



Gulf of Mexico Origin, Waters, and Biota

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Edited by

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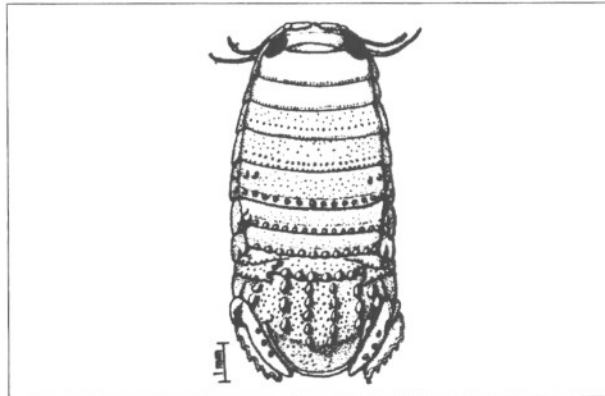
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Isopoda (Crustacea) of the Gulf of Mexico

Marilyn Schotte, John C. Markham, and George D. F. Wilson

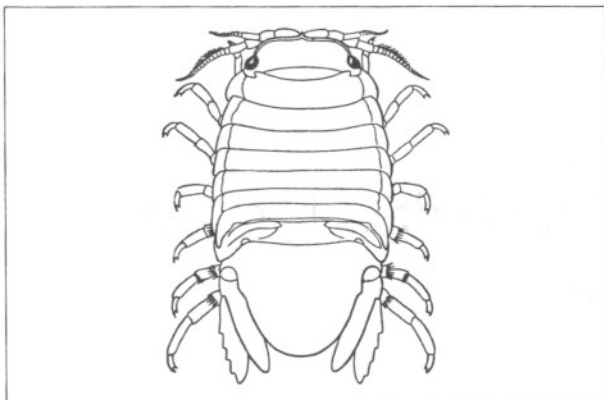
Isopod crustaceans comprise a relatively speciose and abundant group of invertebrates found in diverse habitats and depths throughout the world. Described species, including the terrestrial forms, now number over 10,000 (see the World List of Isopods at www.nmnh.si.edu/iz/isopod). Generally small in size, the majority being less than one centimeter in length, isopods include herbivores, omnivores, scavengers, obligate and temporary parasites, micropredators, and cave forms, both terrestrial and anchialine. Aquatic isopods inhabit benthic or planktonic environments from freshwater and estuaries to intertidal depths, coral reefs, and the deep seas. Some are specialists. Members of the family Aegidae infrequently attach to fish hosts, and only long enough to feed, thus viewed by some as micropredators. Those in the family Cymothoidae are exclusively ectoparasites on marine, freshwater, and brackish-water fishes. Members of the family Bopyridae are ectoparasites of other crustaceans, with juveniles sometimes using copepods as intermediate hosts. Those in the Gnathiidea suborder are entirely marine; larvae are frequently found as fish parasites but the adults do not feed. All isopods are related to mysidaceans, cumaceans, amphipods, and others in the superorder Peracarida, characterized by having a ventral brood pouch in the mature female. They are not known to have economic importance.

The present list contains records of 169 isopod species found in the Gulf of Mexico (GMx). Fishery Bulletin 89 from the Fish and Wildlife Service, "Gulf of Mexico—Its

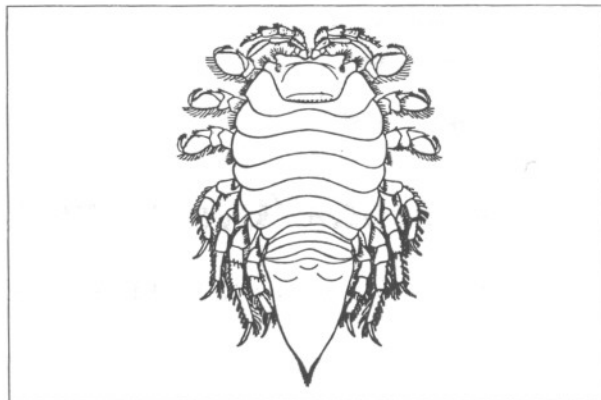


Isopoda. After Miller 1968.

Origin, Waters and Marine Life," published in 1954, does not mention isopod crustaceans, perhaps due to a lack of specialists active at that time. In 1905 Harriet Richardson published her landmark "Monograph on the Isopods of North America," which included all known records for the Gulf of Mexico. In the 1950s and during the next 2 decades several papers that dealt with occurrence and distribution of Gulf isopods appeared (see Clark and Robertson 1982) but no comprehensive studies on this group were done. *Memoirs of the Hourglass Cruises* presented surveys of Gulf isopod fauna by Menzies and Kruczynski, 1983 (exclusive of the suborder Epicaridea) and by Markham (1985), who covered the bopyrid isopods. Both works described several new species. Kensley and Schotte's 1989 *Guide to the Marine Isopod Crustaceans of the Caribbean*



Isopoda. After Fowler 1912.



Isopoda. After Fowler 1912.

included a list of known Gulf isopod species, then numbering 113, all from shallow-water habitats, but did not indicate specific localities or distributions.

As discussed in Kensley and Schotte (1989), only 54% of the Gulf species recorded therein were also reported from the Caribbean Sea, indicating that there may be a true Gulf of Mexico fauna. Their conclusion that the Gulf of Mexico fauna contains an endemic component, a Caribbean component, and a warm-temperate component from the east coast of the United States was also reached by Topp and Hoff (1972) in an analysis of Gulf flatfishes. Of the 169 isopod records listed in the present chapter, 29 (about 17%) found so far are endemic. Our knowledge of the Gulf isopod fauna obviously remains incomplete, as the vast majority of species were collected in the northeast quadrant, with only 6 recorded from the long coast of eastern Mexico up to Cabo Catoche. Likewise, the deep-sea fauna has barely been surveyed. One of us (GW) is currently describing 106 new Gulf isopods in some 13 different families of the suborder Asellota from depths greater than 500 m, collected recently from only the northern quadrants by Gilbert Rowe and colleagues. This collection alone will result in a 60% increase in the total number of isopods known in the Gulf fauna. All that material, including the previously known species that represent new Gulf records, listed in the endnotes to our checklist, will be deposited in the U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C.

In the list that follows, species are listed alphabetically within the suborders, which are also thus listed; no phylogenetic sequence is implied. Subfamily names within the family Bopyridae (suborder Epicaridea), compiled by John Markham, are placed in a suggested phylogenetic sequence. Data on species within the suborder Epicaridea,

all obligate parasites, include numerals in the "Habitat-Biology" cell that correspond to a number identifying each host. These numbers are listed immediately following the endnotes.

Abbreviations

Abbreviations in the "Habitat-Biology" and "Depth" cells are defined as follows: ben = benthic; crr = coral reef; dps = deep sea; end = endemic; epi = epibiotic; est = estuarine; hsb = hard substrate; iif = inlet influenced; inf = infaunal; ins = interstitial; itd = intertidal; msp = mangrove swamp; ocs = outer continental shelf; osp = oceanic surface; par = parasitic; rbl = rubble; sgr = seagrass; slp = slope; unk = habitat unknown. Depth records from the GMx only are recorded in roman type, while those from the entire range are presented in italic typeface. Abbreviations under "GMx range" refer to the 4 quadrants of the Gulf of Mexico (ne, nw, se, sw) from which sampling has yielded each species. In the endnotes section, the abbreviation "USNM" refers to collections at the U.S. National Museum (National Museum of Natural History) of the Smithsonian Institution in Washington, D.C.

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Taxonomic summary for Isopoda of the Gulf of Mexico.

| Component suborders | Total species | Number endemic species | Number nonindigenous species |
|---------------------|---------------|------------------------|------------------------------|
| Anthuridea | 20 | 3 | 0 |
| Asellota | 28 | 4 | 0 |
| Epicaridea | 43 | 11 | 0 |
| Flabellifera | 62 | 3 | 4 |
| Gnathiidea | 2 | 0 | 0 |
| Valvifera | 14 | 8 | 0 |
| Total | 169 | 29 | 4 |

Checklist of isopod crustaceans of the Gulf of Mexico.

| Taxon | Habitat-Biology | Depth (m) | Overall geographic range | GMx range | References/Endnotes |
|--|--------------------|-----------|---|-----------|---------------------|
| Order: Isopoda | | | | | |
| Suborder: Anthuridea | | | | | |
| Family: Anthuridae | | | | | |
| <i>Amakusanthura magnifica</i> (Menzies & Frankenberg, 1966) | ben, inf, rbl, bns | 1-206 | New Jersey to Alabama; Cuba | ne | 29 |
| <i>Amakusanthura signata</i> (Menzies & Glynn, 1968) | ben, inf, bns, rbl | itd-1.5 | Georgia, Florida; Cuba; Puerto Rico; Belize | ne | 29 |
| <i>Cyathura polita</i> (Stimpson, 1855) | ben, est | itd-35 | Massachusetts to Louisiana | ne, nw | 29 |
| <i>Mesanthura fasciata</i> Kensley, 1982 | ben, inf, crr | 0.2-6 | Florida Keys; Yucatan to Belize; Cuba; Jamaica; Trinidad & Tobago | ne | 29 |
| <i>Mesanthura hopkinsi</i> Hooker, 1985 | ben, inf, end, crr | 0.5-55 | Looe Key, Florida, to Florida Middlegrounds | ne, se | 24, 29 |
| <i>Mesanthura loeensis</i> Kensley & Schotte, 1987 | ben, inf, end, crr | 1 | Looe Key, Florida | se | 29 |
| <i>Mesanthura paucidens</i> Menzies & Glynn, 1968 | ben, inf, crr | itd-15.2 | Florida Keys; Belize; Puerto Rico; Jamaica | se | 29 |
| <i>Mesanthura pulchra</i> Barnard, 1925 | ben, inf, crr | 1-37 | Florida Keys; Yucatan; Belize; Cuba; Puerto Rico; U.S. Virgin Is.; Dominica; Turks & Caicos | ne | 29 |
| <i>Pendanthura tanaiformis</i> Menzies & Glynn, 1968 | ben, inf | itd-1 | Bermuda; Florida; Yucatan; Puerto Rico; Belize; Cuba; Curaçao | ne | 29 |
| <i>Ptilanthura colpos</i> Kensley, 1966 | ben, inf, bns | 11.5-88 | Florida to Louisiana | ne, nw | 27 |
| <i>Ptilanthura tenuis</i> Harger, 1878 | ben, inf | itd-339 | Maine to Alabama | ne | 27 |
| <i>Skuphonura lindae</i> Menzies & Kruczynski, 1983 | ben, inf, bns | 6-73 | Central west Florida shelf | ne | 27, 29 |
| Family: Expanathuridae | | | | | |
| <i>Eisothistos petrensis</i> Haswell, 1884 | ben, inf, hsb, rbl | itd-36 | Florida Keys; Belize; Turks & Caicos; St. Thomas; U.S. Virgin Islands | ne | 29 |
| Family: Hyssuridae | | | | | |
| <i>Hyssura bacesui</i> (George & Negoescu-Vladescu, 1982) | ben, inf, ocs, slp | 37-445 | North Carolina to Alabama | ne | 27, 29 |
| <i>Kupellonura formosa</i> (Menzies & Frankenberg, 1966) | ben, inf | 14-159 | North Carolina to Alabama | ne | 27, 29 |
| <i>Neohyssura irpex</i> (Menzies & Frankenberg, 1966) | ben, inf, ocs, slp | 10-460 | North Carolina to Alabama | ne | 27, 29 |

Checklist of isopod crustaceans of the Gulf of Mexico. (continued)

| Taxon | Habitat-Biology | Depth (m) | Overall geographic range | GMx range | References/Endnotes |
|--|--------------------|-----------------------|---|-----------|---------------------|
| <i>Xenanthura brevitelson</i> Barnard, 1925 | ben, inf, bns, rbl | 8–10; <i>itd</i> –180 | North Carolina to Florida; Caribbean | ne | 27, 29 |
| Family: Leptanthuridae | | | | | |
| <i>Accalathura crenulata</i> (Richardson, 1901) | ben, inf, bns | 55; <i>itd</i> –90 | North Carolina to Florida; Yucatan to Panama; West Indies; Brazil | ne | 29 |
| Family: Paranthuridae | | | | | |
| <i>Paranthura floridensis</i> Menzies & Kruczynski, 1983 | ben, inf, end | 73 | W Florida | ne | 29, 32 |
| <i>Paranthura infundibulata</i> Richardson, 1902 | ben, inf | <i>itd</i> –12 | Florida; Bermuda; Yucatan to Belize; Dominica; Venezuela | ne | 29 |
| Suborder: Asellota | | | | | |
| Superfamily: Gnathostenetroidoidea | | | | | |
| Family: Gnathostenetroididae | | | | | |
| <i>Gnathostenetroides pugio</i> Hooker, 1985 | ben, inf, end | 55 | Florida Middlegrounds | ne | 24, 29 |
| Superfamily: Janiroidea | | | | | |
| Family: Acanthaspidiidae | | | | | |
| <i>Mexicope kensleyi</i> Hooker, 1985 | ben, inf | 30; 1 | Florida Middlegrounds; Turks & Caicos | ne | 24, 29 |
| Family: Desmosomatidae | | | | | |
| <i>Eugerdella ischnomesoides</i> Hessler, 1970 | ben, inf, dps | 546–1401 | North and Equatorial Atlantic; GMx | ne, nw | 22 ¹ |
| <i>Prochelator inomitatus</i> Hessler, 1970 | ben, inf, dps | 1562–3015 | North Atlantic; GMx | ne, nw | 22 ¹ |
| <i>Whoia variabilis</i> Hessler, 1970 | ben, inf, dps | 545–2983 | North Atlantic; GMx | ne, nw | 22 ² |
| Family: Haploniscidae | | | | | |
| <i>Chauliodoniscus armadilloides</i> (Hansen, 1916) | ben, inf, dps | 2745–3140 | GMx; NE Atlantic; Norwegian/Arctic Sea | ne, nw | 31 ³ |
| Family: Janiridae | | | | | |
| <i>Carpas algicola</i> (Miller, 1941) | ben, inf | <i>itd</i> –10 | Florida; Yucatan; Caribbean; Hawaii; Indo-West Pacific | ne | 29 |
| <i>Carpas floridensis</i> Menzies & Kruczynski, 1983 | ben, inf, end | 6 | Central W Florida | ne | 29, 43 |
| <i>Carpas harrietae</i> Pires, 1981 | ben, inf | <i>itd</i> –2 | SE to SW Florida; Cuba | ne | 29, 30 ⁴ |
| Family: Joeropsidae | | | | | |
| <i>Joeropsis coralicola</i> Schultz & McCloskey, 1967 | ben, inf | 1–33 | North Carolina to Florida Middlegrounds | ne | 24, 29 |
| <i>Joeropsis rathbunae</i> Richardson, 1902 | ben, inf | <i>itd</i> –36 | Bermuda; Florida Keys; Caribbean | ne | 28 |
| Family: Macrostylidae | | | | | |
| <i>Macrostylis longipes</i> Hansen, 1916 | ben, inf, dps | 1530–3732 | GMx; NE Atlantic and Norwegian/Arctic Sea | ne, nw | 17, 19 ⁵ |
| Family: Mesosignidae | | | | | |
| <i>Mesosignum usheri</i> Menzies, 1962 | ben, inf, dps | 2975 | Caribbean to South Atlantic; GMx | ne | 42 ⁶ |
| Family: Munnidae | | | | | |
| <i>Uromunna hayesi</i> Robertson, 1978 | ben, inf, bns | <i>itd</i> –4 | Texas; Florida | ne, nw | 29 |
| <i>Uromunna reynoldsi</i> Frankenberg & Menzies, 1966 | ben, inf, bns | 0.5–5 | Georgia to Louisiana; Caribbean | ne, nw | 29 |
| Family: Munnopsidae | | | | | |
| <i>Belonectes cf. parvus</i> (Bonnier, 1896) | ben, inf, dps | 658 | GMx; NE Atlantic; Norwegian/Arctic Sea | ne | 62 ⁷ |

(continued)

Checklist of isopod crustaceans of the Gulf of Mexico. (continued)

| Taxon | Habitat-Biology | Depth (m) | Overall geographic range | GMx range | References/Endnotes |
|---|-------------------|----------------|---|------------|----------------------|
| <i>Bathybadistes spinosissima</i> (Hansen, 1916) | ben, inf, dps | 1455 | GMx; NE Atlantic; Norwegian/Arctic Sea | ne | 23 ⁸ |
| <i>Hapsidohedra ochlera</i> Wilson, 1989 | ben, inf, dps | 860-1567 | GMx; off Surinam | ne, nw | 61 |
| Family: Nannoniscidae | | | | | |
| <i>Hebefustis vafer</i> Siebenaller & Hessler, 1977 | ben, inf, dps | 763-2745 | Equatorial SW Atlantic; GMx | ne | 54 ⁹ |
| <i>Pantela</i> cf. <i>wolffi</i> Siebenaller & Hessler, 1981 | ben, inf, dps | 658-3732 | GMx; NE Atlantic; Norwegian/Arctic Sea | ne, nw | 55 ¹⁰ |
| <i>Rapaniscus</i> cf. <i>dewdneyi</i> Siebenaller & Hessler, 1981 | ben, inf, dps | 983-3007 | NW Atlantic Ocean | ne, nw | 55 ¹¹ |
| <i>Thaumastasoma</i> cf. <i>jebamoni</i> (George, 2001) | ben, inf, dps | 2030-2975 | Off North Carolina; GMx | ne, nw | 16 ¹² |
| <i>Thaumastasoma</i> cf. <i>tenue</i> Hessler, 1970 | ben, inf, dps | 1168-2495 | NW Atlantic Ocean | ne, nw | 22, 55 ¹³ |
| Family: Paramunnidae | | | | | |
| <i>Metamunna wilsoni</i> (Hooker, 1985) | ben, inf, end | 55 | Florida Middlegrounds | ne | 24, 29 |
| Family: Pleurocopidae | | | | | |
| <i>Pleurocope floridensis</i> Hooker, 1985 | ben, inf | 1-55 | Florida Middlegrounds; Caribbean | ne | 24, 29 |
| Superfamily: Stenetroidea | | | | | |
| Family: Stenetriidae | | | | | |
| <i>Hansenium stebbingi</i> (Richardson, 1902) | ben, inf, bns | 0.5-50 | Bermuda; Florida Keys; Caribbean; Bahamas | ne | 29 |
| <i>Stenetrium serratum</i> (Hansen, 1904) | ben, inf, bns | <i>itd</i> -15 | Florida Keys; Caribbean | ne | 29, 52 |
| Suborder: Epicaridea | | | | | |
| Family: Bopyridae | | | | | |
| Subfamily: Pseudioninae | | | | | |
| <i>Anuropodione megacephalon</i> Markham, 1974 | epi, par, end, 1 | 54 | W Florida | ne | 32 |
| <i>Aporobopyrina anomala</i> Markham, 1974 | epi, par, 2 | 185-770 | Off Texas, Florida Keys, Marquesas; Colombia | ne, nw | 5, 32 |
| <i>Aporobopyrus rugimanus</i> Adkison, 1988 | epi, par, end, 3 | 12-44 | W Florida | ne | 4 |
| <i>Asymmetrione clibanarii</i> Markham, 1975 | epi, par, bns, 4 | 0-1 | Florida Keys; SE Florida; Bahamas; Colombia | ne | 29, 33 |
| <i>Galathocrypta acaudata</i> Róman-Contreras & Soto, 2002 | epi, par, end, 5 | 502 | Veracruz, Mexico | sw | 50 |
| <i>Kolourione premordica</i> Markham, 1978 | epi, par, bns, 6 | 38 | Off W Florida; Caribbean | ne | 37 |
| <i>Munidion longipedis</i> Markham, 1975b | epi, par, 7 | 330-540 | NW Cuba; Norfolk Canyon; Middle Atlantic Bight; E coast Florida | se | 29, 34 |
| <i>Progebiophils upogebiae</i> (Hay, 1917) | epi, par, 8 | 0-1 | NW Florida; Mexico; North Carolina; Brazil | ne, nw | 21, 60 |
| <i>Pseudione ampla</i> Markham, 1988 | epi, par, end, 9 | 366 | Off SW coast Florida | ne | 39 |
| <i>Pseudione cognata</i> Markham, 1985 | epi, par, end, 10 | 73 | W Florida | ne | 38 |
| <i>Pseudione overstreeti</i> Adkison & Heard, 1995 | epi, par, end, 11 | 25-100 | W Florida to Texas; Tabasco, Mexico | ne, nw, sw | 6 |
| <i>Pseudione parviramus</i> Adkison, 1988 | epi, par, end, 12 | 133 | NE GMx | ne | 4 |

Checklist of isopod crustaceans of the Gulf of Mexico. (continued)

| Taxon | Habitat-Biology | Depth (m) | Overall geographic range | GMx range | References/Endnotes |
|--|-------------------|---------------|--|------------|---------------------|
| Subfamily: Bopyrinae | | | | | |
| <i>Bopyrina abbreviata</i> Richardson, 1904 | epi, par, bns, 13 | 0-1 | NE GMx; North Carolina; Caribbean; Brazil | ne | 29, 38 |
| <i>Bopyrinella thorii</i> (Richardson, 1904) | epi, par, bns, 14 | 1 | Florida Keys; Quintana Roo, Mexico; Caribbean | ne | 29, 38 |
| <i>Bopyrione synalpheii</i> Bourdon & Markham, 1980 | epi, par, bns, 15 | 1 | Florida Keys; Quintana Roo; Caribbean | ne | 29, 38 |
| <i>Ovobopyrus alphezemiotes</i> Markham, 1985 | epi, par, bns, 16 | 37 | E Central GMx; Bahamas | ne | 38 |
| <i>Parabopyrella richardsonae</i> (Nierstrasz & Brender à Brandis, 1929) | epi, par, bns, 17 | 18 | E Central GMx; Bahamas | ne | 38 |
| <i>Parabopyriscus stellatus</i> Markham, 1985 | epi, par, end, 18 | 18-37 | E GMx | ne | 38 |
| <i>Probopyria alpeii</i> (Richardson, 1900) | epi, par, 19 | 0-180 | Entire Gulf coast of Florida; Caribbean | ne | 38 |
| <i>Probopyrinella heardi</i> Adkison, 1984 | epi, par, bns, 20 | 4-7 | SW Florida to Alabama; Georgia; Colombia; Brazil | ne | 2 |
| <i>Probopyrinella latreuticola</i> (Gissler, 1882) | epi, par, osp, 21 | 0 | Florida to Texas; North Carolina to Virgin Islands; Sargasso Sea | ne | 29, 47 |
| <i>Probopyrus bithynis</i> Richardson, 1904 | epi, par, est, 22 | unk | Mississippi; Louisiana; Mexico; Nicaragua to Argentina | ne, nw, sw | 11 |
| <i>Probopyrus floridensis</i> Richardson, 1904 | epi, par, bns, 23 | 1-3 | Central W Florida; E Florida; Brazil | ne | |
| <i>Probopyrus pandicola</i> (Packard, 1879) | epi, par, bns, 24 | 1-7 | New Hampshire to Texas; Caribbean | ne, nw | 29, 38 |
| <i>Schizobopyrina urocaridis</i> (Richardson, 1904) | epi, par, bns, 25 | 2 | North Carolina; W Florida; Colombia | ne | 38 |
| <i>Synsynella choprae</i> (Pearse, 1932) | epi, par, bns, 26 | 4-37 | E Central GMx; W Florida; Bermuda; Georgia; Caribbean | ne | 38 |
| <i>Synsynella deformans</i> Hay, 1917 | epi, par, bns, 27 | 4-37 | E Central GMx; W Florida; North and South Carolina; Caribbean | ne | 21, 38 |
| <i>Synsynella integra</i> Bourdon, 1981 | epi, par, bns, 28 | 55 | E GMx; North Carolina | ne | 38 |
| <i>Urobopyrus processae</i> Richardson, 1904 | epi, par, 29 | 73 | W Florida; Mediterranean; Brazil; Congo | ne | 38 |
| Subfamily: Ioninae | | | | | |
| <i>Cancricepon choprae</i> H. Milne Edwards, 1840 | epi, par, est, 30 | 0- <i>itd</i> | North Carolina to Tortugas; Mississippi; Bahamas; Curaçao | ne, nw | 35 |
| <i>Dactylocepon sulcipes</i> Adkison, 1982 | epi, par, end, 31 | 30-42 | E GMx | ne | 1 |
| <i>Gigantione mortenseni</i> Adkison, 1984 | epi, par, 32 | 32-55 | E GMx; Quintana Roo, Mexico; Caribbean | ne | 3 |
| <i>Gigantione uberlackeræ</i> Adkison, 1984 | epi, par, end, 33 | 30 | W Florida; E GMx | ne | 3 |
| <i>Leidya bimini</i> Pearse, 1951 | epi, par, bns, 34 | 0-1 | W Central Florida; Florida Keys; Bahamas; Bermuda; Caribbean; Brazil | ne | 7, 46 |
| Subfamily: Athelginae | | | | | |
| <i>Anathelges hyptuis</i> (Thompson, 1902) | epi, par, bns, 35 | 0-40 | Massachusetts to W Central Florida; Bahamas, Curaçao | ne | 15, 36 |
| <i>Parathelges occidentalis</i> Markham, 1972 | epi, par, bns, 36 | 0-1 | Florida Keys; North Carolina; Bahamas; Caribbean | ne | 29 |

(continued)

Checklist of isopod crustaceans of the Gulf of Mexico. (continued)

| Taxon | Habitat-Biology | Depth (m) | Overall geographic range | GMx range | References/Endnotes |
|--|-------------------|-----------|---|-----------|---------------------|
| Subfamily: Entophilinae | | | | | |
| <i>Entophilus omnitectus</i> Richardson, 1903 | epi, par, 37 | 185-1010 | NE GMx; Hawaii; Madagascar; Azores; Australia | ne, nw | 5 |
| Subfamily: Hemiarthrinae | | | | | |
| <i>Allo diplophryxus floridanus</i> Markham, 1985 | epi, par, bns, 38 | 3 | W Florida; Colombia | ne | 38 |
| <i>Azygopleon schmitti</i> (Pearse, 1932) | epi, par, bns, 39 | 437 | Florida Keys; North Carolina; E Florida; Caribbean | ne | 38 |
| <i>Eophrinx subcaudalis</i> (Hay, 1917) | epi, par, bns, 40 | 24-73 | Florida Keys, E Central GMx; North Carolina; Caribbean | ne | 38 |
| <i>Hyperphrixus castrensis</i> Markham, 1985 | epi, par, end, 41 | 37 | W Florida | ne | 38 |
| <i>Loki circumsaltanus</i> Markham, 1972 | epi, par, bns, 42 | 0-1 | Florida Bay; SE Florida; Caribbean * | ne | 38 |
| Family: Dajidae | | | | | |
| <i>Oculophryxus bicaulis</i> Shields & Gutierrez, 1996 | epi, par, end, 43 | 125-500 | NE central GMx | ne | |
| Suborder: Flabellifera | | | | | |
| Family: Aegidae | | | | | |
| <i>Aega antillensis</i> Schioedte & Meinert, 1879 | bns, ocs, slp | 70-422 | W Florida; NW Cuba; Caribbean | ne, se | 10 |
| <i>Aega ecarinata</i> Richardson, 1898 | ocs, slp, dps | 176-776 | Florida to Mississippi; Bahamas; Puerto Rico | ne | 29 |
| <i>Aega gracilipes</i> Hansen, 1895 | dps, slp | 1336-2200 | Virginia to Florida | ne, nw | 48 |
| <i>Aega leptonica</i> Bruce, 1988 | end, dps, slp | 1048 | Off Dry Tortugas, Florida | ne | 9 |
| <i>Aega psora</i> (Linnaeus, 1761) | | 55-1171 | Florida to Mississippi; Davis Strait to North Sea | ne | 29 |
| <i>Rocinela insularis</i> Schioedte & Meinert, 1879 | ocs, slp, dps | 550 | Florida to Mississippi; West Indies | ne | 29 |
| <i>Rocinela oculata</i> Harger, 1883 | ocs, slp, dps | 84-750 | Georgia to Florida; Puerto Rico; Australia | ne | |
| <i>Rocinela signata</i> Schioedte & Meinert, 1879 | bns | itd-93 | Florida Keys; Yucatan; Caribbean; E Pacific | ne | 29 |
| Family: Ancinidae | | | | | |
| <i>Ancinus depressus</i> (Say, 1818) | ben, bns | 3.7-42 | Massachusetts to Texas | ne, nw | 29 |
| Family: Cirolanidae | | | | | |
| <i>Bathynomus giganteus</i> A. Milne Edwards, 1879 | slp, dps | 360-2300 | Florida Keys to Louisiana; Bahamas; Caribbean | ne, nw | 29 |
| <i>Cirolana parva</i> Hansen, 1890 | ben, bns, rbl | itd-55 | North Carolina to Louisiana; Bahamas; Yucatan; Caribbean | ne | 29 |
| <i>Conilera cylindracea</i> (Montagu, 1804) | ben, slp, ocs | 206-291 | South Carolina; off Florida; coasts of England and France | ne | 29 |
| <i>Eurydice convexa</i> Richardson, 1900 | ben, bns | 1-103 | South Carolina to Florida Keys; Bahamas; Caribbean | ne | 29 |
| <i>Eurydice littoralis</i> (Moore, 1902) | ben, bns | 3-55 | South Carolina to Florida Keys; Bahamas | ne | 29 |
| <i>Eurydice piperata</i> Menzies & Frankenberg, 1966 | ben | 37-150 | Georgia to W Florida | ne | 29, 42 |
| <i>Exciorolana braziliensis</i> Richardson, 1912 | ben, bns | itd | Mexico; Caribbean to Brazil; Gulf of California to Chile | sw | 29 |
| <i>Exciorolana mayana</i> (Ives, 1891) | ben, bns | itd | Florida, Florida Keys; Caribbean; Bermuda | ne | 29 |

Checklist of isopod crustaceans of the Gulf of Mexico. (continued)

| Taxon | Habitat-Biology | Depth (m) | Overall geographic range | GMx range | References/Endnotes |
|---|-----------------|--------------|--|------------|---------------------|
| <i>Metacirolana sphaeromiformis</i> (Hansen, 1890) | ben, bns | 1 | Florida Keys; Caribbean | ne | 29 |
| <i>Neocirolana obruncata</i> (Richardson, 1901) | ben | unk | Caribbean; Campeche to Cozumel, Mexico | sw | 29 ¹⁴ |
| <i>Politolana haneyi</i> Riseman & Brusca, 2002 | ben, slp, ocs | 311; 92-146 | Off Florida; Gulf of California | ne | 49 |
| <i>Politolana impressa</i> (Harger, 1883) | ben, slp, ocs | 270-677 | Canada to Gulf of Mexico; Bahamas | ne | 49 |
| <i>Politolana wickstenae</i> Wetzer, Delaney, & Brusca, 1987 | ben, slp, ocs | 488-600 | Off Florida | ne | 59 |
| Family: Corallanidae | | | | | |
| <i>Alcirona krebsii</i> Hansen, 1890 | ben, bns | 14-56 | Florida Keys; Bermuda; Yucatan; Caribbean | ne | 29 |
| <i>Excorallana acuticauda</i> (Hansen, 1890) | ben, bns, rbl | 5-18 | Florida Keys; Caribbean; Yucatan | ne | 29 |
| <i>Excorallana delaneyi</i> Stone & Heard, 1989 | ben, bns | 0.1-18 | Off Florida; Caribbean | ne | 29, 56 |
| <i>Excorallana mexicana</i> Richardson, 1905 | ben, bns | 18-73 | Florida to Mississippi | ne | 29 |
| <i>Excorallana sexticornis</i> (Richardson, 1901) | ben, bns, rbl | itd | Florida Keys; Caribbean | ne | 29 |
| <i>Excorallana tricornis</i> (Hansen, 1890) | ben, bns, rbl | 1-55 | Florida; Florida Keys; Caribbean | ne | 29 |
| <i>Lanocira rapax</i> (Moore, 1902) | ben, bns | 37-3; 50-150 | Florida Keys; W Florida; Puerto Rico | ne | 29 |
| Family: Cymothoidae | | | | | |
| <i>Agarna cumulus</i> (Haller, 1880) | epi, par | | Florida Keys | ne | 29 |
| <i>Anilocra haemuli</i> Williams & Williams, 1981 | epi, par | | Florida Keys; Caribbean; Yucatan; Brazil | ne | 29 |
| <i>Anilocra laticauda</i> H. Milne Edwards, 1840 | epi, par | | Florida Keys; Maryland to Straits of Magellan; Caribbean | ne | 29, 48 |
| <i>Ceratothoa transversa</i> (Richardson, 1900) | epi, par, end | | Cedar Keys, Florida, to Mississippi | ne | 29 |
| <i>Cymothoa excisa</i> Perty, 1833 | epi, par | | Massachusetts to Florida Keys; Bahamas; Caribbean | ne | 29 |
| <i>Cymothoa oestrum</i> (Linnaeus, 1793) | epi, par | | Bermuda; Florida Keys to Texas; Bahamas; Caribbean | ne | 29 |
| <i>Elthusa tropicalis</i> (Menzies & Kruczynski, 1983) | epi, par | 18-73 | Central W Florida shelf | ne | 29, 43 |
| <i>Livoneca redmanii</i> Leach, 1818 | epi, par | | New Jersey to Campeche, Mexico; Caribbean; Brazil | ne, nw, sw | 29 |
| <i>Livoneca texana</i> Pearse, 1952 (<i>Incertae sedis</i>) | epi, par, end | | Texas | nw | 29, 47 |
| <i>Mothocya bohlkeorum</i> Williams & Williams, 1982 | epi, par | | Florida Keys; Bahamas; Caribbean | ne | 29 |
| <i>Mothocya nana</i> (Schioedte & Meinert, 1884) | epi, par | | Maryland to W Florida; Bermuda; Caribbean; Brazil | ne | 29, 48 |
| <i>Mothocya xenobranchia</i> Bruce, 1986 | epi, par | | Florida; Florida Keys; Venezuela | ne | 29 |
| <i>Nerocila acuminata</i> Schioedte & Meinert, 1881 | epi, par | | Massachusetts to Texas; Bermuda; Caribbean Panama | ne | 29 |
| <i>Olencira praegustator</i> (Latrobe, 1802) | epi, par | | New York to Texas | ne, nw | 48 ¹⁵ |
| Family: Limnoriidae | | | | | |
| <i>Limnoria pfefferi</i> Stebbing, 1904 | epi, msp | itd | Florida Keys; Yucatan; Bahamas; Caribbean; Indian Ocean; Pacific Ocean | ne | 13, 29 |

(continued)

Checklist of isopod crustaceans of the Gulf of Mexico. (continued)

| Taxon | Habitat-Biology | Depth (m) | Overall geographic range | GMx range | References/Endnotes |
|--|--------------------|-----------------|--|------------|----------------------|
| <i>Limnoria simulata</i> Menzies, 1957 | epi, sgr | 0.5-3 | Florida; Florida Keys; U.S. Virgin Is.; Cozumel, Mexico; Colombia | ne | 29, 41 ¹⁶ |
| <i>Limnoria tripunctata</i> Menzies, 1951 | epi, msp | 0.5 | Florida; Florida Keys; Rhode Island to Venezuela; Caribbean; South America; West Africa; Pacific Ocean; Atlantic Ocean | ne | 13, 29, 41 |
| <i>Paralimnoria andrewsi</i> (Calman, 1910) | epi | <i>itd</i> | Florida Keys; Caribbean; Indian Ocean; Pacific Ocean | ne | 29 |
| Family: Serolidae | | | | | |
| <i>Heteroserolis mgrayi</i> (Menzies & Frankenberg, 1966) | ben, bns | 11-88 | Off North Carolina to Florida; Florida Keys; southern Caribbean | ne | 29 |
| Family: Sphaeromatidae | | | | | |
| <i>Cassinidea ovalis</i> (Say, 1818) | ben, eur, iif | 0-1 | New Jersey to Louisiana; Veracruz, Mexico; Caribbean | ne, nw, sw | 29, 41 |
| <i>Discerceis linguicauda</i> (Richardson, 1901) | ben, bns, end | 48-50 | Cape Catoche, Yucatan | se | 29 |
| <i>Dynamenella perforata</i> (Moore, 1901) | ben, bns | <i>itd</i> | Florida; Florida Keys; Bermuda to Puerto Rico; Caribbean | ne | 29 |
| <i>Exosphaeroma productatelson</i> Menzies & Glynn, 1968 | ben, bns | <i>itd</i> -0.5 | Texas; Puerto Rico; Cuba | nw | 29 |
| <i>Exosphaeroma yucatanum</i> (Richardson, 1901) | ben, bns | 48 | Cape Catoche, Yucatan | se | 29 |
| <i>Harrieta faxoni</i> (Richardson, 1905) | ben, bns, eur, sgr | <i>itd</i> | Florida to Texas | ne, nw | 29 |
| <i>Paracerceis caudata</i> (Say, 1818) | ben, bns, rbl | 0.2-127 | Bermuda; New Jersey to Florida Keys; Bahamas; Caribbean | ne | 29, 48 |
| <i>Paradella diana</i> (Menzies, 1962) | ben, bns | <i>itd</i> | Florida Keys; Puerto Rico; Baja California | ne | 29 |
| <i>Paradella quadripunctata</i> (Menzies & Glynn, 1968) | ben, bns | <i>itd</i> -1 | Florida Keys; Bermuda; Caribbean | ne | 29 |
| <i>Sphaeroma quadridentatum</i> Say, 1818 | ben, bns | <i>itd</i> -1 | New England to Texas | ne, nw | 29, 48 |
| <i>Sphaeroma terebrans</i> Bate, 1866 | ben, est | <i>itd</i> | Virginia to Louisiana; Caribbean to Brazil; Africa; Indian Ocean; Pacific Ocean | ne, nw | 29 |
| <i>Sphaeroma walkeri</i> Stebbing, 1905 | ben, bns | <i>itd</i> | Florida to Puerto Rico; probably pantropical | ne | 29 |
| Family: Tridentellidae | | | | | |
| <i>Tridentella ornata</i> (Richardson, 1911) | ben | 25-168 | SE United States; NW Florida; British Virgin Islands | ne | 29 |
| <i>Tridentella virginiana</i> (Richardson, 1900) | ben | 53-550 | Nova Scotia to Florida; Gulf Stream off Key West | ne | 28, 29 |
| Suborder: Gnathiidea | | | | | |
| Family: Gnathiidae | | | | | |
| <i>Caecognathia floridensis</i> (Menzies & Kruczynski, 1983) | ben, bns | 55 | Central W Florida shelf | ne | 29, 43 |
| <i>Gnathia triospathiona</i> Boone, 1918 | ben | 218 | Off Key West, in Gulf Stream | ne | 29 |
| Suborder: Valvifera | | | | | |
| Family: Arcturidae | | | | | |
| <i>Arcturella bispinata</i> Menzies & Kruczynski, 1983 | ben, end | 55-73 | Off Egmont Key, Florida | ne | 43 |

Checklist of isopod crustaceans of the Gulf of Mexico. (continued)

| Taxon | Habitat-Biology | Depth (m) | Overall geographic range | GMx range | References/Endnotes |
|--|-----------------|-----------|--|-----------|---------------------|
| <i>Astacilla cymodocea</i> Menzies & Glynn, 1968 | ben, sgr | 1–2 | Florida Keys; Puerto Rico; Belize | ne | 29 |
| <i>Astacilla lauffi</i> Menzies & Frankenberg, 1966 | ben, bns | 44–145 | South Carolina to NW Florida | ne | 29 |
| <i>Astacilla spinata</i> Menzies & Kruczynski, 1983 | ben, end | 55–73 | Off Sanibel Island, Florida | ne | 43 |
| <i>Edwinjoycea horologium</i> Menzies & Kruczynski, 1983 | ben, end | 55–73 | W Florida | ne | 43 |
| Family: Chaetiliidae | | | | | |
| <i>Chiridotea excavata</i> Harper, 1974 | ben, bns, end | 3.5–8 | Texas | nw | 18 |
| Family: Holognathidae | | | | | |
| <i>Cleantioides planicauda</i> (Benedict, 1899) | ben, bns, sgr | itd–44 | Maryland to Louisiana; Pacific Mexico | ne | 29 |
| Family: Idoteidae | | | | | |
| <i>Edotia lyonsi</i> (Menzies & Kruczynski, 1983) | ben, end | 18 | Central W Florida shelf | ne | 43 |
| <i>Edotia montosa</i> (Stimpson, 1853) | ben, bns | 1–46 | Bay of Fundy, Nova Scotia to Louisiana | ne | 29, 48 |
| <i>Erichsonella attenuata</i> (Harger, 1873) | ben, bns | itd–2 | Connecticut to Texas | ne, nw | 29, 48 |
| <i>Erichsonella filiformis</i> (Say, 1818) | ben, bns | itd–109 | Connecticut to Texas; Bahamas; Caribbean; Brazil | ne, nw | 29, 48 |
| <i>Erichsonella floridana</i> Benedict, 1901 | ben, bns, end | itd–2 | Florida Keys; western Florida | ne | 29 |
| <i>Erichsonella isabelensis</i> Menzies, 1951 | ben, bns, end | unk | Texas | nw | 40 |
| <i>Synidotea fosteri</i> Schotte & Heard, 2004 | ben, bns, end | unk | Florida Panhandle | ne | 51 |

¹ New record for GMx; ID: GDFW; coll: May–June, 2000, June 2001, G. Rowe et al., R/V "Gyre," 26° 00.142'N–28° 33.1285'N, 88° 34.2763'W–94° 29.381'W, 1562–3015 m; 4 spec.

² New record for GMx; ID: GDFW; coll: May–June, 2000, June 2001, G. Rowe et al., R/V "Gyre," 26° 14.8050'N–28° 00.6970'N, 86° 33.9732'W–94° 33.4048'W, 545–2983 m; 30 spec.

³ New record for GMx; ID: GDFW; coll: May–June 2000, G. Rowe et al., R/V "Gyre," 26° 00.1707'N–28° 00.6970'N, 86° 33.9732'W–93° 19.2166'W, 2745–3140 m; 5 spec.

⁴ New record for GMx; ID: MS; coll: 1965, Mud Key, FL, R/V "Cortez" Cr. 17, X I, 1 m; USNM 221745, 1 male.

⁵ New record for GMx; ID: GDFW; coll: May 2000, June and August 2003, G. Rowe et al., R/V "Gyre," 23° 29.3388'N–28° 33.4292'N, 85° 28.8971'W–93° 21.7915'W, 1530–3732 m; 81 spec.

⁶ New record for GMx; ID: GDFW; coll: June 2000, G. Rowe et al., R/V "Gyre," 27° 50.3354'N–28° 00.8463'N, 86° 45.1549'W–86° 34.5587'W, 2974–2975 m; 2 spec. Although this species fits within the broad definition of *M. usher*, the latter could be divided into geographically distinct species (GDFW, pers. obs.).

⁷ New record for GMx; ID: GDFW; coll: June 2000, G. Rowe et al., R/V "Gyre," 29° 20.0500'N, 87° 3.3738'W, 658 m; 2 spec.

⁸ New record for GMx; ID: GDFW; coll: May 2000, G. Rowe et al., R/V "Gyre," 27° 27.5640'N–27° 27.6103'N, 89° 47.1391'W–89° 46.7720'W, 1452–1453; 2 spec.

⁹ New record for GMx; ID: GDFW; coll: June 2000, G. Rowe et al., R/V "Gyre," 27° 00.0067'N–28° 15.2344'N, 86° 24.7995'W–87° 59.8697'W, 763–2745 m; 2 spec.

¹⁰ New record for GMx; ID: GDFW; coll: May–June 2000, June 2002; G. Rowe et al., R/V "Gyre," 23° 28.7808'N–29° 20.0500'N, 87° 03.3758'W–94° 29.7608'W, 658–3732 m; 30 spec.

¹¹ New record for GMx; ID: GDFW; coll: May–June 2000, June 2001; G. Rowe et al., R/V "Gyre," 26° 09.7884'N–28° 55.1634'N, 86° 34.5587'W–95° 14.7680'W, 983–3007 m; 59 spec.

¹² New record for GMx; ID: GDFW; coll: May–June 2000; G. Rowe et al., R/V "Gyre," 26° 15.2157'N–27° 50.3354'N, 86° 45.1549'W–92° 23.6978'W; 2030–2975 m; 4 spec. This species resembles a species introduced in George, 2001, but its status cannot be verified owing to a missing type (GDFW, pers. obs.).

¹³ New record for GMx; ID: GDFW; coll: May–June 2000, June 2001; G. Rowe et al., R/V "Gyre," 26° 09.7884'N–28° 17.0006'N, 86° 34.1930'W–94° 33.4048'W, 1168–2978 m; 17 spec.

¹⁴ Placed in *Neocirolana* by W. Javed and R. Yasmeen, 1990. A new species of cirrolanid isopod of the genus *Neocirolana* from Pakistan with a review of the genus. *Crustaceana* 58(1): 67–73. Campeche record: USNM 204419; ID: J. W. Martin; coll: USL TFE 2B, 7 Jan. 1978, 10 mi NE of Champoton.

¹⁵ Range extension in central GMx: USNM 144090; ID: T. E. Bowman; coll: Galveston Bay, Texas, 18 July 1972.

¹⁶ The Cozumel and Colombia records are USNM 221552 and USNM 252387 respectively; USNM catalog is on-line at <http://www.nmnh.si.edu/iz/>.

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