SHORT COMMUNICATION

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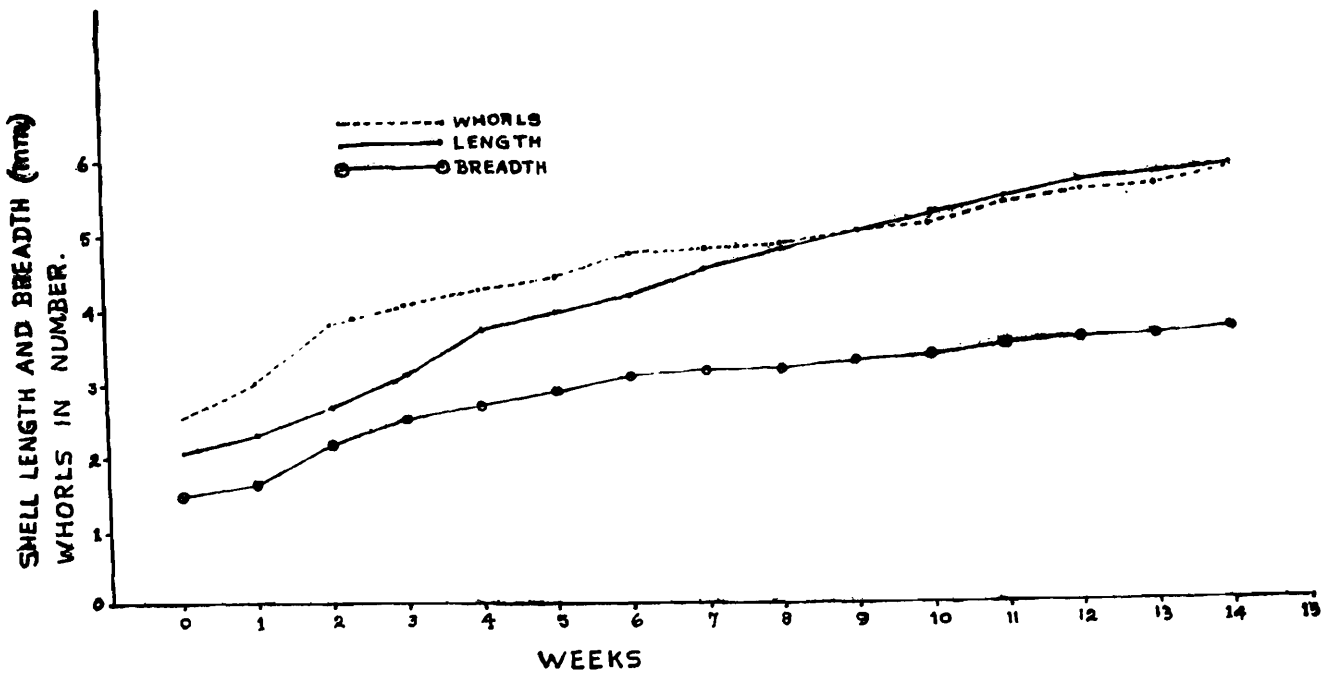
STUDIES ON THE LAND SNAIL *GLESSULA GEMMA* (REEVE) [MOLLUSCA : GASTROPODA]-I. GROWTH RATE

Bioecological aspects of some of the more common land snails have been worked out in recent years by Ghose (1963), Raut and Ghose (1980), Raut (1981), Rahman *et al* (1975), Masurekar and Bagalkote (1976) and Subba Rao *et al* (1981) etc. But *Glessula gemma* (Reeve), a common land snail of West Bengal, continues to be a very little known species. Its bioecological aspects have remained completly uninvestigated so far. An attempt is made to study the ecological aspects of this species and the findings on its growth-rate are presented here.

For the study of growth-rate, 10 newly hatched individuals were selected and were released in a terrarium measuring 30×20× 20 cms. The other methods were followed after Subba Rao *et al* (1981). Growth-rate was ascertained from shell length, shell breadth and the number of whorls at the end of each week. The experiment was started on July 15, 1980 and continued up to October 21, 1980, when all snails died.*

Length of the shell of a newborn individual was between 1.7-2.77 with an average of 2.07 mm. (N=10). Breadth of the shell was



FIE. 1.

Fig. 1. Rates of growth in the shell length, breadth and the body whrol of *Glessula gemma*.

*It is not quite clear whether the snails died of age or not. However, the mean shell length of the snails at the time of death was above 6 mm. (average adult size) and one of the snails had produced a young one also.

1.32-1.87, on the average 1.52 mm. (N=10) and the number of whorls ranged between 2.1-3, on an average 2.5 (N=10). The growth, as evidenced, is a continuous process. However, the rate varied with the age. During the first week, the addition in length and breadth was equal, i. e. 0.15 mm. for both, while the growth in whorl was 0.51. The maximum growth in length (0.6 mm.) was recorded in the 4th week, and those in breadth and in number of whorls, 0.51 mm. and 0.76, respectively were in 2nd week. Of the 10 individuals, 3 survived up to 98 days and at the end, the average length, breadth and whorl count were 6.35 mm., 4.05 mm. and 5.8 respectively (Fig. 1). Thus the total growth as recorded during the life span of 98 days for an individual was 3.78 mm., 2.03 mm. and 3.3, in length, breadth and and number of whorls respectively.

From the results of the present study on *G. gemma* and also from earlier reports on *Achatina fulica* (Rees, 1950 ; Ghose, 1963), *Ariophanta maderaspatana* (Masurekar and Bagalkote, 1976) and *Opeas gracile* (Subba Rao *et al*, 1981), it is clear that the rate of growth in land snails is faster in the first few weeks. This phenomenon may perhaps be associated with the attainment of early sexual maturity and their fight against adverse climatic conditions. Regarding other aspects, the possible reasons may be simillar as discussed by Subba Rao *et al* (1981).

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