

wall. In the present case there was no external indication of multi-shoot development of the propagule. It emerged after the plantation only.

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A PRELIMINARY SURVEY ON NEWLY RECORDED *SOLETELLINA VIOLACEA*

ABSTRACT

Soletellina violacea (Lam.) recorded for the first time, in India at Mithbav Creek (16° 20' N 73° 25' E), is highly nutritious and forms major resource in food chain. It is a good candidate species for aquaculture studies.

Most of the publications have contained references to the growth, reproduction respiration and siphon regeneration of different species in Lamellibranchs. This study is important for three main reasons. *Soletellina* has food value and contains more than ten types of essential amino acids. It is one of the rare species around the west coast of India and the study on *Soletellina* may suggest general principles which could be applicable to other marine bivalves especially for aquaculture.

Material and methods

The specimens collected from Mithbav Creek in Sindhudurg District, over a period

of 15 months, were examined for gut contents. The methods adopted here are mostly based on works of Hynes (1950) and Pillay (1952).

*Results and discussions**Shell*

Shell is fairly large, equivalve, more or less elongated and with a strong periostracum. Ligament pit is short and broad. The pallial sinus is very deep, narrowing anteriorly. Hinge has two teeth in each valve. The shell valves are moderately thick, covered by a dark brown periostracum and marked with concentric growth lines.

Burrowing habits

The foot is wedge shaped, muscular and very much active in burrowing especially during feeding. Distribution from intertidal down to a few metres below the low water mark. It burrows in the soft sandy-muddy ground upto a depth of about a metre beneath the surface, but maintains connection with the surface water through extraordinarily long siphons. They are found only in selected grounds, where the environmental conditions are suitable for survival. In burrowing position the shells lie mouth downward in the substratum. Burrowing depth (Table 1) varies

TABLE 1. Relationship between depth of burrow and size groups in *S. violacea*

Length of shell in mm	Depth in cm
10 — 25	10 — 12
26 — 50	20 — 40
51 — 70	60 — 70
71 — 100	80 — 90
101 — 120	92 — 105

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according to the age and size group. Younger forms of 10-50 mm length always remain few cm below the surface of soil, while adults (51-120 mm) a metre below. During high tide, the functional activities of burrowing mechanism increases for rapid feeding and hence no stability in burrowing depths.

Feeding

During high tides feeding activity seems to be quite high as can be seen by continuous siphonal activities. At this time, the animal gradually comes near the surface, but remains still burried in the mud. The circumference of rotation of the inhalent siphon goes on increasing as the animal comes nearer and nearer to the surface. From the analysis of the stomach contents, the species is considered as omnivorous and detritus feeder. The gut contents shows animals remains, algal fragments, sand and detritus. The food generally consisted of varying amounts of organic matter mixed with sand and mud.

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