

ABSTRACT

*Cynoscion jamaicensis* (Vaillant & Bocourt) undergoes a biological cycle which is linked to the annual changes in the environment, determined largely by the influences of the Orinoco River. The effect of the Orinoco decreases with distance resulting in differences in the timing of some events, such as spawning and annulus formation, in the different sampling areas. Peak spawning takes place during February and March but lower levels of spawning continue over an extended period. Juveniles are recruited into the fishery throughout the wet season and these fish mature at the end of the first year of growth. The major part of the diet of this species consists of a relatively small number of prey species, indicating a greater selectivity of feeding than has been found for members of the genus. Fish were successfully aged and it was found that Age  $\bar{0}$  fish constitute the major part of the population. Due to the extended spawning and recruitment and the reduction in growth after the first year, there is a great degree of overlap of the year classes. In the areas sampled the percentage of males increases with age, indicating either a differential sex mortality or sexual segregation. A greater number of males are found off the north coast than are found in the Gulf. Length/Weight relationships and the von Bertalanffy growth constants are evaluated. It appears that the local population of *C. jamaicensis* is not an isolated one. There is probably some linkage with the Venezuelan population.