

FIRST RECORDS OF *ERGASILUS CERASTES* (COPEPODA,
POECILOSTOMATOIDA) ON CAGE-REARED *ICTALURUS*
FROM NORTHEAST MEXICO

BY

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Copepods are a common component of the ectoparasitic assemblages of all kinds of fish, from all environments and ecosystems (Boxshall & Halsey, 2004). The family Ergasilidae comprises the most common parasites of freshwater fish and the highest diversity is found in the genus *Ergasilus* Von Nordmann, 1832, with more than 180 nominal species (El-Rashidy & Boxshall, 2001; Montú & Boxshall, 2002; Boxshall & Halsey, 2004). *Ergasilus* has a worldwide distribution except in Antarctica (Boxshall & Defaye, 2008; Thatcher & Brasil-Sato, 2008), inhabiting estuarine and freshwater ecosystems. Only the females are found on their fish hosts, whereas the males are free-living in the zooplankton (Amado et al., 1995; Suárez-Morales & Santana-Piñeros, 2008; Thatcher & Brasil-Sato, 2008).

Some ergasilids are considered pests among cultured fish, causing serious damage (Lin & Ho, 1998; Thatcher & Brasil-Sato, 2008), and could be responsible for a high mortality among cultured fish in freshwater and brackish environments and accordingly significant commercial losses in freshwater aquaculture (Lin & Ho, 1998; Piasecki et al., 2004; Boxshall & Defaye, 2008).

Our knowledge of the ergasilid fauna in the Americas is markedly patchy (Suárez-Morales & Santana-Piñeros, 2008). In some areas, such as North America and Brazil, the ergasilid fauna is probably the best known in the Americas as a whole (Roberts, 1970; Johnson & Rogers, 1972; Thatcher & Boeger, 1983, 1984; Tavares & Luque, 2005; Luque & Tavares, 2007; Thatcher & Brasil-Sato, 2008).

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However, Central America and Mexico represent a large continental area in which the ergasilid fauna has not been well studied yet (Suárez-Morales & Santana-Piñeros, 2008).

Records of *Ergasilus* in Mexico include only two species, *E. versicolor* Wilson, 1911 and *E. davidi* Suárez-Morales & Santana-Piñeros, 2008. The first has been recorded in freshwater and brackish environments that include the states of Chiapas (Alvarez-Silva et al., 2006), Veracruz (Alvarez-Silva & Gómez-Aguirre, 2000), and Baja California (Valles-Ríos et al., 2000). Only the record of *E. versicolor* for Baja California reported the host (*Mugil cephalus* Linnaeus, 1758). *Ergasilus davidi* was found on the gills of the yellow snapper *Lutjanus argentiventris* (Peters, 1869) and the yellowfin snook *Centropomus robalito* Jordan & Gilbert, 1882, both collected in the state of Chiapas (Suárez-Morales & Santana-Piñeros, 2008). Additionally, records of Mexican *Ergasilus* have been treated to genus level (Dodson & Silva-Briano, 1996; Rodríguez-Gutiérrez et al., 2001; Violante-González & Aguirre-Macedo, 2007; Violante-González et al., 2007; Violante-González et al., 2008; Comité Estatal de Sanidad Acuícola del Estado de Morelos, 2010).

In the present study, *Ergasilus cerastes* Roberts, 1969 is recorded for the first time from Mexico, but it was first reported from District of Columbia (U.S.A.) (type-locality) where it was collected from a catfish sold at the Maine Avenue fish market (Roberts, 1969; Reid, <http://www.pwrc.usgs.gov/blitz/biocopewash.html>; Hoffman, 1999). *Ergasilus cerastes* has been found on various species of *Ictalurus* in Florida (Roberts, 1969, 1970). In addition, Johnson (1971) and Johnson & Rogers (1972) recorded this parasite on various catfish species, such as *Ameiurus nebulosus* (Lesueur, 1819) from southern Florida, *Ameiurus catus* (Linnaeus, 1758) from South Carolina, *Ictalurus punctatus* (Rafinesque, 1818) from Alabama, and *Ictalurus furcatus* (Valenciennes in Cuvier & Valenciennes, 1840) from Mississippi.

E. cerastes was now obtained from the gills of *Ictalurus punctatus*, which was cage-reared in five dams-lakes and a river in the state of Tamaulipas (fig. 1). They were observed during a routine survey of parasites dwelling on channel catfish, in which samples were taken bi-monthly, from May 2007 to April 2008 (see Rabago-Castro et al., 2011).

Ergasilus systematics are based on the morphology of fertilized females (Amado & Rocha, 2001). Female ergasilids from Tamaulipas were compared with previous descriptions of *E. cerastes* (cf. Roberts, 1969, 1970; Johnson & Rogers, 1972). The possession of a two-segmented endopod of the first leg relates *E. cerastes* with other North and South American ergasilids (Roberts, 1970; Johnson & Rogers, 1972; Boxshall et al., 2002; Suárez-Morales & Santana-Piñeros, 2008; Thatcher & Brasil-Sato, 2008). Johnson & Rogers (1972) reviewed the North