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A Taxonomic Guide to the Mysids of the South Atlantic Bight

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CONTENTS

Abstract. Following the examination of extensive collections from the National Museum of Natural History (NMNH), the Southeastern Regional Taxonomic Center (SERTC), and other regional institutions, 18 species of the family Mysidae are recognized and described from the South Atlantic Bight (Cape Lookout, North Carolina to Cape Canaveral, Florida). This report includes synonymies of previous records, as well as new species distribution records. Previous regional accounts of *Metamysidopsis munda* and *Metamysidopsis mexicana* are attributed to *Metamysidopsis swifti*. New regional records are established for *Amathimysis brattegardi*, *Heteromysis beetoni*, and *Siriella thompsonii*. Two other species tentatively identified as *Amathimysis* sp. (nr. *serrata*) and *Mysidopsis* sp. (cf. *mortenseni*) may represent new taxa. *Neobathymysis renoculata* is included and discussed as a potential regional species. An illustrated key to the species currently known from the South Atlantic Bight is presented. Relevant taxonomic, distributional, and ecological information is also included for each species.

A Taxonomic Guide to the Mysids of the South Atlantic Bight

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Introduction

This guide and report on the order Mysida is part of a series dealing with a broader taxonomic assessment and review of the marine and estuarine fauna of the South Atlantic Bight (SAB), which is defined here as the coastal and oceanic region of the southeastern United States between Cape Lookout, North Carolina and Cape Canaveral, Florida, out to a depth of about 200 m. Several new regional records for mysid species were discovered. The purpose of the present study is to critically review previous information and studies, establish new regional records, document additional distributional records for the SAB, summarize the taxonomic information available on each species treated, and present an illustrated key for the identification of the Mysida currently known from the inshore, nearshore, and offshore shelf waters of the South Atlantic Bight.

Overview of the Order Mysida

Members of the order Mysida are shrimp-like crustaceans that were formerly combined with the order Lophogastrida as the "Mysidacea" (Martin and Davis, 2001). At present, there are more than 1050 species and about 160 genera constituting the four families of Mysida (Mysidae, Petalophthalmidae, Lepidomysidae, and Stygiomysidae). Although they are distributed worldwide, more than 90% of the species inhabit marine areas, occurring mainly in coastal waters and to a lesser extent in the open ocean. Fewer than 100 species inhabit brackish and freshwater, while others, especially the Lepidomysidae and Stygiomysidae, are found in hypogean environments such as marine and anchialine caves and groundwater habitats (Bowman, 1986). Most mysids are free-living, but some marine species are associated symbiotically with a variety of invertebrates, especially anthozoans, sponges, and hermit crabs (Clarke, 1955; Vannini et al., 1993; Price and Heard, 2004; Meland[1]).

The majority (>75%) of mysids are epibenthic, living on or just above the sediment surface. A few species, especially some members of the subfamily Gastrosaccinae, are capable of burrowing. Some mysids are strictly pelagic in coastal and oceanic waters. Species are found in all regions of the ocean from the

[1] Meland, K. 2002 onwards. Mysidacea: Families, Subfamilies and Tribes. Version 1: 2 October 2000. Crustacea.net: an information retrieval system for crustaceans of the world. An Australian Museum website. Accessed February 8, 2006. http://crustacea.net/crustace/mysidacea/index.htm

intertidal zone to depths greater than 7000 m. Coastal and epipelagic forms are small, 30 mm or less in length, but deep-water species may reach 80 mm (Mauchline, 1980; Brusca and Brusca, 2003).

In coastal ecosystems, mysids represent an abundant component of the epibenthic fauna, where they may reach densities in excess of 10^5 per 100 m^3 (Moffat and Jones, 1992). They are also important as major producers and consumers in estuarine food webs (Mauchline, 1980). Most species in estuaries are omnivorous, feeding on plant and animal detritus, zooplankton, and phytoplankton. Mysids may constitute more than 40% of the standing stock of omnivores in some coastal systems. Because their feeding is often selective, mysids have the potential to influence zooplankton, phytoplankton, and meiofaunal communities (Roast et al., 1998). Due to their high densities in estuaries, mysids are a potential food source for coastal fish. These crustaceans have been recorded in the diets of many marine and estuarine fish (Darnell, 1958, 1961; Stickney et al., 1974; Mauchline, 1980), as well as birds and larger invertebrates (Mauchline, 1980), thus inferring their importance as a link to higher trophic levels in coastal regions (Roast et al., 1998).

Available evidence indicates that mysids are more sensitive to toxic substances than most other marine species (Roast et al., 1998) and that this sensitivity occurs at levels that commonly occur in the environment (Odenkirchen and Eisler, 1988). Due to this sensitivity, mysids are frequently used as test organisms for estuarine environmental monitoring in acute and chronic toxicity testing (Roast et al., 1998).

Mysids are commonly called "opossum shrimp," which refers to the presence of a brood pouch or marsupium in mature females. Ovigerous females carry eggs and developing embryos in this ventral brood pouch, which is formed by pairs of flattened thoracic coxal endites called oostegites.

The Mysidacea [= Mysida and Lophogastrida *sensu* Schram (1986) and Brusca and Brusca (2003)] have long been placed within the superorder Peracarida, which was considered a monophyletic group of malacostracan orders characterized by the presence of a brood pouch formed from oostegites and a *lacinia mobilis* on the mandible. Watling (1999) questioned this view and, based on morphological characters, considered mysidaceans to be more closely related to eucarids. This view is supported by DNA sequencing studies conducted by Abele and Spears (1997), Spears and Abele (1998), and Jarman et al. (2000). Jarman et al. (2000) consider that mysids have closer affinities to the Decapoda than to any other malacostracan groups. In contrast, Richter and Scholtz (2001) indicate that the Mysida and Lophogastrida *sensu* Schram (1986) should be retained within Peracarida, but as a distinct sister group to the remaining orders (e.g., Amphipoda, Isopoda, Cumacea, and Tanaidacea) within this superorder. For a more complete synopsis of this systematic problem, see Martin and Davis (2001).

General morphological features of Mysida

Some basic morphological characters of the Mysida (Fig. 1) include 1) a carapace covering most of the thorax, but fused with no more than the first four thoracic somites; 2) maxillipeds 1 and 2 distinct from cephalic appendages; 3) thoracomere 1 separated from head (and maxilla) by an internal transverse skeletal bar; 4) absence of gills on thoracic appendages; 5) female pleopods reduced, male pleopods reduced or biramous and natatory, often with one or more pairs modified; and 6) a statocyst on endopod of each uropod for members of the large family Mysidae (over 95% of the described species), but lacking for the deep water Petalophthalmidae and the hypogean Lepidomysidae and Stygiomysidae (Tattersall, 1951; Stuck et al., 1979a; Price, 1982; Schram, 1986; Brusca and Brusca, 2003). It should be noted that in some mysids the carpus and propodus of the thoracopods are fused and form a "carpo-propodus" and further that the carpo-propodus itself can be segmented (McLaughlin, 1980).

Previous records of mysids from the South Atlantic Bight

Eighteen nominal species of the family have been previously reported from the inshore, coastal, and offshore waters of the South Atlantic Bight (SAB): *Americamysis almyra* (Bowman, 1964); *Americamysis bahia* (Molenock, 1969); *Americamysis bigelowi* (Tattersall, 1926); *Anchialina typica* (Krøyer, 1861); *Bowmaniella brasiliensis* Băcescu, 1968; *Bowmaniella dissimilis* (Coifmann, 1937); *Bowmaniella floridana* Holmquist, 1975; *Bowmaniella johnsoni* (Tattersall, 1937); *Bowmaniella mexicana* (Tattersall, 1951); *Bowmaniella portoricensis* Băcescu, 1968; *Brasilomysis castroi* Băcescu, 1968; *Heteromysis formosa* Smith, 1873; *Metamysidopsis munda* (Zimmer, 1918); *Metamysidopsis swifti* Băcescu, 1969; *Metamysidopsis mexicana* Băcescu, 1969; *Mysidopsis furca* Bowman, 1957; *Neomysis americana* (Smith, 1873); and *Promysis atlantica* Tattersall, 1923.

The first documented information on the Mysida occurring in the SAB was published in Tattersall's (1951) monograph based on material in the collections of the U.S. National Museum, now known as the National Museum of Natural History. Tattersall (1951) documented a total of 11 species for the entire U.S. Atlantic coast (Maine to Florida), only two of which, *Heteromysis formosa* and *Metamysidopsis munda*, were recorded from the waters of the SAB. Later, *Mysidopsis furca* was described from shelf waters off South Carolina (Bowman, 1957).

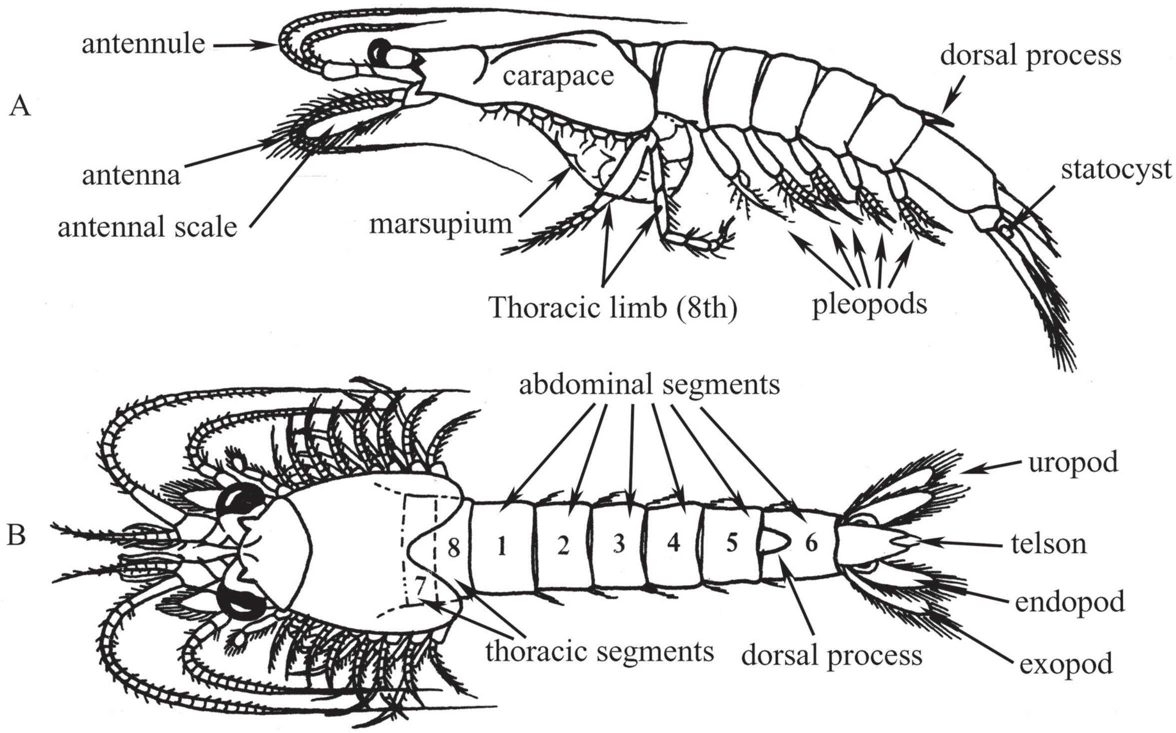

Figure 1

The general morphology of mysids: (A) lateral view; (B) dorsal view. (Modified from Stuck et. al., 1979a.)

In their distributional and ecological study on mysids from the holdings of the National Marine Fisheries Service Laboratory at Woods Hole, Massachusetts, Wigley and Burns (1971) established new SAB regional records for *Anchialina typica, Bowmaniella portoricensi*s, *Mysidopsis bigelowi,* and *Promysis atlantica.* They also presented additional data on *Mysidopsis furca.* In the same year, Day et al. (1971) reported *Gastrosaccus mexicanus* Tattersall, 1951, *Metamysidopsis munda*, *Mysidopsis furca*, and *Promysis atlantica* from benthic transects off North Carolina. Sikora et al. (1972) and Williams (1972) established the first regional records for *Neomysis americana* from Georgia and North Carolina waters, respectively, and later Williams et al. (1974) presented additional regional distribution records, ecological information, and a supplemental description for this ecologically important western Atlantic species. Besides *N. americana*, Williams (1972) reported five other species (*Bowmaniella dissimilis, B. johnsoni, Heteromysis formosa, Metamysidopsis bigelowi,* and *Promysis atlantica*) from North Carolina inshore brackish and marine waters. In Georgia waters, Stickney et al. (1974) reported *N. americana* as a major prey organism in the diets of four species of bothid flatfishes from St. Catherines, Wassaw, Ossabaw, and Sapelo Sounds, and Heard (1975) also reported it in the diet of white catfish from the head waters of St. Catherines Sound (North Newport River). Kelly (1978) listed three mysid species, *Metamysidopsis munda, M. bigelowi,* and *N. americana*, among the biota of the coastal zone of South Carolina. Of these three, only *N. americana* and *M. munda* were based on actual records from South Carolina waters (*M. bigelowi* had been recorded by Tattersall (1951) from Chesapeake Bay and the Louisiana coast and was thus assumed to also occur between these two locations). Howard and Frey (1975), based on a report of Heard and Heard (1971), listed *Bowmaniella johnsoni*, *Brasilomysis cf. castroi, Heteromysis formosa*, *Mysidopsis bigelowi,* and *Neomysis americana* from St. Catherines and Sapelo Sounds and their respective brackish head waters on the coast of Georgia. Previously known from the northern Gulf of Mexico, *Mysidopsis almyra* was reported from the coastal waters of northeast Florida by Price and Vodopich (1979) and Stuck et al. (1979b). In their treatment of the invertebrate fauna of the coastal estuarine and nearshore waters of South Carolina, Fox and Ruppert (1985) reported the occurrence and additional distribution records for *Bowmaniella dissimilis*, *Heteromysis formosa*, *Metamysidopsis swifti*, *Mysidopsis bigelowi*, and *Neomysis americana.* In a recent survey of the invertebrate fauna of St. Catherines Island, Georgia, Prezant et al. (2002) listed the presence of *H. formosa.*

Confusion regarding the identity of several regional *Bowmaniella* species records was recently clarified by Heard and Price (In press). They maintained that all existing SAB records for *Bowmaniella portoricensis* and *Bowmaniella johnsoni* should be attributed to *Bowmaniella* *mexicana.** They regarded *B. portoricensis* to be a junior synonym of *B. mexicana* but stated that *B. johnsoni* was still a valid species, restricted to a distribution in the Virgin Islands and Puerto Rico. Heard and Price (In press) also reported that *Bowmaniella brasiliensis* and *Bowmaniella floridana* were considered junior synonyms of *Bowmaniella dissimilis.*

Updated distributional records of mysids from the South Atlantic Bight

Based on an examination of mysid material in the collections of the South Carolina Department of Natural Resources, the Smithsonian Institution, and the authors, several new regional records are established and other records clarified.

Eighteen species of Mysida are documented herein as occurring in the shallow waters of the South Atlantic Bight: *Amathimysis brattegardi* Stuck and Heard, 1981; *Amathimysis* sp. [nr. *A. serrata* Murano, 1986]; *Americamysis almyra*; *Americamysis bahia; Americamysis bigelowi; Anchialina typica; Bowmaniella dissimilis; Bowmaniella mexicana*; *Brasilomysis castroi*; *Heteromysis beetoni* Modlin, 1984; *Heteromysis formosa*; *Metamysidopsis swifti*; *Mysidopsis furca*; *Mysidopsis* sp. [*mortenseni* complex]; *Neobathymysis renoculata* (Tattersall, 1951); *Neomysis americana*; *Promysis atlantica;* and *Siriella thompsonii* (H. Milne-Edwards, 1837).

SAB records of *Metamysidopsis munda* and *Metamysidopsis mexicana* are now attributed to *Metamysidopsis swifti* Băcescu, 1969, but it remains unclear as to whether either *M. munda* or *M. mexicana* exist elsewhere.

New regional records are established for *Amathimysis brattegardi*, *Heteromysis beetoni*, and *Siriella thompsonii.* Two other species tentatively identified as *Amathimysis* sp. (nr. *serrata*) and *Mysidopsis* sp. (*mortenseni* complex) may represent new taxa. Table 1 gives a systematic listing of the species known or suspected (i.e. *Neobathymysis renoculata*) from the estuarine and marine waters of the SAB. The key presented here is artificial with repetitious illustrations to facilitate the identification of the 18 species of Mysida covered in this guide. For each of the species treated, we present relevant taxonomic, distributional, and ecological information.

The deep-water species *Neobathymysis renoculata* is included within this shallow water (<200 m) guide because it has been collected in the western Atlantic at ~219 m (Tattersall, 1951) and in the Gulf of Mexico at 180 m (Stuck et al., 1979b). Its absence from the collections studied by the present authors may be an artifact of sampling.

Table 1

Taxonomic listing of the mysids currently known from the South Atlantic Bight (SAB).

FAMILY MYSIDAE Haworth, 1825*
- **SUBFAMILY SIRIELLINAE Norman, 1892**
  - **Genus** *Siriella* Dana, 1850
    - *Siriella thompsonii* (H. Milne-Edwards, 1837)
- **SUBFAMILY GASTROSACCINAE Norman, 1892**
  - **Genus** *Anchialina* Norman and Scott, 1906
    - *Anchialina typica* (Krøyer, 1861)
  - **Genus** *Bowmaniella* Băcescu, 1968
    - *Bowmaniella dissimilis* (Coifmann, 1937)
    - *Bowmaniella mexicana* (Tattersall, 1951)
- **SUBFAMILY MYSINAE Hansen, 1910**
  - **Tribe** Erythropini Hansen, 1910
    - **Genus** *Amathimysis* Brattegard, 1969
      - *Amathimysis brattegardi* Stuck and Heard, 1981
      - *Amathimysis* sp. (nr. *serrata*)
  - **Tribe** Leptomysini Hansen, 1910
    - **Genus** *Americamysis* Price et al., 1994
      - *Americamysis almyra* (Bowman, 1964)
      - *Americamysis bahia* (Molenock, 1969)
      - *Americamysis bigelowi* (Tattersall, 1926)
    - **Genus** *Brasilomysis* Băcescu, 1968
      - *Brasilomysis castroi* Băcescu, 1968
    - **Genus** *Metamysidopsis* Tattersall, 1951
      - *Metamysidopsis swifti* Băcescu, 1969
    - **Genus** *Mysidopsis* Sars, 1864
      - *Mysidopsis furca* Bowman, 1957
      - *Mysidopsis* sp. (*mortenseni* complex)
    - **Genus** *Neobathymysis* Bravo and Murano, 1996
      - *Neobathymysis renoculata* (Tattersall, 1951)
    - **Genus** *Promysis* Dana, 1850
      - *Promysis atlantica* Tattersall, 1923
  - **Tribe** Mysini Hansen, 1910
    - **Genus** *Neomysis* Czerniavsky, 1882
      - *Neomysis americana* (Smith, 1873)
  - **Tribe** Heteromysini Hansen, 1910
    - **Genus** *Heteromysis* Smith, 1873
      - *Heteromysis beetoni* Modlin, 1984
      - *Heteromysis formosa* Smith, 1873

* Dana (1852) was originally given as the authority for the order Mysida (=Mysidacea, in part), but it was recently determined that the credit should go to Haworth (1825), who first proposed family status for the group (see Martin and Davis, 2001: 34-35).

Materials and methods

We examined scientific publications, "gray literature" (e.g. regional agency technical reports, contract reports, etc.), and regional collections (National Museum

* Heard and Price (In press, Zootaxa) published their revision of *Bowmaniella* as this publication was at the proof stage. They split the genus *Bowmaniella*, creating *Coifmaniella* Heard and Price for four species: *Bowmaniella johnsoni, B. mexicana, B. merjonesi* (Băcescu, 1968b), and *B. parageia* (Brattegard, 1970). We could not include this new classification in this paper, so what we have called *Bowmaniella mexicana* is now considered to be *Coifmaniella mexicana. Bowmaniella dissimilis* remains within the genus *Bowmaniella.*

of Natural History, Washington, DC; Duke Marine Laboratory, Beaufort, NC; Grice Marine Laboratory, Charleston, SC; South Carolina Department of Natural Resources, Charleston, SC) to produce a comprehensive list of mysid species from the SAB. Wherever possible, we attempted to verify these records by re-examining the specimens reported.

There are certain instances where the key presented here will not work as well for juveniles as for adults, especially with reference to meristic characters such as the number of spiniform setae on the uropodal endopods or lateral or terminal margins of telsons, and sometimes the number of articles on the thoracic endopods. Setae or articles may be added with successive molts until maturity is reached. Even after that, additions may continue if the mysid keeps growing. We advise that users of the key work with adult specimens wherever possible. Mature females can be recognized by the fully developed marsupium, with or without eggs/embryos. Mature males of many species have well developed pleopods, with some modified to varying degrees as gonopods. Some, however, such as the heteromysids, have rudimentary pleopods similar to those of all females. Mature males have a setose lobe on article 3 of the antennular peduncle, but it is sometimes reduced. All mature males have a pair of penes located medially at the bases of 8th thoracic appendages.

The following abbreviations have been used: **DML**–Duke Marine Laboratory, Beaufort, NC; **GADNR**–Georgia Department of Natural Resources, Brunswick, GA; **GML**–Grice Marine Laboratory, College of Charleston, Charleston, SC; **MRRI**–Marine Resources Research Institute, South Carolina Department of Natural Resources, Charleston, SC; **NMNH**–National Museum of Natural History (Smithsonian Institution), Washington, DC (previously catalogued material as **USNM** [United States National Museum]); **SAB**–South Atlantic Bight region; **SERTC**–Southeastern Regional Taxonomic Center, Charleston, SC. Designations used by the U.S. Army Corps of Engineers are **ODA** (Ocean Disposal Area) and **ODMDS** (Ocean Dredged Material Disposal Site).

Results

Key to the mysids of the South Atlantic Bight

(Modified in part from Stuck et al., 1979a; Price, 1982; Price et al., 1994)

1. Posterior margin of telson emarginate (slightly indented), concave, or deeply cleft (Fig. 2) **2**

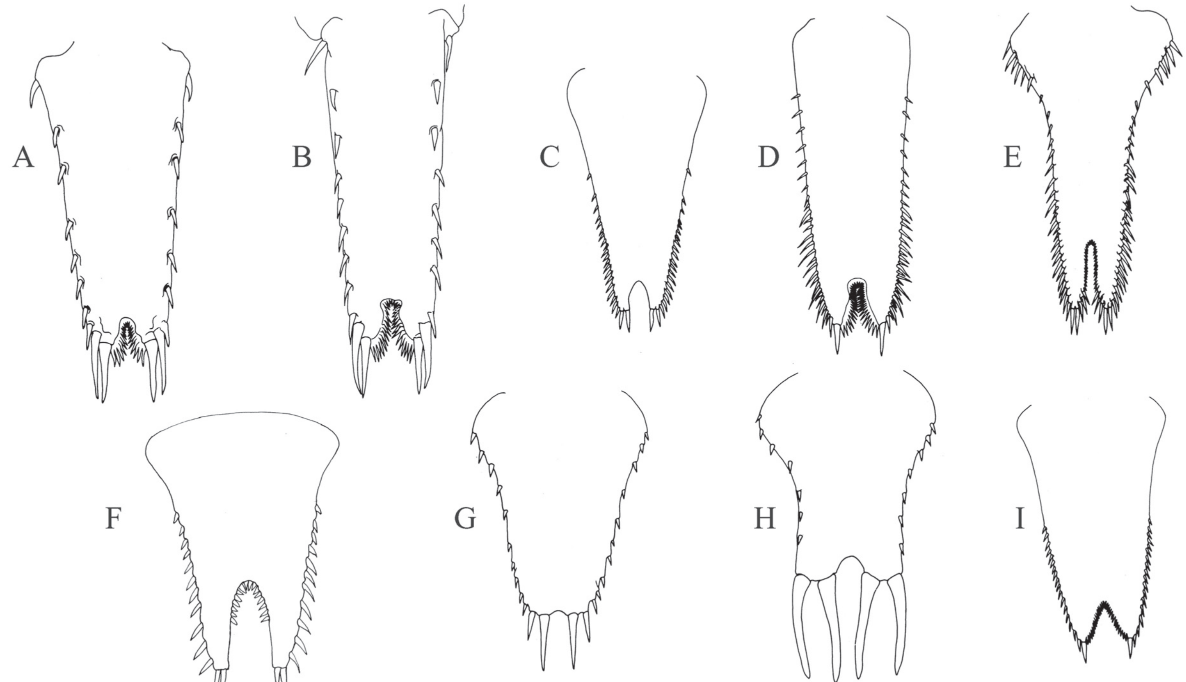

Figure 2

Telson morphology: (A) *Bowmaniella dissimilis*; (B) *Bowmaniella mexicana*; (C) *Promysis atlantica*; (D) *Anchialina typica*; (E) *Neobathymysis renoculata*; (F) *Heteromysis beetoni*; (G) *Mysidopsis furca* (male); (H) *Mysidopsis furca* (female); (I) *Heteromysis formosa.* (A–E, G–I: modified from Stuck et al., 1979a; F: modified from Modlin, 1984.)

—Posterior margin of telson convex, linguiform, or pointed (not terminally cleft or emarginate) (Fig. 3) **9**

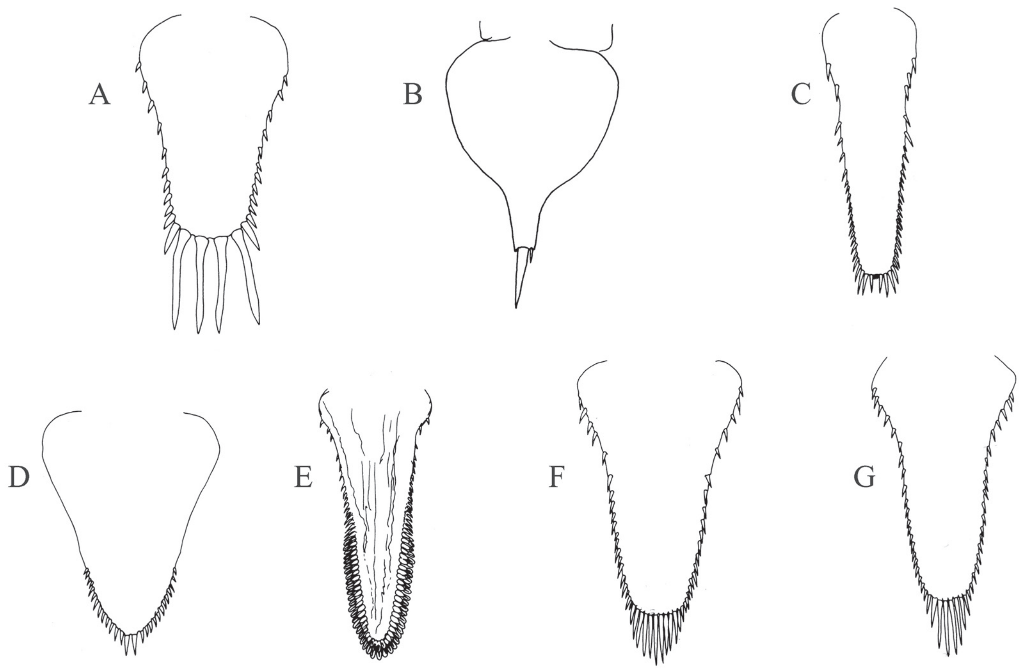

Figure 3

Telson morphology: (A) *Americamysis bigelowi*; (B) *Amathimysis brattegardi*; (C) *Siriella thompsonii*; (D) *Metamysidopsis swifti*; (E) *Brasilomysis castroi*; (F) *Americamysis almyra*; (G) *Americamysis bahia.* (A, C–G: modified from Stuck et al. 1979; B: modified from Stuck and Heard, 1981.)

2. Antennal scale with lateral tooth present (sometimes minute), devoid of setae on outer margin (setae on inner margin not drawn in Figure 4, instead, the setal insertions are indicated) (**Subfamily Gastrosaccinae**) (Fig. 4) **3**

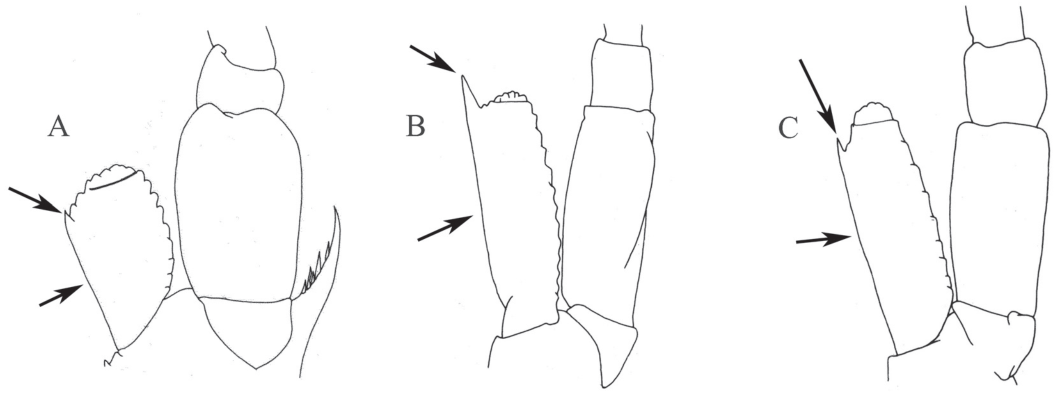

Figure 4

Antenna with antennal scale: (A) *Anchialina typica*; (B) *Bowmaniella dissimilis*; (C) *Bowmaniella mexicana*. (Modified from Stuck et al., 1979a.)

—Antennal scale without lateral tooth, setae present on both inner and outer margins (setae not drawn in Figure 5, instead, the setal insertions are indicated) (Fig. 5) **5**

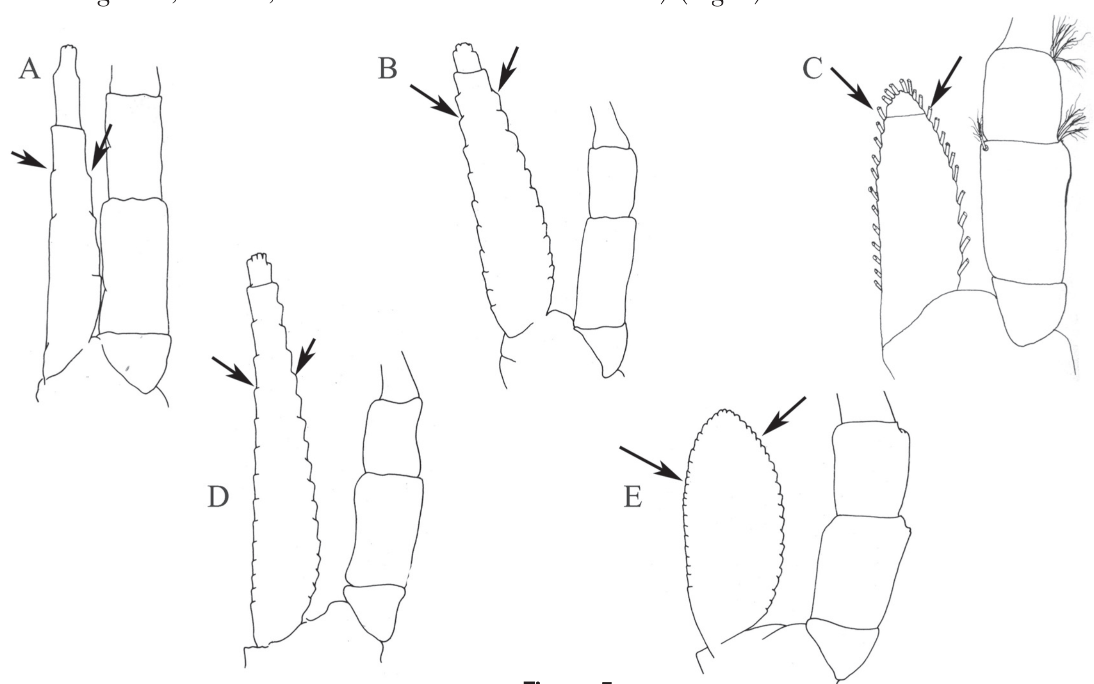

Figure 5

Antenna with antennal scale: (A) *Promysis atlantica*; (B) *Mysidopsis furca*; (C) *Heteromysis beetoni*; (D) *Neobathymysis renoculata*; (E) *Heteromysis formosa*. (A–B, D–E: modified from Stuck et al. 1979; C: modified from Modlin, 1984.)

3. Antennal scale small, rounded, distinctly shorter than article 2 of peduncle, lateral tooth minute, antennal peduncle with sympod with large barbed tooth on inner distal corner. Telson with each posterior lobe armed with 1 large terminal spiniform seta . . . . ***Anchialina typica*** (Fig. 6)

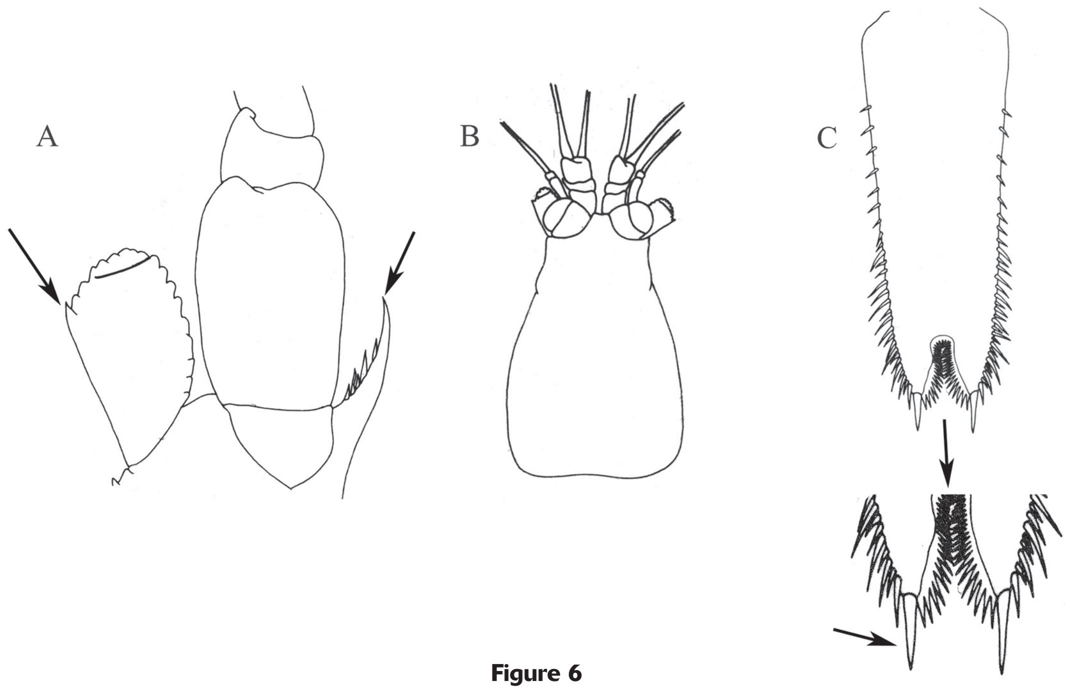

Figure 6

Anchialina typica: (A) antenna with antennal scale; (B) dorsal view of carapace; (C) telson. (Modified from Stuck et al., 1979a.)

—Antennal scale large, elongate, reaching to or past distal end of article 2 of peduncle, lateral tooth distinct, antennal peduncle with sympod lacking tooth on inner distal corner. Telson with each posterior lobe armed with 1 large terminal spiniform seta and 1 large sub-terminal spiniform seta (***Bowmaniella***), see footnote 1 (Fig. 7) **4**

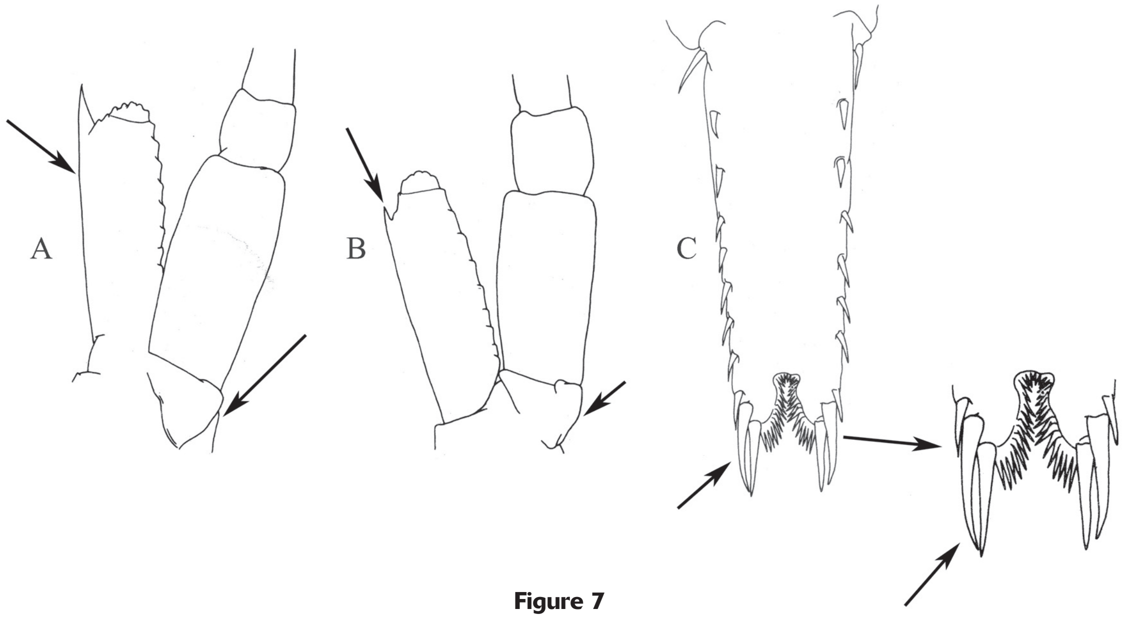

Figure 7

(A) antenna with antennal scale: *Bowmaniella dissimilis*; (B) antenna with antennal scale: *Bowmaniella mexicana*; (C) telson: *Bowmaniella mexicana*. (Modified from Stuck et al., 1979a.)

4. Antennal scale with lateral tooth strongly developed, nearly terminal, extending beyond end of blade. Abdomen with posterior margin of segment 5 with articulated, linguiform, dorsal process. Uropodal endopod armed with 4 or more large spiniform setae along medial margin, without row of smaller spiniform setae near statocyst . . . . ***Bowmaniella dissimilis*** (Fig. 8)

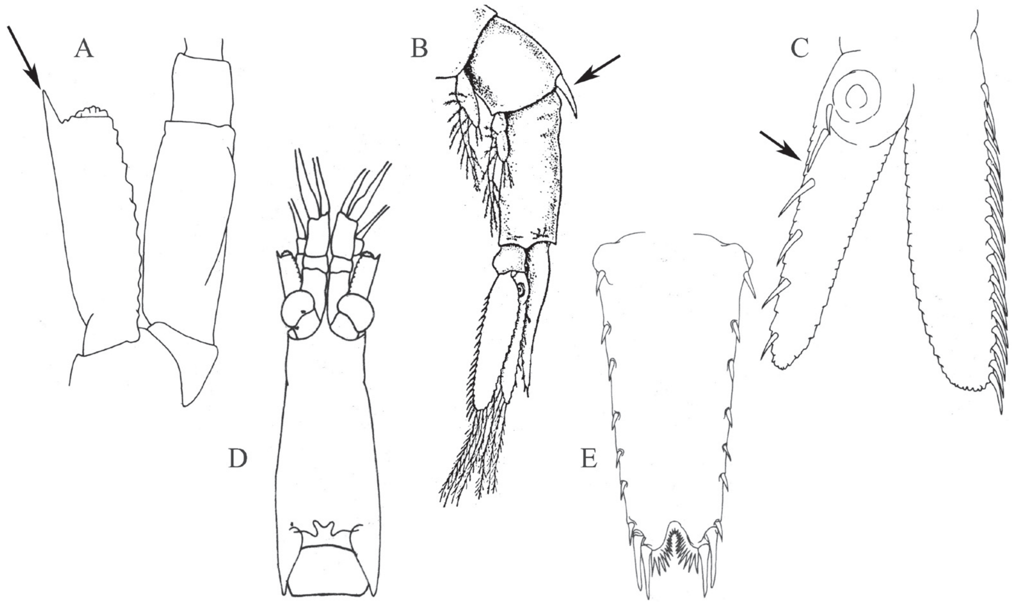

Figure 8

Bowmaniella dissimilis: (A) antenna with antennal scale; (B) lateral view of abdomen with dorsal process; (C) uropod; (D) dorsal view of carapace; (E) telson. (A, C–E: modified from Stuck et al., 1979a; B: modified from Băcescu, 1968b.)

—Antennal scale with lateral tooth not strongly developed, not extending beyond end of blade. Abdomen with posterior margin of segment 5 lacking dorsal articulated process. Uropodal endopod armed with 3–4 large spiniform setae along medial margin, distinct row of smaller spiniform setae present near statocyst . . . . ***Bowmaniella mexicana*** (Fig. 9)

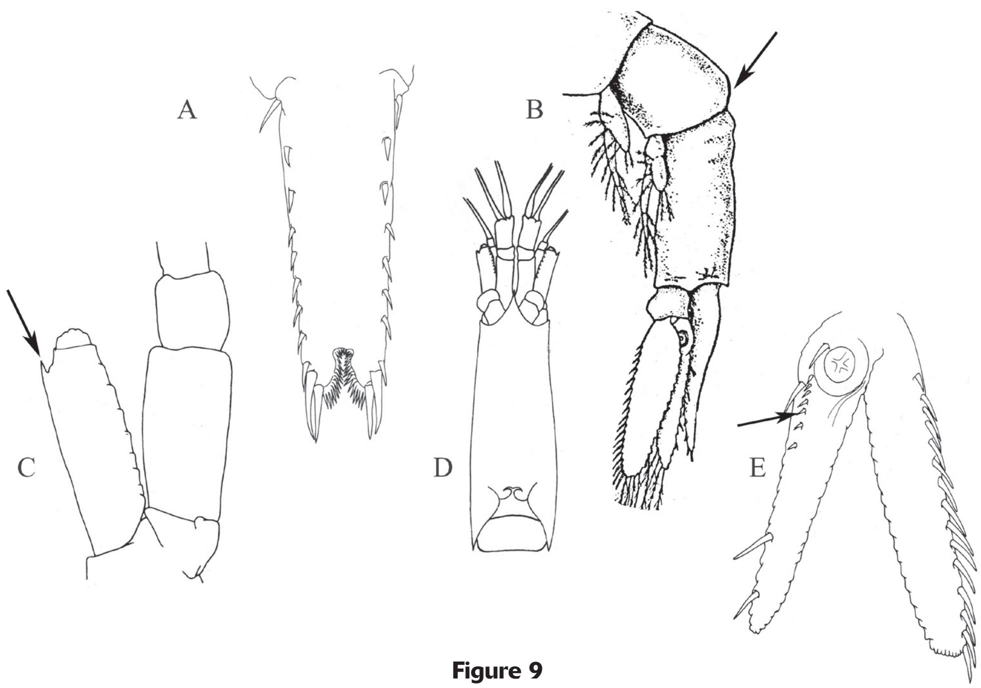

Figure 9

Bowmaniella mexicana: (A) telson; (B) lateral view of abdomen without dorsal process; (C) antenna with antennal scale; (D) dorsal view of carapace; (E) uropod. (A, C–E: modified from Stuck et al., 1979a; B: modified from Băcescu, 1968b.)

5. Telson with posterior cleft (or emargination) devoid of spiniform setae on inner margins (Fig. 10) **6**

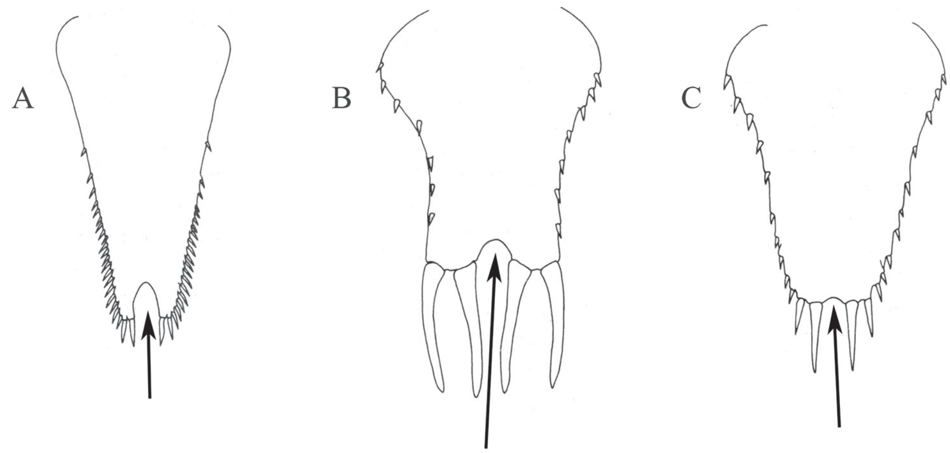

Figure 10

Telson morphology: (A) *Promysis atlantica*; (B) *Mysidopsis furca* (female); (C) *Mysidopsis furca* (male). (Modified from Stuck et al., 1979a.)

—Telson with posterior cleft (or emargination) armed with spiniform setae on inner margins (Fig. 11) **7**

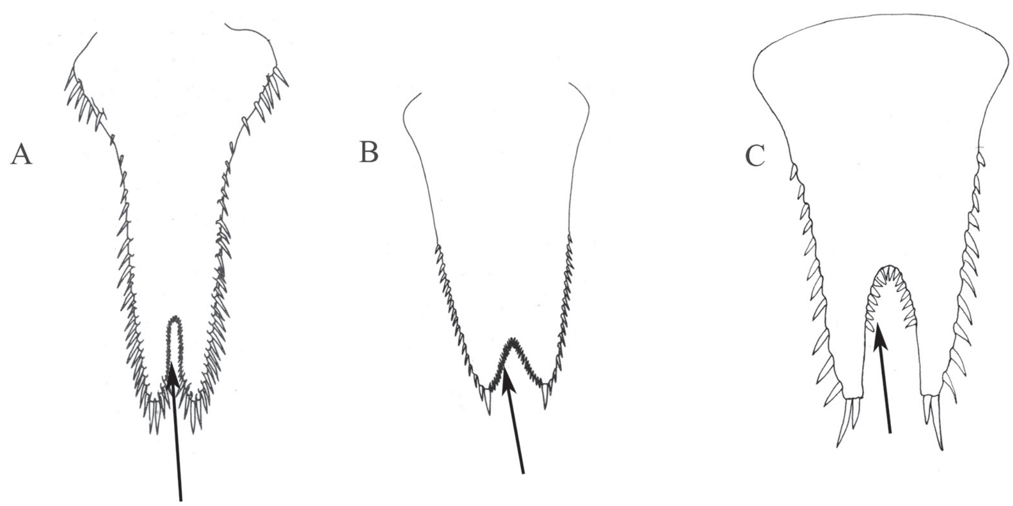

Figure 11

Telson morphology: (A) *Neobathymysis renoculata*; (B) *Heteromysis formosa*; (C) *Heteromysis beetoni*. (A–B: modified from Stuck et al., 1979a; C: modified from Modlin, 1984.)

6. Antenna with distal article of scale about 1/3 length of proximal article, reaching to or just past article 3 of peduncle. Uropodal endopod entire margin armed with 14–30 irregularly spaced spiniform setae; apex armed with 1 or 2 large, spiniform setae with distally curved tips. Telson with anterior 1/3 of lateral margins lacking spiniform setae; posterior end with cleft distinct . . . . ***Promysis atlantica*** (Fig. 12)

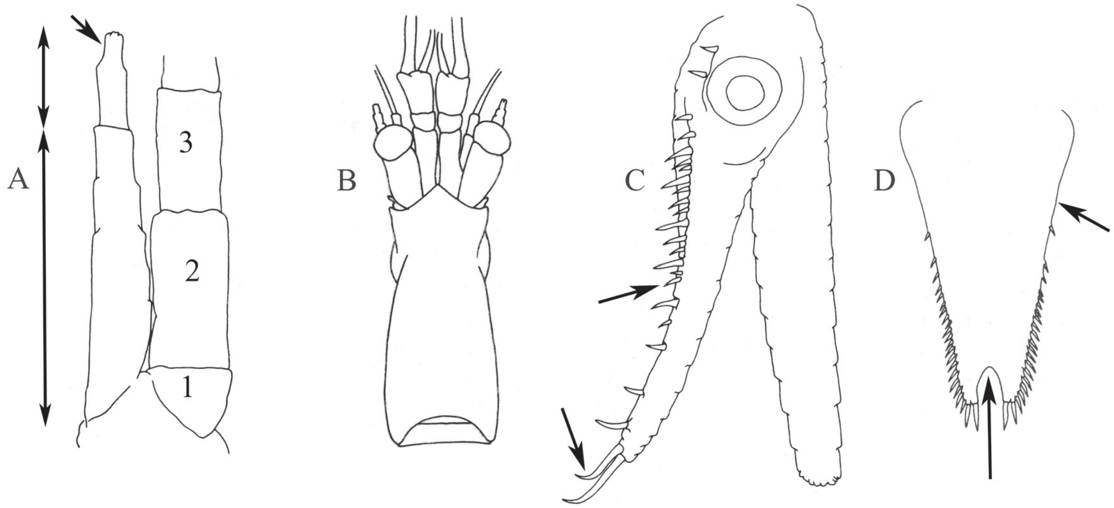

Figure 12

Promysis atlantica: (A) antenna with antennal scale; (B) dorsal view of carapace; (C) uropod; (D) telson. (Modified from Stuck et al., 1979a.)

—Antenna with distal article of scale about 1/8 length of proximal article, reaching distinctly past article 3 of peduncle. Uropodal endopod entire inner margin armed with a closely spaced row of 20–45 spiniform setae; apex unarmed. Telson entire lateral margins with spiniform setae; posterior end shallowly cleft between the inner most terminal spiniform setae . . . . ***Mysidopsis furca*** (Fig. 13)

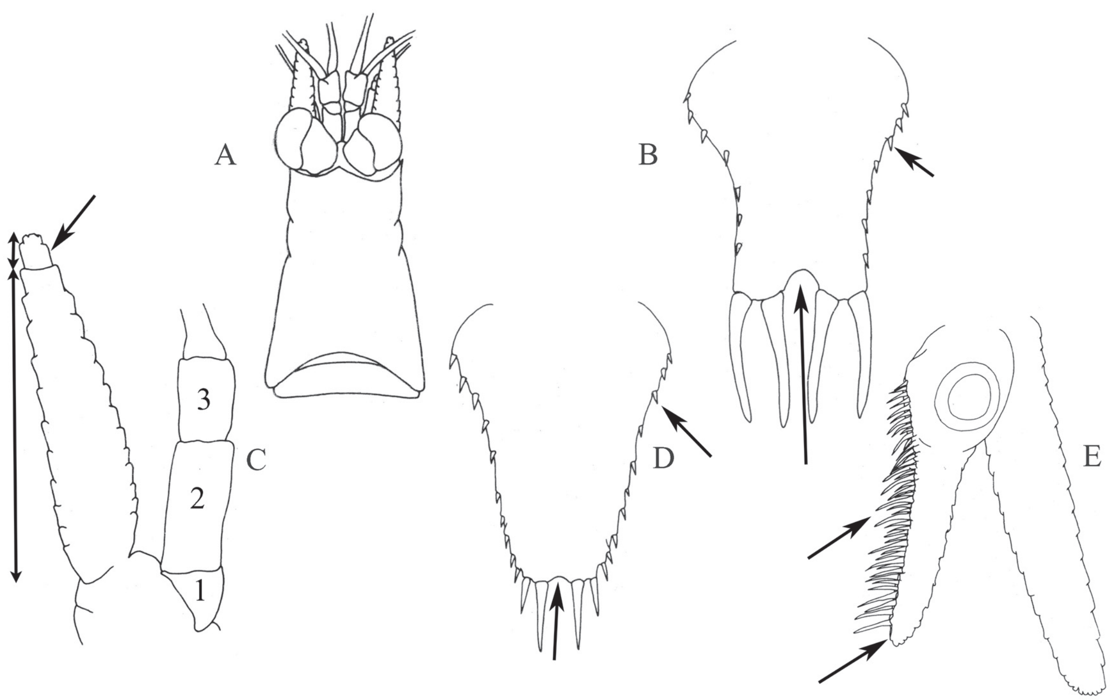

Figure 13

Mysidopsis furca: (A) dorsal view of carapace; (B) telson (female); (C) antenna with antennal scale; (D) telson (male); (E) uropod. (Modified from Stuck et al., 1979a.)

7. Antennal scale length about 5 to 6 times greatest width. Telson with lateral margins armed with 25 or more spiniform setae . . . . ***Neobathymysis renoculata*** (Fig. 14)

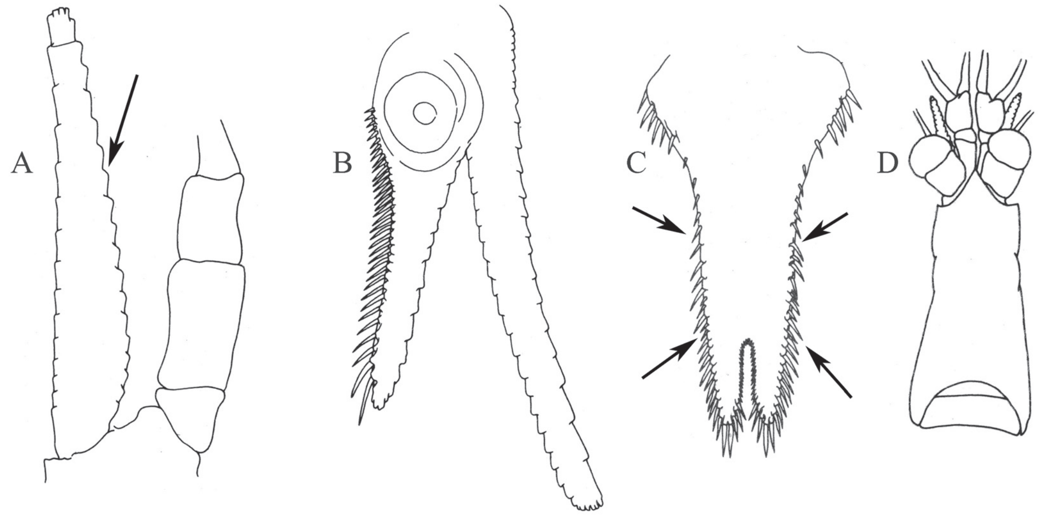

Figure 14

Neobathymysis renoculata: (A) antenna with antennal scale; (B) uropod; (C) telson; (D) dorsal view of carapace. (Modified from Stuck et al., 1979a.)

—Antennal scale length about 3 times greatest width. Telson with lateral margins armed with 8–20 spiniform setae (Fig. 15) **8**

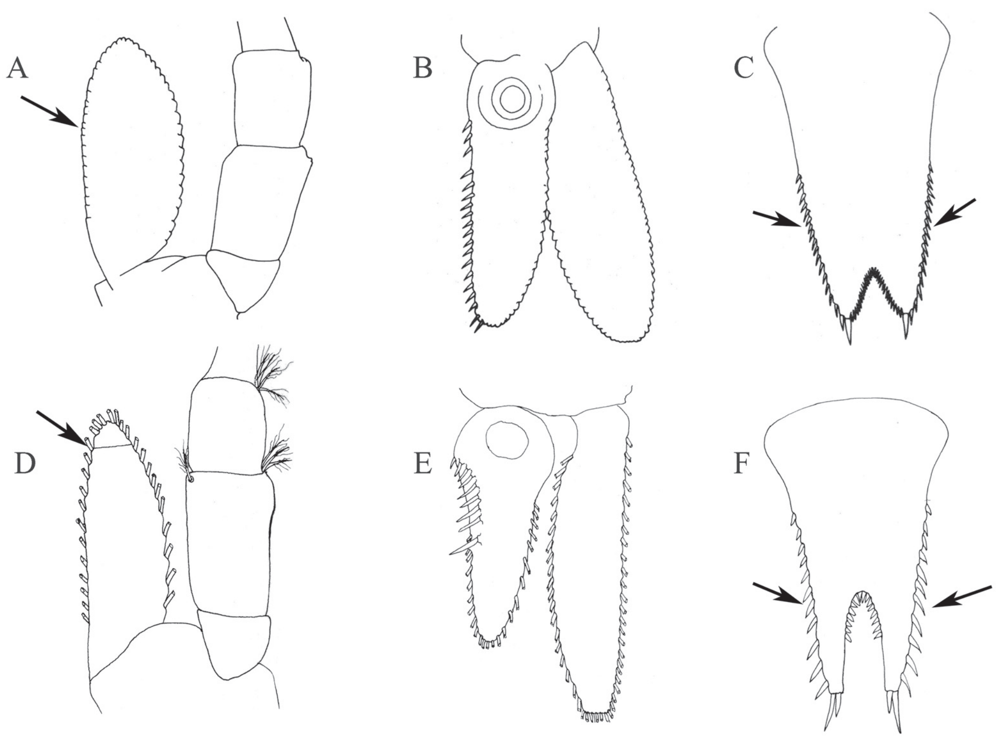

Figure 15

(A) antenna with antennal scale: *Heteromysis formosa*; (B) uropod: *Heteromysis formosa*; (C) telson: *Heteromysis formosa*; (D) antenna with antennal scale: *Heteromysis beetoni*; (E) uropod: *Heteromysis beetoni*; (F) telson: *Heteromysis beetoni*. (A–C: modified from Stuck et al., 1979a; D–F: modified from Modlin, 1984.)

8. Telson with posterior 1/2 of lateral margins bearing around 16 relatively small spiniform setae, posterior cleft relatively shallow, about 1/5 total telson length, with 16–30 closely spaced spiniform setae distributed along entire inner margin. Uropodal endopod armed with 16–21 small spiniform setae extending along the entire inner (medial) margin (beginning adjacent to distal border of statocyst and ending near apex) . . . . ***Heteromysis formosa*** (Fig. 16)

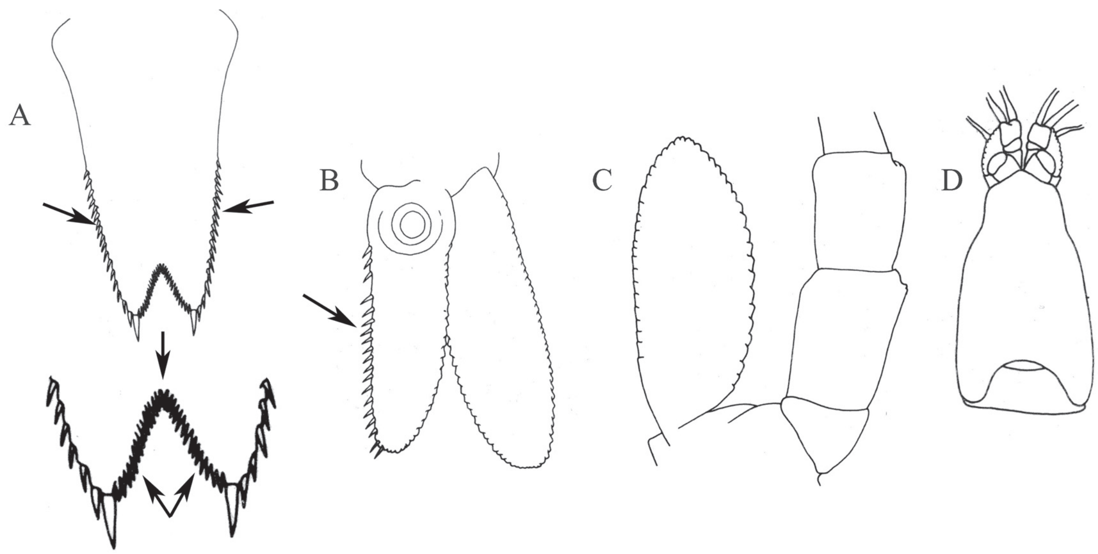

Figure 16

Heteromysis formosa: (A) telson; (B) uropod; (C) antenna with antennal scale; (D) dorsal view of carapace. (Modified from Stuck et al., 1979a.)

—Telson with posterior 2/3 of each lateral margin bearing 9–12 relatively large, moderately spaced, lateral spiniform setae, posterior cleft depth about 1/3 total telson length, inner margin anterior half armed with 15–17 spiniform setae, posterior half lacking setae. Uropodal endopod armed with 7–9 large spiniform setae extending only along the proximal inner (medial) margin (beginning adjacent to distal border of statocyst and ending midway to the apex) . . . . ***Heteromysis beetoni*** (Fig. 17)

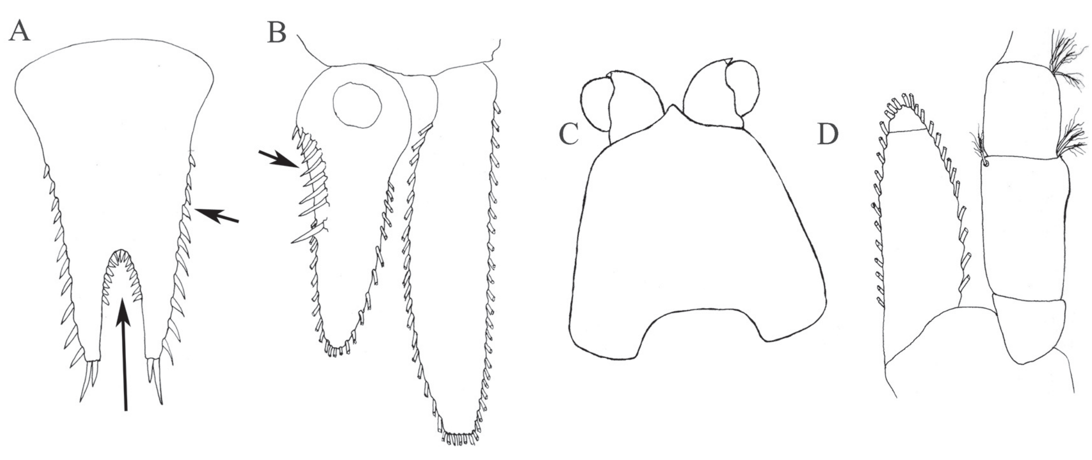

Figure 17

Heteromysis beetoni: (A) telson; (B) uropod; (C) dorsal view of carapace; (D) antenna with antennal scale. (Modified from Modlin, 1984.)

9. Telson constricted posteriorly into a truncated point, armed with 1–2 large terminal spiniform setae, spiniform setae absent from lateral margins (***Amathimysis***) (Fig. 18) **10**

Figure 18

Telson morphology: (A) *Amathimysis* sp. (nr. *serrata*); (B) *Amathimysis brattegardi*. (A: original illustration B: modified from Stuck and Heard, 1981.)

— Telson gradually narrowing posteriorly, with spiniform setae on lateral margins (Fig. 19) **11**

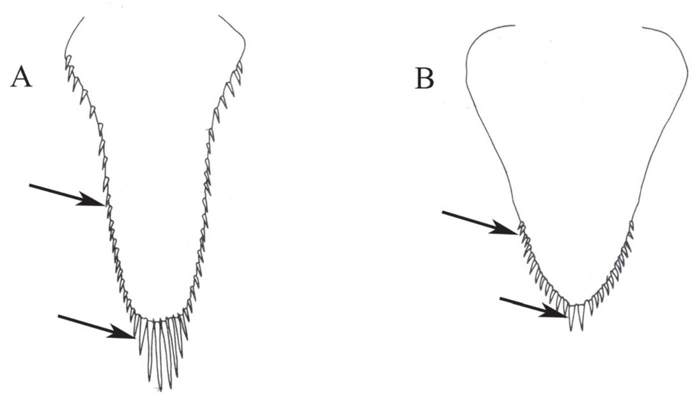

Figure 19

Telson morphology: (A) *Americamysis bahia*; (B) *Metamysidopsis swifti*. (Modified from Stuck et al. 1979.)

10. Carapace with 5 keel-like tubercles. Antennal scale with tooth terminal, forming a spiniform process; antennal peduncle with sympod with large barbed tooth on outer distal corner. Abdominal pleura with posteroventral margins forming acute spiniform processes, especially on segments 3–5. Uropodal endopod longer than exopod. Telson very constricted posteriorly, apex armed with 1 large and 1 small spiniform seta . . . . ***Amathimysis brattegardi*** (Fig. 20)

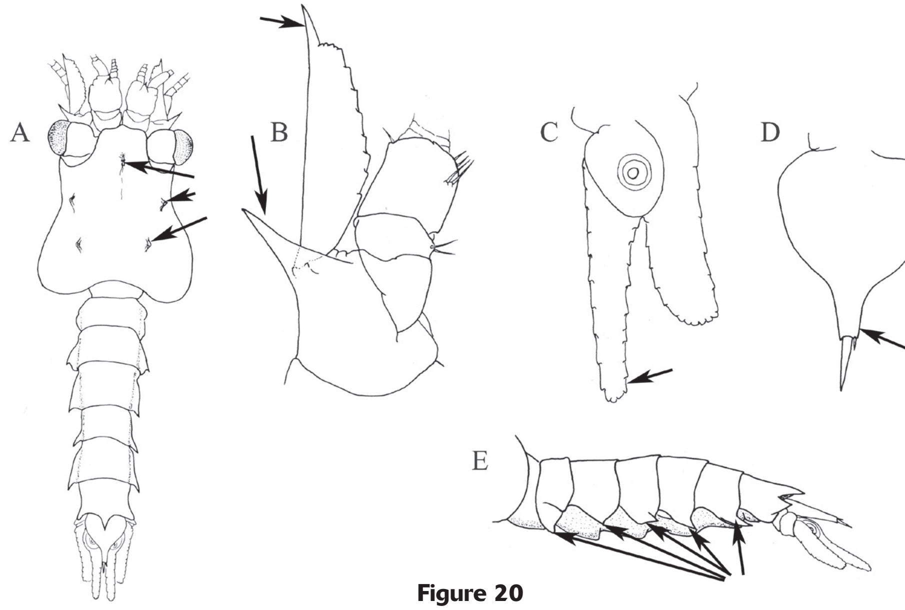

Figure 20

Amathimysis brattegardi: (A) dorsal view of body; (B) antenna with antennal scale; (C) uropod; (D) telson; (E) lateral view of abdomen showing pleural processes. (Modified from Stuck and Heard, 1981.)

—Carapace without keel-like tubercles. Antennal scale with tooth sub-terminal, extending to or just short of tip of blade; antennal peduncle with sympod with small or indistinct tooth on outer distal corner. Abdominal pleura with posteroventral margins rounded. Uropodal endopod similar in length to exopod. Telson narrowly truncate posteriorly, apex armed with 2 large medial and 2 small lateral spiniform setae . . . . ***Amathimysis* sp. (nr. *serrata*)** (Fig. 21)

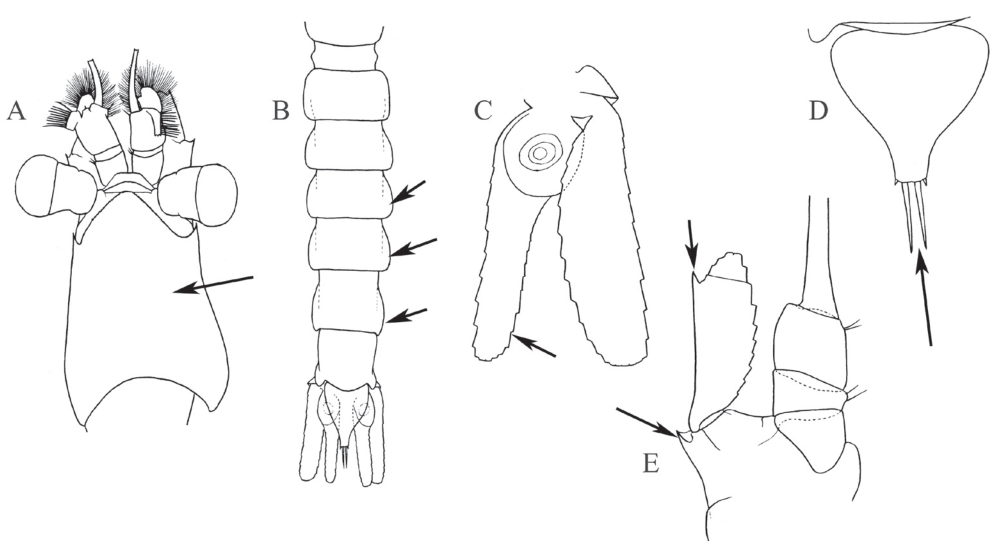

Figure 21

Amathimysis sp. (nr. *serrata*): (A) dorsal view of carapace; (B) dorsal view of posterior end of body; (C) uropod; (D) telson; (E) antenna with antennal scale. (Modified from Murano, 1986.)

11. Antennal scale with small lateral tooth, with setae on inner margin but devoid of setae on outer margin (setae on inner margin not drawn in Fig. 22, instead, the setal insertions are indicated). Uropodal endopod similar in length to exopod . . . . ***Siriella thompsonii*** (Fig. 22)

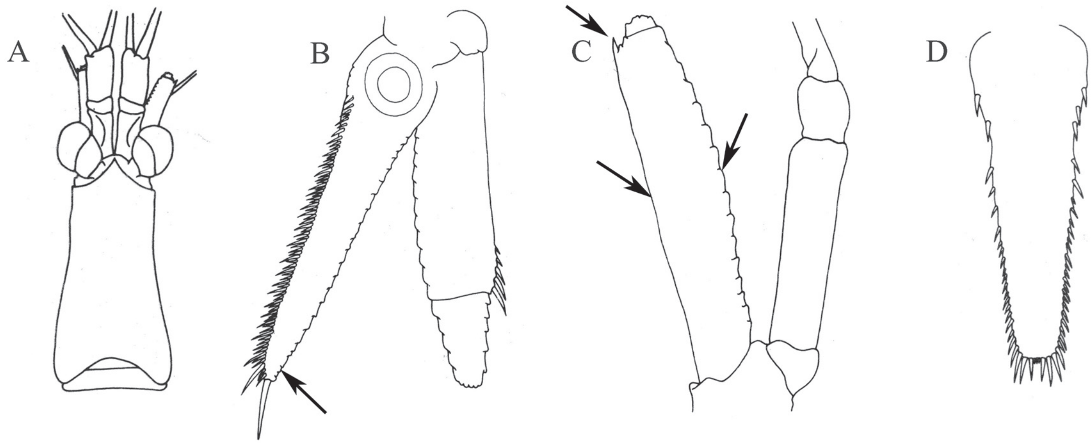

Figure 22

Siriella thompsonii: (A) dorsal view of carapace; (B) uropod; (C) antenna with antennal scale; (D) telson. (Modified from Stuck et al., 1979a.)

—Antennal scale without lateral tooth, with setae on both inner and outer margins (setae on margins not drawn in Fig. 23, instead, the setal insertions are indicated). Uropodal endopod distinctly shorter than exopod (Fig. 23) **12**

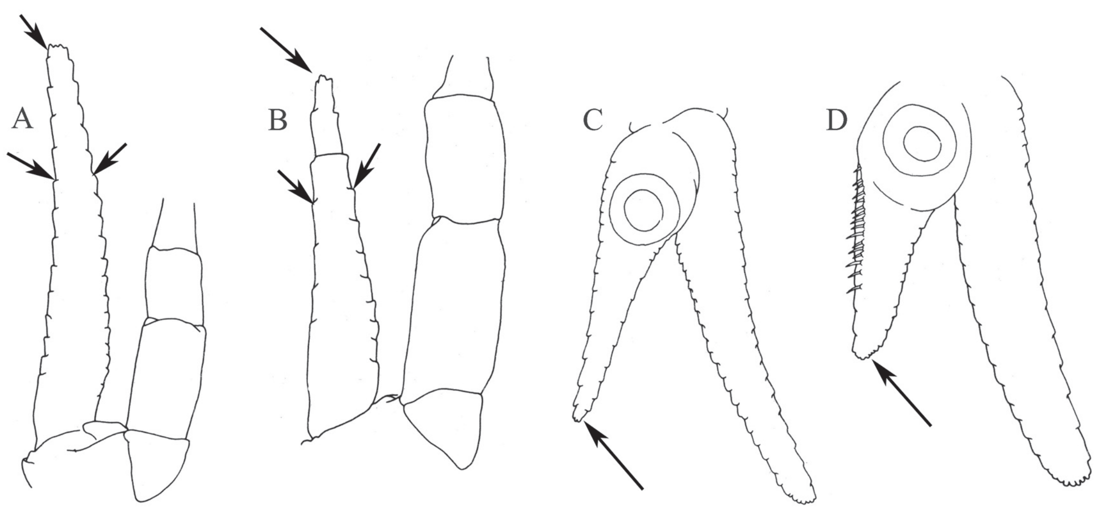

Figure 23

(A) antenna with antennal scale: *Americamysis almyra*; (B) antenna with antennal scale: *Metamysidopsis swifti*; (C) uropod: *Brasilomysis castroi*; (D) uropod: *Metamysidopsis swifti*. (Modified from Stuck et al., 1979a.)

12. Eyestalks long and slender, about twice as long as wide at mid-length. Posterior half of telson armed with 40 or more spatulate spiniform setae . . . . ***Brasilomysis castroi*** (Fig. 24)

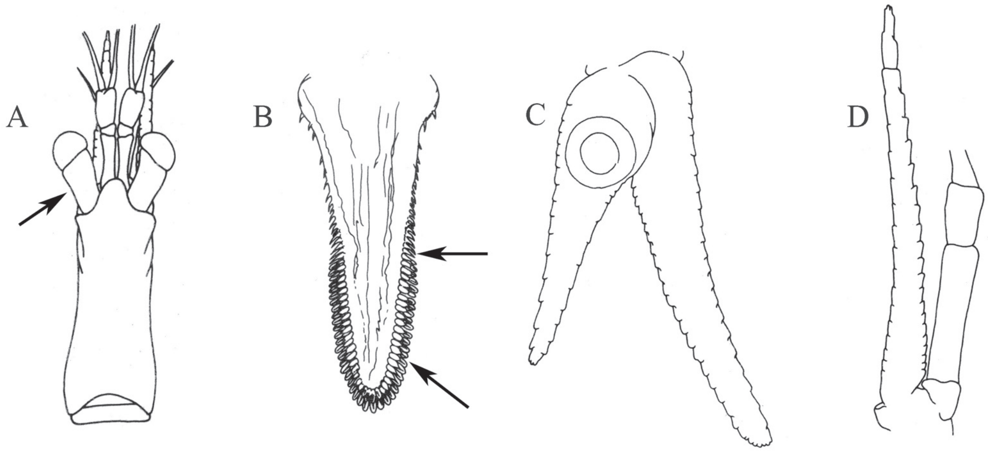

Figure 24

Brasilomysis castroi: (A) dorsal view of carapace; (B) telson; (C) uropod; (D) antenna with antennal scale. (Modified from Stuck et al., 1979a.)

—Eyestalks about as long as wide at midlength. Lateral margins of telson armed with simple (non-spatulate) spiniform setae (Fig. 25) **13**

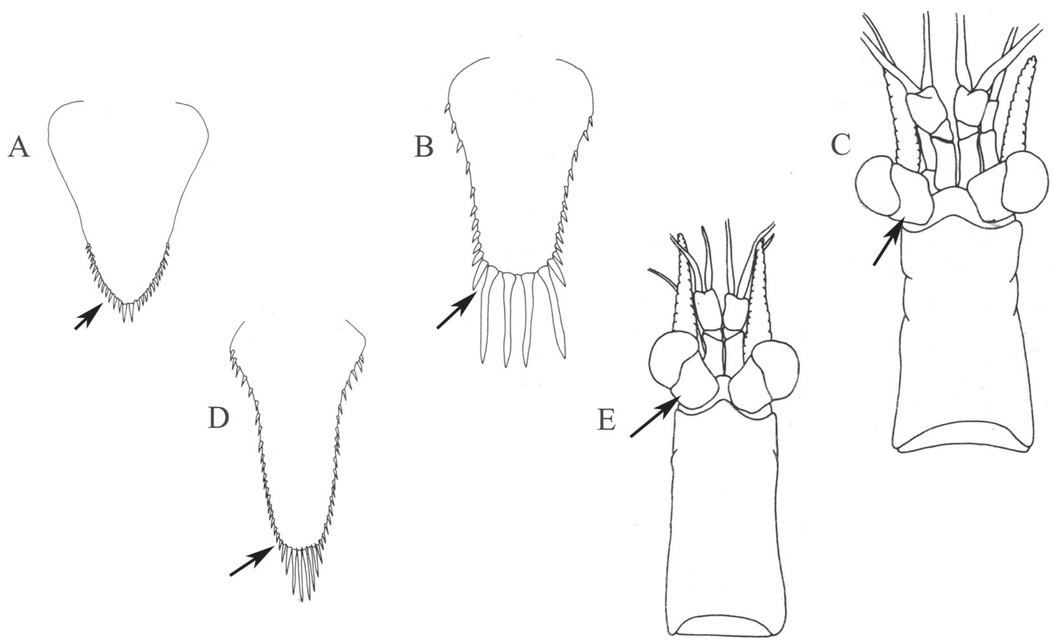

Figure 25

(A) telson: *Metamysidopsis swifti*; (B) telson: *Americamysis bigelowi*; (C) dorsal view of carapace: *Metamysidopsis swifti*; (D) telson: *Americamysis bahia*; (E) dorsal view of carapace: *Americamysis bahia*. (Modified from Stuck et al., 1979a.)

13. Carapace with spine on each anterolateral margin, just posterior to eyes. Antennal scale narrow, lanceolate, 10–11 times longer than greatest width. Thoracic endopods 3–8 have carpo-propodus divided into 5–9 small articles. Telson relatively long and narrowing to a truncated point, length about 2–2.5 times greater than greatest width near base, each lateral margin armed with 22–42 spiniform setae (those on posterior 2/3 of each margin arranged in groups of 1–3 with small setae between larger ones), apex armed with 2 pairs of spiniform setae (outer pair about 3–4 times length of inner medial pair) . . . . ***Neomysis americana*** (Fig. 26)

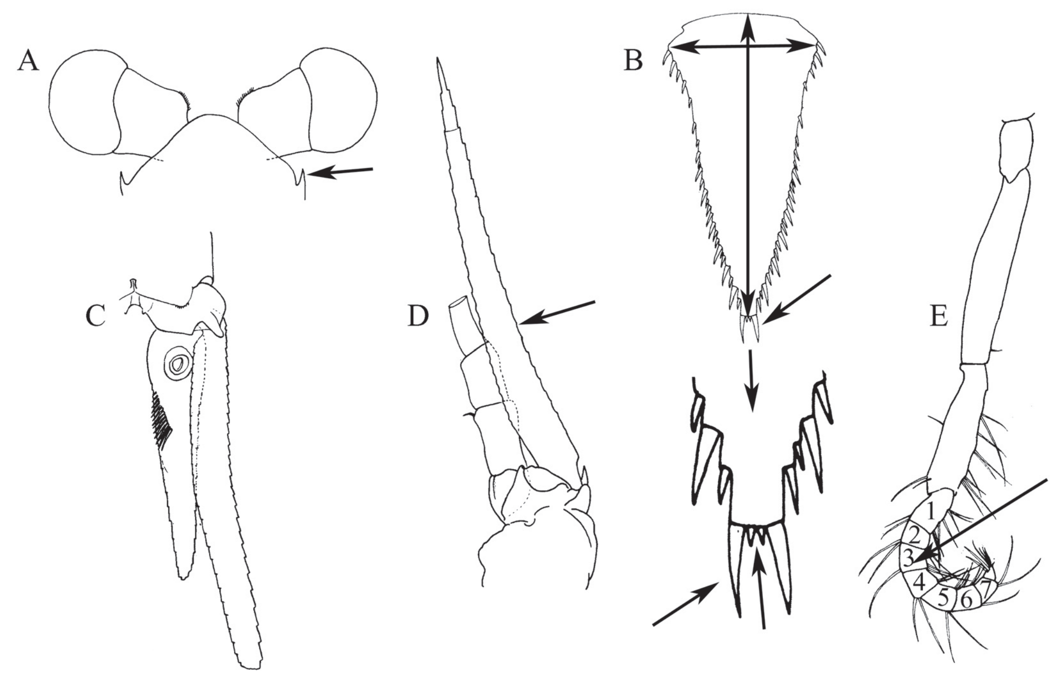

Figure 26

Neomysis americana: (A) anterior end of carapace with eyestalks; (B) telson; (C) uropod; (D) antenna with antennal scale; (E) thoracic endopod. (Modified from Williams, 1974.)

Couplet continued on next page.

—Carapace lacking spines on anterolateral margin behind eyes. Antennal scale less than 8 times longer than greatest width. Thoracic endopods 3–8 have carpo-propodus divided into 2–3 articles. Telson tapering to a rounded apex, length less than twice greatest width near base, each lateral margin armed with fewer than 20 spiniform setae (not alternating in size and length, but generally increasing in size posteriorly) (Fig. 27) **14**

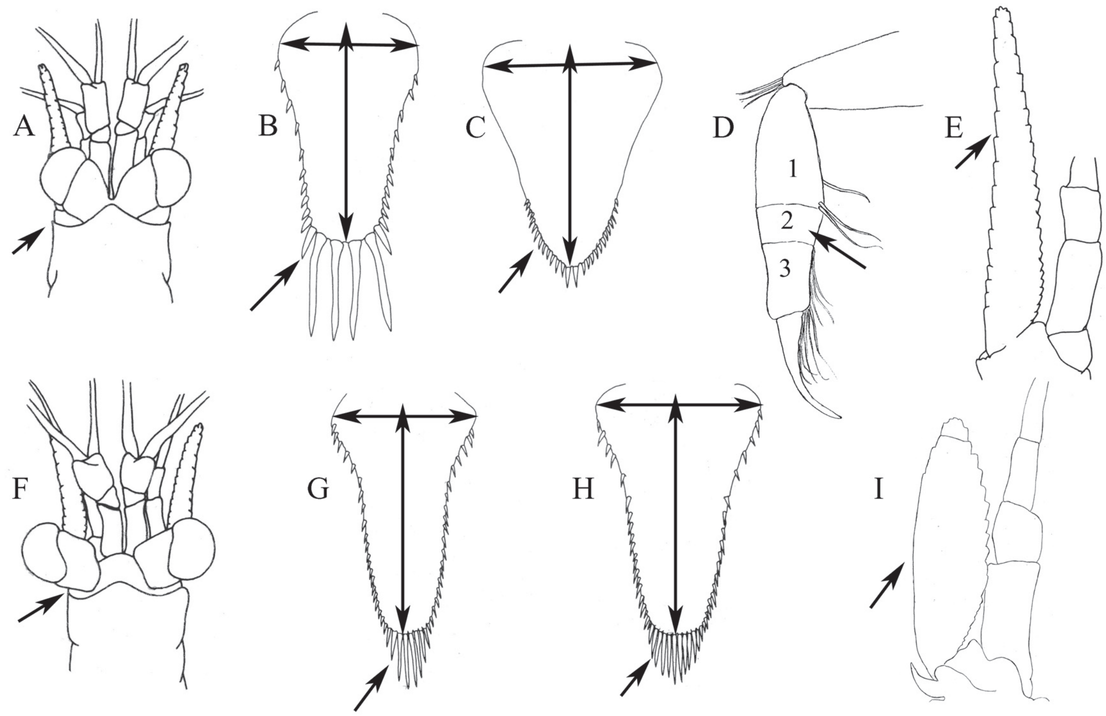

Figure 27

(A) anterior end of carapace: *Americamysis bigelowi*; (B) telson: *Americamysis bigelowi*; (C) telson: *Metamysidopsis swifti*; (D) distal end of thoracic endopod: *Mysidopsis* sp. (*mortenseni* complex); (E) antenna with antennal scale: *Americamysis bahia*; (F) anterior end of carapace: *Metamysidopsis swifti*; (G) telson: *Americamysis bahia*; (H) telson: *Americamysis almyra*; (I) antenna with antennal scale: *Mysidopsis* sp. (*mortenseni* complex). (A–C, E–G: modified from Stuck et al., 1979a; D, I: original illustrations.)

Key continued on next page.

14. Maxilla lacking exopod. Telson with spiniform setae only on posterior 1/3 of lateral margins, apex armed with two large distinct spiniform setae . . . . ***Metamysidopsis swifti*** (Fig. 28)

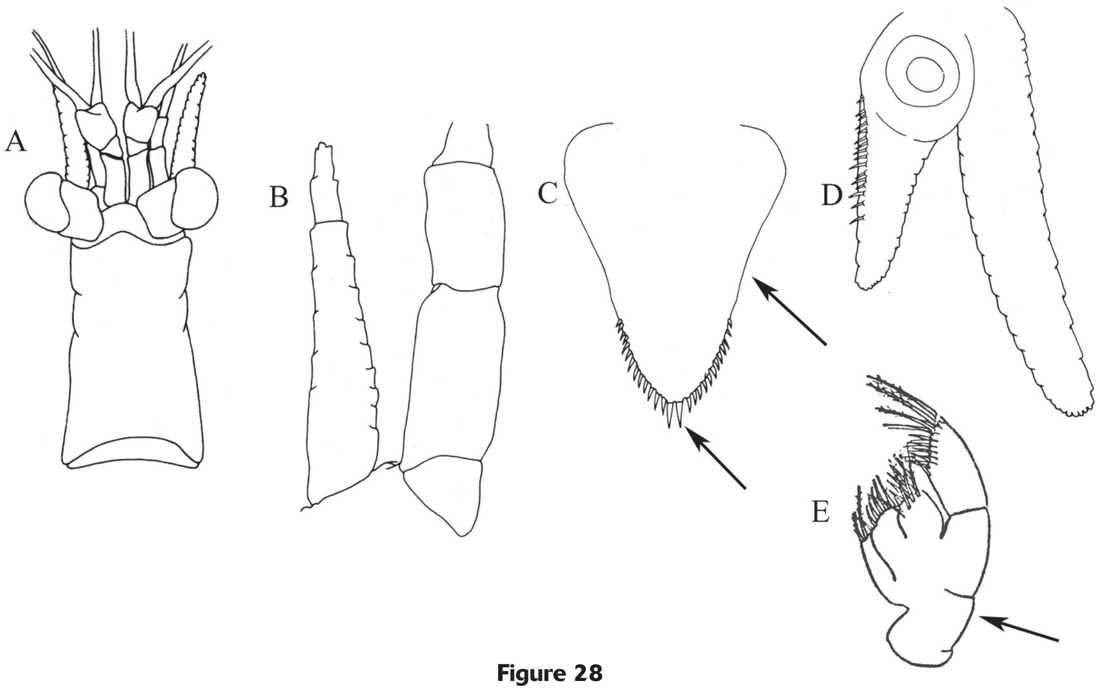

Figure 28

Metamysidopsis swifti: (A) dorsal view of carapace; (B) antenna with antennal scale; (C) telson; (D) uropod; (E) maxilla without palp (exopod). (A–D: modified from Stuck et al., 1979a; E: modified from Tattersall, 1951.)

—Maxilla with exopod. Telson armed with spiniform setae along the posterior 2/3 or more of lateral margins, apex armed with more than two large distinct spiniform setae (Fig. 29) **15**

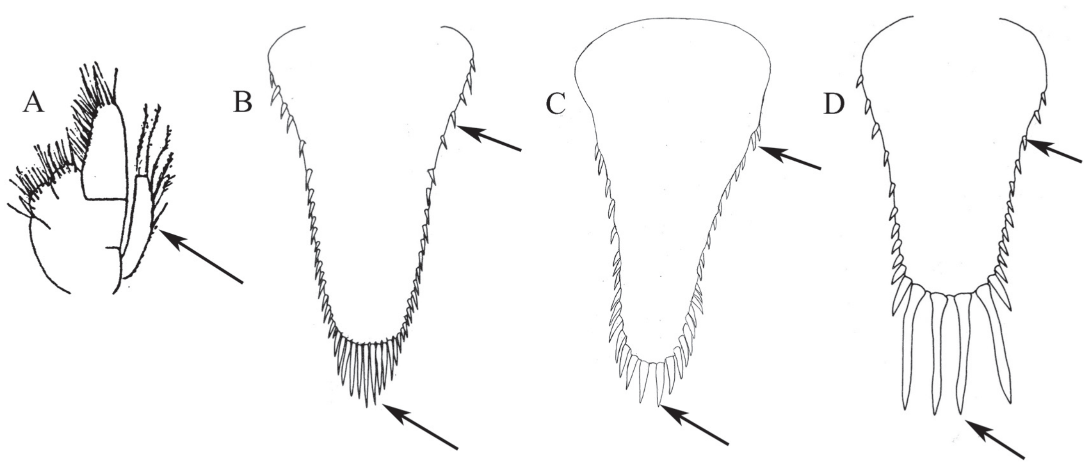

Figure 29

(A) Maxilla with palp (exopod); (B) telson: *Americamysis almyra*; (C) telson: *Mysidopsis* sp. (*mortenseni* complex); (D) telson: *Americamysis bigelowi*. (A: modified from Tattersall, 1951; B–D: modified from Stuck et al., 1979a.)

15. Antennal scale less than 3.5 times as long as greatest width, with distal article. Carpo-propodus of thoracic endopods 3–8 have 3 articles. Uropodal endopod inner margin armed with row of 19–28 relatively large spiniform setae extending to distal end of endopod. Telson with large spiniform setae on apex slightly larger than those on lateral margins (being less than 1/7 of telson length) . . . . ***Mysidopsis* sp. (*mortenseni* complex)** (Fig. 30)

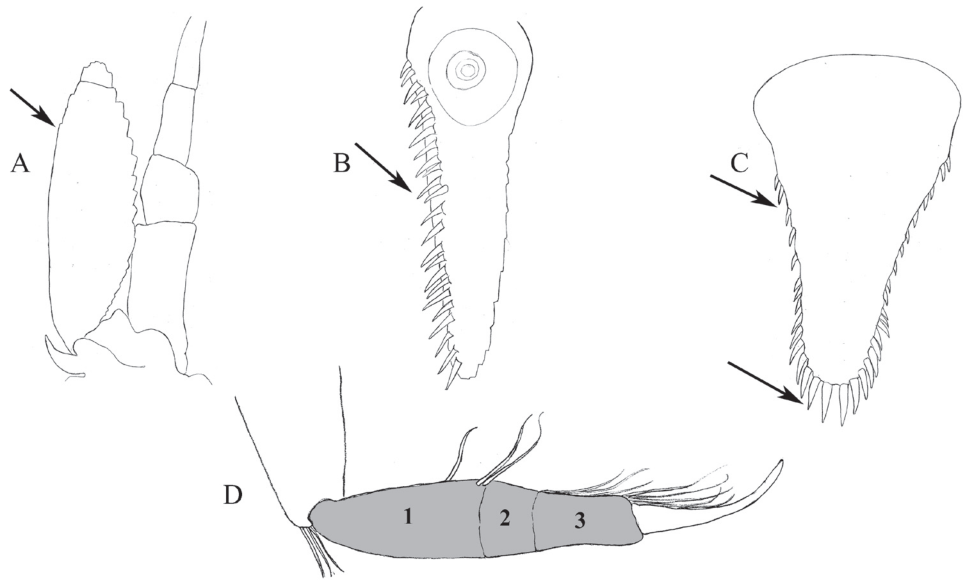

Figure 30

Mysidopsis sp. (*mortenseni* complex): (A) antenna with antennal scale; (B) uropod; (C) telson; (D) distal end of thoracic endopod 3. (All original illustrations.)

—Antennal scale more than 5 times as long as greatest width, lacking distal article. Carpo-propodus of thoracic endopods 3–8 have 2 articles. Uropodal endopod inner margin armed with fewer than 7 spiniform setae barely extending distally past statocyst. Telson with spiniform setae on apex distinctly larger than those on lateral margins (being at least 1/5 of telson length) (Fig. 31) (***Americamysis***) **16**

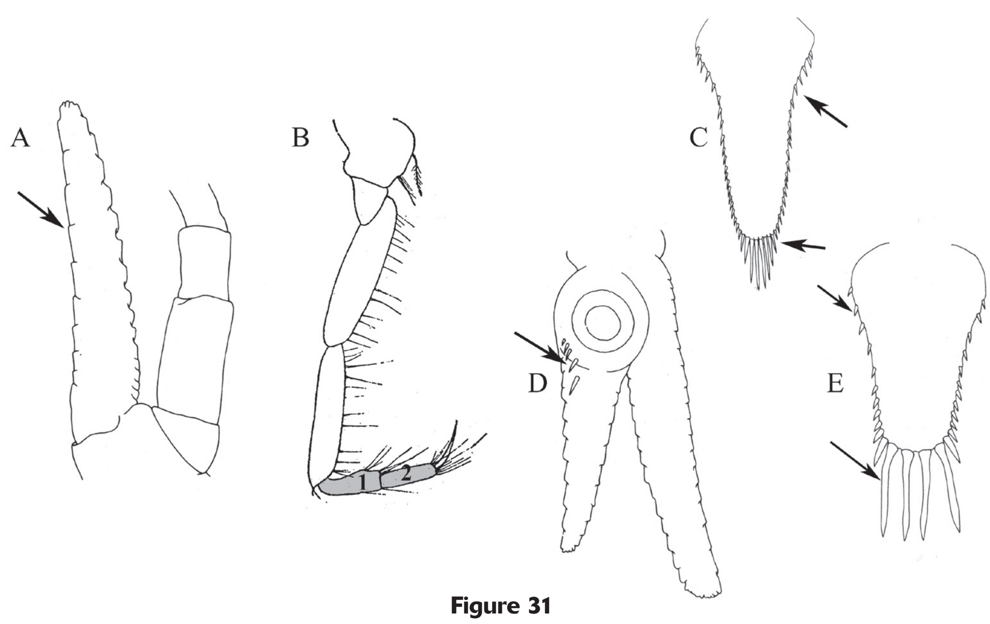

Figure 31

(A) antenna with antennal scale: *Americamysis bigelowi*; (B) thoracic endopod 3: *Americamysis bigelowi*; (C) telson: *Americamysis bahia*; (D) uropod: *Americamysis bigelowi*; (E) telson: *Americamysis bigelowi.* (A, C–E modified from Stuck et al., 1979a; B: modified from Tattersall, 1951.)

16. Carpo-propodus of second thoracic endopod with a series of 4–12 spiniform setae on distal 1/2 to 2/3 of inner margin of the first article; merus with 2 setae on proximal inner margin. Uropodal endopod usually with 4–5 (rarely 3 or 6) spiniform setae on inner margin near distal edge of statocyst. Telson with 3 pairs of large terminal setae, all distinctly longer than lateral setae, the innermost being about 1/3 the length of telson . . . . ***Americamysis bigelowi*** (Fig. 32)

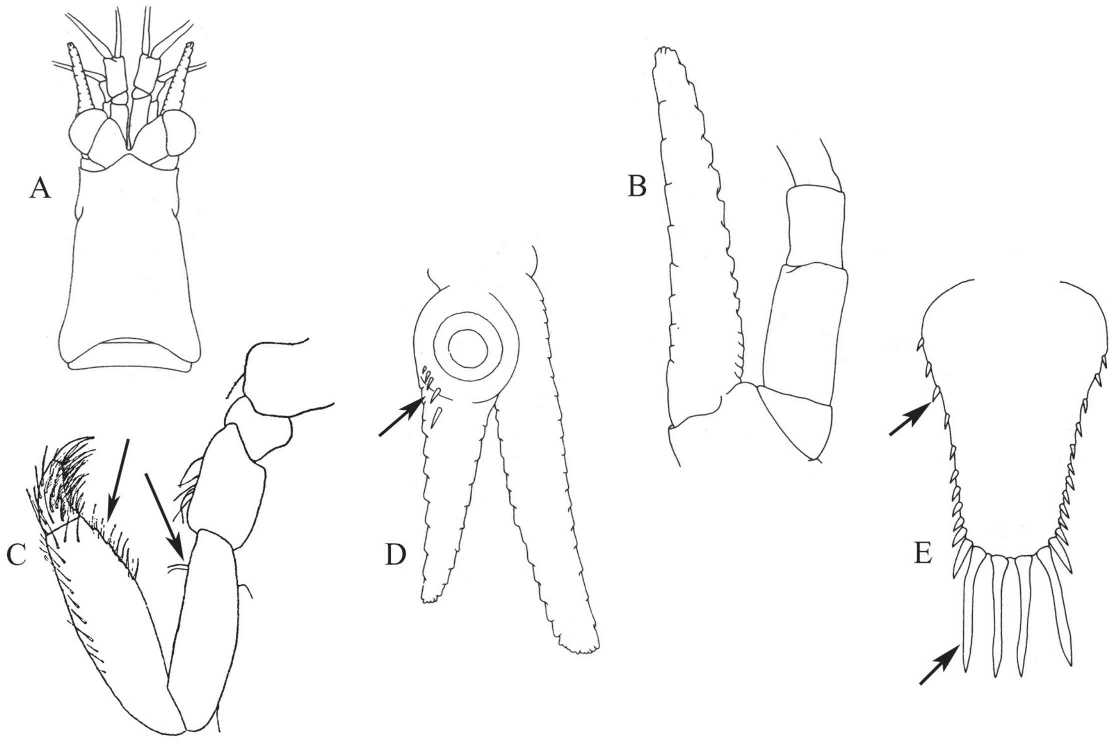

Figure 32

Americamysis bigelowi: (A) dorsal view of carapace; (B) antenna with antennal scale; (C) thoracic endopod 2; (D) uropod; (E) telson. (A, C–E: modified from Stuck et al., 1979a; B: modified from Tattersall, 1951.)

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—Carpo-propodus of second thoracic endopod with 2–4 setae on distal part of inner margin of first article; merus with 4–18 setae on proximal 2/3 of inner margin. Uropodal endopod usually with 1–3 (sometimes 4–5) spiniform setae on inner margin near distal edge of statocyst. Apex of telson with 3–8 pairs of closely-set terminal setae, outermost pair being only slightly longer than adjacent lateral setae, innermost pair being no more than 1/4 length of telson (Fig. 33) **17**

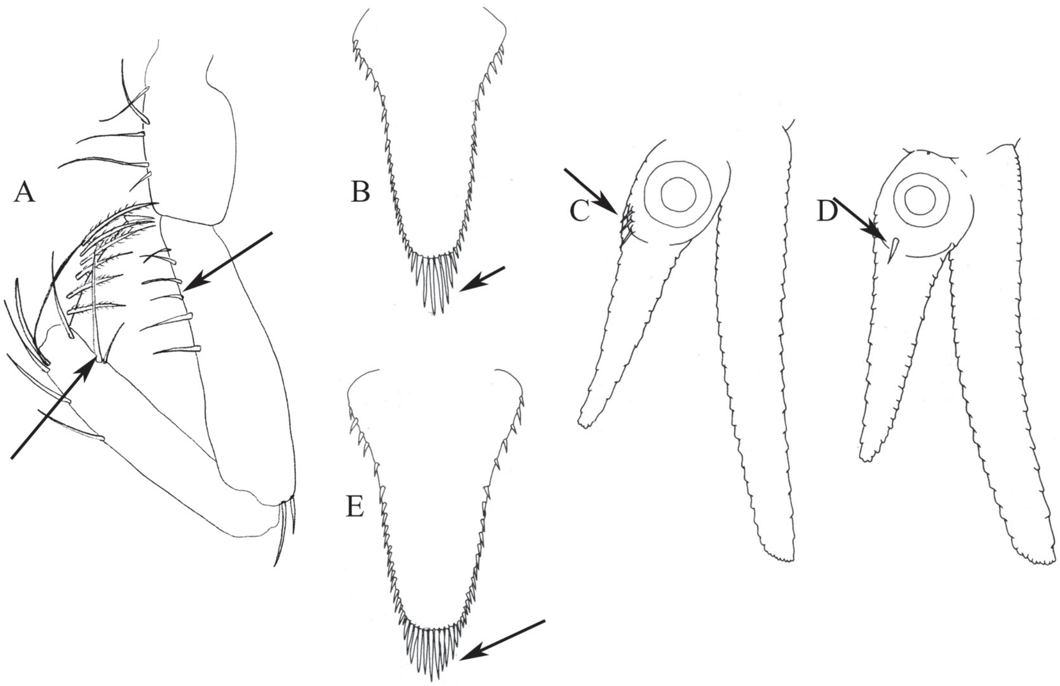

Figure 33

(A) thoracic endopod 2; (B) telson: *Americamysis bahia*; (C) uropod: *Americamysis bahia*; (D) uropod: *Americamysis almyra*; (E) telson: *Americamysis almyra*. (A: original illustration; B–E modified from Stuck et al., 1979a.)

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17. Anterior margin of carapace (rostral shield) broadly rounded. Uropodal endopod usually with 1 spiniform seta on inner margin near distal edge of statocyst. Telson with apex usually bearing 4–8 pairs of terminal spiniform setae gradually increasing in length medially . . . .***Americamysis almyra*** (Fig. 34)

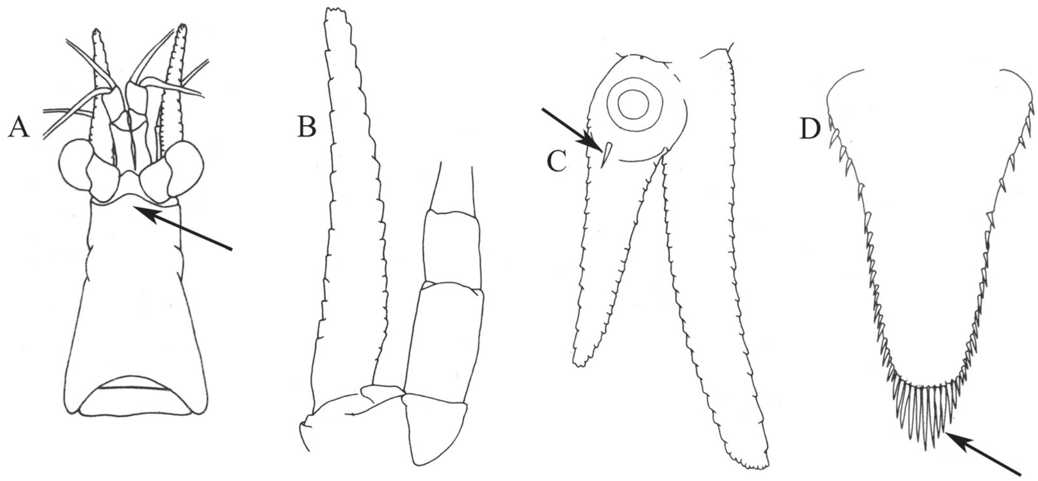

Figure 34

Americamysis almyra: (A) dorsal view of carapace;(B) antenna with antennal scale; (C) uropod; (D) telson. (Modified from Stuck et al., 1979a.)

—Anterior margin of carapace produced to form a short triangular rostrum. Uropodal endopod usually with 2–3 (occasionally 1 or 4–5) spiniform setae on inner margin near distal edge of statocyst. Telson with apex usually bearing 3–6 pairs of terminal spiniform setae abruptly increasing in length medially . . . .***Americamysis bahia*** (Fig. 35)

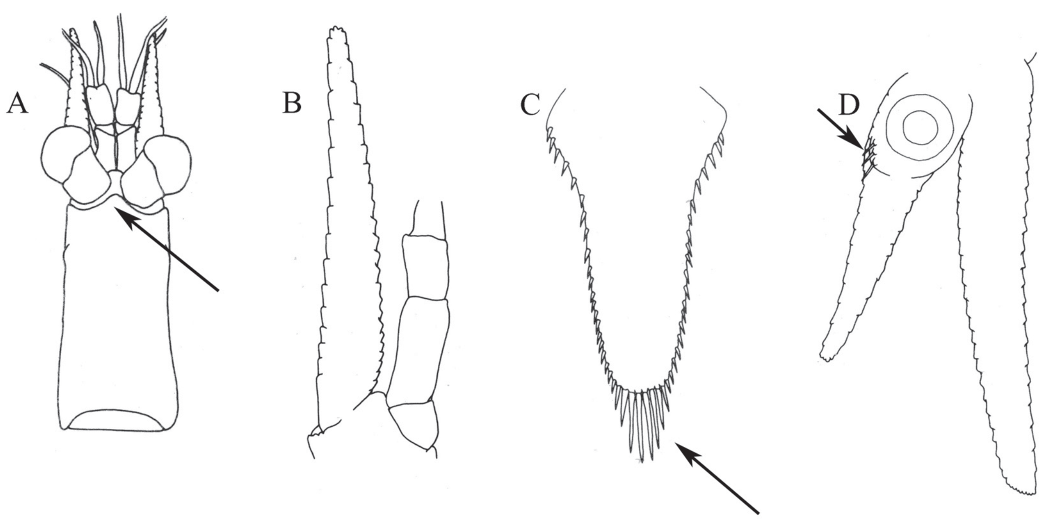

Figure 35

Americamysis bahia: (A) dorsal view of carapace; (B) antenna with antennal scale; (C) telson; (D) uropod. (Modified from Stuck et al., 1979a.)

Annotated list of mysids from the South Atlantic Bight

The following list contains those mysid species known or likely to occur in the coastal and offshore waters of the SAB. Comments are presented on the distribution of each species and on the ecology and taxonomy of selected species.

FAMILY MYSIDAE Haworth, 1825

SUBFAMILY SIRIELLINAE Norman, 1892

Siriella thompsonii (H. Milne-Edwards, 1837)
(Fig. 22)

Cynthia thompsoni H. Milne-Edwards, 1837: 462.
Siriella thompsonii.—Sars, 1885: 205, Plate 36, Figs. 1–24.—Ii, 1964: 62, Figs. 14–15.—Pillai, 1965: 1693, Fig. 19.—Stuck et al., 1979a: 234, Figs. 2f, 3f, 4f, 5f.—Stuck et al., 1979b: 244.

Material examined. SERTC #S43, off St. Simons Island, GA, 31°8.10′N, 79°55.00′W, 55 m, coll. MRRI staff, 11 September 1980.

Known distribution. Oceanic with wide distribution in tropical and temperate waters of the world (Stuck et al., 1979b).

Remarks. Although this is the first record for this widely distributed species in the waters of the SAB, the occurrence of *Siriella thompsonii* was not unexpected.

SUBFAMILY GASTROSACCINAE Norman, 1892

Anchialina typica (Krøyer, 1861)
(Fig. 6)

Anchialus typicus Krøyer, 1861: 53, Plate 2, Fig. 7a–1.—Sars, 1885: 193, Plate 34, Figs. 4–24.
Anchialina typica.—Hansen, 1910: 52, Plate 7, Fig. 2a–k.—Nouvel, 1943: 70, Plate 4, Figs. 109–110.—Tattersall, 1955: 89, Fig. 15.—Ii, 1964: 188, Figs. 48–49.—Pillai, 1964: 18, Fig. 10.—Pillai, 1965: 1700, Figs. 32–34.—Brattegard, 1970: 24, Fig. 6.—Nouvel, 1971: 325, Fig. 1.—Stuck et al., 1979a: 227, Figs. 2a, 3a, 4a, 5a.—Stuck et al., 1979b: 244.—Băcescu and Ortiz, 1984: 16, Fig. 1b.

Material examined. SERTC #S27, Charleston ODA, SC, 32°42.50′N, 79°51.60′W, 8–17 m, coll. MRRI staff, August 1978. SERTC #S44, off St. Simons Island, GA, 31°8.10′N, 79°55.00′W, 55 m, coll. MRRI staff, 11 September 1980. SERTC #S47, off Cumberland Island, GA, 30°54.30′N, 80°36.10′W, 34 m, coll. GADNR staff, 26 March 1980. DML #2130, off Bogue Banks, Cape Lookout, NC, 34°28.50′N, 76°07.00′W, 40 m, coll. J. Day, 30 September 1965. DML #4345 (labeled *Bowmaniella poctoricensis* [sic]), off Cape Fear, NC, 33°32.40′N, 77°25.10′W, 30 m, 13 August 1981. DML #4356 [in part] (labeled *Bowmaniella* sp.), off Bogue Banks, Cape Lookout, NC, 34°24.20′N, 76°35.80′W, 25 m, 13 August 1981.

Known distribution. Widely distributed in the tropical and sub-tropical regions of the Atlantic, Indian, and Pacific oceans (Tattersall, 1951; Ii, 1964; Brattegard, 1970, 1973, 1975; Băcescu and Ortiz, 1984; Price et al., 2002; Price and Heard, 2004); waters off Nova Scotia (Nouvel, 1943); South Carolina (Wigley and Burns, 1971); Gulf of Mexico (Hopkins, 1966; Stuck et al., 1979a, b; Modlin, 1984; Price et al., 1986).

Other regional records. Van Dolah et al., 1983; Wenner et al., 1984; MRRI[2,3,4]; Van Dolah et al.[5].

Remarks. The occurrence of this widely distributed species in the offshore waters of the SAB was previously documented by Wigley and Burns (1971).

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[2] MRRI. 1981. Final Report, South Atlantic OCS Area Living Marine Resources Study, Vol. III: Appendices (to An investigation of live bottom habitats south of Cape Fear, North Carolina, Vol. 1 and An investigation of live bottom habitats north of Cape Fear, North Carolina, Vol. 2). Prepared for Bureau of Land Management, Washington, D.C., Contract AA551-CT9-27, 180 p. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422; Coastal Resources Division, Georgia Department of Natural Resources, One Conservation Way, Brunswick, GA 31520; Duke University Marine Laboratory, 135 Duke Marine Lab Road, Beaufort, NC 28516-9721.

[3] MRRI. 1982. Final Report, South Atlantic OCS Area Living Marine Resources Study, Year 2. Vol. III: Appendices (to *An investigation of live-bottom habitats off South Carolina and Georgia, Vol. 1* and *An investigation of live-bottom habitats off North Carolina, Vol. 2*). Prepared for Minerals Management Service, Washington, D. C., Contract AA551-CT1-18, 263 p. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422 and Duke University Marine Laboratory, 135 Duke Marine Lab Road, Beaufort, NC 28516-9721.

[4] MRRI. 1984. Final Report, South Atlantic OCS Area Living Marine Resources Study, Phase III. Vol. II: Appendices. Prepared for Minerals Management Service, Washington, D. C., Contract 14-12-0001-29185, 82 p. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422.

[5] Van Dolah, R. F., P. H. Wendt, D. A. Goldman, A. B. Wrona, R. A. Pardieck, and M. V. Levisen. 1997. An assessment of benthic infaunal assemblages and sediments in the vicinity of the Charleston ocean dredged material disposal area. Final Report to the U.S. Army Corps of Engineers, Charleston District. Charleston, SC, 59 p. and appendices. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422.

Bowmaniella dissimilis (Coifmann, 1937)
(Fig. 8)

Gastrosaccus dissimilis Coifmann, 1937: 5, Figs. 2–3.—Tattersall, 1951: 97, Fig. 29.—Costa, 1964: 4, Plate 1, Figs. 1–4.

Bowmaniella dissimilis.—Băcescu, 1968b: 363, Fig. 4.—Brattegard, 1970: 9, 11, Fig. 2.

Bowmaniella brasiliensis Băcescu, 1968b: 363, Figs. 5a–c, 6.—Brattegard, 1974a: 91.—Price, 1978: 173.—Stuck et al., 1979a: 226 (key), 233, Figs. 2d, 3d, 4c, 5d, 7.—Stuck et al., 1979b: 244.—Price, 1982: 13, Fig. 4.

Bowmaniella floridana Holmquist, 1975: 68.—Stuck et al., 1979a: 226 (key), 232, Figs. 2c, 3c, 4d, 5c, 6.—Stuck et al., 1979b: 244.—Price, 1982: 14, Figs. 2, 3.

Material examined. SERTC #S11, Murrells Inlet, SC, 33°31.90′N, 79°1.80′W, coll. MRRI staff, 13 July 1982. SERTC #S13, Murrells Inlet, SC, 33°31.60′N, 79°1.70′W, coll. MRRI staff, 13 July 1982. SERTC #S14, Murrells Inlet, SC, 33°31.90′N, 79°1.90′W, coll. MRRI staff, 15 July 1982. SERTC #S15, Murrells Inlet, SC, 33°33.00′N, 79°0.90′W, coll. MRRI staff, 16 July 1982. SERTC #S17, Murrells Inlet, SC, 33°33.50′N, 79°0.70′W, coll. MRRI staff, no collection date. SERTC #S20, Charleston ODA, SC, 32°42.50′N, 79°51.60′W, 8–17 m, coll. MRRI staff, August 1978. SERTC #S29, Charleston ODA, SC, 32°42.50′N, 79°51.60′W, 8–17 m, coll. MRRI staff, August 1978. SERTC #S32, Georgetown ODMDS, SC, 33°12.17′N, 79°7.05′W, 9 m, coll. MRRI staff, 13 July 1983. SERTC #S34, Georgetown ODMDS, SC, 33°12.17′N, 79°7.05′W, 9 m, coll. MRRI staff, 13 July 1983. SERTC #S37, Georgetown ODMDS, SC, 33°12.42′N, 79°5.30′W, 11 m, coll. MRRI staff, 14 July 1983. SERTC #S38, Georgetown ODMDS, SC, 33°13.20′N, 79°8.00′W, coll. MRRI staff, 1983. SERTC #S60, entrance to Charleston Harbor, SC, 32°40.33′N, 79°47.12′W, 12.7 m, coll. MRRI staff, 28 January 1987. SERTC #S64, Port Royal Sound, SC, 32°17.83′N, 80°45.92′W, coll. MRRI staff, October 1987. SERTC #S67, southwest end of Folly Beach, SC, 32°38.23′N, 79°58.50′W, 0.7 m, coll. D.M. Knott, 26 February 2002. SERTC #S73, Charleston ODMDS, SC, 32°40.51′N, 79°45.50′W, 10.7 m, coll. MRRI staff, 11 September 2000. SERTC #S74, Charleston ODMDS, SC, 32°40.00′N, 79°44.69′W, 11.5 m, coll. MRRI staff, 11September 2000. SERTC #S78, Charleston ODMDS, SC, 32°40.39′N, 79°45.58′W, 10.9 m, coll. MRRI staff, 11 September 2000. SERTC #S79, Charleston ODMDS, SC, 32°40.70′N, 79°45.70′W, 10.5 m, coll. MRRI staff, 11 September 2000. SERTC #S85, south of Bird Key, Folly River, SC, 32°37.54′N, 79°58.34′W, 3 m, coll. D.M. Knott, 12 September 2003. SERTC #S729, front beach at North Island, SC, 33°13.33′N, 79°10.56′W, 2 m, coll. D.M. Allen, 13 October 2003. SERTC #S733 collection, off north jetty at entrance to Winyah Bay, SC, 33°12.40′N, 79°07.36′W, 7 m, coll. D.M. Allen, 12 November 2003. SERTC #S1234, off Little Tybee Island, GA, 31°58.40′N, 80°51.40′W, intertidal, coll. R.W. Heard, 10 June 1991. SERTC #S1235, between Wyley's dock and groins, Tybee Island, GA, 31°59.30′N, 80°51.40′W, 0.5–1.0 m, coll. R.W. Heard, 5 October 1991. SERTC #S1238, near Wyley's dock, Tybee Island, GA, 31°59.30′N, 80°51.40′W, coll. R.W. Heard, 10 May 1991. SERTC #S1244, North Inlet, SC, 33°19.50′N, 79°9.80′W, 8.0–10.0 m, coll. D.M. Allen, 17 June 1986. SERTC #S1245, Clambank Creek, North Inlet, SC, 33°20.08′N, 79°11.33′W, 10.2 m, coll. D.M. Allen, 2 November 1979.

Known distribution. U.S. Atlantic coast, Indian River Inlet, DE (Hopkins, 1965); Gulf of Mexico, southwestern Florida (Brattegard, 1970) to Veracruz, Mexico (Băcescu, 1968b); Caribbean coast of Colombia (Brattegard, 1974b); Brazil (Coifmann, 1937; Costa, 1964; Băcescu, 1968b).

Other regional records. Holland, 1974; Shealy et al., 1975; DeLancey, 1984, 1987; Van Dolah et al., 1984; Fox and Ruppert, 1985; Dubick[6]; Heard, pers. observ.; Jutte et al.[7]; Knott et al.[8];Van Dolah et al.[9]; Vittor and Associates[10]; Zimmerman[11].

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[6] Dubick, J. D. Personal commun. YEAR. National Benthic Infaunal Database of the Center for Coastal Environmental Health and Biomolecular Research, National Centers for Coastal Ocean Science, NOAA, 219 Fort Johnson Road, Charleston, SC 29412-9110.

[7] Jutte, P. C., R. F. Van Dolah, G. W. Eason, Jr., and M. V. Levisen. 1999. An assessment of benthic infaunal assemblages and sediments in the vicinity of the Port Royal Ocean Dredged Material Disposal Site. Final Report to the U.S. Army Corps of Engineers, Charleston District. Charleston, SC, 55 p. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422-2559.

[8] Knott, D. M., R. F. Van Dolah, and D. R. Calder. 1984. Ecological effects of rubble weir jetty construction at Murrells Inlet, South Carolina. Volume II: Changes in macrobenthic communities of sandy beach and nearshore environments. Technical Report EL-84-4, prepared by the Marine Resources Research Institute, Charleston, SC, for Coastal Engineering Research Center, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS, 98 p. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422.

[9] Van Dolah, R. F., D. M. Knott, and D. R. Calder. 1984. Ecological effects of rubble weir jetty construction at Murrells Inlet, South Carolina. Volume I: Colonization and community development on new jetties. Technical Report EL-84-4, prepared by the Marine Resources Research Institute, Charleston, SC, for Coastal Engineering Research Center, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS, 69 p. and appendices. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422.

[10] Vittor, B.A., and Associates. 2000. Benthic sampling of the nearshore area off Brunswick Harbor, Georgia. Final Report to the U.S. Army Corps of Engineers, Savannah District. Savannah, GA, 32 p. Barry A. Vittor & Associates, Inc., 8060 Cottage Hill Rd., Mobile, AL 36695.

[11] Zimmerman, L. E. Unpubl. data from the South Carolina Estuarine and Coastal Assessment Program. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston, SC 29422-2559.

Remarks. *Bowmaniella dissimilis* is confined to Atlantic inshore waters and is known along the coasts of the Americas from Brazil to the United States. It is readily distinguished from the other mysids from the SAB by the presence of an articulated, dorsal process on the fifth abdominal segment. This relatively large, sand burrowing species is a common resident along the beaches of the SAB, where is usually co-occurs with *Metamysidopsis swifti*. The systematics and taxonomy of *B. dissimilis* and the other species currently assigned to the genus *Bowmaniella* Băcescu 1968b have been reviewed by Heard and Price (In press). Based on their observations, the records for *B. brasiliensis* and *B. floridana* from the SAB are attributable to *B. dissimilis*.

Bowmaniella mexicana (Tattersall, 1951)
(Fig. 9)

Gastrosaccus mexicanus Tattersall, 1951: 98, Fig. 30.—Day et al., 1971: Appendix A.

Bowmaniella (*Coifmaniella*) *mexicana*.—Băcescu, 1968b: 356.

Bowmaniella portoricensis Băcescu, 1968b: 357, Figs. 1, 2a–e, 3a–b.—Brattegard, 1970: 9, Tables 7–8.—Wigley and Burns, 1971: 721–722 (map).—Stuck et al., 1979a: 227, Figs. 2b, 3b, 4b, 5b.—Stuck et al., 1979b: 244.

Bowmaniella (*Bowmaniella*) *atlantica* Silva, 1971: 159 (=*Gastrosaccus brasiliensis sensu* Silva, 1970: 35, Fig. 1).

Gastrosaccus johnsoni (not *Gastrosaccus johnsoni* Tattersall, 1937).—Howard and Frey, 1975: 13.—Frankenberg and Leiper, 1977: 390, Table 6.

Bowmaniella gutzui Ortiz, 1988: 4, Fig. 1.

Material examined. SERTC #S25, Charleston ODA, SC, 32°42.50′N, 79°51.60′W, 8–17 m, coll. MRRI staff, August 1978. SERTC #S41, off Sapelo Island, GA, 31°23.40′N, 80°53.00′W, 18 m, coll. MRRI staff, 10 August 1980. SERTC #S46, off Folly Beach, SC, 32°29.60′N, 79°42.50′W, 19 m, coll. MRRI staff, 21 January 1980. SERTC #S48, off Cumberland Island, GA, 30°54.30′N, 80°36.10′W, 34 m, coll. GADNR staff, 26 March 1980. SERTC #S51, off Sapelo Island, GA, 31°23.50′N, 80°52.80′W, 17 m, coll. MRRI staff, 27 April 1981. SERTC #S59, off St. Catherine's Island, GA, 31°38′N, 80°30′W, 20 m, coll. MRRI staff, 29 November 1982. SERTC #S61, entrance to Charleston Harbor, SC, 32°38.47′N, 79°44.82′W, 12.1 m, coll. MRRI staff, 17 July 1987. SERTC #S75, Charleston Harbor ODMDS, SC, 32°26.90′N, 79°43.50′W, 14.6 m, coll. MRRI staff, 23 September 2002. USNM #98611 (labeled as *Bowmaniella johnsoni*), off South Carolina, 33°02′N, 78° 21′W, 0–9 m, 2 March 1953. USNM #99316 (labeled as *Bowmaniella johnsoni*), off South Carolina, 33°33.7′N, 78°24.6′W, 20.1 m, 8 May 1953. USNM #99386 (labeled as *Bowmaniella johnsoni*), off Georgia, 32°38.2′N, 80°14.2′W, 0–17 m, 5 August 1953. USNM #106193 (labeled as *Bowmaniella johnsoni*), off North Carolina, 35°02′N, 75°46′W, 0–11 m, 13 November 1953. USNM #174759 (labeled as *Bowmaniella sewelli*), off Cape Fear, NC, 33°20′N, 77°46′W, 28 m, coll. Texas Instruments, Inc., South Atlantic Benchmark Program, 11 February 1977. USNM #174760 (labeled as *B. sewelli*) off St. Simons Island, GA, 31°08′N, 80°50′W, 19 m, coll. Texas Instruments, Inc., South Atlantic Benchmark Program, 23 November 1977. DML #2127 (labeled as *Gastrosaccus* sp.), off Bogue Banks, Cape Lookout, NC, 34°24.00′N, 76°05.50′W, 35 m, coll. J. Day, 6 April 1965. DML #4344 (labeled as *Bowmaniella poctoricensis* [sic]), off Cape Fear, NC, 33°32.40′N, 77°25.00′W, 29 m, 13 August 1981. DML #4346 (labeled as *Bowmaniella poctoricensis* [sic]), off Cape Fear, NC, 33°32.50′N, 77°25.00′W, 32 m, 13 August 1981. DML #4355 (labeled *Bowmaniella* sp.), off Cape Fear, NC, 33°32.30′N, 77°25.00′W, 33 m, 5 May 1981. DML #4356 [in part] (labeled *Bowmaniella* sp.), off Bogue Banks, Cape Lookout, NC, 34°24.20′N, 76°35.80′W, 25 m, 13 August 1981.

Known distribution. Gulf of Mexico, Cape San Blas, Florida; Panama (Pacific coast) (Tattersall, 1951); South Atlantic Bight (Day et. al., 1971; Wigley and Burns, 1971; Howard and Frey, 1975 [as *Gastrosaccus johnsoni*]; Frankenberg and Leiper, 1977 [as *Gastrosaccus johnsoni*]).

Other regional records. Băcescu, 1968b (as *B. portoricensis*); Wenner et al., 1984; MRRI[2,3,4]; Dubick[6] (from Gray's Reef, GA); Knott et al.[8] (as *G. johnsoni*); Jutte et al.[12]; Jutte et al.[13]; Jutte et al.[14].

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[12] Jutte, P. C., R. F. Van Dolah, M. V. Levisen, P. Donovan-Ealy, P. T. Gayes, and W. E. Baldwin. 1999. An environmental monitoring study of the Myrtle Beach Renourishment Project: Physical and Biological Assessment of Offshore Sand Borrow Sites. Phase I – Cherry Grove Borrow Area. Final Report to the U.S. Army Corps of Engineers, Charleston District. Charleston, SC. 79 p. and appendices. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422 and Center for Marine and Wetlands Studies, Coastal Carolina University, P.O. Box 1954, Conway, SC 29526.

[13] Jutte, P. C., R. F. Van Dolah, G. Y. Ojeda and P. T. Gayes. 2001. An environmental monitoring study of the Myrtle Beach Renourishment Project: Physical and biological assessment of offshore sand borrow sites. Phase II – Cane South Borrow Area. Final Report to the U.S. Army Corps of Engineers, Charleston District. Charleston, SC. 70 p. and appendices. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422 and Center for Marine and Wetlands Studies, Coastal Carolina University, P.O. Box 1954, Conway, SC 29526.

[14] Jutte, P. C., L. E. Zimmerman, R. F. Van Dolah, G. Y. Ojeda and P. T. Gayes. 2001. An environmental monitoring study of the Myrtle Beach Renourishment Project: Physical and biological assessment of offshore sand borrow sites. Phase III – Surfside/Garden City Borrow Area. Final Report to the U.S. Army Corps of Engineers, Charleston District. Charleston, SC, 80 p. and appendices. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422 and Center for Marine and Wetlands Studies, Coastal Carolina University, P.O. Box 1954, Conway, SC 29526.

Remarks. This species appears to be a senior synonym of *Bowmaniella portoricensis*, *Bowmaniella atlantica,* Silva, 1971 and *Bowmaniella gutzui* Ortiz, 1988. *Bowmaniella mexicana* exhibits the penultimate male stage while the ultimate male stage is represented by the other three species (Heard and Price, In press). *Bowmaniella atlantica* and *B. gutzui* are reported from Brazil (Silva, 1971) and Cuba (Ortiz, 1988), respectively, and *B. portoricensis* is documented from off Cape Hatteras, North Carolina to Ft. Pierce, Florida on the U.S. Atlantic coast (Băcescu, 1968b; Wigley and Burns, 1971; Camp et al., 1977) and off Mississippi in the Gulf of Mexico (Stuck et al., 1979a, b).

SUBFAMILY MYSINAE Hansen, 1910

Tribe Erythropini Hansen, 1910

Amathimysis brattegardi Stuck and Heard, 1981
(Fig. 20)

Amathimysis brattegardi Stuck and Heard, 1981: 272, Figs. 1–2.—Price et al., 1986: 48.

Material examined. SERTC #S40, off Cumberland Island, GA, 30°54.00′N, 80°36.30′W, 35.5 m, coll. MRRI staff, 1980. SERTC #S49, off Savannah River, GA, 31°32.20′N, 79°44.20′W, 57 m, coll. MRRI staff, 10 May 1981. SERTC #S726, off Winyah Bay, SC, 33°15.26′N, 78°54.74′W, 15 m, coll. D.M. Allen, 12 August 2003.

Known distribution. Gulf of Mexico, continental shelf waters off Tampa Bay (Stuck and Heard, 1981) and northern Texas coast (Price et al., 1986).

Other regional records. MRRI[2].

Remarks. This is the first published record for *Amathimysis brattegardi* in the SAB, as well as for the entire U.S. Atlantic coast. Our SAB records also represent the second report of this small species since its original description, which was based on specimens from the shallow shelf waters off the Florida west coast (Stuck and Heard, 1981). In the Gulf of Mexico, *Amathimysis brattegardi* occurred on sand-shell substrata at depths of 11–51m (Stuck and Heard, 1981; Price et al., 1986). In the waters of the SAB it was found associated with live bottoms (rocky outcroppings) off the mouth of Winyah Bay, South Carolina and Savannah Scarp, Georgia at depths of 15 and 57 m, respectively.

***Amathimysis* sp. (nr. *serrata*)**
(Fig. 21)

Material examined. SERTC #S86, off Savannah River, GA, 31°32.0′N, 79°44.8′W, 57 m, coll. MRRI staff, 5 August 1981.

Other regional records. MRRI[2] (as *Amathimysis* sp. A).

Remarks. The two specimens available for study were collected on live bottom (rocky outcropping) habitats off Georgia at 57 m. Unfortunately, these specimens have been damaged by desiccation. They are adult males, which based largely on the setation of the telson appear to have their closest affinity to *Amathimysis serrata* Murano, 1986. The SAB specimens may be conspecific with this species or they may represent a closely related, undescribed species. Additional specimens in good condition are needed to resolve the identification of the SAB specimens.

Tribe Leptomysini Hansen, 1910

Americamysis almyra (Bowman, 1964)
(Fig. 34)

Mysidopsis almyra Bowman, 1964: 15, Figs. 1–24.—Brattegard, 1969: 50, Fig. 14.—Stuck et al., 1979a: 236, Figs. 2m, 3m, 4m, 5n.—Stuck et al., 1979b: 245.—Price, 1982: 17, Figs. 22–25.
Americamysis almyra.—Price et al., 1994: 680.

Material examined. SERTC #S68, above Hwy 17 bridge, Combahee River, SC, 32°40.56′N, 80°46.32′W, 4.8–5.5 m, coll. D.M. Knott, 16 July 2002.

Known distribution. U.S. Atlantic coast from Patapsco River, Maryland (Grabe, 1981) to St. Johns River, Florida (Price and Vodopich, 1979); Gulf of Mexico, southwestern Florida to Terminos Lagoon, Mexico (Escobar-Briones and Soto, 1988).

Other regional records. Stuck et al., 1979b; Heard, pers. observ.

Remarks. Since this inshore species was previously known from Maryland, the east coast of Florida (from an oligohaline lake [Lake Monroe] at the head-waters of the St. Johns River drainage system in central Florida) and throughout the Gulf of Mexico, its presence in low-salinity waters of the SAB is not unexpected.

Americamysis bahia (Molenock, 1969)
(Fig. 35)

Mysidopsis bahia Molenock, 1969: 113, Figs. 1–18.—Brattegard, 1970: 28, Fig. 7.—Stuck et al., 1979a: 236, Figs. 2l, 3l, 4l, 5m.—Stuck et al., 1979b: 245.—Price, 1982: 18, Figs. 26–28.

Mysidopsis bigelowi Williams, 1972: 256 (in part).
Americamysis bahia.—Price et al., 1994: 680.

Material examined. SERTC #S1237, between Wyley's dock and groins, Tybee Island, GA, 31°59.30′N, 80°51.40′W, 0.5–1.0 m, coll. R.W. Heard, 5 October 1991. SERTC #S1239, near Wyley's dock, Tybee Island, GA, 31°59.30′N, 80°51.40′W, coll. R.W. Heard, 10 May 1991. SERTC #S1659, from salt marsh off Wappoo Creek, near Charleston Harbor, SC, 32°46.53′N, 80°00.07′W, intertidal, coll. MRRI staff, 17 January 1991.

Known distribution. U.S. Atlantic coast from Narragansett, Rhode Island (Lussier et al., 1988) to Beaufort, North Carolina (Williams, 1972; Fulton, 1982a[15]), South Carolina and Georgia (this report), Gulf of Mexico, southwestern Florida to Terminos Lagoon, Mexico (Escobar-Briones and Soto, 1988).

Remarks. Of the presently known species of *Americamysis*, *A. bahia* appears to have the widest distribution (Rhode Island southward to Florida and along the Gulf of Mexico to Terminos Lagoon, Mexico). The presence of *A. bahia* in North Carolina waters near Beaufort was reported by Fulton (1982b). Also, one of us (RWH) examined some of the few remaining plankton samples from Williams' (1972) study in North Carolina waters and determined that many of the specimens that had been identified as *Mysidopsis bigelowi* were *Americamysis bahia*. In addition to the records given here for South Carolina and Georgia, RWH has examined material from near St. Augustine in northeastern Florida.

Americamysis bigelowi (Tattersall, 1926)
(Fig. 32)

Mysidopsis bigelowi Tattersall, 1926: 10, Plate 1, Figs. 1–8.—Tattersall, 1951: 139, Fig. 50.
Americamysis bigelowi.—Price et al., 1994: 680.

Material examined. SERTC #S9, Murrells Inlet, SC, 33°30.90′N, 79°2.70′W, coll. MRRI staff, 1978. SERTC #S23, Charleston ODA, SC, 32°42.50′N, 79°51.60′W, 8–17 m, coll. MRRI staff, August 1978. SERTC #S28, Charleston ODA, SC, 32°42.50′N, 79°51.60′W, 8–17 m, coll. MRRI staff, August 1978. SERTC #S31, Georgetown ODMDS, SC, 33°12.42′N, 79°5.30′W, 11 m, coll. MRRI staff, 16 February 1983. SERTC #S35, Georgetown ODMDS, SC, 33°11.92′N, 79°6.17′W, 9 m, coll. MRRI staff, 13 July 1983. SERTC #S57, off Cape Lookout, NC, 34°23.40′N, 76°33.60′W, 19 m, coll. DML staff, 10 February 1981. SERTC #S65, near Bird Key, Folly River, SC, 32°38.13′N, 79°58.18′W, 2.1–3.6 m, coll. D.M. Knott, 12 September 2002. SERTC #S71, near Bird Key, Folly River, SC, 32°38.15′N, 79°59.13′W, 4.5–7.3 m, coll. D.M. Knott, 12 September 2002. SERTC #S72, confluence of Folly and Stono Rivers, SC, 32°37.76′N, 79°59.55′W, 6.7–9.7 m, coll. D.M. Knott, 12 September 2003. SERTC #S77, Charleston Harbor ODMDS, SC, 32°38.81′N, 79°47.09′W, 14.3 m, coll. MRRI staff, 11 September 2000. SERTC #S83, south of Bird Key, Folly River, SC, 32°37.54′N, 79°58.34′W, 3.0 m, coll. D.M. Knott, 12 September 2003. SERTC #S728, front beach at North Island, SC, 33°13.33′N, 79°10.56′W, 2 m, coll. D.M. Allen, 13 October 2003. SERTC #S732, off north jetty at entrance to Winyah Bay, SC, 33°12.40′N, 79°07.36′W, 7 m, coll. D.M. Allen, 12 November 2003. SERTC #S1241, North Inlet, SC, 33°19.50′N, 79°9.80′W, intertidal, coll. D.M. Allen, 20 September 1979. SERTC #S1243, North Inlet, SC, 33°19.50′N, 79°9.80′W, 8.0–10.0 m, coll. D.M. Allen, 17 June 1986. SERTC #S1246, Clambank Creek, North Inlet, SC, 33°20.08′N, 79°11.33′W, 10.2 m, coll. D.M. Allen, 2 November 1979.

Known distribution. U.S. Atlantic coast, off Massachusetts (Georges Bank) to just south of Jacksonville, Florida (Wigley and Burns, 1971).

Other regional records. Smith, 1971; Wigley and Burns, 1971; Dörjes, 1972; Sikora et al., 1972; Williams, 1972; Kelly, 1978; Howard and Frey, 1975; Van Dolah et al., 1979; Fulton, 1982a, b; Knott et al., 1983; Van Dolah et al. 1983; DeLancey, 1984; Van Dolah et al., 1984; Fox and Ruppert, 1985; MRRI[3,4]; Dubick[6]; Knott et al.[8]; Vittor and Associates[10]; Zimmerman[11]; Jutte et al.[12]; Jutte et al.[13]; Van Dolah and Knott[16]; Van Dolah et al.[17].

Remarks. This species appears to be a common inshore and shallow to mid-shelf resident of the U.S. Atlantic coast. It is the type host for the dajiid parasite *Prodajus bigelowiensis* Schultz and Allen, 1982. This small epica-

[15] Fulton (1982a) only briefly mentions a dissertation, in which experiments were conducted on *Americamysis bahia*. As we have not seen this material, we are not able to confirm this identification.

[16] Van Dolah, R. F., and D. M. Knott. 1984. A biological assessment of beach and nearshore areas along the South Carolina Grand Strand. Final Report to the U.S. Department of the Interior, Fish and Wildlife Service, Agreement No. 14-16-004-84-924, 58 p. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston, SC 29422.

[17] Van Dolah, R. F., P. H. Wendt, C. A. Wenner, R. M. Martore, G. R. Sedberry, and C. J. Moore. 1987. Ecological effects of rubble weir jetty construction at Murrells Inlet, South Carolina. Volume III: Community structure and habitat utilization of fishes and decapods associated with the jetties. Technical Report EL-84-4, prepared by the Marine Resources Research Institute, Charleston, SC, for Environmental Laboratory, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS, 165 p. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422.

ridean isopod specifically infests the marsupium of its adult female mysid host, where it occurs in pairs with the dwarf, hyperparasitic male, being attached to its much larger globular female partner (Schultz and Allen, 1982). The distribution of this and other species of *Americamysis* is given by Price et al. (1994).

Brasilomysis castroi Băcescu, 1968
(Fig. 24)

Brasilomysis castroi Băcescu, 1968a: 81, Figs. 3–4.—Brattegard, 1969: 61, Fig. 18.—Almeida Prado, 1974: 50, Figs. 5–7.—Stuck et al., 1979a: 236, Figs. 2n, 3n, 4n, 5o.—Stuck et al., 1979b: 246.—Price, 1982: 16, Figs. 13–14.

Brasilomysis cf. castroi.—Howard and Frey, 1975: 13 (Table).

Material examined. SERTC #S10, off Murrells Inlet, SC, 33°31.6′N, 79°01.7′W, 6 m, coll. MRRI staff, 22 August 1978. SERTC #S66, northeast end of Bird Key, Folly River, SC, 32°38.13′N, 79°58.18′W, 2.1–3.6 m, coll. D.M. Knott, 12 September 2002. SERTC #S70, behind Bird Key, Folly River, SC, 32°38.15′N, 79°59.13′W, 4.5–7.3 m, coll. D.M. Knott, 12 September 2002. SERTC #S80, south of Bird Key, Folly River, SC, 32°37.54′N, 79°58.34′W, 3.0 m, coll. D.M. Knott, 12 September 2003. SERTC #S731, off north jetty at entrance to Winyah Bay, SC, 33°12.40′N, 79°07.36′W, 7 m, coll. D.M. Allen, 12 November 2003. SERTC #S1248, Clambank Creek, North Inlet, SC, 33°20.08′N, 79°11.33′W, 10.2 m, coll. D.M. Allen, 2 November 1979.

Known distribution. U.S. Atlantic coast, St. Catherine's Sound, Georgia (Stuck et al., 1979b); Gulf of Mexico, southwestern Florida (Brattegard, 1969) to Terminos Lagoon, Mexico (Escobar-Briones and Soto, 1988); Caribbean coasts of Panama (Brattegard, 1974a) and Colombia (Brattegard 1973, 1974b); Brazil (Băcescu, 1968a; Almeida Prado, 1973).

Other regional records. Sikora et al., 1972; Brattegard, 1974a; Knott et al., 1983; Heard, pers. observ.; Zimmerman[11]; Jutte et al.[12]; Van Dolah et al.[18].

Remarks. This species was originally described from Brazilian waters (Băcescu, 1968a), but has since been reported at several localities in the Caribbean, Gulf of Mexico, and in south Florida. *Brasilomysis castroi* appears to be a nearshore species that will enter the mouths of bays, sounds, and estuaries. Specimens were collected from Sapelo Island beach and the mouth of Doboy Sound, Georgia during 1968 and 1969 (Heard, pers. observ.). Our present records for *B. castroi* extend its range northward into the nearshore waters of South Carolina.

Metamysidopsis swifti Băcescu, 1969
(Fig. 28)

Metamysidopsis swifti Băcescu, 1969: 350, Fig. 1.—Brattegard, 1970: 30, Fig. 8.—Brattegard, 1973: 21, Fig. 7.—Stuck et al., 1979a: 234, Figs. 2h, 3h, 4h, 5h.—Stuck et al., 1979b: 245.—Price, 1982: 16, Figs. 15–16.

Metamysidopsis munda.—Tattersall, 1951: 147 (in part).—Day et al., 1971: Appendix A.

Metamysidopsis mexicana Băcescu, 1969: 354 (in part).

Material examined. SERTC #S12, Murrell's Inlet, 33°31.6′N, 79°1.7′W, coll. MRRI staff, 13 July 1982. SERTC #S19, Murrells Inlet, SC, 33°31.0′N, 79°2.6′W, coll. MRRI staff, 15 November 1977. SERTC #S84, south of Bird Key, Folly River, SC, 32°37.54′N, 79°58.34′W, 3.0 m, coll. D.M. Knott, 12 September 2003. SERTC #S727, front beach at North Island, SC, 33°13.33′N, 79°10.56′W, 2 m, coll. D.M. Allen, 13 October 2003. SERTC #S730, off north jetty at entrance to Winyah Bay, SC, 33°12.40′N, 79°07.36′W, 7 m, coll. D.M. Allen, 12 November 2003. SERTC #S1240, North Inlet, SC, 33°19.50′N, 79°9.80′W, intertidal, coll. D.M. Allen, 20 September 1979.

Known distribution. U.S. Atlantic coast from Delaware southward into the Gulf of Mexico, Florida, Louisiana, Texas, and Veracruz, Mexico (Tattersall, 1951; Băcescu, 1969; Brattegard, 1970; Day et al., 1971; Price, 1975; Stuck et al., 1979a, b); Caribbean coast of Colombia and Panama (Brattegard, 1973, 1974b).

Other regional records. Kelly, 1978; Knott et al., 1983; DeLancey, 1984; Fox and Ruppert, 1985; Heard, pers. observ.; Knott et al.[8]; Van Dolah et al.[17]; Jutte et al.[19].

Remarks. There has been much confusion concerning the taxonomic status of this species in the waters of the southeastern United States. Stuck et al. (1979a)

[18] Van Dolah, R. F., R. M. Martore, A. E. Lynch, M. V. Levisen, P. H. Wendt, D. J. Whitaker, and W. D. Anderson. 1994. Environmental evaluation of the Folly Beach nourishment project. Final Report to the U.S. Army Corps of Engineers, Charleston District. Charleston, SC, 100 p. and appendices. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422.

[19] Jutte, P. C., R. F. Van Dolah, and M. V. Levisen. 1999c. An environmental monitoring study of the Myrtle Beach Renourishment Project: Intertidal benthic community assessment. – Phase II – Myrtle Beach. Supplemental Report to the U.S. Army Corps of Engineers, Charleston District. Charleston, SC, 38 p. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422.

considered that all of the records for *Metamysidopsis* in the Gulf of Mexico were attributable to *M. swifti*, and all of the material that we have examined from the SAB (from NC, SC, and GA) is also referable to this species. Based on these observations, we have tentatively referred the SAB records of *M. munda* sensu Tattersall (1951) and *M. mexicana* sensu Băcescu (1969) from the SAB to *M. swifti*. For a further discussion of the taxonomy of this group of species see Stuck et al. (1979a).

Mysidopsis furca Bowman, 1957
(Fig. 13)

Mysidopsis furca Bowman, 1957: 1, Figs. 1–2.—Brattegard, 1969: 47, Fig. 13.—Day et al., 1971: Appendix A.—Stuck et al., 1979a: 235, Figs. 2k, 3k, 4k, 5k–l.—Stuck et al., 1979b: 245.—Price et al., 1986: 50.

Material examined. SERTC #S26, Charleston ODA, SC, 32°42.5′N, 79°51.6′W, 8–17 m, coll. MRRI staff, August 1978. SERTC #S42, off St. Simons Island, GA, 31°8.1′N, 79°55.0′W, 55 m, coll. MRRI staff, 11 September 1980. SERTC #S45, off St. Simons Island, GA, 31°7.3′N, 79°55.1′W, 50 m, coll. MRRI staff, 11 September 1980. SERTC #S56, off Sapelo Island, GA, 31°23.5′N, 80°53.3′W, 17 m, coll. MRRI staff, 27 April 1981. SERTC #S62, entrance to Charleston Harbor, SC, 32°39.90′N, 79°44.13′W, 10.6 m, coll. MRRI staff, 16 July 1987. USNM #179059, off Cape Romain, SC, 32°50′N, 79°04′W, 20 m, coll. Texas Instruments, Inc., South Atlantic Benchmark Program, 18 November 1977. USNM #179060, off mouth of Savannah River, GA, 31°40′N, 80°16′W, 21 m, coll. Texas Instruments, Inc., South Atlantic Benchmark Program, 27 August 1977. USNM #179061, off Cape Romain, SC, 32°50′N, 79°04′W, 20 m, coll. Texas Instruments, Inc., South Atlantic Benchmark Program, 18 November 1977.

Known distribution. U.S. Atlantic coast, Cape Lookout, North Carolina (Day et al., 1971) to Pigeon Key, Florida (Brattegard, 1969); Gulf of Mexico, continental shelf waters off Mississippi (Stuck et al., 1979b), Louisiana, and Texas (Price et al., 1986).

Other regional records. Wigley and Burns, 1971; Wenner et al., 1984; MRRI [2,3,4].

Remarks. This species, which was originally described from the shelf waters off North Inlet, South Carolina, has subsequently been reported from off Cape Lookout, North Carolina and from south Florida and the eastern and northern Gulf of Mexico. *Mysidopsis furca* occurs both in high salinity bays and sounds and over the continental shelf in depths of 1–80 m. The distinctive sexual dimorphism exhibited by the telson sets this species apart from other northwestern Atlantic members of the genus *Mysidopsis*.

***Mysidopsis* sp. (*mortenseni* complex)**
(Fig. 30)

Material examined. SERTC #S22, Charleston ODA, SC, 32°42.5′N, 79°51.6′W, 8–17 m, coll. MRRI staff, August 1978. SERTC #S63, entrance to Charleston Harbor, SC, 32°39.90′N, 79°44.13′W, 10.6 m, coll. MRRI staff, 16 July 1987. SERTC #S1249, marker 30, Back Sound, Carteret County, NC, 34°40.02′N, 76°31.37′W, 1.0 m, coll. L. Eaton, 11 August 1994.

Known distribution. South Atlantic Bight, off North Carolina and South Carolina.

Other regional records. Van Dolah et al., 1983 (as *Mysidopsis bahia*).

Remarks. This species has many similarities with *Mysidopsis mortenseni* Tattersall, 1951, but there are some differences in the setation of the telson, which indicate that it may represent an undescribed species. Until additional specimens from the area where the species was collected can be examined, the taxonomic status of these specimens will remain uncertain.

Neobathymysis renoculata (Tattersall, 1951)
(Fig. 14)

Bathymysis renoculata Tattersall, 1951: 153, Figs. 57–58.—Wigley and Burns, 1971: 729.—Stuck et al., 1979a: 235, Figs. 2i, 3i, 4i, 5i.—Stuck et al., 1979b: 245.

Neobathymysis renoculata.—Bravo and Murano, 1996: 501.

Material examined. None.

Known distribution. U.S. Atlantic coast, New England to southern tip of Florida (Tattersall, 1951); north central Gulf of Mexico (Stuck et al., 1979b).

Remarks. Bravo and Murano (1996) recently transferred this species to the genus *Neobathymysis* Bravo and Murano, 1996. As mentioned in the introduction, this deep-water species is included in this guide, because its range extends northward and southward of the SAB and because it is known to occur in depths of less than 200 m (Stuck et al., 1979a, b).

Promysis atlantica Tattersall, 1923
(Fig. 12)

Promysis atlantica Tattersall, 1923: 286, Plate 1, Figs. 5–6.—Tattersall, 1951: 245, Fig. 56.—Clarke, 1956: 1, Figs. 1–6.—Costa, 1964: 8, Plate 2, Figs. 1–2.—Day et al., 1971: Table 5, Appendix A.—Brattegard, 1973: 44, Fig. 18.—Almeida Prado, 1974: 52, Figs. 15–17.—Stuck et al., 1979a: 234, Figs. 2g, 3g, 4g, 5g.—Stuck et al., 1979b: 244.—Price, 1982: 15, Figs. 5–6.

Material examined. SERTC #S18, Murrells Inlet, SC, 33°30.9′N, 79°2.4′W, coll. MRRI staff, 10 May 1978. SERTC #S21, Charleston ODA, SC, 32°42.5′N, 79°51.6′W, 8–17 m, coll. MRRI staff, August 1978. SERTC #S33, Georgetown ODMDS, SC, 33°12.17′N, 79°7.05′W, 9 m, coll. MRRI staff, 13 July 1983. SERTC #S36, Georgetown ODMDS, SC, 33°11.92′N, 79°6.17′W, 9 m, coll. MRRI staff, 13 July 1983. SERTC #S39, off Folly Beach, SC, 32°30.0′N, 79°41.9′W, 18 m, coll. MRRI staff, 17 January 1980. SERTC #S50, off Sapelo Island, GA, 31°23.50′N, 80°52.80′W, 17 m, coll. MRRI staff, 27 April 1981. SERTC #S53, off Little Tybee Island, GA, 31°41.3′N, 80°20.8′W, 27 m, coll. MRRI staff, 29 April 1981. SERTC #S76, Charleston Harbor ODMDS, SC, 32°26.9′N, 79°43.5′W, 14.6 m, coll. MRRI staff, 23 September 2002. SERTC #S82, south of Bird Key, Folly River, SC, 32°37.54′N, 79°58.34′W, 3.0 m, coll. D.M. Knott, 12 September 2003. SERTC #S725, near 2WB "sea buoy" off south jetty at entrance to Winyah Bay, SC, 33°11.69′N, 79°05.08′W, 12 m, coll. D.M. Allen, 12 August 2003.

Known distribution. U.S. Atlantic coast, off Albemarle Sound, North Carolina (Wigley and Burns, 1971); Gulf of Mexico, northwestern Florida (Hopkins, 1966) to Texas (Price, 1982); Caribbean coast of Colombia (Brattegard, 1973, 1974a); Brazil (Tattersall, 1923; Costa, 1964; Băcescu, 1968c; Almeida Prado, 1974).

Other regional records. Clarke, 1956; Day et al., 1971; Williams, 1972; Van Dolah et al., 1984; MRRI[2,3,4]; Dubick[6]; Jutte et al.[7,12,13,14]; Van Dolah and Knott[16].

Remarks. Based on this and previous studies, *Promysis atlantica* appears to be widely distributed in the temperate and warm waters of the western Atlantic and is a common resident in the shelf waters of the SAB.

Tribe Mysini Hansen, 1910

Neomysis americana (Smith, 1873)
(Fig. 26)

Mysis americana Smith, 1873: 552.
Mysis americanus.—Benedict, 1885: 176.
Neomysis americana.—Sumner et al., 1913: 663.—Williams et al., 1974: 838, Figs. 4–5.

Material examined. SERTC #S8, Murrells Inlet, SC, 33°31.8′N, 79°1.8′W, coll. MRRI staff, 10 May 1978. SERTC #S24, Charleston ODA, SC, 32°42.5′N, 79°51.6′W, 8–17 m, coll. MRRI staff, August 1978. SERTC #S30, Georgetown ODMDS, SC, 33°12.17′N, 79°7.05′W, 10 m, coll. MRRI staff, 16 February 1983. SERTC #S58, Wando River, SC, 32°52′N, 79°51′W, 1.7 m, coll. MRRI staff, 6 March 1986. SERTC #S69, Combahee River above Highway 17 bridge, SC, 32°40.56′N, 80°46.32′W, 4.8–5.5 m, coll. D.M. Knott, 16 July 2002. SERTC #S81, south of Bird Key, Folly River, SC, 32°37.54′N, 79°58.34′W, 3.0 m, coll. D.M. Knott, 12 September 2003. SERTC #S724, off North Island Lighthouse, inside entrance to Winyah Bay, SC, 33°12.54′N, 79°11.01′W, 8 m, coll. D.M. Allen, 12 August 2003. GML 76-54, off Leadenwah Creek, North Edisto River, SC, 32°37.1′N, 80°13.9′W, 2.5 m, coll. N.A. Chamberlain, 13 May 1976. GML 76-105, North Edisto River, SC, 32°36.68′N, 80°14.26′W, coll. C.K. Biernbaum, 26 May 1976. GML 76-109, Leadenwah Point, North Edisto River, SC, 32°36.63′N, 80°13.80′W, coll. C.K. Biernbaum, 26 May 1976. SERTC #S1236, between Wyley's dock and groins, Tybee Island, GA, 31°59.30′N, 80°51.40′W, 0.5–1.0 m, coll. R.W. Heard, 5 October 1991. SERTC #S1242, North Inlet, SC, 33°19.50′N, 79°9.80′W, intertidal, coll. D.M. Allen, 20 September 1979. SERTC #S1247, Clambank Creek, North Inlet, SC, 33°20.08′N, 79°11.33′W, 10.2 m, coll. D.M. Allen, 2 November 1979.

Known distribution. North American Atlantic coast, Gulf of St. Lawrence to off St. Augustine, Florida (Williams et al., 1974); Argentina (Hoffmeyer, 1990).

Other regional records. Pearse et al., 1942; Sikora et al., 1972; Williams, 1972; Stickney et al., 1974; Williams et al., 1974; Heard, 1975; Howard and Frey, 1975; Mayou and Howard, 1975; Shealy et al., 1975; Stickney et al., 1975; Kelly, 1978; Van Dolah et al., 1979; Fulton, 1982a, b; Van Dolah et al., 1983; DeLancey, 1984; Van Dolah et al., 1984; Van Fox and Ruppert, 1985; Zagursky and Feller, 1985; Knott, pers. observ.; Dubick[6]; Knott et al.[8]; Zimmerman[11]; Van Dolah et al.[17]; Van Dolah et al.[18]; Van Dolah et al.[20]; Van Dolah et al.[21].

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[20] Van Dolah, R. F., P. H. Wendt and M. V. Levisen. 1988. A study of shrimp trawling effects on bottom communities in South Carolina sounds. Final Report. Marine Resources Research Institute, South Carolina Wildlife and Marine Resources Department, Charleston, SC, 62 p. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston SC 29422

[21] Van Dolah, R. F., P. H. Wendt, and E. L. Wenner. 1990. A physical and ecological characterization of the Charleston Harbor estuarine system. Final Report to South Carolina Coastal Council, Charleston, SC, Grant #NA87AA-D-CZ068, 634 p. Marine Resources Research Institute, South Carolina Department of Natural Resources, P.O. Box 12559, Charleston, SC 29422.

Remarks. This ecologically important species represents one of the most, if not the most, common species occurring in the inshore waters of the SAB and the Atlantic coast, in general. In the northwestern Atlantic its range extends nearly the entire length of the North American coast from boreal Canadian waters to as far south as St. Augustine, Florida (Williams et al., 1974). Within the coastal waters of the SAB, this relatively large species appears to be important in the diets of numerous juvenile and adult estuarine fishes, especially bothid flounder and juvenile sciaenids (Stickney et al., 1974; Sikora and Heard, pers. observ.). A larval digenean parasite (metacercaria), possibly belonging to the family Hemiuridae, was observed in abdominal muscles of specimens from the waters around Sapelo Island, Georgia (Heard, pers. observ.)

Tribe Heteromysini Hansen, 1910

Heteromysis beetoni Modlin, 1984
(Fig. 17)

Heteromysis beetoni Modlin, 1984: 283, Figs. 1, 2A–D.

Material examined. SERTC #S52, off Little Tybee Island, GA, 31°41.3′N, 80°20.8′W, 27 m, coll. MRRI staff, 29 April 1981. SERTC #S55, off Little Tybee Island, GA, 31°41.3′N, 80°21.1′W, 27 m, coll. MRRI staff, 24 October 1981.

Known distribution. Northeastern Gulf of Mexico (Modlin, 1984), Georgia (this report).

Other regional records. None.

Remarks. This species, which is reported for only the second time, was originally collected from the Florida Middle Ground, the northernmost hermatypic coral reef in the Gulf of Mexico. Divers there collected specimens from three species of sponges (*Agelas dispar, Ircinia campana,* and *Haliclona sp.*) and the scleractinian coral *Madracis decactis* (Modlin, 1984). The South Atlantic Bight specimens were reported as "Mysidae A" (MRRI[3]) from epibenthic sled and rock dredge collections at a station off Georgia, where they co-occurred with five other species of mysids (*Amathimysis brattegardi, Anchialina typica, Bowmaniella mexicana, Mysidopsis furca,* and *Promysis atlantica*). A diverse sponge fauna characterized benthic communities at this location, including *Ircinia campana* and an undetermined species of *Haliclona* (MRRI[3]).

Heteromysis formosa Smith, 1873
(Fig. 16)

Heteromysis formosa Smith, 1873: 553.—Tattersall, 1951: 235, Figs. 100–101.—Brattegard, 1969: 92, Fig. 29.—Stuck et al., 1979a: 237, Figs. 2o, 3o, 4o, 5p.—Stuck et al., 1979b: 246.

Material examined. SERTC #S54, off Folly Beach, SC, 32°29.6′N, 79°42.5′W, 17 m, coll. MRRI staff, 23 October 1981. GML 76-54, off Leadenwah Creek, North Edisto River, SC, 32°37.1′N, 80°13.9′W, 2–3 m, coll. N.A. Chamberlain, 13 May 1976.

Known distribution. U.S. Atlantic coast, Maine to off Ft. Pierce, Florida (Wigley and Burns, 1971; Howard and Frey, 1975; Camp et al., 1977); northeastern Gulf of Mexico (Tattersall, 1951; Stuck et al., 1979b).

Other regional records. Tattersall, 1951; Sikora et al., 1972; Williams, 1972; Wenner et al., 1984; Fox and Ruppert, 1985; Prezant et al., 2002; Heard, pers. observ.; MRRI [2,3]; Van Dolah et al.[9].

Remarks. This species, which has been previously reported from the SAB by Williams (1972), is widely distributed along the east coast of the United States. The records from the northeastern Gulf of Mexico (Tattersall, 1951; Stuck et al., 1979a, b) need confirmation, by comparison of those specimens and additional material from that region with specimens from the U.S. Atlantic coast.

Although *Heteromysis formosa* has been collected in depths greater than 200 m (Tattersall, 1951), it is more common in estuaries and shallow continental shelf areas. During the day, it is often found over coarse substrata inside empty bivalve and gastropod shells or in cavities under rocks (Allen, 1982).

This species has been confused with *Heteromysis norvegica,* which was described by Sars (1883). Lagardère and Nouvel (1980) separated the two species based on differences in the morphology of the antennal scale, thoracic endopod 3, and telson. While the distribution of *H. formosa* is restricted to the western north Atlantic, *H. norvegica* is found in the eastern north Atlantic from Norway to Morocco (Lagardère and Nouvel, 1980).

General remarks

Compared to other coastal regions of the eastern United States, the mysid fauna of the SAB, which generally encompasses the Carolinian Province, is most similar to that of the northern Gulf of Mexico (see Stuck et al., 1979a, b; Price, 1982) and the immediately adjacent waters of the northeastern U.S. coast (Virginian Province). In the coastal areas of south Florida, where a variety of tropical habitats exist (i.e., hard bottoms, coral reefs, sponge and soft corals bottoms, mangroves), the diversity of mysids, as expected, is much greater. Over 30 species are currently known from the south Florida region (Farrell, 1979; Price, pers. observ.). The low diversity of mysids in the SAB may be, in part, an artifact of sampling. More specifically, there have not been many collections from mid-shelf and hard bottom habitats within the SAB. These habitats may harbor cryptic species like members of the commensal genera *Heteromysis* and *Amathimysis*. Further studies in such live bottom (rocky outcropping) areas of the SAB are needed, especially using divers to collect samples with mysid specimens sufficient for taxonomic work.

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