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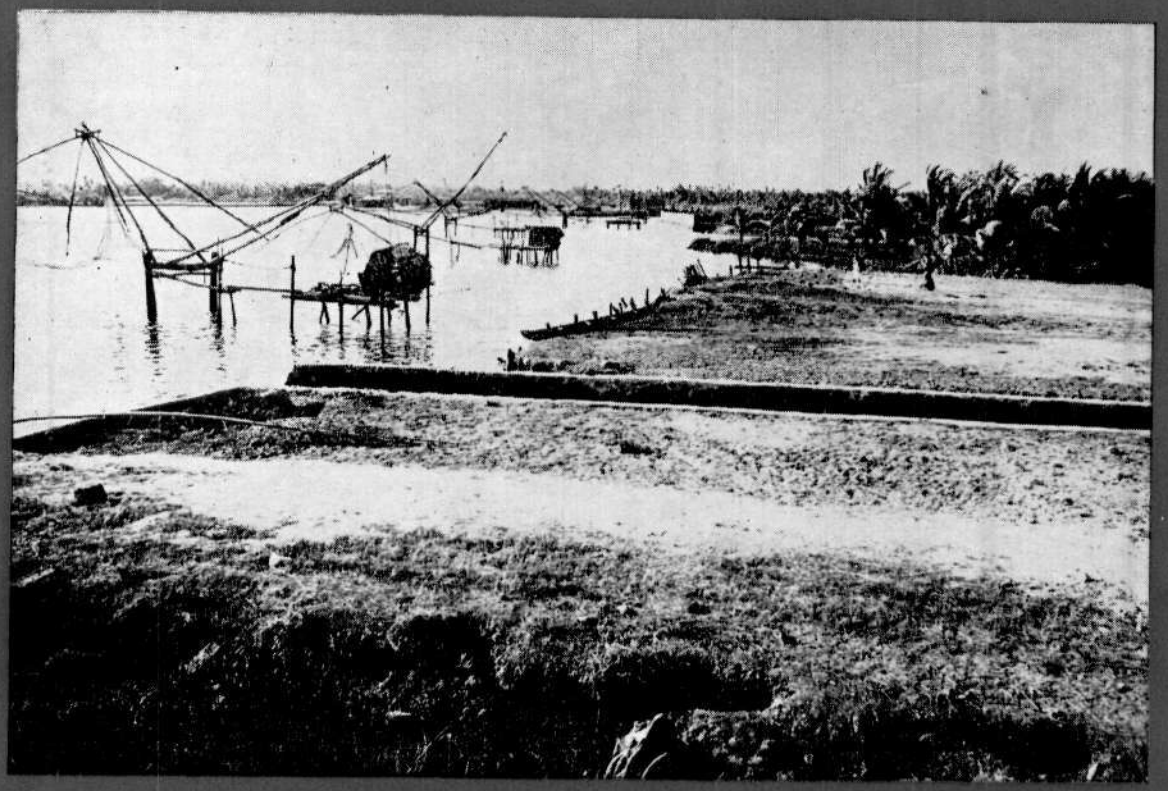

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AN ACCOUNT ON THE SUB-FOSSIL SHELL DEPOSITS OF KOVALAM BACKWATER*

Vast stretches of sub-fossil deposits of molluscan shells have been found excavated by the people of Padur village around the Kovalam backwater area. The shell deposit stratum extends over an area of about 2.0 x 0.5 km on the western bank of the backwater from the Kovalam bridge to Muttukadu bridge (Fig. 1), and the shell deposits are rarely found on the eastern side of the backwater.

The detection of shell deposits is done by piercing a probe (iron rod or wooden pole) pointed at one end,

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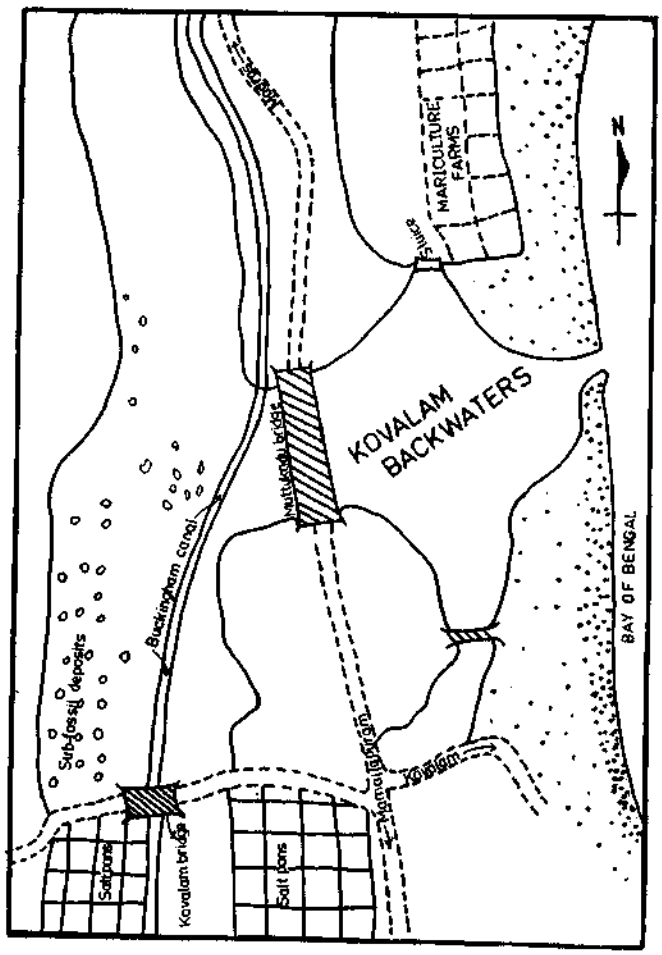

Fig. 1. Sub-fossil shell deposits of Kovalam backwater.

with a handle at the other. The dislodging of shells is usually done during the low tide. Excavation of shells is more intensive on the western side of the backwater from the bank to about 300 m width towards the water spread area than on the eastern side. Men and boys are engaged in excavation. Usually 4 or 5 persons group together and start to excavate the shells by means of spade and crow-bar (Fig. 2). The size of each pit is 2–3 m in length and 1.5–2 m in width (Fig. 3) depending upon occurrence of shells. Water percolates into the pit. After reaching the shell-strata cane baskets are used to scoop out the shells along with mud and sand. A basket lifted from the pit may contain about 50% of shells and 50% of mud. The shells in the basket are sieved to remove the sand and mud, and put in heaps (Fig. 4) within easy reach of the boat. After cleaning again in the water, the baskets full of shell are carried by head-loads to the bank of the estuary by women.

From each pit about 1,000 to 1,500 kg of sub-fossil shells are obtained. Each basket of 20 kg shells is sold at Rs. 4.50 and thus each tonne of shells realises a price of about Rs. 225 in the site. One lorry load of shells costs about Rs. 700/- at Kovalam and Rs. 1,000/- at Madras including transportation costs. After baking into lime, one tonne of lime is sold for Rs. 600/- in the local market of Kovalam. The sub-fossil shells baked

Fig. 2. Method of excavation of shells.

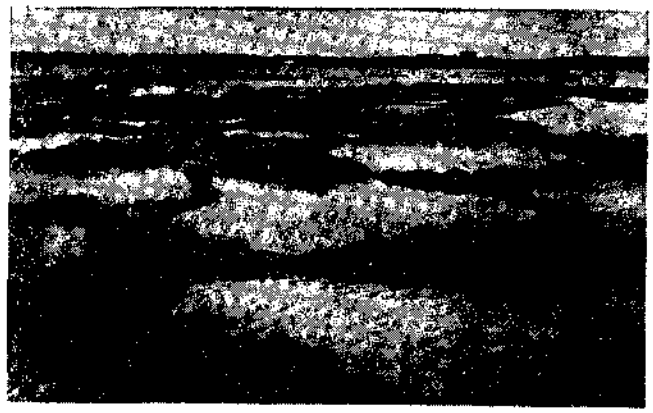

Fig. 3. Shell pits of Kovalam backwater area.

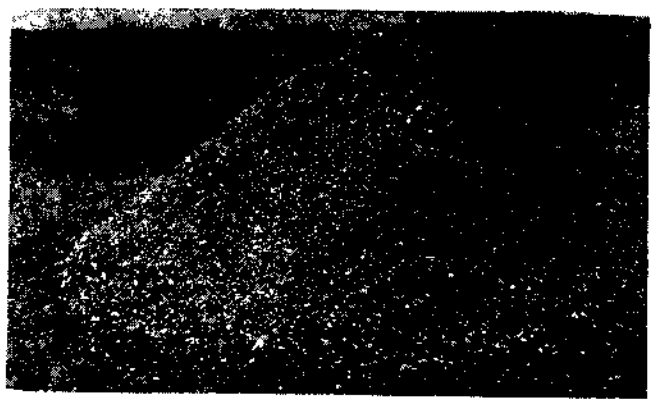

Fig. 4. Heaps of shells excavated from the pits.

into lime are used for white washing or building construction. Shells are also used for preparing poultry grit to a certain extent.

Shell deposit composition estimated from random samples of sub-fossils collected from different areas of the Kovalam backwater is given as follows:

Genera	Percentage
Cerithidium	64.24
Meretrix	15.33
Crassostrea	8.03
Umbonium	4.38
Arca	2.19
Window-pane oyster	1.46
Other gastropods	1.46
Cardium	0.72
Tellina	0.72
Miscellaneous	1.46

In almost all places of the backwater of Kovalam, the gastropod shell *Cerithidium* ranks first in the sub-fossils, whereas in a few places the oyster shells constitute to about 25 to 35%.

The regular season of exploitation starts during January and extend till the end of July, with seasonal fluctuations in the trend of exploitation. About 200 people from Padur village are engaged in this profession, excavating about 40 to 50 tonnes/day during the peak season March–May, and they are unemployed for most of the days during the offseason.

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