



NEW RECORDS OF DEEP-WATER MARINE AMPHIPODS
(CRUSTACEA: PERACARIDA) FROM THE GULF OF MEXICO
AND ATLANTIC OCEANNuevos registros de anfípodos marinos de aguas
profundas (Crustacea: Peracarida)
para el golfo de México y el océano AtlánticoCarlos Varela^{1*}, Heather D. Bracken-Grissom^{2,3} and Manuel Ortiz⁴¹Environmental Monitoring and Evaluation, Florida, USA.²Institute of Environment, Department of Biological Sciences, Florida International University, 3000 NE 151st St, North Miami, FL 33181, USA. hbracken@fiu.edu,  <https://orcid.org/0000-0002-4919-6679>.³Department of Invertebrate Zoology, Smithsonian Institution, National Museum of Natural History, Washington, DC 20013-7012, USA.⁴Universidad Nacional Autónoma de México, Mexico. ortiztouzet@yahoo.com, <https://orcid.org/0000-0002-6985-8019>.*Corresponding author: varela06@gmail.com,  <https://orcid.org/0000-0003-3293-7562>.

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ABSTRACT

New records of deep-sea marine amphipods are presented. Three families, three genera and three species (*Chuneola paradoxa*, *Epimeria ortizi* and *Trischizostoma nicaeense*) are recorded for the first time for the Gulf of Mexico. Another species, *T. raschi*, is recorded for the first time from the Florida Keys, the Lesser Antilles, and the eastern Atlantic Ocean.

Keywords: Amphipoda, Epimeriidae, *Chuneola*, *Epimeria*, *Trischizostoma*.

RESUMEN

Se brindan nuevos registros de anfípodos marinos de aguas profundas. Se registran por primera vez para el golfo de México tres familias, tres géneros y tres especies (*Chuneola paradoxa*, *Epimeria ortizi* y *Trischizostoma nicaeense*). Otra especie, *T. raschi*, se registra por primera vez para los cayos de Florida, las Antillas Menores y el este del océano Atlántico.

Palabras clave: Amphipoda, Epimeriidae, *Chuneola*, *Epimeria*, *Trischizostoma*.

Examination of material collected in the deep waters of the Gulf of Mexico and the Atlantic Ocean has resulted in the discovery of new species and/or new distributional ranges for marine peracarids in recent years (Ortiz & Winfield, 2023; Ortiz et al., 2022, 2023; Varela, 2022; Varela & Bracken-Grissom, 2021; Varela et al., 2021, 2023).



The genus *Epimeria* Costa, 1851 consists of almost a hundred species that mainly inhabit the deep waters of the Atlantic (North and South), Indian and Pacific Oceans (Winfield & Hendrickx, 2020). For the area of eastern Florida and Florida Keys, three species have been recorded: *E. longispinosa* K. H. Barnard, 1916, *E. obtusa* Watling, 1981 and *E. ortizi* Varela & García-Gómez, 2015 (Horton et al., 2024; Varela & García-Gómez, 2015; Watling, 1981). The genus *Chuneola* Woltereck, 1909 consists of three pelagic species that mainly inhabit the deep waters of the Pacific and Indian Oceans. It is hypothesized that the morphological characters of the species of this family, like the dorsoventrally flattened body and strong pereopods with sharp and retractile claws, are evidence of an ectoparasitic life habit but the potential hosts are still unknown (Zeidler, 2009). The family Trischizostomidae consists of 18 species of ectoparasites of deep-sea fish and sharks that inhabit all known oceans (Freire & Serejo, 2004; Varela, 2022; Winfield et al., 2016).

The material studied was the product of several trips by the research vessels R/V Columbus Iselin, Elliot Pillsbury and Gerda from the University of Miami (RSMAS) and R/V Point Sur in the Gulf of Mexico, Caribbean Sea and east Atlantic Ocean. The specimens were drawn with the help of the camera lucida. The material is deposited in the RSMAS Marine Invertebrate Collection at the University of Miami (UM) and in the Florida International Crustacean Collection (FICC) at Florida International University.

In the present paper, the distribution of four species of deep-sea amphipods is extended and the presence of three families (Chuneolidae, Epimeriidae and Trischizostomidae) for the Gulf of Mexico is recorded for the first time.

TAXONOMY

Order Amphipoda

Family Epimeriidae

Epimeria ortizi Varela & García-Gómez, 2015

(Figure 1A)

Material examined. GULF OF MEXICO (USA). Station (DP06-21JUL18-MOC10-B175N2-104-N0), starting 29.01435 N 87.3115 W and ending 29.0001 N 87.4642 W. 1300 meters deep. 21.vii.2018. HBG9247.

Remarks. It is possible to differentiate this species from the other species of the genus because the rostrum is long and reaches half of the second article of the antenna and the eyes are present and unpigmented. Other characters include: maxilliped palp article 4 with more than two teeth in the internal margin; coxa 5 posteroventral corner elongated backwards, reaching the pleonite 1; pleonites 1–3 with dorsomedial acute teeth directed backwards, the one of pleonite 1 is smaller than the others in pleonite 2–3, which are subequal in length. *Epimeria ortizi* has been recorded for Venezuela and the Florida Keys (Varela & García-Gómez, 2015). This is the first record of this species for the Gulf of Mexico.

Family Chuneolidae Woltereck, 1909
Chuneola paradoxa Woltereck, 1909
(Figure 1B)

Material examined. GULF OF MEXICO (USA). Station (DP06-24JUL18-MOC10-B251D-105-N0), starting 28.4648 N 88.4686 W and ending 28.4929 N 88.6367 W. 0-1400 meters depth. 24.vii.2018. HBG9182.

Remarks. This species differentiates from the other two species of the genus because it has a rounded rostrum, small eyes, pereon arched without keels or spines and the antennae is shorter than the rostrum. *Chuneola paradoxa* has been recorded for localities in the Pacific Ocean (Zeidler, 2009). This is the first record of a member of the family Chuneolidae for the Gulf of Mexico.

Familia Trischizostomidae Lilljeborg, 1865
Trischizostoma nicaense (Costa, 1853)
(Figure 1C)

Material examined: GULF OF MEXICO (USA). Station (DP06-01AUG18-MOC10-B175D2-121-N2), starting 29.0096 N 87.4911 W and ending 29.1038 N 87.3750 W. 598-803 meters deep. 01.viii. 2018. HBG8701. GULF OF MEXICO (USA). Station (DP06-21JUL18-MOC10-B175N2-104-N0), starting 29.0143 N 87.3115 W and ending 29.0001 N 87.4643 W. 0-1312 meters depth. 21.vii. 2018. HBG8726.

Remarks. This species can be differentiated from the other in the genus because of the presence of eyes, coxa 2 subtriangular with rounded anterior margin, gnathopod 1 with oval propodus and telson distally rounded. This species has been recorded in the Atlantic Ocean (North), Mediterranean Sea and Caribbean Sea (Diviacco & Ruffo, 1989; Sexton, 1908, Varela & Bracken-Grissom, 2017). This is the first record of the family Trischizostomidae for the Gulf of Mexico.

Trischizostoma raschi Boeck, 1861
(Figure 1D)

Material examined. FLORIDA KEYS (USA). One specimen. Station (G-963) 23.735 N and 82.217 W, collected to 1448 meters deep, 01. ii. 1968. UMML 32.9015; LESSER ANTILLES (near TOBAGO). One specimen. Station (P-847) 11.650 N and 60.00 W, collected to 1007 meters deep, 02. vii. 1969. UMML 32.9011. GULF OF GUINEA (LIBERIA). One specimen. Station (P-270), 00.733 S and 06.533 E, collected to 430 meters deep, 18.v.1965. UMML 32.9018.

Remarks. This species can be differentiated from the others in the genus because coxa 2 is subtriangular, with a sharp anterior margin, the presence of eyes and telson emarginated. Other characters include: gnathopod 1 propodus subtriangular with palm slightly convex with small robust setae along all its extension and three pairs of longer robust setae distally. *Trischizostoma raschi* has been recorded in several localities in the Mediterranean Sea and in Brazil in the Atlantic Ocean (Wakabara & Serejo, 1999). Our material matches the descriptions of Sexton (1908) and Wakabara & Serejo (1999).

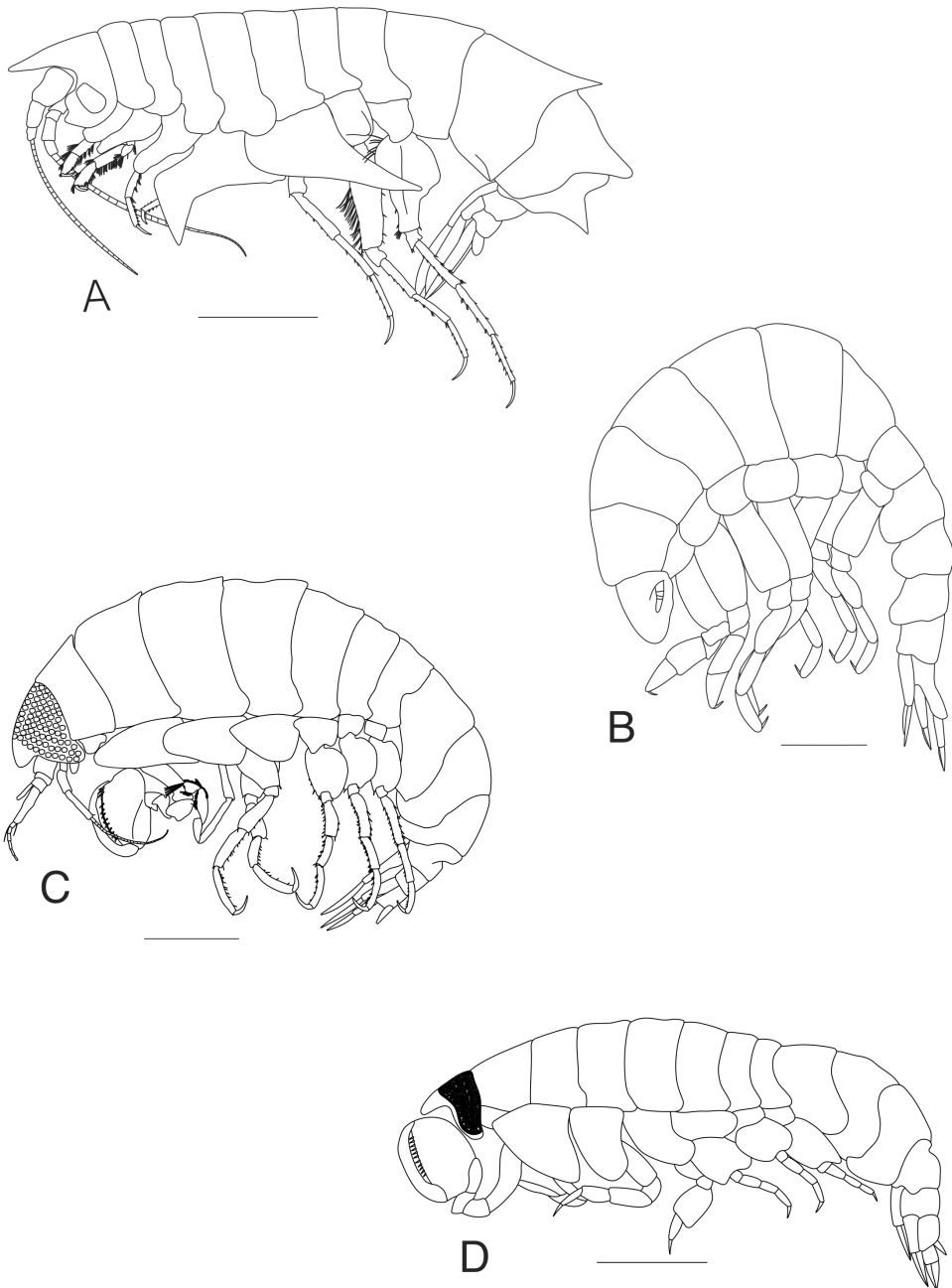


Figure 1. Lateral view of the new records of deep-water marine amphipods species. **A)** *Epimeria ortizi*; **B)** *Chuneola paradoxa*; **C)** *Trischizostoma nicaense* and **D)** *Trischizostoma raschi*. Scale: A, C and D, 5 mm; B, 2 mm.

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