

### ABSTRACT

Studies on the Cascadura *Hoplosternum littorale* Hancock, a local delicacy, were carried out in Trinidad W.I. during the period Oct. 1975 - June 1978 as a prelude to culture. The fishery in Trinidad and Guyana was described. The nutritional cycle of the Cascadura was related to the rainfall. Its feeding biology revealed it as a detritivore and an opportunistic feeder. Under laboratory conditions it accepted a wide variety of prepared foods. Floating nests with foam built by the males occurred in the flooded savannahs between June and September annually. More than one female usually contributed eggs to the nest. Multiple spawning occurred in both male and female. The average number of eggs per nest was 10,200. The male protected and would rebuild the nests if they were disturbed.

It was possible to raise the larvae in the laboratory for the first time by feeding Aufwuchs to them. A critical period occurred between the 6th and 8th day. Larval survival averaged 25%.

Histological details of gonad development followed the typical teleost pattern and exhibited an annual cycle of development. Sexual maturity was usually attained after one year. Gonad development was unaffected by changes in photoperiod but reacted to temperature changes when this was applied at stage II of the gonadal cycle. Length-weight relationships were derived for the male and female

Cascadura separately:-

$$\text{Male} - \log W = -1.7966 + 3.0234 \log L.$$

$$\text{Female} - \log W = -1.8485 + 3.0726 \log L.$$

Bands formed in the transverse section of the spine were valid for age determination. Growth was assessed and parameters fitted to the Von Bertalanffy growth equation:

$$\text{Male} - l_+ = 22 (1 - e^{-0.3529(t+1.4817)})$$

$$\text{Female} - l_+ = 17.5 (1 - e^{-0.3808(t+2.139)})$$

Its life span is four years. The one and two year old fish were heavily exploited. In the light of the study the need for management was emphasised and management proposals advanced. The study indicated that the fish is suitable for culturing and the implications of low level and intensive culture techniques discussed.

Suggestions for future work were advanced.