

MUDBANKS – A STRANGE PHENOMENON OF THE KERALA COAST

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Introduction

Mudbank formation is a phenomenon that generally occurs along the Kerala coast during the south-west monsoon and is widely publicised by local newspapers and sometimes even radio stations. The news of a mudbank in a particular place attracts thousands of fishermen from far and near who flock around with their families, country crafts, oars, nets and other materials of daily requirements, with the result that the barren beach which was nothing but vast spreads of sand, gets transformed overnight into a busy township with hotels, teashops, hawkers, merchants, agents of processors and trucks and lorries for quickly transporting the heavy landings of fishes. Health centres are opened by the Government and a festival atmosphere prevails in the region - everything for a couple of months only. All sorts of social, religious and communal activities, from births to deaths, meeting with life's partners, falling in love, marriages etc. take place as so picturesquely described by Shri Thankazhi in his famous novel

"Chemmeen". I shall briefly discuss hereunder what a mudbank is and how it occurs, in the light of existing scientific knowledge on the subject.

What is a Mudbank ?

As the Arabian sea frets and frowns and fiercely rears with high waves under the influence of the south-west monsoon with "surges seething high", a particular area is observed to lie calm and cool like a serene sage as if utterly unaware or unmindful of the chaos and confusion that prevail in the adjoining areas of the sea. Such a calm area is termed a "mudbank". The calmness and safety at such an area can be imagined when we know that even large steamers which find it practically impossible to negotiate the high waves of the rough sea can safely anchor there for any length of time. Fishes from neighbouring rough sea collect in this lake-like area for protection from the monstrous waves as well as for feeding on the food materials which become abundantly available in such areas. It is then possible to catch these fishes without any

difficulty and expending the minimum effort. Mudbank areas generally extend 8 to 10 km. in length and almost in equal breadth. It is a very interesting fact that from nowhere else in the world, excepting the Kerala coast, this phenomenon has been reported so far.

Mudbanks of Kerala

Mudbanks occur mainly at four places on the Kerala coast. The most important one is in the Alleppey region, the next one in importance being in the Narakkal region with the third and fourth ones appearing in the Calicut region. The Narakkal mudbank generally occurs between Cochin harbour mouth and the Periyar estuary and extends about 5 km in length and upto about 6.5 km from the land. Even though the most important Alleppey mudbank extending from 5 to 10 km in length and upto 8 km in breadth occurs generally in the vicinity of the Alleppey pier, in certain years a shift upto Thrikkunnappuzha (48 km south of Alleppey) in its location is observed, Ambalapuzha, Purakkad and Punnappara being the common places of occurrence. Some other mudbanks of minor importance occur in certain years only, at Quilandy, Beypore, Veliyangad, Munampam and Chellanam.

The harvest on the Mudbank

We can easily imagine the abundant availability of fish in the mudbanks when we know that it is possible to scoop out the fish by means of a small scoop net tied to the end of a pole with least effort, the important varieties caught being prawns, oil sardines, mackerel and soles. The Alleppey mudbank alone yielded 1,200 and 3,850 tonnes of fish in

1965 and 1966 respectively, which fact speaks about the contribution made by this phenomenon towards the economy of Kerala. In earlier years, considerable portions of the fish harvested from the mudbanks used to go waste due to lack of quick transport facilities and scientific methods of preservation. But the conditions are entirely different today. Lorries and trucks are used for quick transport of fish to interior markets and prawns to freezing and canning factories. Plenty of ice is also being used for preservation during transport. Even shortage in supply of ice occurs during mudbank seasons due to heavy catches. As a result of these developments, the fishermen now get better returns for their effort.

How are mudbanks formed ?

Even though the final and authoritative answer to this question has not yet been put forward, a somewhat satisfactory explanation of the phenomenon has been furnished by scientists based upon their nature, chemical composition of the mud and other characteristics. It is a fact that excepting the Alleppey mudbank, all others occur in the vicinity of river mouths. During the monsoon, these rivers overflow their banks and carry thousands of tonnes of silt, mud, decaying plants and leaves of tress etc. into the sea. These materials get deposited temporarily near the river mouth in positions as decided by the direction of current in the sea. Simultaneously, the mud in the sea bottom gets shaken up (upwelled) and pushed near shore by the strong winds and waves and getting mixed up with the materials brought by the rivers are deposited together in

the mudbank area. This is inferred from observations such as the turbidity of the water in the region with presence of oily particles. Thus the bottom region in the mudbank area will be a sort of loose, soft and spongy mud for considerable depths and like a shock absorber, this cushion of mud absorbs all the violence and rages caused by the strong winds, which explains why water in this particular area lies calm and cool like a lake in contrast to that in adjoining areas. In the Alleppey mudbank area, conical heaps of mud oozing out muddy water like lava from a volcano have been observed. It has to be inferred from this that even though there is no river mouth near the mudbank, mud and water from the Vembanad lake are entering the sea through some unknown underground passages. Geologists believe that in ancient times there was an opening to the sea in Alleppey.

Special features of the mudbank

Mud occurring in the mudbank area is dark green in colour and soft like butter and is entirely different from that in other areas. This mud has been shown to contain upto 0.004% of mineral oil, besides other mineral salts, organic matter and plankton, the chief food material of fishes. Bottom dwellers like prawns and soles and pelagic fishes like oil sardine and mackerel flock to this region to feed on the abundantly available food materials and for shelter from the rough seas elsewhere.

Historical background

Even though mention has been made about mudbank formation as far back as

two centuries, the oldest authoritative statement is the one about the Narakkal mudbank and its chemical composition made about a century back. A recent study on this subject is the one published in 1938 by the then chief engineer of the Cochin Port, Sir Robert Bristow. The Central Marine Fisheries Research Institute, National Institute of Oceanography and Oceanography Department of the Cochin University are all actively engaged in studies on the occurrence and other special features of mudbanks and we may hope that these studies will throw more light on these aspects.

Conclusion

As mentioned elsewhere, mudbanks are a special and unique feature of the Kerala coast. In the lean months of the south-west monsoon when scarcity of food and other necessities of life is acutely felt especially in the coastal belt and among fishermen, mudbanks are a boon to the people of Kerala brought by the Arabian sea. In recent years mudbanks have also been scenes of competition and consequent scuffles and skirmishes between fishermen fishing from country crafts and those operating mechanised boats. As plenty of the foreign exchange earner (prawn) is also caught along with the food fishes like oil sardine and mackerel from the mudbanks, thousands of fishermen, processors and other concerned people find this phenomenon a real blessing of nature, specially showered on the people of Kerala alone.