

Dr. P. S. B. R. James*

The Central Marine Fisheries Research Institute, Cochin has achieved several breakthroughs in the field of sea-farming. The Institute which has developed a number of techniques for culture of commercially important marine animals has recently been concentrating on the sea ranching programmes for replenishing the natural fishery resources. The research efforts in this direction have culminated in success, for the first time in India, of laboratory breeding of sea cucumbers, top shell, great clam and blood clam.

SEA CUCUMBER BRED

The beche-de-mer prepared from sea cucumber earns a foreign exchange of about Rs.20 lakhs annually. The major markets for this product are Singapore and Hong Kong. In India this commercially important resource is restricted to the Gulf of Mannar and Palk Bay region and there are evidences of over exploitation of the single species (*Holothuria scabra*) contributing to the fishery. Dr.D.B.James, Mr.M.E. Rajapandian and Dr. C.P. Gopinathan, Scientists and Mr. B.K.Baskar, Senior Research Fellow of the Institute developed a technique for laboratory breeding of this animal by temperature manipulation. This achievement can pave way for large-scale culture of the sea cucumbers for further development of the industry and breeding of much larger and more valuable species occurring in Lakshadweep islands for sea ranching and export.



Adult Sea Cucumber

BREEDING OF TOP SHELL

The top shell (*Trochus niloticus*) is in great demand in shell craft industry. To establish techniques for breeding and larval rearing of these animals, experiments were conducted at the Shellfish Hatchery Laboratory of the Tuticorin Research Centre of the Institute with the candidate species *Trochus radiatus*. The fully matured animals kept in clean filtered sea water spawned, hatched out and developed into young animals within a period of 4 days. These animals attained full growth within three months. Micro-algal culture of *Isochrysis* and soft algal filaments were given as feed. Messers.K.Ramdoss and S.Mahadevan, Scientists and T.Rajan, Technical Assistant achieved this success. Based on these results, commercially important species of top shells available in Andaman

and Lakshadweep regions could also be bred using the same technique.

BREEDING OF GREAT CLAM

Clams, which play a very important role in coastal rural economy, belong to the group of animals, which are suitable for farming. Clam is an efficient converter of primary production into food suitable for human consumption, thus contributing to low cost nutritious food material. The shell, rich in calcium carbonate is used in lime, cement, fertilizer, sugar and shell craft industries and the meat as a feed for prawn and poultry. It also has a place in the export market and clam meat worth Rs.1 crore has been exported annually to Japan. The present breakthrough obtained in the laboratory breeding by temperature

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manipulation and production of seed of the great clam (*Meretrix meretrix*) and blood clam (*Anadara granosa*) would help in transplanting the seeds in suitable areas where a production of 40 tonnes per hectare can be obtained in a period of six months. This success was achieved by a team of scientists consisting of Dr. K.A. Narasimham, Mr. P.Muthiah and Dr.C.P.Gopinathan. There is scope for taking up clam farming on a large scale in the coastal and brackishwater areas of the country for increasing production and employment opportunities.

shrimp exports to Japan significantly. Taiwan is reported to be suffering from a disease problem as its cultured shrimps were affected by a disease. Subsequently, Taiwan lost its share in the Japanese shrimp market giving a chance to other leading competitors like India, Bangladesh, Malaysia to step up their shrimp exports markedly. This new scenario has also led to strengthening of price of shrimps exported from countries other than Taiwan which are likely to cash in on the promising situation.

and processing equipment. Deep sea fishing has been identified as one of the main thrust areas and would encourage flow of adequate investment in deep sea fishing sector which has a high growth potential considering under-exploited but richly available resources available in our Exclusive Economic Zone and projected rapid growth in sea food exports and sea food consumption domestically. Apart from loan assistance which is likely to pick up in the current year, SCICI would be offering equity participation to deep sea fishing operations and also projected assistance for improving landing and processing facilities.

Rs.70 CRORE SCICI FUND FOR TRAWLERS

Mr.Naresh Chand Singhal, Managing Director, SCICI is reported to have stated that about Rs.70 crores would be allocated for the acquisition of deep sea fishing trawlers



INDIA'S SHRIMP EXPORTS LIKELY TO GO UP

In the wake of declining shrimp exports from Taiwan India is likely to step up her

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