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RECORDS AND RANGE EXTENSIONS OF MYSIDACEA FROM COASTAL AND SHELF WATERS OF THE EASTERN GULF OF MEXICO

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ABSTRACT  Records of seventeen species of Mysidacea from the Gulf of Mexico are presented. Bowmaniella portoricensis, Pseudomma sp., Siriella thompsonii and Bathymysis renoculata are recorded from the Gulf for the first time. Range extensions within the Gulf are established for Anchialina typica and Mysidopsis furca. Records of Brasilomysis castroi and Mysidopsis almyra from the Atlantic coast of the United States are reported.

INTRODUCTION
The offshore benthic and planktonic mysidacean fauna of the Gulf of Mexico are poorly known; however, the shallow-water species have been investigated by several authors. Brattegard (1969, 1970) reported eight species from coastal waters off southern Florida and presented their taxonomic characters. Farrell (1979) provided a key to 24 nearshore species from Florida but did not include data on collection sites. The Mysidacea of the western Gulf of Mexico have been studied by Price, who identified seven species from Galveston Bay, Texas (1976), and four species from Mexico (1975, 1978). The taxonomic works of Banner (1953), Clarke (1956), Băcescu (1961, 1969), Bowman (1964) and Molenock (1969) have also added to the knowledge of the group in the Gulf of Mexico. Ecological studies and baseline inventories in northern Gulf estuaries have contributed data on a limited number of species (cited in text).

Records of some Mysidacea from the Gulf of Mexico appear to be in error, due in part to confusion in the literature (Stuck et al. 1979). In addition to establishing new records and range extensions for Gulf mysids, data are presented here to clarify the known distribution of several shallow-water species.

MATERIALS AND METHODS
This report is based on a collection of mysid shrimps of the family Mysidae from the continental shelf waters off Mississippi, Alabama, and Florida, and supplemented with material from shallow, estuarine waters in the northeastern Gulf of Mexico. Specimens were provided to the authors from the following sources:

3. Dames and Moore under Contract N. AA550–CT7–
4. Steve Heath, Alabama Marine Resources Laboratory; specimens from Dauphin Island and Gulf Shores, Alabama.
5. Shiao Wang, Gulf Coast Research Laboratory; specimens from continental shelf waters off Main Pass, Mississippi River.
6. Steve Manning, Gulf Coast Research Laboratory; specimens from Gulf Breeze, Florida.
8. The personal collections of Kenneth C. Stuck (KCS) and Richard W. Heard (RWH).

Records of occurrence follow the style of Brattegard (1969, 1970). Plankton stations are designated as either day (D) or night (N) and are followed by the depth of tow (S–surface, M–midwater, B–bottom). Selected synonymies of interest to regional investigators are provided for each species when applicable. The study area, divided into four subareas based on geographic location, and collecting sites are shown in Figures 1 through 5.

Specimens were taken with a variety of gear types and these are included with station location and bottom type in the collecting sites listing. Sediment analysis was not available for many locations.

A representative collection of the mysids reported herein has been deposited in the museum at the Gulf Coast Research Laboratory, Ocean Springs, Mississippi.

COLLECTING SITES
1. Timbalier Bay, Louisiana; mud; Renfro beam trawl.
2. Terrebonne Parish, Louisiana; Gulf surf, sand; Renfro beam trawl.
3. Forty-two miles east of Main Pass, Mississippi River, 88°30' N, 29°25'W; plankton net.
4. Mouth of Bayou St. John, Orleans Parish, Louisiana; sand; Renfro beam trawl.
5. South shore of Lake Pontchartrain, Louisiana; sand, grass bed; Renfro beam trawl.

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6. North shore of Lake Pontchartrain, Louisiana; sand, grass bed; Renfro beam trawl.  
7. Cedar Point, St. Louis Bay, Mississippi; silty sand; Renfro beam trawl.  
8. Henderson Point, Pass Christian, Mississippi; sand; Renfro beam trawl.  
9. Gulfport Beach, Gulfport, Mississippi; sand; Renfro beam trawl.  
10. East end of Deer Island, Mississippi; mud; Renfro beam trawl.  
11. Fort Point, Biloxi Bay, Mississippi; sand, grass bed; Renfro beam trawl.  
12. Davis Bayou, Mississippi; mud; Renfro beam trawl.  
13. Belle Fontaine Beach, Mississippi; silty sand; Renfro beam trawl.  
14. Cat Island Pass, Mississippi; Clarke-Bumpus plankton sampler.  
15. Ship Island Pass, Mississippi; Clarke-Bumpus plankton sampler.  
16. Ship Island; Gulf surf, sand; Renfro beam trawl.  
17. Continental shelf, north central Gulf of Mexico, 30°02'30" N, 88°40'15" W; plankton net.  
18. Continental shelf, north central Gulf of Mexico, 29°42'00" N, 88°27'30" W; plankton net.  
19. Continental shelf, north central Gulf of Mexico, 29°24'15" N, 88°17'00" W; plankton net.  
20. Continental shelf, north central Gulf of Mexico, 20°19'00" N, 88°14'00" W; plankton net.  
21. Continental shelf, north central Gulf of Mexico, 29°17'15" N, 88°12'05" W; plankton net.  
22. Dog Keys Pass, Mississippi; Clarke-Bumpus plankton sampler.  
23. Chimney Lagoon, Horn Island, Mississippi; silty sand; Renfro beam trawl.  
24. Middle Ground, Mississippi Sound; sand, grass bed; Renfro beam trawl.  
25. Horn Island Pass, Mississippi; Clarke-Bumpus plankton sampler.  
26. Dauphin Island, Alabama; gear type unknown.  
27. Gulf Shores, Alabama; gear type unknown.  
28. Gulf Breeze, Florida; sand; Renfro beam trawl.  
29. Brackish water pond, Destin, Florida; sand; fine-mesh dip net.  
30. Continental shelf, north central Gulf of Mexico, 29°43'29" N, 87°54'30" W; box core.  
31. Continental shelf, NE Gulf of Mexico, 29°47'59" N, 86°09'29" W; box core.  
32. Continental shelf, NE Gulf of Mexico, 28°23'59" N, 85°15'03" W; box core.  
33. Continental shelf, NE Gulf of Mexico, 27°57'00" N, 84°05'00" W; box core.  
34. Continental shelf, NE Gulf of Mexico, 29°47'00" N, 84°05'00" W; box core.  
35. Continental shelf, NE Gulf of Mexico, 29°05'01" N, 83°45'01" W; box core.  
36. Continental shelf, NE Gulf of Mexico, 28°30'00" N, 83°29'58" W; box core.  
37. Continental shelf, NE Gulf of Mexico, 27°57'00" N, 83°09'00" W; box core.  
38. Continental shelf, NE Gulf of Mexico, 27°56'01" N, 83°27'30" W; box core.  
39. Continental shelf, NE Gulf of Mexico, 27°52'31" N, 83°33'59" W; box core.  
40. Continental shelf, NE Gulf of Mexico, 27°57'29" N, 83°42'29" W; box core.  
41. Continental shelf, NE Gulf of Mexico, 27°56'30" N, 83°53.5' W; box core.  
42. Continental shelf, NE Gulf of Mexico, 27°37.2' N, 83°53.5' W; box core.  
43. Continental shelf, NE Gulf of Mexico, 27°24.2' N, 84°07.3' W; box core.  
44. Continental shelf, SE Gulf of Mexico, 27°03'26" N, 83°01'09" W; box core.  
45. Continental shelf, SE Gulf of Mexico, 26°25'00" N, 82°15'09" W; box core.  
46. Continental shelf, SE Gulf of Mexico, 26°25'00" N, 82°58'00" W; box core.  
47. Continental shelf, SE Gulf of Mexico, 26°25'00" N, 83°23'01" W; box core.  
48. Continental shelf, SE Gulf of Mexico, 25°40.0' N, 82°20.0' W; box core.
Figure 1. Study area showing locations of subareas I through IV.

Figure 2. Location of stations in subarea I.
Figure 3. Location of stations in subarea II.

Figure 4. Location of stations in subarea III.
Figure 5. Location of stations in subarea IV.
Anchialina typica (Krøyer)

Anchialus typicus Krøyer, 1861, p. 53, pl. 2, fig. 7a–1
Anchialina typica: Hansen, 1910, p. 52, pl. 7, fig. 2a–k
Anchialina typica: li, 1964, p. 188, figs. 48–49
Anchialina typica: Brattegard, 1970, p. 24, fig. 6
Anchialina typica: Stuck, Perry and Heard, 1979, p. 227, figs. 2a, 3a, 4a, 5a

**Occurrence** — Station 19NM (males–4, females–1, ovigerous females–0, juveniles–0), 20NM (1–3–1–0), 21NM (0–0–1–0), 31(1–0–0–0), 34(0–1–0–0), 35(1–0–0–0), 37(1–0–0–0), 42(0–1–0–0), 45(0–1–0–0), 48(0–0–0–0).

**Gulf of Mexico Records** — Hopkins (1966).

**Distribution** — Widely distributed in the tropical and subtropical regions of the Atlantic and Pacific oceans (li 1964). Reported from waters off Nova Scotia (Nouvel 1943), the continental shelf off South Carolina (Wigley and Burns 1971), Biscayne Bay, Florida (Brattegard 1970), St. Andrew Bay, Florida (Hopkins 1966), and the continental shelf waters off Mississippi (present study).

Bowmaniella portoricensis Bácescu

Bowmaniella portoricensis Bácescu, 1968a, p. 363, figs. 5a–d, 6

**Occurrence** — Station 20NM (females–2, juveniles–2).


**Distribution** — Georgia (Brattegard 1974) to Brazil (Bácescu 1968a).

**Remarks** — See Stuck et al. (1979).

Pseudomma sp.

**Occurrence** — Station 20NM (females–2, juveniles–2).

**Gulf of Mexico Records** — Previously unreported.

**Remarks** — This appears to be an undescribed species of Pseudomma; however, description awaits the collection of male specimens.

Siriella thompsonii (H. Milne-Edwards)

**Cynthia thompsonii** H. Milne-Edwards, 1837, p. 462

**Siriella thompsonii**: Sars, 1885, p. 205, pl. 36, figs. 1–24

**Siriella thompsonii**: li, 1964, p. 62, figs. 14a–h, 15a–n

**Siriella thompsonii**: Stuck, Perry and Heard, 1979, p. 234, figs. 2f, 3f, 4f, 5f

**Occurrence** — Station 17DM (males–1, females–11, ovigerous females–2, juveniles–0), 17NM (6–28–0–3), 19DS (2–7–0–1), 19DB (2–0–1–0), 20NS (13–36–0–0), 21NS (2–4–1–0).

**Gulf of Mexico Records** — Oceanic with wide distribution in the tropical and temperate waters of the world (li 1964). Reported from the Straits of Florida (Tattersall 1926), and the continental shelf waters off Mississippi (present study).

Promysis atlantica W. M. Tattersall

Promysis atlantica W. M. Tattersall, 1923, p. 286, pl. 1, figs. 5–6

**Occurrence** — Station 3DS (males–2, females–7, ovigerous females–0, juveniles–1), 15DB (0–4–0–1), 17NM (2–14–2–6), 18NM (0–2–2–0), 18NS (2–0–0–0), 18NB (0–1–0–0), 19DM (0–3–0–0), 19NS (0–1–0–1), 20NS (2–4–0–0), 21DB (6–9–1–0), 25DB (3–3–0–9).

**Remarks** — The taxonomic status of B. floridana is currently being reviewed by Thomas E. Bowman of the United States National Museum. Stuck et al. (1979) have discussed the taxonomic problems associated with B. floridana, B. dissimilis and B. brasiliensis.

Bowmaniella brasiliensis Bácescu

Bowmaniella brasiliensis Bácescu, 1968a, p. 363, figs. 5a–d, 6

**Occurrence** — Mature males only, station 12(4), 13(6), 24(3), 26(2).


**Distribution** — Georgia (Brattegard 1974) to Brazil (Bácescu 1968a).

**Remarks** — See Stuck et al. (1979).

**Distribution** — Brazil north throughout the Caribbean Sea, Gulf of Mexico and Atlantic coast of North America to just north of Cape Hatteras, North Carolina (Brattegard 1973).

*Metamysidopsis swifti* Bacescu

*Metamysidopsis munda* — Tattersall, 1951 (in part), p. 147

*Metamysidopsis munda* — Hopkins, 1966, p. 47

*Metamysidopsis swifti* Bacescu, 1969, p. 350, fig. 1

*Metamysidopsis swifti* — Brattegard, 1970, p. 30, fig. 8

*Metamysidopsis swifti* — Stuck, Perry and Heard, 1979, p. 234, figs. 2h, 3h, 4h, 5h

**Occurrence** — Station 2 (males—0, females—0, ovigerous females—2, juveniles—0), 13(0-4-0-0), 16(23-15-10-0, 26(0-1-0-0).


**Distribution** — Mullet Key, Florida to Caribbean coast of Colombia (Brattegard 1973).

**Remarks** — *Metamysidopsis munda* was reported from Calcasieu Pass, Louisiana, by Tattersall (1951); however, an examination of these specimens revealed them to be *M. swifti*. Specimens identified as *M. mexicana* from Mullet Key, off Tampa, Florida, were provided to the authors by Thomas E. Bowman of the United States National Museum. These specimens were also found to be *M. swifti*, thus adding the eastern Gulf of Mexico to its known range.

*Bathymysis renoculata* W. M. Tattersall

*Bathymysis renoculata* — Tattersall, 1951, p. 153, figs. 57–58

*Bathymysis renoculata* — Stuck, Perry and Heard, 1979, p. 235, figs. 2i, 3i, 4i, 5i

**Occurrence** — Station 18NM (males—0, females—1, ovigerous females—0, juveniles—0), 20NM (1-0-0-1), 21NB (0-0-0-2), 32(0-1-0-0).

**Gulf of Mexico Records** — Previously unreported.

**Distribution** — Atlantic coast of the United States from New England to the southern tip of Florida (Tattersall 1951) and the north central Gulf of Mexico (present study).

**Remarks** — This species was previously known only from the deeper waters of the western Atlantic Ocean at depths from 220 to 483 meters. It was identified in the present study from continental shelf waters off western Florida at depths of 180 meters. The records from the shelf waters off Mississippi were at much shallower depths, ranging from 37 to 91 meters.

*Mysidopsis bigelowi* W. M. Tattersall

*Mysidopsis bigelowi* W. M. Tattersall, 1926, p. 10, pl. 1, figs. 1–8

**Occurrence** — Station 1 (males—1, females—0, ovigerous females—0, juveniles—0), 2(0-1-1-0), 6(0-1-0-0), 7(0-1-1-0), 10(1-2-0-0), 12(0-0-1-0), 23(6-6-9-0), 24(0-2-12-0), 27(8-6-7-1).


**Distribution** — Laguna de Tamiahua, Mexico (Price 1978), to Buttonwood Channel, Cape Sable, Florida (Brattegard 1970).


**Distribution** — Laguna de Tamiahua, Mexico (Price 1978), to St. Johns River, Florida (Price and Vodopich 1979), and Ormond Beach, Florida (personal collection of RWH).

**Brasilomysis castroi** Băcescu

*Brasilomysis castroi* Băcescu, 1968b, p. 81, figs. 3–4
*Brasilomysis castroi*: Brattegard, 1969, p. 61, fig. 18
*Brasilomysis castroi*: Stuck, Perry and Heard, 1979, p. 236, figs. 3n, 3n, 3n, 3n, 5n

**Occurrence** — Station 15DB(males–0, females–0, ovigorous females–0, juveniles–1), 17NM(1–0–0–0), 18NS (1–1–0–0), 18NM(0–2–0–0), 22DB(0–1–0–1), 25DB (0–2–0–2).


**Distribution** — Brazil (Băcescu 1968b) to coast of Georgia (Brattegard 1974), and St. Catherine's Sound, Georgia (personal collection of RWH).

**Heteromysis formosa** S. I. Smith

*Heteromysis formosa* S. I. Smith, 1873, p. 553
*Heteromysis formosa*: Tattersall, 1951, p. 235, figs. 100, 101
*Heteromysis formosa*: Brattegard, 1969, p. 92, fig. 29
*Heteromysis formosa*: Stuck, Perry and Heard, 1979, p. 237, figs. 3o, 3o, 4o, 5p

**Occurrence** — Station 41(1 female).

**Gulf of Mexico Records** — Tattersall (1951).

**Distribution** — Western Atlantic from New England to the eastern Gulf of Mexico; eastern Atlantic Ocean, Norway, British Isles, France; Mediterranean off Monaco (Brattegard 1969).

**Remarks** — One of the authors (KCS) examined a 12.0-mm specimen (female) from continental shelf waters east of the mouth of Main Pass, Mississippi River.

**Taphromysis louisianae** Banner

*Taphromysis louisianae* Banner, 1953, p. 3, figs. 1–2
*Taphromysis louisianae*: Stuck, Perry and Heard, 1979, p. 237, figs. 2p, 3p, 4p, 5q

**Occurrence** — Station 7(males–4, females–2, ovigorous females–0, juveniles–0).

**Gulf of Mexico Records** — Banner (1953), Conte and Parker (1971), Mackin (1971), Conte (1972), Kalke (1972), Cali (1972), Harrel et al. (1976), Livingston et al. (1977).

**Distribution** — Lavaca River, Texas (Mackin 1971), to Apalachicola Bay, Florida (Livingston et al. 1977).

**Taphromysis bowmani** Băcescu

*Taphromysis bowmani* Băcescu, 1961, p. 517, figs. 1–2
*Taphromysis bowmani*: Brattegard, 1969, p. 89, fig. 28
*Taphromysis bowmani*: Stuck, Perry and Heard, 1979, p. 237, figs. 2q, 3q, 4q–r, 5r–s

**Occurrence** — Station 6(males–1, females–6, ovigorous females–0, juveniles–0), 7(1–1–0–15), 28(3–7–4–0), 29(3–2–0–0).


**Distribution** — Upper Laguna Madre (Compton and Price 1979), to Biscayne Bay, Florida (Băcescu 1961).

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