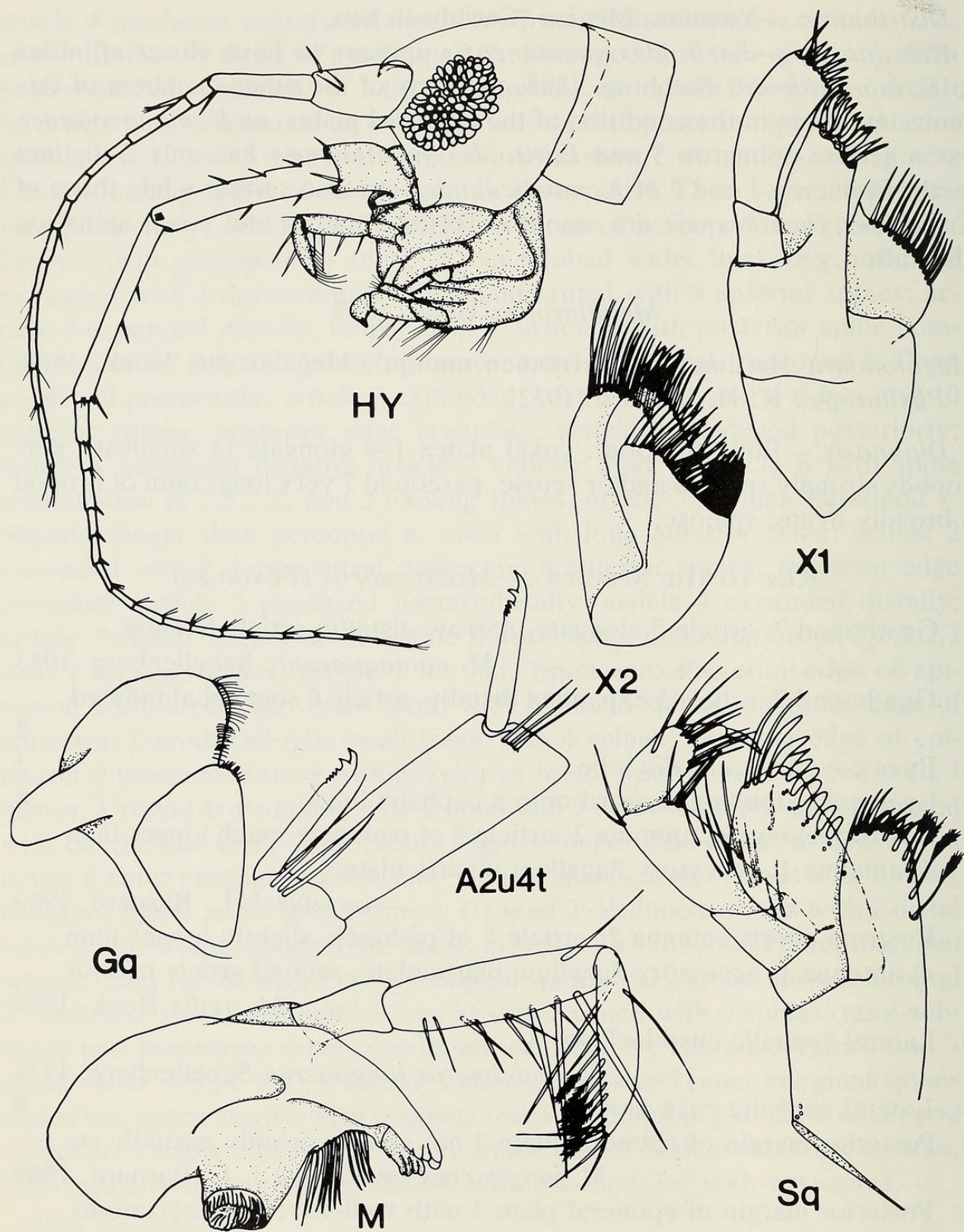


Fig. 5. *Megaluropus myersi*, female 4.20 mm.

posterodorsal edges of abdominal segments 2–6 serrate, 4–5 slightly elevated. Antenna 1: Length ratios of peduncle articles 1, 2, 3 = 16:17:4; flagellum with 14 articles, accessory flagellum biarticulate. Antenna 2: Articles 4 and 5 of peduncle subequal in length; flagellum with 17 articles 3–15, with serrate

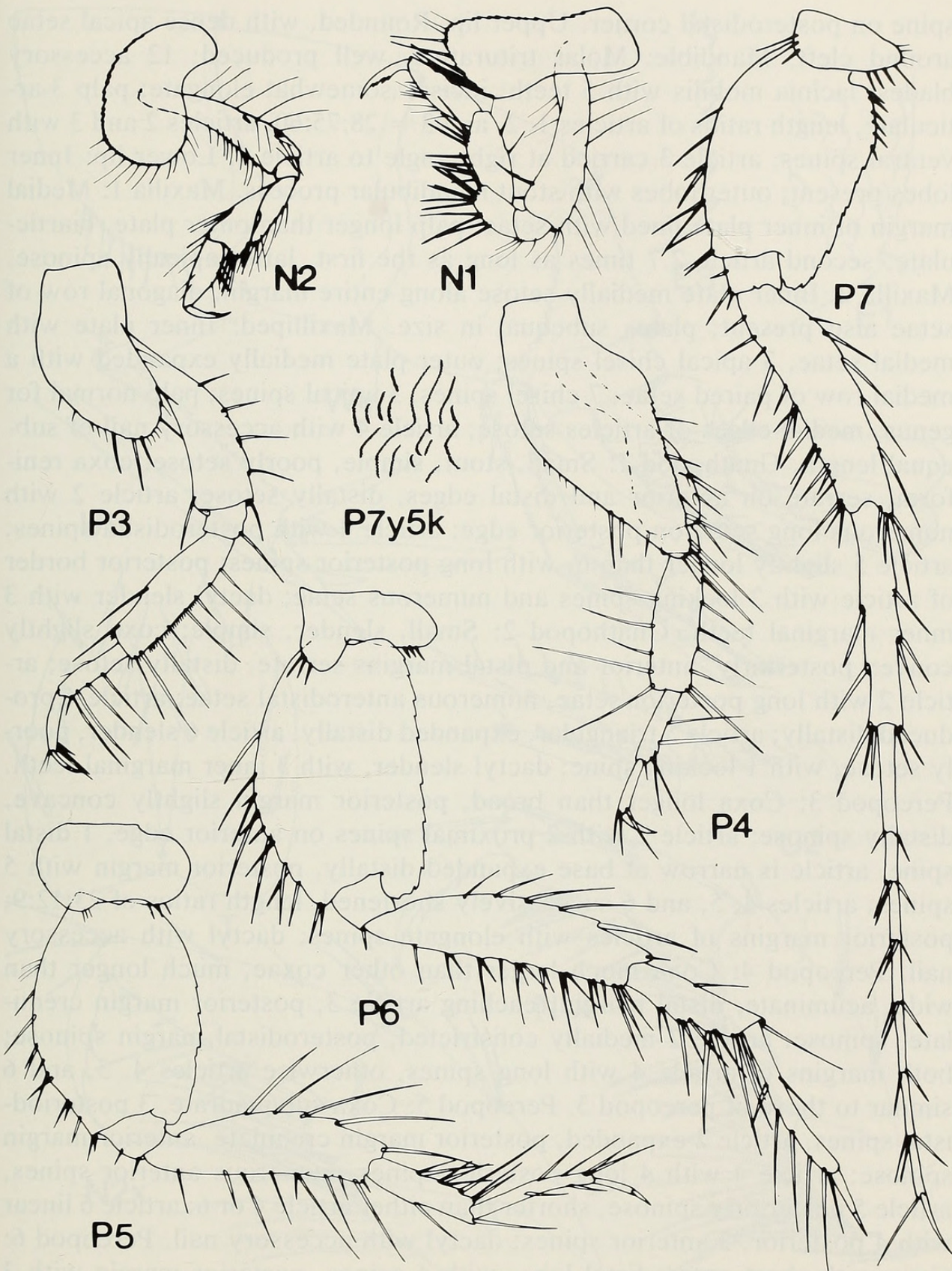


Fig. 6. *Megaluropus myersi*, female 4.20 mm.

spine on posterodistal corner. Upper lip: Rounded, with dense apical setae around cleft. Mandible: Molar triturative, well produced; 12 accessory blades; lacinia mobilis with 5 teeth; incisor somewhat elongate; palp 3-articulate, length ratios of articles 1, 2, and 3 = 28:75:60, articles 2 and 3 with ventral spines, article 3 carried at right angle to article 2. Lower lip: Inner lobes present; outer lobes with stout mandibular process. Maxilla 1: Medial margin of inner plate lined with setae; palp longer than outer plate, biarticulate, second article 2.7 times as long as the first, latter apically spinose. Maxilla 2: Inner plate medially setose along entire margin, diagonal row of setae also present; plates subequal in size. Maxilliped: Inner plate with medial setae, 3 apical chisel spines; outer plate medially expanded with a medial row of paired setae, 7 chisel spines, 3 apical spines; palp normal for genus, medial edges of articles setose; article 4 with accessory nail of subequal length. Gnathopod 1: Small, stout, simple, poorly setose; coxa reniform, serrate on anterior and distal edges, distally setose; article 2 with numerous long setae on posterior edge; article 4 with posterodistal spines; article 5 slightly longer than 6, with long posterior spines; posterior border of article with 2 locking spines and numerous setae; dactyl slender with 3 inner marginal teeth. Gnathopod 2: Small, slender, simple; coxa slightly convex posteriorly, anterior and distal margins serrate, distally setose; article 2 with long posterior setae, numerous anterodistal setae; article 4 produced distally; article 5 triangular, expanded distally; article 6 slender, poorly setose, with 1 locking spine; dactyl slender, with 3 inner marginal teeth. Pereopod 3: Coxa longer than broad, posterior margin slightly concave, distally spinose; article 2 with 2 proximal spines on anterior edge, 1 distal spine, article is narrow at base expanded distally, posterior margin with 5 spines; articles 4, 5, and 6 successively shortened, length ratios of 23:12:9; posterior margins of articles with elongate spines; dactyl with accessory nail. Pereopod 4: Coxa much larger than other coxae, much longer than wide, acuminate, distal margin reaching article 3, posterior margin crenulate, spinose; article 2 medially constricted, posterodistal margin spinose; both margins of article 4 with long spines, otherwise articles 4, 5, and 6 similar to those of pereopod 3. Pereopod 5: Coxa subquadrate, 3 posterodistal spines, article 2 expanded, posterior margin crenulate, anterior margin spinose; article 4 with 4 long posterior spines, numerous anterior spines, article 5 posteriorly spinose, shorter than either article 4 or 6; article 6 linear with 4 posterior, 2 anterior spines; dactyl with accessory nail. Pereopod 6: Coxa with short anterodistal lobe, with 4 spines, posterior margin with 3 spines; remaining articles as in pereopod 5 but more spinose; pereopod 6 1.2 times longer than pereopod 5. Pereopod 7: Coxa reduced, 4 posterior spines, article 2 expanded posteriorly, crenulate, with 6 spines, anteriorly spinose; article 4 slightly longer than 5, with 6 posterior and numerous anterior spines; article 5 with 5 posterior and anterior spines; article 6 elon-

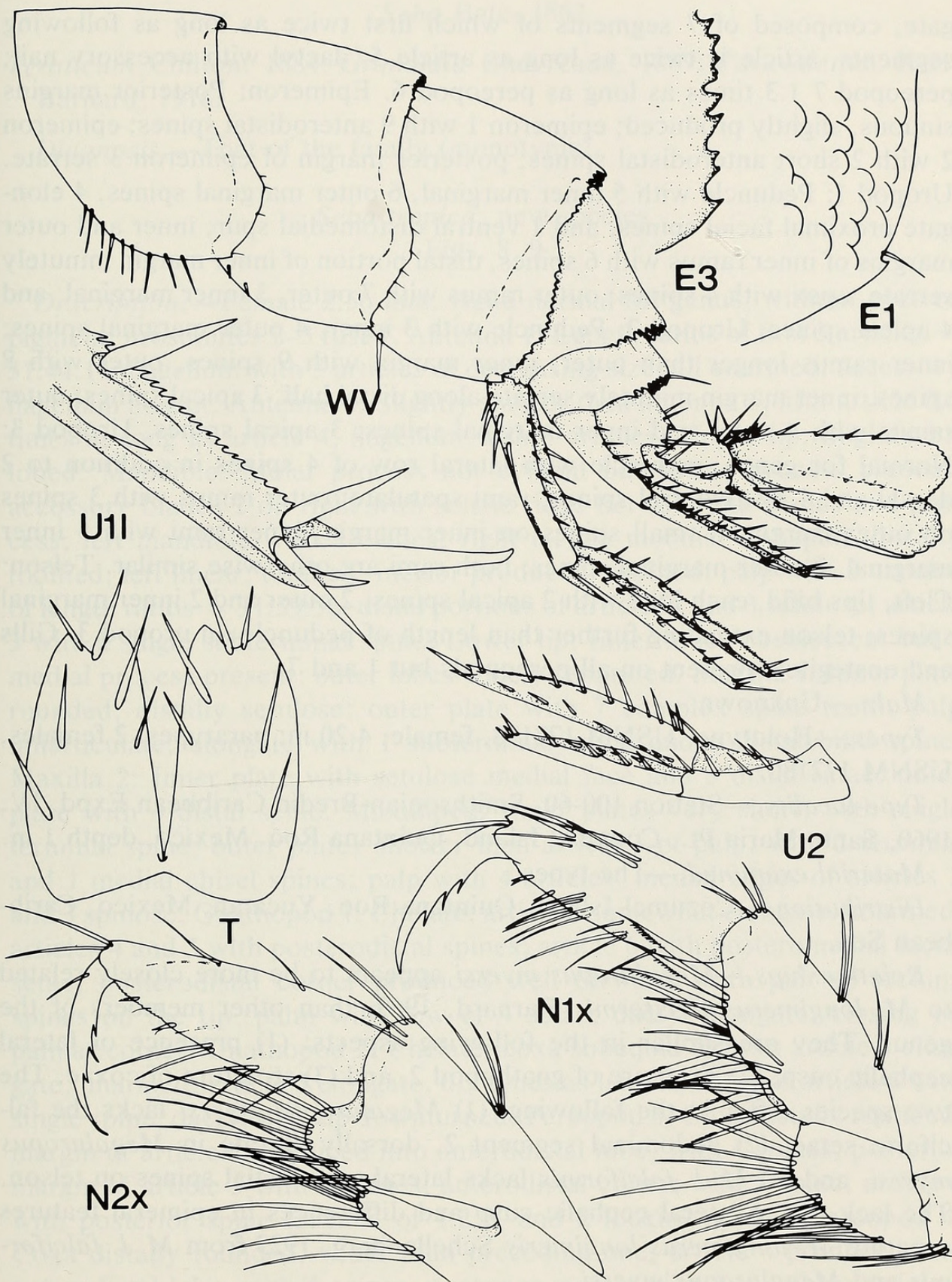


Fig. 7. *Megaluropus myersi*, female 4.20 mm.

gate, composed of 7 segments of which first twice as long as following segments, article is twice as long as article 5; dactyl with accessory nail; pereopod 7 1.3 times as long as pereopod 6. Epimeron: Posterior margins sinuous, slightly produced; epimeron 1 with 9 anterodistal spines; epimeron 2 with 2 short anterodistal spines; posterior margin of epimeron 3 serrate. Uropod 1: Peduncle with 5 inner marginal, 6 outer marginal spines, 4 elongate proximal facial spines, and 1 ventral distomedial spur; inner and outer margins of inner ramus with 6 spines, distal portion of inner margin minutely serrate, apex with 4 spines; outer ramus with 7 outer, 3 inner marginal, and 4 apical spines. Uropod 2: Peduncle with 3 inner, 4 outer marginal spines; inner ramus longer than outer, inner margin with 9 spines, outer with 8 spines, inner margin minutely serrate along distal half, 3 apical spines; outer ramus with 4 outer and inner marginal spines, 3 apical spines. Uropod 3: Normal for genus, peduncle with lateral row of 4 spines in addition to 2 dorsal and 1 distoventral spines; rami spatulate; outer ramus with 3 spines on outer margin, 6 small spines on inner margin; inner rami with 5 inner marginal, 2 outer marginal spines; both rami are otherwise similar. Telson: Cleft, tips bifid, each lobe with 2 apical spines, 2 outer and 2 inner marginal spines; telson extending further than length of peduncle on uropod 3. Gills and oostegites: present on all pereopods but 1 and 7.

*Male*.—Unknown.

*Types*.—Holotype, USNM 172178, female, 4.20 m; paratypes, 2 females, USNM 172180.

*Type-locality*.—Station 100-60. Smithsonian-Bredin Caribbean Expd. IV, 1960, Santa Maria Pt., Cozumel Island, Quintana Roo, Mexico, depth 1 m.

*Material examined*.—The types.

*Distribution*.—Cozumel Island, Quintana Roo, Yucatan, Mexico, Caribbean Sea.

*Relationships*.—*Megaluropus myersi* appears to be more closely related to *M. longimerus falciformis* Barnard, 1969, than other members of the genus. They are similar in the following aspects: (1) presence of lateral cephalic cusp, (2) structure of gnathopod 2, and (3) structure of coxae. The two species differ in the following: (1) *Megaluropus myersi* lacks the falciform setae, (2) abdominal segment 2, dorsally serrate in *Megaluropus myersi*, and (3) *M. l. falciformis* lacks lateral and medial spines on telson. The lack of the lateral cephalic cusp and differences in epimeral features separate *M. longimerus longimeris* Schellenberg, 1925 from *M. l. falciformis* and *Megaluropus myersi*.

## Sebidae

*Diagnosis*.—Accessory flagellum biarticulate; mandibular molar obsolescent; gnathopods chelate, gnathopod 1 larger than 2; uropod 3 uniramus; urosomites 2–3 fused.

*Seba* Bate, 1862

*Teraticum* Chilton, 1884; *Grimaldia* Chevreux, 1889; *Paravalettia*, K.H. Barnard, 1916.

*Diagnosis*.—That of the family (monotypic).

*Seba tropica*, new species

Figs. 8, 9

*Description*.—Female 2.56 mm. Head normal for genus, without eyes or pigment; urosomites 2–3 fused. Antenna 1: Length ratios of first 3 articles = 31:44:14; flagellum with 5 articles of decreasing size, all unarmed; accessory flagellum absent. Antenna 2: Slightly shorter than antenna 1; fifth article 0.6 times as long as article 4; flagellum with 3 articles. Upper lip: Slightly bilobed. Mandible: Molar process not evident but setose process present; accessory blades 2 on right with setose ridge between the blades and process; left mandible with 3 blades; right lacinia mobilis V-shaped, distally toothed, left linear, toothed; incisor produced, toothed; palp with 3 articles of length ratios = 31:59:56; distal portions of articles 2 and 3 setulose; article 3 with a single subterminal spine. Lower lip: Inner lobes obsolescent but a medial process present; outer lobes widely separated. Maxilla 1: Inner plate rounded, distally setulose; outer plate with 7 complex spine teeth; palp uniarticulate, elongate with 1 subterminal spine and a distal bifid spine. Maxilla 2: Inner plate with setulose medial face and 3 distal setae; outer plate with 4 distal setae. Maxilliped: Inner plates very short, with single terminal spine; outer plates shorter than article 1 of palp, with 2 terminal and 1 medial chisel spines; palp with 4 articles, medial edges of articles 2 and 3 spinose. Gnathopod 1: Chelate; article 2 somewhat elongate, unarmed; articles 4 and 5 with posterodistal spines; article 6 with posteromedial facial setae; posterodistal corner produced well forward, with pair of locking spines on the tip, palm with row of 4 setae; dactyl elongate, closing on palmar corner. Gnathopod 2: Chelate; coxa subequal to first; article 3 elongate, unarmed; article 5 elongate, 0.9 times as long as 6; tip of article 6 with single spine; dactyl with tip downturned. Pereopod 3: Coxa distally rounded; margin of article 4 produced into anterodistal lobe, with 4 spines; posterior margin of article 5 with 3 spines, anterodistal corner with 1 spine; article 6 with posterior spine formula of 1,2,2, and 2 locking spines. Pereopod 4: Coxa distally rounded, wider than preceding one; article 4 produced into anterodistal lobe, with 5 spines, posterior margin with 3–4 spines; article 6 with 3 posteromarginal spines; posterior spine formula of article 6—2,2, and 2 locking spines. Pereopod 5: Coxa with anterior lobe, 2 anterodistal spines; posterior margin of article 2 expanded, setulose; anterior margin with 6 spines; article 4 produced into a posterodistal lobe with 3 spines; article 5 with 2 anteromarginal and 1 posterodistal spine; article 6 with anteromar-

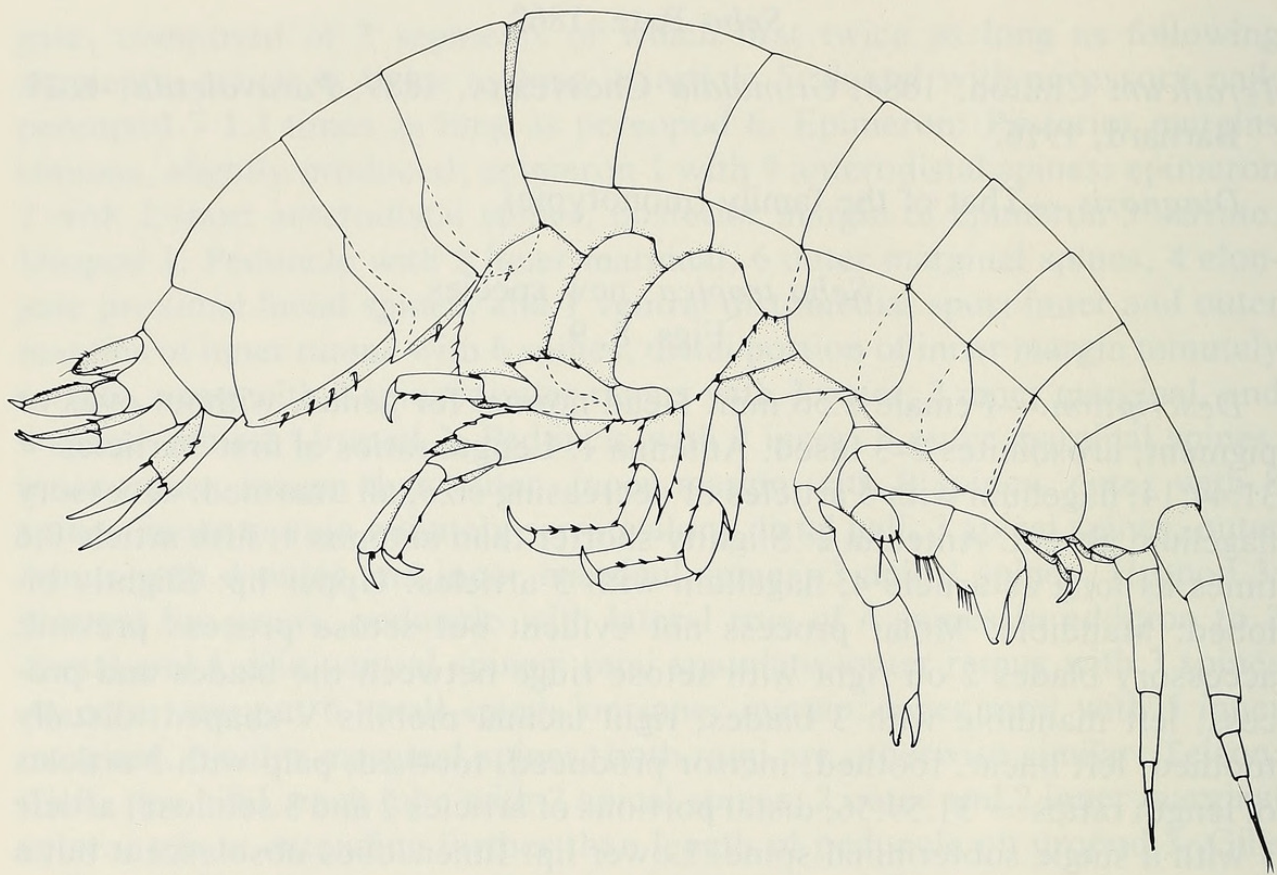


Fig. 8. *Seba tropica*, female 2.56 mm.

ginal spine formula of 1,2, and 2 locking spines. Pereopod 6: Posterior margin of article 4 with 4 spines, otherwise like pereopod 5. Pereopod 7: Posterior margin of article 4 with 3 spines, otherwise like pereopod 5. Epimeron: Epimeron 1 with single mediodistal spine, posterior margin sinuous; epimeron 2 with single mediodistal spine, posterodistal corner produced; epimeron 3 with 4 distomarginal spines, posterodistal margin somewhat sinuous. Uropod 1: Outer margin of peduncle with 2 medial, 1 distal spine, inner margin with 1 distal spine; rami subequal, lanceolate. Uropod 2: Peduncle with distal spines on inner and outer margins; rami lanceolate. Uropod 3: Peduncle short, 0.5 times as long as single ramus; inner margin of ramus with setulose ridge and single distal spine. Telson: Entire, distally rounded, dorsally depressed, lateral margins with pair of setules and 2 distal setae.

*Male*.—1.83 mm. Smaller than female; palm of gnathopod 2 transverse, lower corner armed as in female, hinge process with two teeth; otherwise similar to female.

*Types*.—Holotype, USNM 172181, 2.56 mm, female; paratype, series of 2 individuals, USNM 172182.

*Type-locality*.—Specimens from 26°10'N, 97°15'W (waters near Port Isabel, Texas).

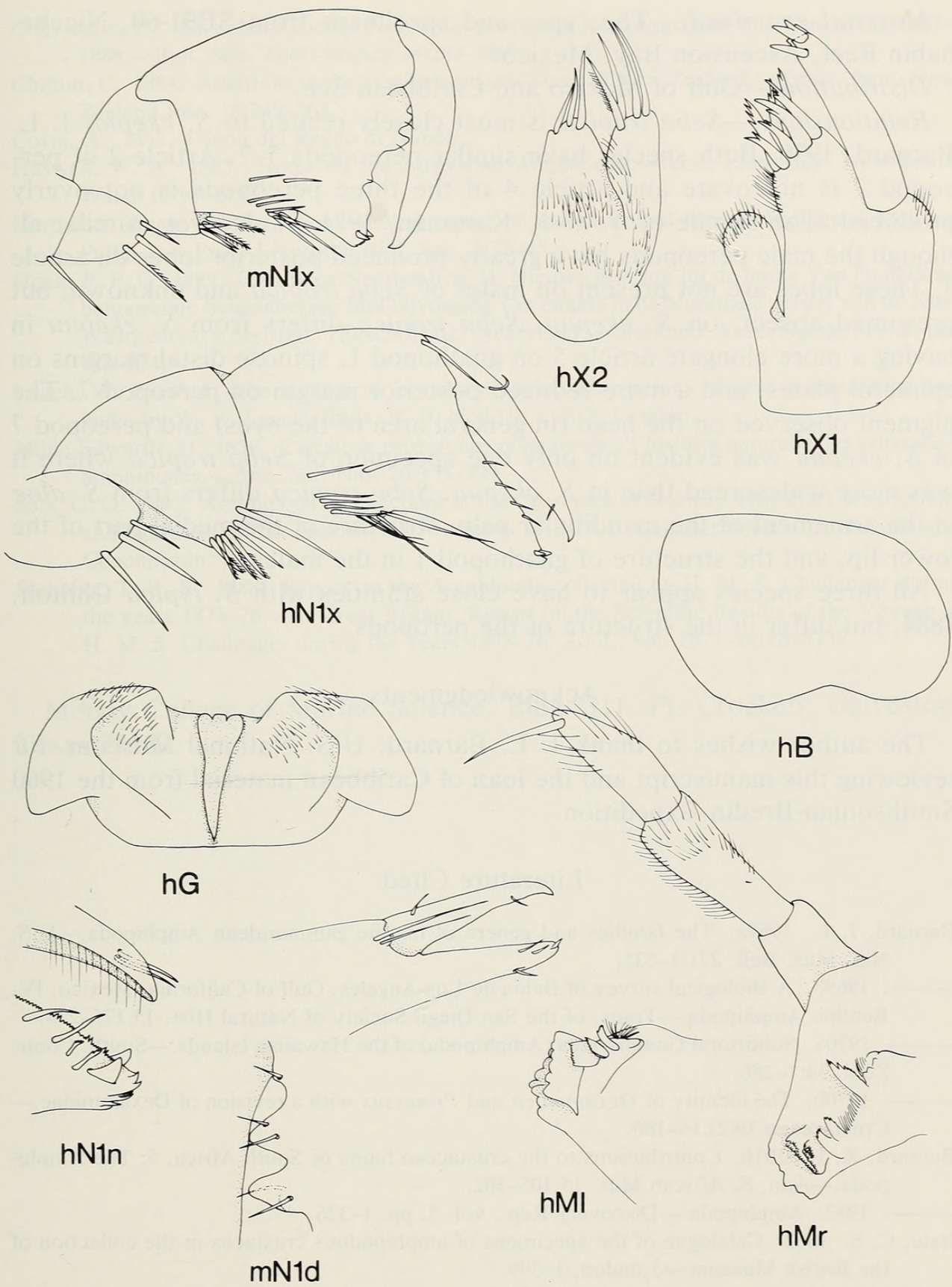


Fig. 9. *Seba tropica*, h = female 2.56 mm; m = male 1.83 mm.

*Material examined*.—The types and specimens from SB91-60, Nicchehabin Reef, Ascension Bay, Mexico.

*Distribution*.—Gulf of Mexico and Caribbean Sea.

*Relationships*.—*Seba tropica* is most closely related to *S. ekepuu* J. L. Barnard, 1970. Both species have similar pereopods 5–7. Article 2 of pereopod 7 is not ovate and article 4 of the three pereopods is not overly produced. The female of *S. aloe*, Karaman, 1971, is also very similar although the male pereopods have greatly produced posterior lobes on article 4. These lobes are not present on males of *Seba tropica* and unknown, but presumed absent, on *S. ekepuu*. *Seba tropica* differs from *S. ekepuu* in having a more elongate article 5 on gnathopod 1, spinose distal margins on epimeral plates, and a more reduced posterior margin on pereopod 7. The pigment observed on the head (in general area of the eyes) and pereopod 7 of *S. ekepuu* was evident on only one specimen of *Seba tropica* where it was more widespread than in *S. ekepuu*. *Seba tropica* differs from *S. aloe* in the armament of the mandibular palp, structure of the medial part of the lower lip, and the structure of gnathopod 1 in the males.

All three species appear to have close affinities with *S. typica* Chilton, 1884, but differ in the structure of the pereopods.

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### Literature Cited

- Barnard, J. L. 1969a. The families and genera of marine gammaridean Amphipoda.—U.S. Nat. Mus. Bull. 271:1–535.
- . 1969b. A Biological survey of Bahía de Los Angeles, Gulf of California, Mexico, IV. Benthic Amphipoda.—Trans. of the San Diego Society of Natural Hist. 15:175–228.
- . 1970a. Sublittoral Gammaridea (Amphipoda) of the Hawaiian Islands.—Smith. Contr. Zool. 34:1–286.
- . 1970b. The identity of *Dexamonica* and *Prinassus* with a revision of Dexaminidae.—Crustaceana 19(2):16–180.
- Barnard, K. H. 1916. Contributions to the crustacean fauna of South Africa, 5: The Amphipoda.—Ann. S. African Mus. 15:105–302.
- . 1932. Amphipoda.—Discovery Rep., vol. 5, pp. 1–326.
- Bate, C. S. 1862. Catalogue of the specimens of amphipodous crustacea in the collection of the British Museum.—London, 1–399.
- Boeck, A. 1861. Bemaerkninger angaaende de ved de norske Kyster forekommende Amphipoder.—Forhandl. Skandinaviske Naturforsk. Møde Kiøbenhavn 8–14 de Juli 1860 (vol. 8), pp. 613–677.
- Bulycheva, A. I. 1955. Novye vidybokoplavov (Amphipoda, Gammaridea) iz Japonskogo Morja, II.—Trudy Zool. Inst. Akad. Nauk SSSR 21:193–207.

- Chevreaux, E. 1889. Amphipodes Nouveaux provenant des campagnes de l'Hirondelle 1887–1888.—Bull. Soc. Zool. France 14:284–289.
- Chilton, C. 1884. Additions to the sessile-eyed crustacea of New Zealand.—Trans. Proc. New Zealand Inst. 16:249–265.
- Costa, A. 1853. Fauna del Regno di Napoli.
- Haswell, W. A. 1885. Notes on the Australian Amphipoda.—Proc. Linn. Soc. New South Wales 10:94–114.
- Herdmon, W. A. 1889. Second annual report of the Liverpool Marine Biological Stat. on Puffin Is.—Proc. Liverpool Biol. Soc. 3:23–45.
- Hoek, P. P. C. 1889. Crustacea Neerlandica, II: Nieuwe lijst van tot de fauna Van Nederland behorende Schaaldieren, Met bijvoeging van enkele in de Noordzee verder van de Kust Waargenomen Soorten. Tijdschrift der Nederland.—Dierkund. Vereeniging. Ser. 2, pp. 170–234.
- Leach, W. E. 1815. The zoological miscellany; being descriptions of new or interesting animals, by W. E. Leach, Illust. R. P. Nodder, vol. 2, London.
- Milne Edwards, H. 1830. Extrait de recherches pour servir a l'histoire naturelle des crustace's amphipodes.—Ann. Sci. Nat. 20:353–399.
- Sars, G. O. 1895. Amphipoda: An account of the Crustacea of Norway with short descriptions and figures of all the species, vol. 1, pp. 1–711.—Alb. Cammermeyers, Christiania and Copenhagen.
- Stebbing, T. R. R. 1888. Report on the Amphipoda collected by H. M. S. Challenger during the years 1873–76.—In Great Britain, Report on the Scientific Results of the Voyage of H. M. S. Challenger during the years 1873–76. Zool., vol. 29. i–xxvii–1737.

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Mckinney, L D. 1980. "4 New And Unusual Amphipods From The Gulf Of Mexico And Caribbean Sea." *Proceedings of the Biological Society of Washington* 93, 83–103.

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