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9. MOLLUSCAN SHELL DEPOSITS ALONG PINNAKKAYAL—VALINOKKOM COAST AND THEIR EXPLOITATION

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ABSTRACT

Marine molluscan shell deposits are distributed at different places between Pinnal(ayal and Valmoltkom on the southwest coast of India and support a good shell lima Indutsry. The different areas where the lime shell deposits occur have been surveyed and the nature and extent of the deposits, the species composition, the methods of exploitation, magnitude of production, utilization and annual turnover are dealt with.

INTRODUCTION

Along the east coast of India molluscan lime shell exploitation is a means of livelihood to local people at a number of places (Hornell 1916; Jones 1970; Rao 1969; Alagarswami and Narasimham 1973; Rao 1974). Between Pinnakayal and Valinokkam on the southeast coast there are many places where molluscan shell deposits are being exploited commercially for various purposes. However studies have not been attempted in this subject. The distribution of the deposits, species composition, magnitude of exploitation and utilization have been studied in this work and the results are presented in this paper.

MATERIAL AND METHODS

The places where the shell deposits occur have been surveyed and data collected on the areas where they are distributed, depth at which they occur, the thickness of the deposits. environmental conditions, methods of exploitation, extent of production and the purposes for which they are utilized.

RESULTS

The shell deposits occur at Kovangad, Mariyour, Agaram and Valinokkam. The deposits are of recent origin formed in the post-pleistocene period.

Shell deposits at Kovangad

At Kovangad, located 16 km southwest of Tuticorin, shell deposits occur about 0.5 m ''^'ow the surface and are as much as 2.0 m ^^'"'^ ^"'^ ^'^ distributed over an area of about ^5 ha. The shells are found in black muddy sandy sediment.

Exploitation is by pushing rectangular wooden panels into the earth, removing mud 3"^^ sand present inside and collecting the *'i«"s- *Meretrix casta* are the predominant constituent of the deposits and forms about Q4%- Shell remains of *Crassostrea madrasensis. ^\r\dosNpaneoVs\et Placenta placenta, Sanguinolaria diphos, Anadara. Phaphia* and *Xancus pyrum* are also seen in the deposit. Marginal agriculture farmers of Kovangad and neighbouring area, engage themselves in this activity throughout the year except in northeast monsoon months i.e. October-December. 100-200 persons are involved in this vocation when they do not have work in fields. The state Govern- "lent leases out the right of exploitation in specific areas in different years to individuals, The lessees employ agricultural workers for the collection of shells. The workers are paid Rs. 1.50 per basket of shells. After collection, the shells are heaped in the adjoining areas. When sufficient quantities accumulate they are transported by lorries to industries such as Southern Petrochemical Industries Corporation, Sun Paper Mill, Seshasayee Paper Mill and others. The annual shell production varies from 300 to 400 t.

ShdII deposits at Mariyoor

The shell deposits in this area occur at a depth of 0.2 m to 1.0 m in sediment which is mostly sandy with some amount of silt. In the rainy months the area is submerged by rain water flow from the adjoining Kallar river. The deposits are the recent formations, lie scattered and not dense. Many of the area where the deposits occur have been taken on lease by salt companies for construction of salt pans. The loosely occurring shells ate removed by digging and hand picking when salt pans are prepared. Shells of oysters Crassosfrea mat/ra-*sensis.* 40-180 mm in length form bulk of the deposits The remaining portion consists of windowpane oysters,/WerefA/xcwfa and>»/7arfa«.

The shells are gathered by the labourers of the salt pans located at Mariyoor. When lorry loads accumulate they sell the shells to comp-anies in Madurai for conversion into lime, needed for building construction and poultry feeding. Exploitation is being carried out in this place since seven years and the annual production from this area varies from 150-2001.

Shell deposits at Agaram

The deposits are distributed in the areas adjoining the Pinnakayal estuary. These deposits also are recent formation and occur at about 0.3to 1 m below the surface in sandy muddy sediment. *M. casta* is the main compon-ent of the lime shell deposits, the rest con-sisting of *M. meretrix* and gastropod shells. The shell deposits are being exploited by digging the earth and hand picking. Shells are collected by agricultural workers of Agaram and neigh-bouring places and' transported by lorries to SPIC and paper mills. The annual production is about 150 t

Shell deposits at Valinokkam

The deposits at Valinokkam were exploited till very recently. The shells comprised of C. /narf/'ase/7s/s and to a lesser extent *Meretrix sp.* The shells were present in sediment which was mainly sand with some amount of silt. It is stated that previously as much as 60 t of shells Were gathered anhuaily'anid transported by lorries to Calcium carbide companies.

REMARKS

'» "laV ^e seen from the above account that molluscan shells occuring as subsurface deposits are collected regularly at the places mentioned. The lime shell deposits are of significant importance to the economy of the 'coastal rural areas as it provides mean, of livelihood to the people particularly when they d° "°^ have other occupation like fishing Or cultivation The shell deposits are distributed over large stretches at some of the places like Kovangad and Agaram. At present time we have no information on the quantum of shell deposits available for exploitation in the areas dealt with. In this context there is need for a proper survey to determine the magnitude of the deposits. It will be helpful in generating more employment to the economically weaker section of the population in the areas of the region and also result in increased production of the lime shells for which there is growing demand from various industries like lime, fertilizer, calcium carbide, cement and poultry.

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