

Status and prospects of the ornamental fish industry in Tamil Nadu, India**P.Ruby*, A.Jackquelin Wino, S.Selvaraj and R.Jeya Shakila**

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[DOI:10.5281/FishWorld.14996318](https://doi.org/10.5281/FishWorld.14996318)**Introduction**

The global ornamental fish trade is estimated at US\$ 18-20 billion which is supported by about 100 million hobbyists around the world enterprise and has been expanding at a rapid pace in recent years. India has considerable potential in production and trade of ornamental fish due to the rich biodiversity of species hailing from diverse aquatic ecosystems. In Tamil Nadu, ornamental fish business is mostly concentrated in Kolathur region near Chennai. This hub supports a plethora of economic activities ranging from large and small scale production of ornamental fishes, their distribution to domestic and international markets, related logistical activities, production and distribution of aquarium and its accessories, live and formulated ornamental fish feed, etc. together constituting an elaborate business network. Feed has a prominent role to play in ornamental fish business as the fishes require balanced nutrition constituted by vitamins, micro nutrients, and other dietary components for good health, fast growth and for developing attractive colours. Though the industry thrived mainly on live feeds conventionally, formulated feeds have emerged in a big way in recent times. A variety of formulated feeds viz., flakes, tablets, granules and pellets prepared from a wide variety of agro-based raw materials (Raja et al., 2014).

In Tamil Nadu, the ornamental fish industry holds a significant position within India, Tamil Nadu ranking as the second largest producer after West Bengal state, with the majority of activity concentrated around the Kolathur area near to Chennai; This ornamental fish industry has good potential for further growth due to its diverse native species and increasing global demand for ornamental fish, though challenges remain regarding breeding techniques, marketing, and disease management. Major production hub is Kolathur region near to Chennai is considered the epicentre of ornamental fish production in Tamil Nadu. Tamil Nadu accounts for roughly 30% of India's ornamental fish production, second only to West Bengal. Overall, the ornamental fish

industry in Tamil Nadu has substantial potential for growth with focused efforts on research and development, training programs for fish farmers, and improved market access to capitalize on the increasing global demand for ornamental fish. Ornamental fish culture and breeding in Tamil Nadu is significant due to its potential for generating income and employment opportunities, particularly for small-scale entrepreneurs, as it leverages the state's diverse native fish species, contributing to the local economy while also providing a popular hobby with aesthetic value for residents; moreover, it can promote sustainable practices through captive breeding, reducing pressure on wild populations of ornamental fish.

Ornamental fish culture and breeding in Tamil Nadu

Ornamental fish are a wonderful creation of nature. Ornamental fish farming is the second most favourite hobby in the world and the number of ornamental fish-keeping enthusiasts is increasing day by day. Ornamental fish farming is an ancient practice. The fishes were kept in the aquarium are used to decorate the house. Recently, they have occupied an important position in commercial trade, especially in earning foreign exchange. A good location combined with the use of effective breeding and rearing methods will result in successful ornamental farming. The breeding and production techniques for ornamental fish will vary depending on their habitat for reproduction and psychological development.

Ninety-five per cent of our ornamental fish export is based on wild collection. Majority of the indigenous ornamental fish trade in India is from the North Eastern states and the rest is from Southern states which are the hot spots of fish bio diversity in India. This capture-based export is not sustainable and it is a matter of concern for the industry. In order to sustain the growth, it is absolutely necessary to shift the focus from capture to culture-based development. Moreover, most of the fish species grown for their ornamental importance can be bred in India successfully. Organised trade in ornamental fish depends on assured and adequate supply of demand, which is possible only by mass breeding (Satam et al., 2018).

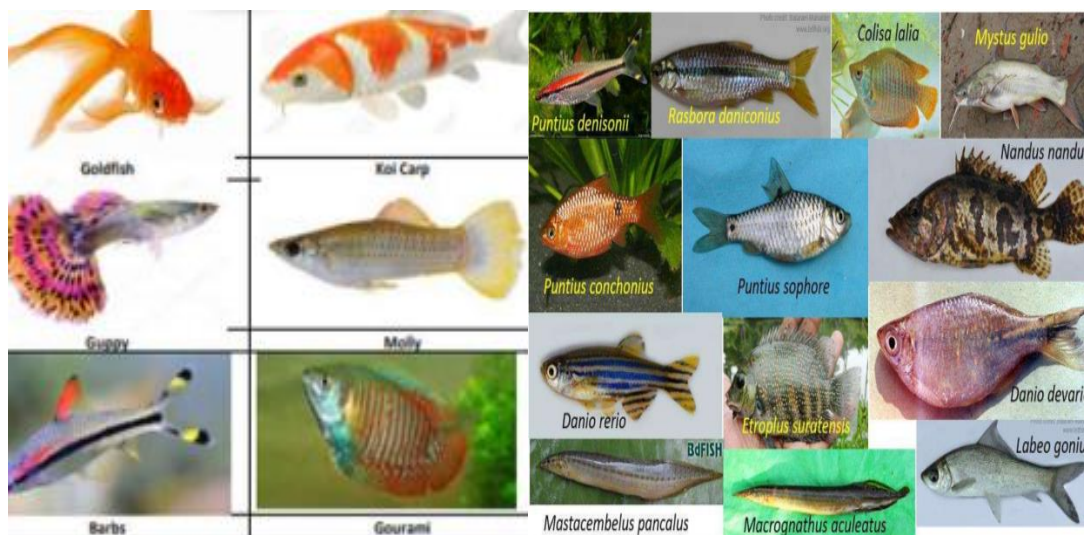
Tamil Nadu has a remarkable history in ornamental fish breeding and is deemed to be the uncrowned kings in Indian ornamental fish sector for their experience and expertise, production quantity, variety and whatsoever. A number of issues hold back the breeding sector of India from enhancing the ornamental fish production. General problems mentioned as constraints for the sector is the lack of availability of brood stock and difficulty in marketing, lack of professional training in breeding, lack of training in nutrition, disease and health care of ornamental fishes.

Freshwater ornamental fishes of Tamil Nadu

Species confined to the freshwater bodies of Tamil Nadu are *Enobarbichthys maculatus* (Day, 1868); *Dawkinsia arulius arulius* (Jerdon, 1849); *Dawkinsia arulius tambraparniei* (Silas,

1954); *Devario neilgherriensis* (Day, 1867); *Garra hughii* (Silas, 1955); *Garra maclellandi* (Jerdon, 1849); *Horallabiosa joshuai* (Silas, 1954); *Horallabiosa palaniensis* (Devi and Menon, 1994); *Osteobrama neilli* (Day, 1873); *Osteochilus nashii* (Day, 1869); *Pethia sharmai* (Menon and Devi, 1993); *Puntius mudumalaiensis* (Menon and Devi, 1992); *Nemacheilus nilgiriensis* (Menon, 1987) and *Noemacheilus triangularis tambaraparniensis* (Menon, 1987). Currently many of the endemic, high value ornamental fishes are exploited for commercial purposes from the wild, thus annoying their degree of endangerment.

The exotic ornamental fish species in Tamil Nadu are *Tinca tinca* (Linnaeus, 1758); *Gambusia affinis* (Baird and Girard, 1853); *Poecilia reticulata* (Peters, 1859); *Cichlasoma trimaculatum* (Gunther 1867); *Hemichromis bimaculatus* (Gill 1862); *Oreochromis aureus* (Steindachner 1864); *Oreochromis mossambicus* (Peters, 1852); *Osphronemus gourami* (Lacepède 1801); *Trichopodus trichopterus* (Pallas, 1770); *Pterygoplichthys disjunctivus* (Weber, 1991) and *Pterygoplichthys pardalis* (Castelnau, 1855)



Conclusion:

Selective breeding of fish and developing new stain of ornamental fish is a common practice but in India this technology not yet popularized and hence the indigenous ornamental fish are not accepted in large scale due to their less attractiveness. Development of regional hub for ornamental “on the lines of aquaculture rainbow technology park, developed by Tamil Nadu Dr. J. Jayalalithaa Fisheries University, would improve overall exports. Popularization of planted tanks will open new avenues for increasing the existing market. The most important of these is the sustainability factor; secondly, there is not much interest in breeding indigenous fishes which are not popular in the domestic market. If government institutions could set up large scale facilities and provide specialised training and assistance to breeders, more indigenous ornamental fish can be produced for enhancing export from the country.

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