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NEW RECORDS OF HYPERIIDEA (CRUSTACEA: AMPHIPODA) FROM THE NORTH CENTRAL GULF OF MEXICO¹

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ABSTRACT Records of 54 species of amphipods of the suborder Hyperieida from the Gulf of Mexico are presented. Forty-seven species are recorded from the Gulf for the first time. Previous records of occurrence in the Gulf of Mexico, Caribbean Sea, and associated North Atlantic waters are provided for each species.

INTRODUCTION

Few of the major oceanographic expeditions of the late nineteenth and early twentieth centuries ventured into the Caribbean Sea and Gulf of Mexico region. Of the limited investigations of Gulf plankton, few have dealt in detail with the pelagic amphipods. As a result, the hyperiid amphipod fauna of the Gulf of Mexico are poorly known.

Pearse (1913) recorded three species of hyperiid amphipods, *Cystisoma spinosum*, *Phronima sedentaria* and *Phrosina semilunata*, from northern Gulf waters. Springer and Bullis (1956) and Bullis and Thompson (1965) reported eight hyperiid species from the Gulf of Mexico cruises of the R/V OREGON II: *Scina crassicornis*, *Phronima sedentaria*, *Phrosina semilunata*, *Paraprone crustulum*, *Platyscelus ovoides*, *Oxycephalus clausi*, *Symprone parva*, and *Hemityphis rapax*. Hopkins (1966) recorded two hyperiid amphipods, *Hyperia atlantica* (syn. *Lestrignon bengalensis*) and *Simorhynchotus antennarius*, from the St. Andrew Bay system, Florida. Gillespie (1971) reported *Hyperia atlantica*, *Phronima* sp., and *Primo* sp. from coastal waters of southern Louisiana. The Dana expedition of 1921-22 occupied a limited number of stations in the eastern Gulf, from which records of *Phronima sedentaria* and *Phronima pacifica* were established (Shih 1969).

The hyperiid fauna of the neighboring Caribbean Sea and western North Atlantic have received attention in several studies. Moryakova (1968), Madin and Harbison (1977), and Harbison et al. (1977) listed numerous hyperiids associated with gelatinous zooplankton. Seventeen species of hyperiids were reported from Caribbean waters near Barbados (Lewis and Fish 1969, Moore and Sander 1977), and Moore and Sander (1979) listed three species from waters near Jamaica. Shoemaker (1948) identified eight species of hyperiids from the southwestern coast of Cuba. Hyperiid amphipods of the subgenus *Parahyperia*, occurring in the Florida Current, were reviewed by Yang (1960). Bovallius (1887, 1889, 1890) listed several species of Hyperieida from the Caribbean Sea and from the tropical waters of the Atlantic Ocean. The Dana expeditions of 1920-22 occupied several stations in the Carib-

bean Sea, Florida Straits, and associated western North Atlantic waters. Hyperiid amphipods of the families Oxycephalidae and Phronimidae from these cruises were studied by Fage (1960) and Shih (1969), respectively. The hyperiid fauna of the tropical and warm temperate waters of the western North Atlantic have been discussed by Vosseler (1901), Shoemaker (1945), Evans (1961), and Grice and Hart (1962).

This report is intended to establish new and supplemental records of hyperiid amphipods of the Gulf of Mexico. A comprehensive key to the hyperiids of the Caribbean Sea-Gulf of Mexico region will be presented at a later date.

MATERIALS AND METHODS

This report is based in large part on a master's thesis presented by the senior author to the University of Southern Mississippi. Specimens were provided to the authors from the following sources:

1. National Marine Fisheries Service under Public Law 88-309, Project 2-42-R.
2. National Marine Fisheries Service under Public Law 88-309, Project 2-215-R.
3. Shiao Wang, personal collection of specimens from stations 11 and 12.

Collection sites (Figure 1), gear types, and water depths are listed in Table 1.

Selected synonymies of interest to local investigators are provided. Detailed synonymies can be found in the listed reference of latest date. Records of occurrence follow the style of Stuck et al. (1979). Stations are designated as day (D) or night (N), and are followed by the depth of tow (S—surface, M—midwater, B—bottom). The number of specimens listed in materials examined represents a small fraction of a large collection of pelagic amphipods (over 6,000 specimens) examined by the senior author. Figures within the parentheses represent the number of males, females, ovigerous females, and immature specimens (0-0-0-0). A brief summary of world distribution is presented for each species. Records from the tropical and warm temperate waters (below 40°N latitude) of the western North Atlantic, Caribbean Sea, and Gulf of Mexico are given.

A representative collection of the hyperiid amphipods reported in this paper has been deposited in the U.S. National Museum of Natural History, Washington, D.C.

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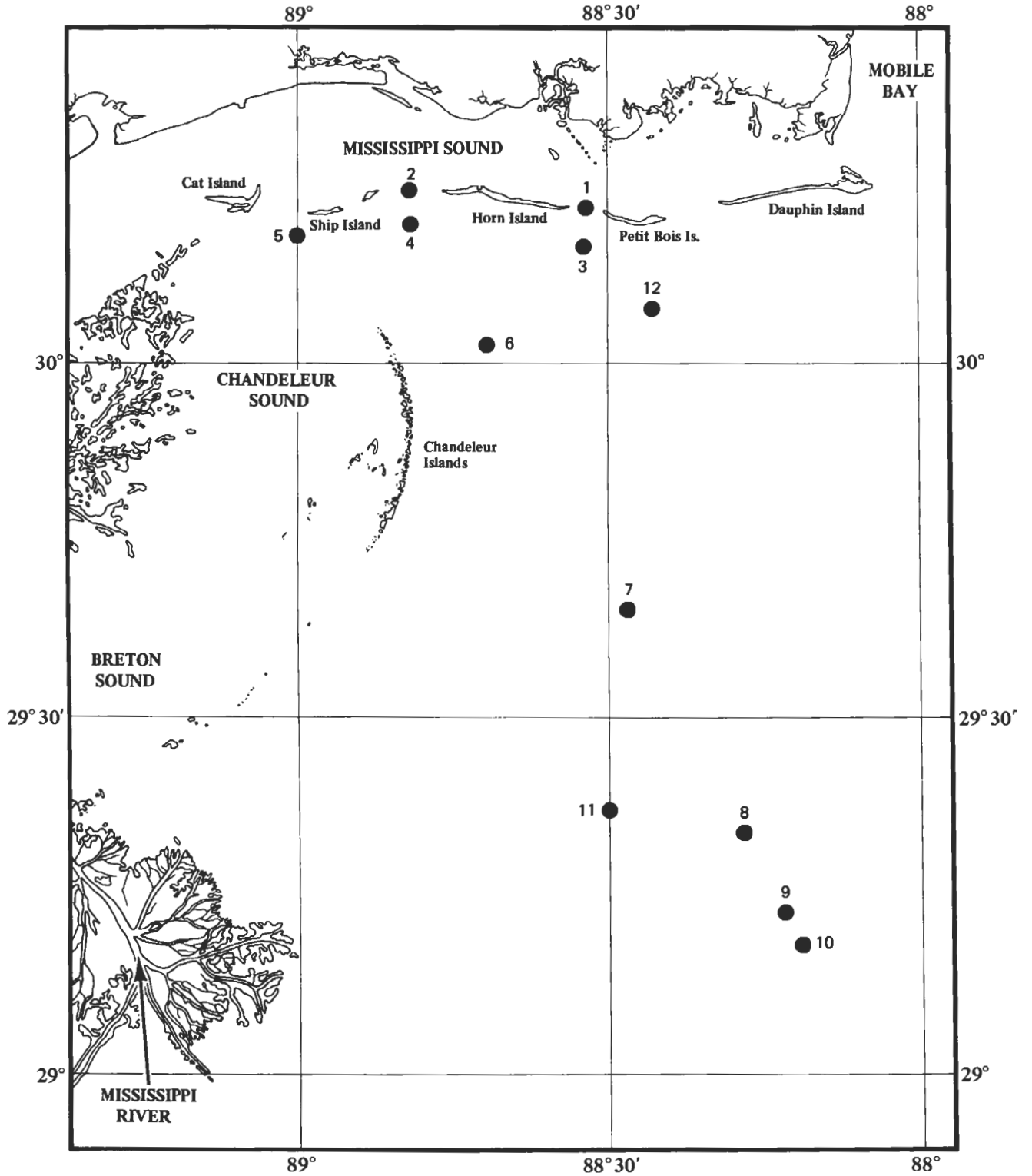


Figure 1. Station locations.

TABLE 1.
Station locations, gear types, and water depth.

Station Number	Station Location	Gear Type	Water Depth (m)
1	Horn Island Pass, Mississippi	Clarke-Bumpus plankton sampler	13
2	Dog Keys Pass, Mississippi	Clarke-Bumpus plankton sampler	10
3	30°09.5' N latitude, 88°31.0' W longitude	Meter Nekton net	11
4	30°11.2' N latitude, 88°47.0' W longitude	Meter Nekton net	11
5	30°09.5' N latitude, 88°59.5' W longitude	Meter Nekton net	8
6	30°02.5' N latitude, 88°40.2' W longitude	0.5 meter plankton net	18
7	29°42.0' N latitude, 88°27.5' W longitude	0.5 meter plankton net	37
8	29°24.4' N latitude, 88°17.0' W longitude	0.5 meter plankton net	55
9	29°19.0' N latitude, 88°14.0' W longitude	0.5 meter plankton net	73
10	29°17.2' N latitude, 88°12.1' W longitude	0.5 meter plankton net	91
11	29°25.0' N latitude, 88°30.0' W longitude	0.5 meter plankton net	31
12	30°05.0' N latitude, 88°20.0' W longitude	0.5 meter plankton net	20

SPECIES ACCOUNT

Family Scinidae

Scina tullbergi (Bovallius)

Tyro tullbergi Bovallius, 1885, p. 15

Scina concors: Stebbing, 1895, p. 360, pl. 53B

Scina tullbergi: Wagler, 1926, p. 384, figs. 34–35

Scina tullbergi: Shoemaker, 1945, p. 232

Material Examined – 8NB (0–1–0–0).

Distribution – Widely distributed in warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the western North Atlantic near Bermuda (Shoemaker 1945). This is the first record for the Caribbean Sea-Gulf of Mexico region.

Family Vibiliidae

Vibilia australis Stebbing

Vibilia australis Stebbing, 1888, p. 1287, pl. 149

Vibilia australis: Behning 1925, p. 488, figs. 32–34

Vibilia australis: Barnard, 1932, p. 264

Material Examined – 7NM (0–1–0–0).

Distribution – Indian Ocean, Red Sea, South Pacific, and Equatorial Atlantic (Reid 1955). The present record is the first for the Caribbean Sea-Gulf of Mexico region.

Family Paraphronimidae

Paraphronima crassipes Claus

Paraphronima crassipes Claus, 1879b, p. 65, pl. 1, figs. 6–9, pl. 2, fig. 10

Paraphronima crassipes: Bovallius, 1889, p. 30, pl. 2, figs. 11–15

Paraphronima clypeata: Bovallius, 1889, p. 33, pl. 2, figs. 16–40

Paraphronima crassipes: Chevreux and Fage, 1925, p. 390, figs. 393–394

Paraphronima crassipes: Shoemaker, 1945, p. 234

Material Examined – 3DS (0–1–0–0), 10NS (0–1–0–0).

Distribution – Widely distributed in warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Recorded from the tropical western North Atlantic (Vosseler 1901), and Bermuda (Shoemaker 1945). Reported from the Caribbean Sea (Bovallius 1889), and the north central Gulf of Mexico (present study).

Paraphronima gracilis Claus

Paraphronima gracilis Claus, 1879b, p. 65, pl. 1, figs. 4–5

Paraphronima cuivis: Stebbing, 1888, p. 1337, pl. 157

Paraphronima gracilis: Bovallius, 1889, p. 27, pl. 2, figs. 1–10

Paraphronima gracilis: Chevreux and Fage, 1925, p. 391, fig. 394 (in part)

Paraphronima gracilis: Spandl, 1927, p. 165, fig. 6

Material Examined – 1NS (1–1–0–0).

Distribution – Widely distributed in warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the tropical western North Atlantic (Vosseler 1901, Evans 1961), between New York and Bermuda (Grice and Hart 1962), the Caribbean Sea near Barbados (Lewis and Fish 1969), and the northern Gulf of Mexico (present study).

Family Hyperiididae

Hyperietta vosseleri (Stebbing)

Hyperia vosseleri Stebbing, 1904, p. 34

Hyperia fabrei: Yang, 1960, p. 33, fig. 8

Hyperietta vosseleri: Bowman, 1973, p. 58, figs. 41–42

Material Examined – 3NB (0–1–0–0), 3DS (1–0–0–0), 6NB (1–2–0–1), 7DM (0–1–0–0), 8DM (2–6–2–1), 9DS (1–4–1–5), 10DM (0–2–1–1), 11 DS (0–1–1–0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans (Bowman 1973). Wide distribution in the western North Atlantic (Vosseler 1901, Grice and Hart 1962). Reported from the Caribbean Sea near Barbados (Lewis and Fish 1969, Moore and Sander 1977), the Florida Current (Yang 1960), and the north central Gulf of Mexico (present study).

Hyperietta luzoni (Stebbing)

Hyperia luzoni Stebbing, 1888, p. 1382, pl. 166A

Hyperietta luzoni: Bowman, 1973, p. 55, figs. 39–40

Material Examined – 9DS (0–1–0–1).

Distribution – Warm waters of the Pacific Ocean (Bowman 1973), the Mediterranean Sea, and eastern North Atlantic (Stephensen 1924). Reported from the western North Atlantic waters between New York and Bermuda (Grice and Hart 1962). This is the first record of this species from the Caribbean Sea-Gulf of Mexico region.

Hyperietta stebbingi Bowman

Hyperia luzoni: Vosseler, 1901, p. 64, pl. 5, figs. 16–28

Hyperietta stebbingi Bowman, 1973, p. 61, figs. 43–45

Material Examined – 10NS (3–0–0–0).

Distribution – Warm waters of the Pacific, Indian, and Atlantic oceans (Bowman 1973). Reported from the warm waters of the western North Atlantic (Vosseler 1901, Harbison et al. 1977). This is the first record of this species from the Caribbean Sea-Gulf of Mexico region.

Hyperietta stephensi Bowman

Hyperietta stephensi Bowman, 1973, p. 61, figs. 46–48

Material Examined – 8DB (2–2–0–0), 8NS (0–1–0–0), 9DM (1–0–0–0).

Distribution – Warmer parts of the Atlantic, Pacific, and Indian oceans (Bowman 1973). This is the first record of this species from the Caribbean Sea-Gulf of Mexico region.

Lestrignonus bengalensis Giles

Lestrignonus bengalensis Giles, 1887, p. 224, pls. 6–7

Hyperia bengalensis: Bovallius, 1889, p. 199

Hyperia thoracica: Bovallius, 1889, p. 233, pl. 11, figs. 37–41

Hyperia atlantica: Vosseler, 1901, p. 67, pl. 6, figs. 5–15

Lestrignonus bengalensis: Bowman, 1973, p. 50, figs. 37–38

Material Examined – 1DS (1–2–1–0), 2DS (4–2–1–2), 2DB (3–2–1–1), 3DS (10–26–2–5), 3DB (6–11–0–2), 4DS (11–21–1–2), 4DB (6–6–0–1), 5DS (2–5–0–1), 5DB (0–3–0–1), 6DB (1–2–1–1), 6NM (1–3–2–0), 7NS (2–9–1–1), 7NB (1–2–0–1), 8NS (10–12–1–6), 8DS (2–6–0–0), 9DM (6–17–2–3), 9NM (6–2–0–0), 10DB (2–7–1–1), 10NS (3–1–0–1), 11DS (4–11–11–6), 12 DS (6–42–7–5).

Distribution – Worldwide in tropical waters (Bowman 1973). Reported from warm waters of the western North Atlantic (Vosseler 1901, Grice and Hart 1962, Harbison et al. 1977), the Caribbean Sea near Barbados (Lewis and Fish 1969, Moore and Sander 1977), Jamaica (Moore and Sander 1979), the Florida Current (Yang 1960), and the northern Gulf of Mexico (Hopkins 1966, Gillespie 1971).

Remarks – *Lestrignonus bengalensis* is the most common hyperiid amphipod found in the coastal waters of the northern Gulf. It was present in all offshore samples examined and commonly occurred in nearshore waters.

Lestrignonus schizogeneios (Stebbing)

Hyperia schizogeneios Stebbing, 1888, p. 1391, pl. 168

Hyperia promontorii: Stebbing, 1888, p. 1385, pl. 166B

Hyperia schizogeneios: Yang, 1960, p. 15, figs. 1–3

Lestrignonus schizogeneios: Bowman, 1973, p. 39, figs. 28–30

Material Examined – 3DB (1–2–0–0), 4DS (1–3–0–0), 7NS (0–2–0–1), 8DB (1–2–0–0), 9DS (1–1–0–0), 10NM (1–3–1–0), 11DS (0–1–0–0).

Distribution – Warm water areas around the world (Bowman 1973). Reported from the western North Atlantic (Vosseler 1901, Evans 1961, Harbison et al. 1977), the east and central Caribbean Sea (Moryakova 1968), the Florida Current (Yang 1960), and the north central Gulf of Mexico (present study).

Lestrignonus crucipes (Bovallius)

Hyperia crucipes Bovallius, 1889, p. 225, pl. 11, figs. 14–25

Lestrignonus crucipes: Bowman, 1973, p. 43, fig. 31

Material Examined – 5NM (0–1–0–0), 10 NM (1–2–0–0).

Distribution – Warm water areas of the Indian and Atlantic oceans (Bowman 1973). Reported from the western North Atlantic (Harbison et al. 1977), and the north central Gulf of Mexico (present study).

Lestrignonus macrophthalmus (Vosseler)

Hyperia macrophthalma Vosseler, 1901, p. 70, pl. 6, figs. 16–25

Hyperia macrophthalma: Yang, 1960, p. 19, figs. 4–5

Lestrignonus macrophthalmus: Bowman, 1973, p. 48, fig. 35

Material Examined – 4DS (1–0–0–0), 4DB (0–1–0–0), 7NM (1–2–0–0), 9DS (0–1–0–0), 10DM (1–2–0–1), 10DB (2–1–0–0), 12 DS (3–1–1–5).

Distribution – Tropical parts of the Atlantic, Pacific, and Indian oceans (Bowman 1973). Reported from western North Atlantic between New York and Bermuda (Grice and Hart 1962), the Caribbean Sea near Barbados (Lewis and Fish 1969, Moore and Sander 1977), the Florida Current (Yang 1960), and the north central Gulf of Mexico (present study).

Lestrigonus latissimus (Bovallius)

- Hyperia latissima* Bovallius, 1889, p. 229, pl. 11, figs. 26–36
Hyperia hydrocephala: Vosseler, 1901, p. 74, pl. 6, figs. 26–28, pl. 7, figs. 1–5
Hyperia bengalensis: Shoemaker, 1945, p. 238
Hyperia bengalensis: Shoemaker, 1948, p. 12
Lestrigonus latissimus: Bowman, 1973, p. 50, fig. 36

Material Examined – 3DS (0–1–0–0), 6NB (1–2–0–0), 7NM (1–1–0–1), 8DB (2–1–1–0), 9NM (1–2–0–1), 10DM (1–0–0–0), 10NM (2–3–0–0).

Distribution – Mediterranean Sea, eastern Atlantic (Bowman 1973). Reported from the western North Atlantic (Vosseler 1901), near Bermuda (Shoemaker 1945), Bahia Corrientes on the southwestern coast of Cuba (Shoemaker 1948), and the northern Gulf of Mexico (present study).

Hyperioides longipes Chevreux

- Hyperioides longipes* Chevreux, 1900, p. 143, pl. 17, fig. 2
Hyperia sibaginis: Vosseler, 1901, p. 60, pl. 7, figs. 6–20
Hyperioides longipes: Bowman, 1973, p. 33, figs. 24–25

Material Examined – 10NB (1–2–0–0), 10DB (0–2–0–0).

Distribution – Known from warm waters of all the world oceans (Bowman 1973). Wide distribution in the western North Atlantic (Vosseler 1901). Recorded from Bermuda (Shoemaker 1945), the Caribbean Sea near Barbados (Lewis and Fish 1969, Moore and Sander 1977), and the north central Gulf of Mexico (present study).

Themistella fusca (Dana)

- Lestrigonus fuscus* Dana, 1853, p. 983, pl. 67, figs. 8a–c
Hyperia thoracica: Vosseler, 1901, p. 73, pl. 6, figs. 1–4
Themistella fusca: Bowman, 1973, p. 66, fig. 51

Material Examined – 1DS (3–0–0–0), 3DB (3–7–0–0), 3DS (2–2–0–0), 4DS (1–3–0–0), 5DS (0–1–0–0), 6NB (2–3–0–1), 7NM (2–2–0–1), 8NS (1–1–0–0), 10NM (0–2–0–0), 12DS (0–3–0–2).

Distribution – Worldwide in tropical waters (Bowman 1973). Reported from the tropical western North Atlantic (Vosseler 1901), the Caribbean Sea off Barbados (Bowman 1973), and the north central Gulf of Mexico (present study).

Phronimopsis spinifera Claus

- Phronimopsis spinifer* Claus, 1879b, p. 64, pl. 1, figs. 1–3
Phronimopsis sarsii: Bovallius, 1889, p. 320, pl. 14, figs. 1–29
Phronimopsis spinifera: Chevreux and Fage, 1925, p. 408, fig. 406
Phronimopsis spinifera: Shoemaker, 1945, p. 242

Material Examined – 8NS (1–2–0–0), 9DM (2–3–0–1).

Distribution – Tropical and temperate areas of the Indian, Pacific, and Atlantic oceans, and the Red and Mediterranean seas (Dick 1970). Reported from the western North Atlantic near Bermuda (Shoemaker 1945), the Caribbean Sea (Bovallius 1889), and the north central Gulf of Mexico (present study).

Hyperionyx macrodactylus (Stephensen)

- Hyperia macrodactyla* Stephensen, 1924, p. 90, fig. 35
Hyperia (Parahyperia) macrodactyla: Yang, 1960, p. 35, fig. 9
Hyperionyx macrodactylus: Bowman, 1973, p. 71, fig. 52

Material Examined – 7NM (1–3–0–1).

Distribution – Pacific Ocean near the Fiji Islands (Hurley 1960), the South Atlantic Ocean (Dick 1970), and the Mediterranean Sea (Stephensen 1924). Reported from the Florida Current off Miami (Yang 1960), and the north central Gulf of Mexico (present study).

Family Dairellidae

Dairella latissima Bovallius

- Dairella latissima* Bovallius, 1887, p. 24
Dairella bovallii: Stebbing, 1888, p. 1343, pl. 158
Dairella latissima: Bovallius, 1889, p. 336, pl. 15, figs. 1–20
Dairella latissima: Barnard, 1932, p. 282

Material Examined – 12DS (1–0–0–0).

Distribution – Warm water regions of the Atlantic and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the western North Atlantic waters between New York and Bermuda (Grice and Hart 1962), and the north central Gulf of Mexico (present study).

Family Phronimidae

Phronimella elongata (Claus)

- Phronima elongata* Claus, 1862, p. 193, pl. 19, figs. 2, 3, 7
Phronimella elongata: Stebbing, 1888, p. 1362, pl. 163
Phronimella elongata: Shih, 1969, p. 30, figs. 8, 21

Material Examined – 8NS (0–1–0–0), 9NM (0–1–0–0), 9NS (1–0–0–0).

Distribution – Widely distributed in the warm water regions of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Shih 1969). Reported from the western North Atlantic (Vosseler 1901, Evans 1961, Shih 1969, Harbison et al. 1977), near Bermuda (Shoemaker 1945), the Caribbean waters near Barbados (Shih 1969), and the north central Gulf of Mexico (present study).

Phronima atlantica Guérin

- Phronima atlantica* Guérin, 1836, p. 7, pl. 18, fig. 1
Phronima atlantica: Bovallius, 1889, p. 374, pl. 16, figs. 19–26
Phronima atlantica: Shih, 1969, p. 14, figs. 2, 15

Material Examined – 1DS (0–1–0–0), 10DM (0–1–0–0).

Distribution – Widely distributed in warm waters of the Atlantic, Pacific and Indian oceans, and the Mediterranean and Red seas (Shih 1969). Reported from the western North Atlantic (Vosseler 1901, Shih 1969, Harbison et al. 1977), near Bermuda (Shoemaker 1945), the Caribbean waters near Barbados (Lewis and Fish 1969, Shih 1969, Moore and Sander 1977), and the north central Gulf of Mexico (present study).

Phronima pacifica Streets

Phronima pacifica Streets, 1877, p. 128

Phronima pacifica: Vosseler, 1901, p. 29, pl. 3, figs. 4–7

Phronima pacifica: Shih, 1969, p. 18, figs. 4, 17

Material Examined – 1NS (1–1–0–0), 3DS (0–1–0–0), 4DS (0–1–0–0), 9NM (0–1–0–0), 10DM (0–1–0–0).

Distribution – Widely distributed in the warm waters of the Atlantic; also noted in the Pacific and Indian oceans, and the Mediterranean Sea (Shih 1969). Reported from northern Atlantic waters near Bermuda (Shoemaker 1945), the Caribbean Sea and Yucatan Channel (Shih 1969), and the north central Gulf of Mexico (present study).

Phronima solitaria Guérin

Phronima solitaria Guérin, 1836, p. 7, pl. 18, fig. 1

Phronima atlantica var. *solitaria*: Vosseler, 1901, p. 23, pl. 2, fig. 5

Phronima solitaria: Shih, 1969, p. 16, figs. 3, 16

Material Examined – 3DS (0–1–0–0), 4DS (0–0–0–0).

Distribution – Warm waters of the Atlantic, eastern Pacific, and Indian oceans, and the Mediterranean and Red seas (Shih 1969). Reported from the western North Atlantic (Shoemaker 1945, Shih 1969, Harbison et al. 1977), the Florida Straits (Shih 1969), and the north central Gulf of Mexico (present study).

Phronima stebbingi Vosseler

Phronima stebbingi Vosseler, 1900, p. 402

Phronima stebbingii: Vosseler, 1901, p. 36, pl. 4, figs. 4–10

Phronima stebbingi: Shih, 1969, p. 29, figs. 7, 20

Material Examined – 7NM (0–1–0–0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Shih 1969). Wide distribution in the western North Atlantic (Vosseler 1901, Shoemaker 1945, Evans 1961, Grice and Hart 1962). Reported from the Caribbean Sea at Mona Passage (Shih 1969), and the north central Gulf of Mexico (present study).

Family Phrosinidae

Phrosina semilunata Risso

Phrosina semilunata Risso, 1822, p. 245

Phrosina semilunata: Chevreux and Fage, 1925, p. 413, fig. 409

Phrosina semilunata: Pillai, 1966b, p. 219, fig. 11

Material Examined – 1DS (0–1–0–0), 3DS (2–11–0–0), 6NM (1–4–0–2), 7NM (3–8–1–2), 8DB (0–2–0–0), 9NM (1–6–0–1), 9DM (0–3–0–0), 10NM (1–4–0–2), 10DB (1–6–0–1).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Shoemaker 1945). Wide distribution in the western North Atlantic (Vosseler 1901, Evans 1961, Grice and Hart 1962, Harbison et al. 1977), near Bermuda (Shoemaker 1945), the Caribbean Sea near Barbados (Lewis and Fish 1969, Moore and Sander 1977), and the Gulf of Mexico (Pearse 1913, Springer and Bullis 1956, Bullis and Thompson 1965).

Anchylomera blossevillii Milne-Edwards

Anchylomera blossevillii Milne-Edwards, 1830, p. 394

Anchylomera blossevillii: Chevreux and Fage, 1925, p. 414, fig. 410

Anchylomera blossevillii: Pillai, 1966b, p. 218, fig. 10

Material Examined – 7NM (0–2–0–1), 9DM (1–2–0–0), 11DS (0–1–0–0), 12DS (0–2–0–1).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean and Red seas (Dick 1970). Wide distribution in the western North Atlantic (Vosseler 1901, Evans 1961, Grice and Hart 1962). Also reported from Bermuda (Shoemaker 1945), the Caribbean Sea near Barbados (Lewis and Fish 1969, Moore and Sander 1977), and the north central Gulf of Mexico (present study).

Primno brevidens Bowman

Primno macropa: Stebbing, 1888, p. 1441, pl. 178

Primno brevidens Bowman, 1978, p. 8, figs. 3d–j, 5–8

Material Examined – 4DS (0–2–0–0), 7NM (0–2–0–1), 8DB (1–3–2–4), 9DM (0–3–0–1).

Distribution – Pacific Ocean and southeastern Gulf of Guinea (Bowman 1978). This is the first record of this species from the Caribbean Sea-Gulf of Mexico region.

Remarks – The genus *Primno* was revised by Bowman in 1978. Prior to that revision, records of several species of *Primno* were included under a single species *Primno macropa*; consequently, the distribution of this genus is poorly understood.

Primno johnsoni Bowman

Euprimno macropus: Chevreux and Fage, 1925, p. 416, fig. 411

Primno macropa: Shoemaker, 1945, p. 234

Primno johnsoni Bowman, 1978, p. 15, figs. 11–13

Material Examined – 3DS (0–1–0–0), 3DB (1–0–0–0),

4DB (1-4-0-0), 7NM (1-3-0-0), 8DM (1-2-0-0), 9NM (0-3-0-2), 10DM (1-4-0-6).

Distribution – South Pacific Ocean and the north Atlantic Ocean near the Canary Islands (Bowman 1978). Reported from the western North Atlantic near Bermuda (Shoemaker 1945), and the north central Gulf of Mexico (present study).

Remarks – See “Remarks” *Primno brevidens*.

Family Lycaeopsidae

Lycaeopsis themistoides Claus

Lycaeopsis themistoides Claus, 1879a, p. 188(42)

Lycaeopsis themistoides: Chevreux and Fage, 1925, p. 417, fig. 412

Lycaeopsis themistoides: Spandl, 1927, p. 213, fig. 35

Lycaeopsis themistoides: Pirlot, 1930, p. 27, fig. 8

Material Examined – 9DM (0-2-0-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean and Red seas (Dick 1970). Reported from the tropical western North Atlantic (Evans 1961, Harbison et al. 1977), between Bermuda and New York (Grice and Hart 1962), and the north central Gulf of Mexico (present study).

Remarks – The genus *Lycaeopsis* is in need of revision and identification of species is tentative (Bowman, personal communication).

Lycaeopsis zamboangae (Stebbing)

Phorcorrhaphis zamboangae Stebbing, 1888, p. 1452, pl. 180

Lycaeopsis zamboangae: Pirlot, 1930, p. 28, fig. 9

Lycaeopsis zamboangae: Pillai, 1966b, p. 222, figs. 13, 13a

Material Examined – 4DB (1-1-0-0).

Distribution – Warm waters of the Atlantic and Pacific oceans, and the Red Sea (Dick 1970). The present record is the first for the Caribbean Sea-Gulf of Mexico region.

Remarks – See “Remarks” *Lycaeopsis themistoides*.

Family Pronoidea

Eupronoe armata Claus

Eupronoe armata Claus, 1879a, p. 174(28)

Eupronoe intermedia: Stebbing, 1888, p. 1517, pl. 188

Eupronoe armata: Pillai, 1966b, p. 220, fig. 12

Material Examined – 2DS (0-1-0-0), 3DB (6-1-0-0), 4DB (0-2-0-0), 6DB (1-2-0-0), 10DM (0-2-0-1), 12DS (0-3-0-0).

Distribution – Warm waters of the Atlantic and Indian oceans (Dick 1970). Reported from the tropical western North Atlantic (Evans 1961). The present records are the first for the Caribbean Sea-Gulf of Mexico region.

Eupronoe minuta Claus

Eupronoe minuta Claus, 1879a, p. 174(28)

Eupronoe minuta: Claus, 1887, p. 53, pl. 14, figs. 7-12

Eupronoe minuta: Chevreux and Fage, 1925, p. 425, fig. 417

Eupronoe minuta: Shoemaker, 1945, p. 245

Material Examined – 6DB (2-0-0-0), 10NB (0-2-0-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the western North Atlantic near Bermuda (Shoemaker 1945). The present records are the first for the Caribbean Sea-Gulf of Mexico region.

Paralycaea gracilis Claus

Paralycaea gracilis Claus, 1879a, p. 186(40)

Paralycaea gracilis: Claus, 1887, p. 64, pl. 20, figs. 1-11

Paralycaea gracilis: Stephensen, 1925, p. 165, fig. 62

Paralycaea gracilis: Pirlot, 1930, p. 30, fig. 10

Material Examined – 8NS (0-1-0-0), 9NM (0-1-0-0).

Distribution – Warmer waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the western North Atlantic (Harbison et al. 1977), and the north central Gulf of Mexico (present study).

Sympronoe parva (Claus)

Parapronoe parva Claus, 1879a, p. 177(31)

Parapronoe parva: Claus, 1887, p. 55, pl. 14, figs. 13-18

Sympronoe parva: Stebbing, 1888, p. 1533, pl. 192

Sympronoe parva: Shoemaker, 1945, p. 246

Material Examined – 9NB (0-1-0-0).

Distribution – Warmer waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the western North Atlantic (Shoemaker 1945, Harbison et al. 1977), the Caribbean near Barbados (Lewis and Fish 1969), and the northern Gulf of Mexico (Bullis and Thompson 1965).

Family Lycaeidae

Lycaea vincentii Stebbing

Lycaea vincentii Stebbing, 1888, p. 1563, pl. 199

Lycaea vincentii: Barnard, 1930, p. 429, fig. 57

Lycaea vincentii: Harbison, 1976, p. 152, figs. 12, 13

Material Examined – 12DS (2-0-0-0).

Distribution – In question. Reported from the Cape Verde Islands (Stebbing 1888), the western North Atlantic (Harbison 1976, Madin and Harbison 1977), the Caribbean Sea (Madin and Harbison 1977), and the north central Gulf of Mexico (present study).

Remarks – Shoemaker (1945) synonymized *L. bovallii*, *L. bovallioides*, and *L. vincentii* with *L. pulex*. Harbison and Madin (1976) provided a key to eight species of *Lycaea*, treating the species collected in the present study separately.

Records of *L. pulex* from Bermuda (Shoemaker 1945), Cuba (Shoemaker 1948), and the distribution records presented by Dick (1970) may, therefore, include species of *Lycaea* treated here.

Lycaea bovallioides Stephensen

Lycaea bovallioides Stephensen, 1925, p. 169, fig. 63

Lycaea bovallioides: Harbison and Madin, 1976, p. 165, fig. 5A

Material Examined – 1DB (0-1-0-0).

Distribution – Warm waters of the Atlantic Ocean and the Mediterranean Sea (Stephensen 1925). Reported from the tropical western North Atlantic (Evans 1961). The present record is the first for the Caribbean Sea-Gulf of Mexico region.

Remarks – See “Remarks” under *L. vincentii*.

Lycaea bovallii Chevreux

Lycaea bovallii Chevreux, 1900, p. 157, pl. 18, fig. 3

Lycaea bovallii: Stephensen, 1925, p. 168

Lycaea bovallii: Harbison and Madin, 1976, p. 165, fig. 3A

Material Examined – 7NB (0-1-0-0).

Distribution – Warm waters of the Atlantic Ocean and the Mediterranean Sea (Stephensen 1925). The present record is the first for the Caribbean Sea-Gulf of Mexico region.

Remarks – See “Remarks” under *L. vincentii*.

Brachyscelus spp.

Remarks – Large numbers of *Brachyscelus* spp. were found in the present study. The vast majority of specimens were females and small juveniles, making specific identification difficult. A few large male specimens agreed with the description of *Brachyscelus rapax* (syn. *Thamyris rapax* Claus, 1879). The taxonomic status of *B. rapax* is in question (Dick 1970), and a reexamination of the type specimen(s) is needed to clarify its relationship to the other species of *Brachyscelus*.

Shoemaker (1948) has reported *B. cruscolum*, *B. globiceps*, and *B. macrocephalus* from Bahia Corrientes, Cuba.

Family Oxycephalidae

Oxycephalus clausi Bovallius

Oxycephalus clausi Bovallius, 1887, p. 35

Oxycephalus clausi: Bovallius, 1890, p. 60, pl. 1, figs. 19–24, pl. 2, fig. 1; figs. 4, 7, 8, 22, 54, 65 (in text)

Oxycephalus clausi: Fage, 1960, p. 20, figs. 11–16

Oxycephalus clausi: Pillai, 1966a, p. 174, pl. 1–B, C; fig. 3 (in text)

Material Examined – 2DS (0-2-0-2), 3DS (1-1-0-0), 4DS (0-1-0-0), 10NB (0-1-0-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean and Red seas (Dick 1970). Recorded from the western North Atlantic (Fage 1960, Harbison et al. 1977, Madin and Harbison 1977), near Bermuda (Shoemaker 1945), the Caribbean waters off Puerto Rico, Cuba and Panama, the Florida Straits (Fage 1960), and the northern Gulf of Mexico (Springer and Bullis 1956).

Oxycephalus piscator Milne-Edwards

Oxycephalus piscatoris Milne-Edwards, 1830, p. 396

Oxycephalus piscator: Bovallius, 1890, p. 56, pl. 1, figs. 8–16; figs. 33, 35–37, 41, 42, 66, 68, 69, 75 (in text)

Oxycephalus piscator: Shoemaker, 1945, p. 246, figs. 42, 43

Oxycephalus piscator: Pillai, 1966a, p. 176, fig. 4

Material Examined – 3DS (1-0-0-0), 8DB (0-1-0-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Recorded from the western North Atlantic (Fage 1960, Evans 1961), near Bermuda (Shoemaker 1945), the Caribbean waters off Cuba and Puerto Rico, the Florida Straits (Fage 1960), and the north central Gulf of Mexico (present study).

Cranocephalus scleroticus (Streets)

Oxycephalus scleroticus Streets, 1878, p. 281, pl. 2, fig. 3

Cranocephalus goesi: Bovallius, 1890, p. 95, pl. 4, figs. 7–9; figs. 5, 53, 72 (in text)

Cranocephalus scleroticus: Shoemaker, 1945, p. 251, fig. 44

Cranocephalus scleroticus: Fage, 1960, p. 72, figs. 44–55

Cranocephalus scleroticus: Pillai, 1966a, p. 184, pl. 1–I; fig. 9 (in text)

Material Examined – 3DS (0-1-0-0), 4DS (0-1-0-0), 8DB (0-1-0-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Recorded from the western North Atlantic near Bermuda (Shoemaker 1945). The present records are the first for the Caribbean Sea-Gulf of Mexico region.

Leptocotis tenuirostris (Claus)

Oxycephalus tenuirostris Claus, 1871, p. 155

Dorycephalus lindstroemi: Bovallius, 1890, p. 76, pl. 2, figs. 16–18, pl. 3, fig. 1; figs. 31, 39, 44, 56, 73, 77 (in text)

Leptocotis tenuirostris: Fage, 1960, p. 37, figs. 21–24

Leptocotis tenuirostris: Pillai, 1966a, p. 181, pl. 1–F, G; fig. 7 (in text)

Material Examined – 7NM (1-0-0-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans (Dick 1970). Recorded from the western North Atlantic (Fage 1960), near Bermuda (Shoemaker 1945), the Caribbean Sea off Cuba, Puerto Rico and Panama, the Florida Straits (Fage 1960), and the north central Gulf of Mexico (present study).

Simorhynchotus antennarius Claus

Simorhynchotus antennarius Claus, 1871, p. 156
Simorhynchotus antennarius: Fage, 1960, p. 11, figs. 1–3
Simorhynchotus antennarius: Pillai, 1966a, p. 171, pl. 1–A;
 figs. 1, 2 (in text)

Material Examined – 1DS (1–2–0–1), 3DS (312–130–22–10), 4DB (16–8–0–5), 5DS (162–80–21–15), 7NS (2–1–0–2), 8NS (0–2–0–1), 10NB (2–1–0–1).

Distribution – Widely distributed in warmer waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Recorded from the Caribbean Sea near Barbados (Lewis and Fish 1969), Panama (Fage 1960), and the northern Gulf of Mexico (Hopkins 1966).

Remarks – *Simorhynchotus antennarius* was very common in coastal waters, ranking second in abundance to *Lestrigonus bengalensis*.

Streetsia challengerii Stebbing

Streetsia challengerii Stebbing, 1888, p. 1603, pl. 207
Streetsia challengerii: Fage, 1960, p. 51, figs. 36–43
Streetsia challengerii: Pillai, 1966a, p. 189, pl. 1–L; fig. 12
 (in text)

Material Examined – 3DS (1–0–0–0).

Distribution – Widely distributed in warmer waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Recorded from the western North Atlantic (Fage 1960), near Bermuda (Shoemaker 1945), the Caribbean waters off Puerto Rico and Panama, the Florida Straits (Fage 1960), the central and eastern Caribbean Sea (Moryakova 1968), and the north central Gulf of Mexico (present study).

Streetsia mindanaonis (Stebbing)

Leptocotis mindanaonis Stebbing, 1888, p. 1598, pl. 204C
Streetsia mindanaonis: Fage, 1960, p. 45, figs. 28–35
Streetsia mindanaonis: Pillai, 1966a, p. 192, pl. 1–N;
 fig. 14 (in text)

Material Examined – 10DM (0–1–0–0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans (Dick 1970). Reported from waters off north-east Cuba, the Caribbean Sea near St. Croix, Puerto Rico and Panama (Fage 1960), and the north central Gulf of Mexico (present study).

Rhabdosoma whitei Bate

Rhabdosoma whitei Bate, 1862, p. 345, pl. 54, fig. 7
Xiphocephalus whitei: Bovallius, 1890, p. 125, pl. 7, figs. 1–20; figs. 13–17, 24, 32, 45–49, 63, 64, 78, 79, 81–83, 85–87
Rhabdosoma whitei: Fage, 1960, p. 97, figs. 71–76
Rhabdosoma whitei: Pillai, 1966a, p. 194, fig. 15

Material Examined – 2DS (0–9–0–0).

Distribution – Widely distributed in warmer waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Recorded from the western North Atlantic (Fage 1960), near Bermuda (Shoemaker 1945), the Caribbean Sea near St. Croix, Puerto Rico, Dominica and Panama, the Florida Straits (Fage 1960), and the north central Gulf of Mexico (present study).

Family Platyscelidae

Platyscelus ovoides (Claus)

Eutyphis ovoides Claus, 1879a, p. 155(9)
Eutyphis globosus: Claus, 1879a, p. 159(12)
Platyscelus ovoides: Shoemaker, 1945, p. 256, figs. 47, 48

Material Examined – 10DB (0–1–0–0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the western North Atlantic near Bermuda (Shoemaker 1945), and the northern Gulf of Mexico (Springer and Bullis 1956, Bullis and Thompson 1965).

Hemityphis rapax (Milne-Edwards)

Typhis rapax Milne-Edwards, 1830, p. 395
Hemityphis tenuimanus: Claus, 1887, p. 38, pl. 4, figs. 1–13
Hemityphis crustulatus: Claus, 1887, p. 39, pl. 4, figs. 14–22
Hemityphis rapax: Shoemaker, 1945, p. 259

Material Examined – 10NM (0–1–0–0).

Distribution – Widely distributed in warmer waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the western North Atlantic (Shoemaker 1945, Harbison et al. 1977), the Caribbean Sea off Barbados (Lewis and Fish 1969), and the northern Gulf of Mexico (Bullis and Thompson 1965).

Paratyphis maculatus Claus

Paratyphis maculatus Claus, 1879a, p. 160(14)
Paratyphis maculatus: Claus, 1887, p. 39, pl. 5, figs. 1–9
Paratyphis maculatus: Shoemaker, 1948, p. 15

Material Examined – 3DS (0–1–0–0), 9DM (0–1–0–0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans (Dick 1970). Reported from the western North Atlantic near Bermuda (Shoemaker 1945), Bahia Corrientes on the southwest coast of Cuba (Shoemaker 1948), and the north central Gulf of Mexico (present study).

Tetrathyrus forcipatus Claus

Tetrathyrus forcipatus Claus, 1879a, p. 160(14)
Tetrathyrus forcipatus: Claus, 1887, p. 40, pl. 5, figs. 10–18, pl. 6, figs. 1–3
Tetrathyrus forcipatus: Chevreux and Fage, 1925, p. 422, fig. 415
Tetrathyrus forcipatus: Pillai, 1966b, p. 230, fig. 19

Material Examined – 1DS (2-0-0-0), 2DS (0-1-0-0), 3DB (9-14-0-0), 3DS (4-0-0-0), 4DB (1-2-0-1), 5DS (1-1-0-0), 7NS (1-2-0-2), 8DB (1-1-0-2), 9DM (3-7-0-3), 12DS (0-1-0-2).

Distribution – Widely distributed in warmer waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean and Red seas (Dick 1970). Reported from the tropical western North Atlantic (Evans 1961, Harbison et al. 1977), near Bermuda (Shoemaker 1945), Bahia Corrientes on the southwestern coast of Cuba (Shoemaker 1948), and the north central Gulf of Mexico (present study).

Remarks – *Tetrathyrus forcipatus* was commonly found in coastal and offshore samples, ranking third in total abundance.

Amphithyrus bispinosus Claus

Amphithyrus bispinosus Claus, 1879a, p. 161(15)

Amphithyrus bispinosus: Claus, 1887, p. 41, pl. 6, figs. 4-16

Amphithyrus bispinosus: Shoemaker, 1945, p. 259

Material Examined – 10DB (0-1-0-0).

Distribution – Widely distributed in warmer waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the western North Atlantic near Bermuda (Shoemaker 1945), the Caribbean Sea off Barbados (Lewis and Fish 1969), and the north central Gulf of Mexico (present study).

Amphithyrus sculpturatus Claus

Amphithyrus sculpturatus Claus, 1879a, p. 162(16)

Amphithyrus sculpturatus: Claus, 1887, p. 41, pl. 7, figs. 1-9

Amphithyrus orientalis: Shoemaker, 1925, p. 58, figs. 25, 26

Amphithyrus sculpturatus: Shoemaker, 1948, p. 14

Material Examined – 10DB (0-1-0-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the western North Atlantic (Harbison et al. 1977), Bahia Corrientes, Cuba (Shoemaker 1948), and the north central Gulf of Mexico (present study).

Family Parascelidae

Thyropus edwardsii (Claus)

Parascelus edwardsii Claus, 1879a, p. 164(18)

Parascelus edwardsii: Claus, 1887, p. 46, pl. 10, figs. 1-11

Parascelus zebu: Stebbing, 1888, p. 1496, pl. 185

Parascelus edwardsii: Shoemaker, 1945, p. 260

Material Examined – 8DB (0-1-0-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean and Red seas (Dick

1970). Reported from the tropical western North Atlantic (Evans 1961, Harbison et al. 1977), near Bermuda (Shoemaker 1945), the Caribbean Sea off Barbados (Lewis and Fish 1969, Moore and Sander 1977, Harbison et al. 1977), and the north central Gulf of Mexico (present study).

Remarks – Bowman and Gruner (1973) placed the genus *Parascelus* Claus, 1879 in synonymy with *Thyropus* Dana, 1852.

Thyropus typhoides (Claus)

Parascelus typhoides Claus, 1879a, p. 165(19)

Parascelus typhoides: Claus, 1887, p. 46, pl. 9, figs. 12-16, pl. 10, figs. 12, 13

Parascelus typhoides: Chevreux and Fage, 1925, p. 424, fig. 416

Parascelus typhoides: Pillai, 1966b, p. 227, fig. 17

Material Examined – 7NM (0-1-0-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean and Red seas (Dick 1970). Reported from the western North Atlantic near Bermuda (Shoemaker 1945). This is the first record of this species from the Caribbean Sea-Gulf of Mexico region.

Thyropus sphaeroma (Claus)

Tanyscelus sphaeroma Claus, 1879a, p. 163(17)

Tanyscelus sphaeroma: Claus, 1887, p. 45, pl. 8, figs. 1-11

Thyropus danae: Stebbing, 1888, p. 1492, pl. 210C

Thyropus sphaeroma: Spandl, 1927, p. 259, figs. 53, 54, p. 284, fig. 63

Thyropus sphaeroma: Shoemaker, 1945, p. 260

Material Examined – 6NM (0-1-0-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans (Dick 1970). Reported from the western North Atlantic (Shoemaker 1945, Harbison et al. 1977). This is the first record of this species from the Caribbean Sea-Gulf of Mexico region.

Schizoscelus ornatus Claus

Schizoscelus ornatus Claus, 1879a, p. 167(21)

Schizoscelus ornatus: Claus, 1887, p. 44, pl. 10, figs. 1-11

Schizoscelus ornatus: Stebbing, 1888, p. 1504, pl. 210D

Schizoscelus ornatus: Spandl, 1927, p. 255, fig. 52

Material Examined – 3DS (2-0-0-0), 4DB (0-1-0-0), 11DS (0-0-1-0).

Distribution – Warm waters of the Atlantic, Pacific, and Indian oceans, and the Mediterranean Sea (Dick 1970). Reported from the western North Atlantic (Harbison et al. 1977), and the north central Gulf of Mexico (present study).

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The authors thank Mr. Kenneth A. Kimball for supplying several obscure references concerning hyperiid records in the Caribbean Sea-Gulf of Mexico region. These additional references were not received in time to be incorporated within the original text of this report. Included are Senna (1906) who reported a number of hyperiid genera from the Caribbean Sea-Gulf of Mexico waters; Colosi (1918), who reported *Dorycephalus lindstroemi* from the Caribbean Sea; and Suarez-Caabro and Duarte-Bello (1961) who included *Eupronoe armata*, *Platyscelus ovoides*, and *Parascelus typhoides* among a list of hyperiids from Caribbean waters off Cuba.

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