

NOTICE OF PUBLICATION



AQUAFISH COLLABORATIVE RESEARCH SUPPORT PROGRAM

RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Masculinization of the native cichlid Tenhuayaca, *Petenia splendida* (Günther, 1862), using *Artemia nauplii* as vehicle of the steroid 17- α methyltestosterone

Author(s): Juan Manuel Vidal-López, Carlos Alfonso Álvarez-González, Wilfrido Miguel Contreras-Sánchez y Ulises Hernández-Vidal
Laboratorio de Acuicultura Tropical, División Académica de Ciencias Biológicas, Universidad Juárez Autónoma de Tabasco.
Carretera Villahermosa-Cárdenas Km 0.5., Villahermosa, Tabasco, 86039 México

Date: January 19, 2011

Publication Number: CRSP Research Report 09-A08

The CRSP will not be distributing this publication. Copies may be obtained by writing to the authors.

Abstract: At world-wide level the use of steroids to obtain all-male population in cichlids, has been widely used with the objective to avoid the reproduction process and to canalize the energy of the food in weight gain. In this sense, the application of steroids has been commonly through the artificial diets. Nevertheless, for some cichlid such as tenhuayaca or bay snook *Petenia splendida*, which is considered an appropriate species for aquaculture in the Southeastern of Mexico and Central America, the use of artificial diets during the larval period is not possible, for this reason the use of live preys is required which could be use as vehicle for the steroids. In the present study the production of all-male population was evaluated in *P. splendida* using *Artemia nauplii* as vehicle for the steroid 17- α methyltestosterone (MT). For this study the first feeding larvae were fed with *Artemia nauplii* with MT for 5, 10, 20, 28, 45 and 60 days of feeding, and a control treatment without MT. Significant differences were detected in the masculinization percentage and survival of the larvae fed for 60 days with MT using *Artemia nauplii* (96% and 85% respectively) compared with the control treatment where only 56% of males and a similar survival of 83% were obtained. For this reason, we conclude that the use *Artemia nauplii* as vehicle of MT is a suitable alternative to obtain all male production in *P. splendida* when larvae are feed for 60 days.

This abstract was excerpted from the original paper, which was published in *Hidrobiológica* 19(3): 211-216, 2009.

CRSP RESEARCH REPORTS are published as occasional papers by the Management Entity, AquaFish Collaborative Research Support Program, Oregon State University, 418 Snell Hall, Corvallis, Oregon 97331-1643 USA. The AquaFish CRSP is supported by the US Agency for International Development under CRSP Grant No. EPP-A-00-06-00012-00. See the website at <aquafishcrsp.oregonstate.edu>.