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Metazoan parasites of fishes from Coyuca Lagoon, Guerrero, Mexico

JUAN VIOLANTE-GONZÁLEZ & M. LEOPOLDINA AGUIRRE-MACEDO

Centro de Investigación y Estudios Avanzados del Instituto Politécnico Nacional (CINVESTAV-IPN) Unidad Mérida, Carretera Antigua a Progreso Km. 6, A.P. 73 Cordemex, 97310 Mérida, Yucatán, México. E-mail: viojuang@yahoo.com.mx

Abstract

A total of 33 species of metazoan parasites were identified (31 helminth and 2 crustaceans) from 10 species of fish (*n* = 1,030) collected from Coyuca Lagoon, Guerrero, Mexico, between May 2001 and February 2003. Digeneans (7 adults and 11 larvae) dominated the parasite fauna. The most widespread species of parasite were: Digenea- *Pseudoacanthostomum panamense*, *Diplostomum* (*Austrodiplostomum*) *compactum*, *Clinostomum complanatum*; Nematoda- *Contracaecum* sp.; Branchiura- *Argulus* sp.; and Copepoda- *Ergasilus* sp. Species composition of the parasite fauna exhibited a clear freshwater influence; 57.5% (19/33) of the identified species have a freshwater distribution. This is the first survey of parasites of fish from this location and all reported species are new geographical host records for Coyuca Lagoon, Guerrero, Mexico.

Key words: Digenea, Nematoda, Crustacea, fish, Coyuca Lagoon, Guerrero, Mexico

Introduction

Coyuca Lagoon is one of the most important aquatic resources in the state of Guerrero, Mexico, because of its size (28.5 Km^2) and fish production (Violante-González 2006). Located 35 km northwest of Acapulco, this lagoon is predominantly oligohaline (1.5 to 5 ppm) during most of the year, but has a marine influence during the rainy season when temporary connections open between it and the Pacific Ocean. This allows entrance of marine species, giving the lagoon's ichthyofauna a strong marine influence. The high productivity of Coyuca Lagoon and the wide variety of species of fish from different origins (i.e. freshwater, brackish water and marine water) provide an ideal habitat for a rich local parasite fauna. However, no research has been done to date on the parasite fauna of the fish in this lagoon. The goal of the present study was to generate an inventory of the parasite fauna from the diverse fish populations in Coyuca Lagoon and to contribute in the development of future research on metazoan parasites of the coastal lagoons of the state of Guerrero, Mexico.

Materials and methods

A total of 1,030 fishes were collected from Coyuca Lagoon (16º57' N; 100º02' W) between May 2001 and February 2003. Ten species of fish were examined: Ariidae_ *Hexanematichthys guatemalensis* (Günther, 1864) (Blue sea catfish, *n* = 223); Centropomidae_ *Centropomus nigrescens* (Günther, 1864) (Black snook, *n* = 35); Cichlidae_ *Cichlasoma trimaculatum* (Günther, 1867) (Three spot cichlid, *n* = 151); Eleotridae_ *Dormitator latifrons* (Richardson, 1937) (Pacific fat sleeper, *n* = 322), *Eleotris picta* (Kner and Steindachner, 1864) (Spotted sleeper, *n* = 31), *Gobiomorus maculatus* (Günther, 1859) (Pacific sleeper, *n* = 73); Gerridae_

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