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Crangonidae and Glyphocrangonidae (Decapoda; Caridea) of the Southern Gulf of Mexico

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Abstract

Distribution and abundance of species of Crangonidae and Glyphocrangonidae in the Mexican deep-waters of the Gulf of Mexico were analyzed through six research cruises onboard of the R/V *Justo Sierra* of the Universidad Nacional Autónoma de México using an otter trawl in a depth range of 300–1200 m. We collected two and five species of the Crangonidae and Glyphocrangonidae families, respectively. We provide information about its depth and geographic distribution, abundance, frequency of occurrence and size structure. *Glyphocrangon*, composed of five species (*G. aculeata*, *G. alispina*, *G. haematonotus*, *G. longleyi* and *G. spinicauda*), was the most common and abundant component during the benthic trawls with a total of 1125 individuals. The family Crangonidae recorded only one genus and two species (*Parapontocaris caribbaea* and *P. vicina*) with 21 individuals. A taxonomic key for these crangonid and glyphocrangonid shrimps of the Gulf of Mexico is also provided.

Key words: Crangonidae, Glyphocrangonidae, Gulf of Mexico, sizes, depth, distribution

Introduction

Deep-water decapod megacrustaceans of the SW and SE Gulf of Mexico in front of Tamaulipas to Quintana Roo Mexican states are poorly known, mainly due to scarce studies developed in the southern part of the Gulf of Mexico comparatively to the north area. Wicksten & Packard (2005) reported near 396 collection sites in the northern part, in comparison to only 28 located in the southern counterpart in the Mexican waters. Most of the available information about deep-water crustacean fauna in the south of the Gulf of Mexico is referred mainly to records by foreign expeditions (e.g. R/V *Alaminos*, *Oregon*, and *Pillsbury*). Few studies have been developed in Mexican deep-waters, some of them in the Mexican Ridge System and Sigsbee Canyon (Gaytán 2005; Escobar-Briones *et al.* 2008). But none of these expeditions made extensive and/or intensive collections throughout the Mexican continental slope. Since 1998, the Laboratorio de Ecología Pesquera de Crustáceos, ICML, UNAM, has been conducting a research program in deep-waters of Mexican Gulf of Mexico, with the purpose to analyze the biodiversity of megacrustaceans and explore potential fishery resources in the upper continental slope. As a result of these investigations, we present information of the caridean families, Crangonidae and Glyphocrangonidae of the south Gulf of Mexico obtained during the projects BATO (Biota de los arrecifes de la plataforma y del talud continental en el noroeste del Banco de Campeche); BIOREPES (Biodiversidad y Recursos Pesqueros del Golfo de México); and COBERPES (Comunidades bentónicas y recursos pesqueros potenciales del mar profundo del Golfo de México), which were carried out between 1998 and 2011.

The family Glyphocrangonidae represented only by *Glyphocrangon* A. Milne-Edwards 1881, has nowadays, a total of 89 species around the world (De Grave & Fransen 2011; Komai 2011), which inhabit from continental shelf to abyssal basins (200 to 6500 m) (Holthuis 1971; Gore 1985; Kensley *et al.* 1987; Komai 2004b, 2006, 2007, 2011). Eight species were recorded in the western Atlantic (Pequegnat 1970; Holthuis 1971; Dardaeu & Heard 1983; Chace 1984; Cardoso & Serejo 2007; Campos *et al.* 2005; Komai 2004a), while Felder *et al.* (2009) registered 7 species for the entire Gulf of Mexico, and only 3 in the Mexican portion of the Gulf of Mexico. On the