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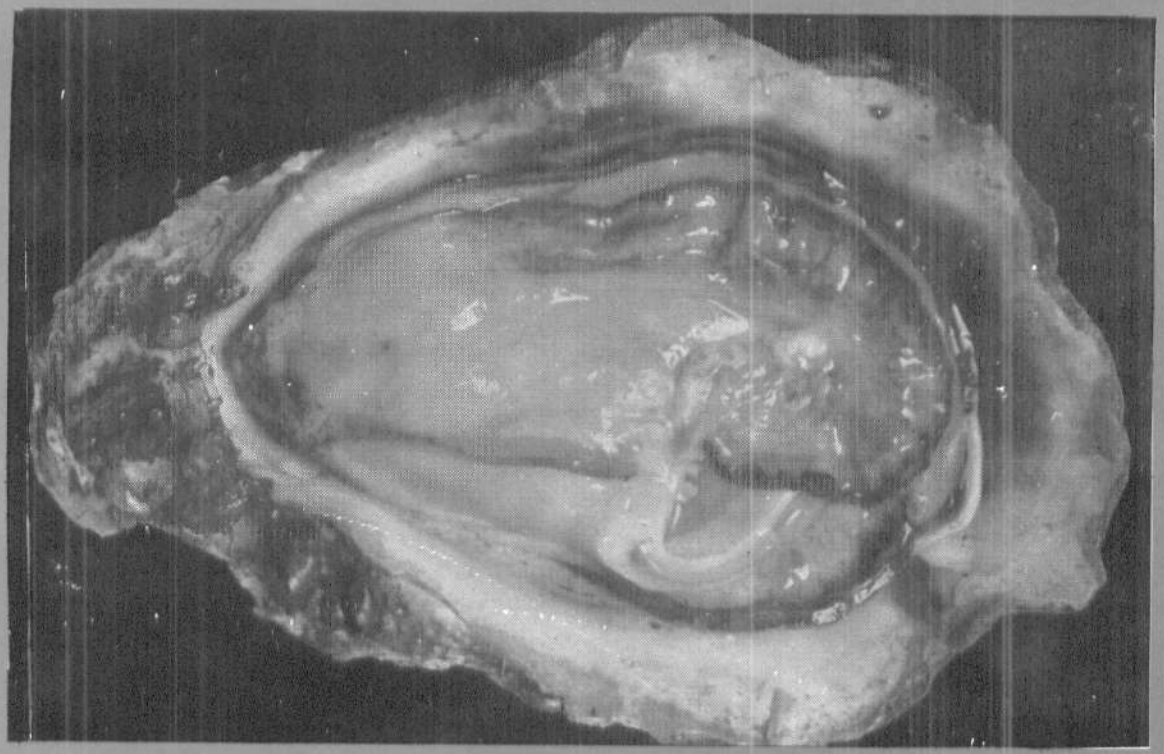

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849 A note on the growth of the juveniles of *Holothuria scabra* in concrete ring

Although the seed of sea cucumber was produced more than sixty years back in Japan and China no serious attempts were made to farm them nor used the seed so produced to ranch and enrich the natural populations. Sea cucumbers are slow growing animals which live for a number of years. It is expensive to maintain them for a longer period in the hatchery and therefore the seed is sea ranched. *Holothuria scabra* reaches marketable size in 18 months and full size in two years time.

Seed of *H. scabra* was produced for the first time in 1988 in the hatchery of Tuticorin Research Centre of CMFRI. Although *H. scabra* is the most valuable species for the processing and it forms a fishery in several parts of the world, the seed of this species was not produced earlier anywhere. Last year the seed of this species was also produced in the Solomon Islands for the first time.

Since 1988 the seed of *H. scabra* was produced at CMFRI on a number of occasions. Most of the seed so produced were used in various experiments to observe the growth of the juveniles under different conditions. The seed was grown in Karapad and Valinokkam bays in rectangular cages, velon screen cages and also in netlon cages. In the Karapad Bay the seed was also grown in old one tonne tanks.

The rectangular cages made of iron rods soon get rusted on coming in contact with sea water. The velon screen cages get clogged with mud and algae and the netlon cages become brittle when they remained in sea water for more than two months. Therefore for the first time concrete rings which are used in well construction were used. These will last for a long time in the sea. The concrete ring selected was 70 cm in diameter and 30 cm in height. Larger rings where more juveniles can be stocked cannot be used since they are very heavy to handle. Ring is set at a depth of one metre on even ground. At times due to currents depressions are formed below the ring due to the removal of the mud. At such times the mud in the ring runs out through the fine velon screen leading to the starvation of the juveniles. The ring is set in an area which is out of bounds for the fishermen who may disturb the ring and remove the juveniles. The bottom is tied with velon screen to prevent the juveniles from borrowing and escaping. After setting the ring in the proper position the surrounding mud is put inside the ring to a height of 20 cm. The juveniles subsist on the organic matter present in the mud. The top of the ring is also covered by velon screen to prevent the entry of fishes and other organisms. Every time one kg of Mahima feed is also put inside the ring as supplementary feed. This has a crude protein content of 35-40 %. When the ring was examined at regular intervals the individual weights of the juveniles were noted to calculate the average weight. Also the total number of juveniles was counted to know the mortality.

The experiment was started on 9-4-'96 with 24 juveniles of average weight of 22 g and terminated on 10-3-'97 when someone removed the ring and the juveniles. The average weight of the juveniles increased to 120 g on 14-2-'97. The juveniles of *H. scabra* thrive well inside the concrete ring. The details of the experiment are presented in Table 1.

TABLE 1. *Growth rate of the juveniles of* H. scabra *inside concrete ring at Tuticorin*

Date	Total number of juveniles	Average weight of juveniles (g)
09-04-'96	24	22
10-05-'96	23	43
*8-07-'96	10	44
28-08-'96	10	75
26-10-'96	10	88
14-02-'97	10	120

*When examined on 8-7-'96 there was no mud inside the concrete ring resulting in the death of 13 juveniles due to starvation.

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