

INDIAN JOURNAL OF GEO-MARINE SCIENCES

Volume 40 Number 1

February 2011

EDITORIAL

Ornamental fish industry

Ornamental fish is the most popular hobby in the world, second to photography. Ornamental or pet fish keeping started as early as 500 B.C. It is a popular hobby in China from the year 1548 onwards and in Europe from the year 1600. Chinese developed the practice of ornamental fish breeding during the year A.D. 600. In the year 1883, the first hatchery (Gold fish) happened at USA.

It is big industry today with 4,500 specie of fresh water fish, 1450 species of marine fish, 650 species of marine and other corals and marine invertebrates. Globally 1539 species are declared as ornamental fishes. 32 species dominate the trade. More than 50% of the ornamental fish supply originates in Asia. 80% of this are farm raised fresh water fish, 15% and 5% are wild caught marine and fresh water species. Singapore specializes in farming fresh water species. Thailand, Japan, China, Malaysia and Sri Lanka are other countries that have major share in ornamental fish industry. Value of live ornamental fish industry is US \$ 900 million with 14% increase per year and the value of global industry related to this is US \$ 18 billion.

Ornamental fish keeping is considered as an easy and stress relieving hobby. About 7.2 million houses in the USA and 3.2 million in the European Union have an aquarium. USA, Europe and Japan are the largest markets for ornamental fish. More than 65% of the exports come from Asia. More than 60% of total world trade goes to their economies

Researchers had identified many specific problems for the development of this industry. There are lack of qualified staff within the distribution chain and the retail level of the industry. Lack of specific training in fish and invertebrate medicine within the veterinary curriculum and a poor understanding of the value of the veterinary involvement within the ornamental fish industry. There is specific concern about the sustainability of wild harvesting within both marine and freshwater sectors. There is traditionally

poor organizations and communication within and among all sectors of the industry.

Tropical reef aquariums is an expanding area of hobby in many developed countries. There are reports that the increased interest in keeping the reef aquarium has resulted in a significant rise in the number of countries exporting and culturing ornamental fish for the past two decades. Tropical freshwater fish and reef aquariums continue to be the mainstay and hobby in this venture. Though the aquarium keep of the fish had originated during the year 1805 the industry for aquarium is 1% and the 99% of the market is confined to hobbyists

India is in a insignificant position in this industry. According to the Marine Products Export Development Authority of India, there are one million fish hobbyists in India. The internal trade is estimated to be about US \$ 3.26 million and the export trade is in the vicinity of US \$ 0.38 million, i.e., 0.008% of the global trade.

Ornamental fish industry in India is scattered and the production from specific regime is low. Transport facility is inadequate and the high air freight charges are not affordable to many associated with the industry. Brood stock are quite meager and even the quality of the same are in hamper. 90% of the ornamental fish export in India is based on wild collection. Capture based export is not sustainable in ornamental fish trade . This will abate the survival of this industry. Focus of the industry should shift from capture to culture based development. This is possible only by mass breeding. Government agencies in India are working towards the goal by developing captive breeding technology for indigenous varieties of ornamental fish. Strategies to network ornamental fish breeders, standardizing methods for diagnosing viral diseases, cluster development and facilitating access to cheaper credit

Breeding unit, Rearing unit and combined development of rearing and breeding unit are the various facets of Ornamental fish industry. Carrying capacity, candidate species and infrastructure are the

prime activities that emanate profit and the consistent development of this industry. Marginal farmers who breed or rear the fish have to sell them earlier due to lack of proper equipment and get less profit. On the other hand, better-off farmers rear the fish to an optimum size and get more profit. As per the studies of Central Institute of Freshwater Aquaculture, Bhubaneswar, this is quite profitable and earning. Economy of small-scale breeding and rearing unit for the live shows that for a total cost of Rs. 45,295 the gross income is Rs. 76,800 with the net income of Rs. 31,505. Many people involved in this industry including ornamental fish breeders, growers, seed and live food collectors, traders and exporters.

Many State governments had initiated specific programs to support this industry. Kerala is planning for the first aqua park in the country at Kochi for ornamental fish production and marketing. It is a 14 crore project in collaboration and is a public private participation. About 90% of Indian exports go from Kolkata followed by 8% from Mumbai and 2% from Chennai

Majority of the indigenous ornamental fish trade in India is from the North eastern states and the rest from Southern states. Domestic growth of Indian market is 20%. Many collaborative projects had been initiated among various states in India. Kerala, Uttar Pradesh, Madhya Pradesh, West Bengal and Tamilnadu had initiated attempt to train skilled manpower for the industry. Ornamental fish exports have increased from Rs. 3.2 crore in 2001-02 to Rs. 5.6 crore in 2006-07, but it remains quite insignificant compared to the export of food fish, which is worth Rs. 8,000 crore per annum.

Marine Products Export Development Authority (MPEDA) has evolved a vision to boost exports to \$ 50 million by 2012. According to the study of the School of Industrial Fisheries of the Cochin University of Science and Technology, India's potential share of the total global trade is worth as \$ 282 million. Experts say that India can emerge as a big supplier for ornamental fish with the rich biodiversity in the Northeastern hills and Western Ghats. There are more than 300 species of fresh water fish in the Western Ghats alone, out of which 150 can be bred. India has the best creeks and estuary like Sundarbans that forms the natural breeding grounds of marine products. A rich diversity of species and favourable climate, cheap labor and easy distribution make India, suitable for ornamental fish culture.

Ornamental fish industries have enormous potential in tropical countries. Avenues are unlimited to India. India has more than 1000 islands and about 7000 km of coastline. National Fisheries Development Board, Ministry of Agriculture has initiated many training programmes at Centre of Annamalai University, Advanced Study in Marine Biology. They had initiated seven training programmes in marine ornamental fish culture to the entrepreneurs and fisheries and extension officials from various States from August 2010 to February 2011. Many such collective efforts by various Ministries, Universities State Governments and other Stake holders are essential to develop the ornamental fish industry in India.

J. Sundaresan