

ABSTRACT

The present study was undertaken to assess the potential of the river conch, Pomacea urceus as a culture species. Investigations on general biology, life history and population dynamics were undertaken in Trinidad during the period from December 1982 to February 1983. The species is herbivorous. The anatomy of the digestive system is described. Shell scarring is probably due to erosion rather than rasping by other snails. The species is dioecious and the structure of the reproductive system in both sexes is described. Microscopic gonad analyses, gonado-somatic ratio, condition factors and size frequency distributions indicate that the reproductive cycle is annual. Spawning and early development occur in the dry season while females aestivate. The mean fecundity was 52, with a range of 21 to 93. Growth rates under laboratory conditions were slower than that in the wild. Maximum growth rate in the wild was 2.85 mm/week. Estimates of total population, individual growth rates, birth rates, survival and mortality were also determined. Growth rates of the new recruits were also determined from field data. Morphometric analyses provided useful information for the culture of Pomacea urceus. Length-weight relationships were determined

for each sex separately:

$$\text{MALES : } \text{LOG W} = -3.67961 + 2.95299 \text{ LOG L}$$

$$\text{FEMALES : } \text{LOG W} = -3.81378 + 3.04932 \text{ LOG L}$$

Other morphometric analyses included condition factor estimates, body length - meat weight relationship and body length - operculum length relationship. The suitability of P. urceus for culture is discussed and suggestions for further research are put forward.