



Tropentag, September 17-19, 2014, Prague, Czech Republic

“Bridging the gap between increasing knowledge and decreasing resources”

Feeding Habits and Reproduction of the Corvine (*Cynoscion phoxocephalus*) in the Gulf of Tortugas

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Abstract

Colombian Pacific coastal waters have varied marine resources, making it privileged in terms of availability of aquatic resources. The feeding habits and reproductive biology were studied in corvine (*Cynoscion phoxocephalus*), between September 2013 and April 2014, in the Gulf de Tortugas (Colombian Pacific).

Feeding habits according to the analysis of the feeding items in the stomachs of the fish were determined as follows: vacuity index (14%), weight of the stomach content (2.5 g). The diet included fish, (86%) and crustaceans (10%). The morphological characters related to the feeding habits were: length of the gut (33 cm) and the mouth area, this was not significantly different between females and males. The dietary preference in the studied species was diverse, with a generalist feeding strategy that corresponds to carnivorous fish.

There were no significant differences between adult females (n= 281) and males (n=115) in body length, but body weight differed significantly between sexes. Maturity state was 71% and the reproductive analysis showed high values from October to February, with a maximum in December (period of major spawns). The relative fecundity ranged between 3,093 to 10,820 eggs per gram of gonad. The histology analysis showed an asynchronous development, with a dominant gonad somatic stage. The parameters of growth obtained from 792 couples of data show that corvine present an isometric growth ($b=3,2392$) and the relationship between the total length (TI) and the total weight (Tw) is: $Tw = 0.0046 * TI^{3.2392}$. The values of Von Bertalanffy's equation were estimated as $L_{\infty} (=74.49$ cm; $K=0.359$ cm year⁻¹ and $t_0= 0.806$ year s.

Keywords: Colombian Pacific, corvine fish, diet, reproduction