



Monogenean parasites of Carangidae and Sciaenidae marine fish on the Alvarado coast, Veracruz, Mexico, south Gulf of Mexico

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Abstract

A total of 311 individual fish from 16 species, 10 Carangidae and 6 Sciaenidae, were examined between August 2004 and February 2007. Twenty one monogenean species from 18 genera and 12 families are reported. Four species, *Cemocotylella elongata*, *Engraulicola* cf. *thrissocles*, *Rhamnocercus margaritae*, and *R. rhamnocercus* are reported for the first time from the Gulf of Mexico; 16 of the parasite-host records are new. Each fish host family is parasitized by a particular set of monogenean species, genera and families not shared with the other.

Key words: parasites, helminths, Monogenea, Carangidae, Sciaenidae, survey, Gulf of Mexico, Veracruz, Mexico

Introduction

Carangids and sciaenids (Teleostei: Carangidae, Sciaenidae) are commercially important fish frequently caught in the Gulf of Mexico (GOM). Many monogenean species have been recorded in these fish families in the northern GOM (Price 1943, 1962; Hargis 1955a, b, 1956, 1957; Koratha 1955; Hendrix 1994) and southern GOM (Caballero y Bravo-Hollis 1965, 1967; Bravo-Hollis 1983, 1984, 1989; Bravo-Hollis & Salgado-Maldonado 1983). The present data update and enrich the understanding of the monogenean parasite fauna in carangids and sciaenids collected in the southwest GOM.

Materials and methods

A total of 311 individual fish from 16 species (10 Carangidae and 6 Sciaenidae) were examined between August, 2004 and February, 2007. Most fish were caught off Playa Las Barrancas beach (18°59'31"N, 95°57'83"W), Alvarado Municipality, Veracruz, Mexico. With the help of local fishers, a beach seine net (500 m long x 4–5 m high; ¼–1 in mesh) was extended from the beach into the ocean for collection. Larger sized fish were caught by hook-and-line at the Arrecife El Cabezo reef (19° 03'07"N, 95°52'05"W), 11.7 km east of Playa Las Barrancas. All collected fish were transported live to the laboratory, placed in 1, 000 l tanks and examined within 24 hours. Taxonomic designations of fish were done according to Froese & Pauly (2007).

A stereoscopic microscope was used to make a general helminthological examination of each fish, including skin, fins, eyes, mouth, anus, cloacae, opercula and gills. Monogeneans were fixed in hot 4% formalin, later stained with Mayer's paracarmin, Gomori's triple stain or Delafield haematoxylin and mounted whole in Canada balsam. Some monogeneans were fixed with the Malmberg semipermanent mounting technique for study of their sclerotized parts (see Ergens 1968, Vidal-Martínez et al. 2001).