

# *Lethrinus lentjan* (Lacepède, 1802)

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## IDENTIFICATION

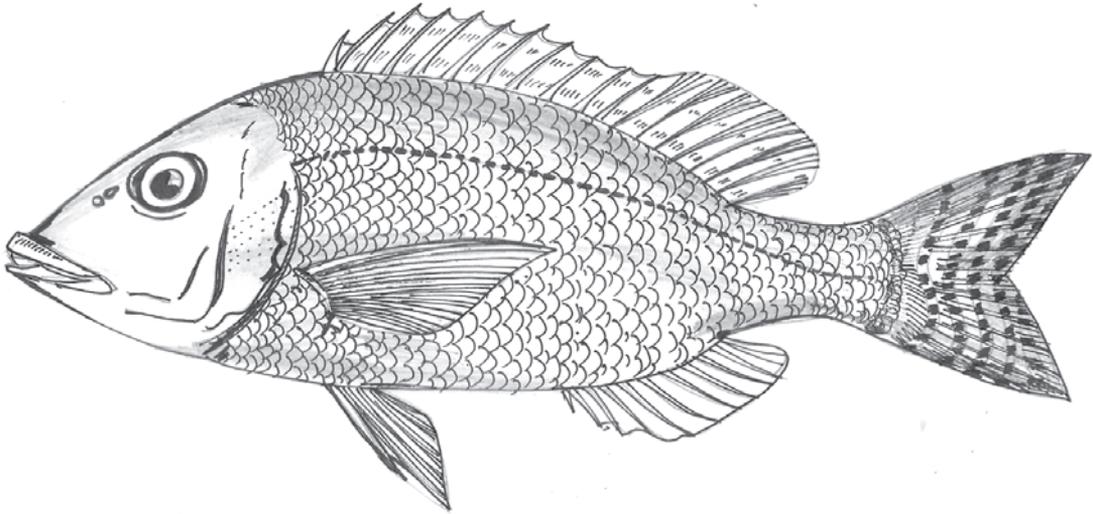
Order	: Perciformes
Family	: Lethrinidae
Common/FAO Name (English)	: Pink ear emperor fish



**Local names:** Dhamil (**Marathi**); Kadu, Pulli velameen, Velameen (**Malayalam**)

## MORPHOLOGICAL DESCRIPTION

*Lethrinus lentjan* has 10 spines and 9 soft rays in the dorsal fin, 3 spines and 8 soft rays in the anal fin. The base of pectoral fin has very few scales and sometimes may even be naked. This fish is distinguished by the reddish colour on posterior margin of the operculum, hence the name pink ear emperor fish. The base of the pectoral fin can also be red sometimes. Body is olive-greenish in colour, becoming lighter colour ventrally. The dorsal scales may have a white centre occasionally. The dorsal fin is white with a reddish margin and orange colouration, pelvic fins and anal fin can be whitish to orange, pectoral fin shows large variation in colour from white to yellow to pink. Caudal fin has orange-reddish patterns.



## PROFILE

### GEOGRAPHICAL DISTRIBUTION

The pink ear emperor fish is distributed widely in the Indo-West Pacific area, extending from the Red Sea and Persian Gulf to Australia and New Caledonia and Tonga. In India, it has been reported from Kerala and south-east coast.

### HABITAT AND BIOLOGY

The species is coastal in distribution, mainly found in sandy areas, seagrass areas, mangroves, lagoons and coral reefs. Juveniles are found closer to the shore whereas adults are solitary and are found in deeper waters. In a study from northern Mozambique, only juveniles of this species were found over seagrass beds. The species has been described as a member of the "mesocarnivore specialist" fish which typically feed on slow moving invertebrates. This species has a high body form and molariform teeth, which helps it to feed on hard and soft shelled benthic invertebrates primarily crustaceans, molluscs, echinoderms, polychaete worms and certain fishes. Studies from the south-

east coast of India also indicated the dominance of crustaceans, particularly brachyurans (mainly *Charybdis*, *Thalamita* and other crabs) in its diet. Molluscs (bivalves and gastropods) were the second most dominant food item. Juveniles feed more on amphipods and crustacean larvae while the adult fed more on crustaceans, molluscs and echinoderms.

It is a protogynous hermaphrodite with juveniles first maturing into female fish and then the female converts to male fish. In the Red Sea, females are reported to convert to males during the fifth year when it is approximately 30 cm. Along the south-east Indian coast the species is reported to spawn twice a year, during December to February and then from June to August. Size at first maturity for female fish is reported to be at 300 mm along the south-east coast of India. The growth is reported to be fast in the first year and then slow after that. The species is estimated to reach approximately 15, 27, 36, 42 and 47 cm at the end of the first, second, third, fourth and fifth year respectively in the wild. *Lethrinus lentjan* is a marine, reef-associated fish with a maximum reported size of 52 cm and maximum age of 19 years.

## PRODUCTION SYSTEMS

### BREEDING IN CAPTIVE CONDITIONS

Rearing of broodstock of *Lethrinus lentjan* was carried out at Vizhinjam RC of ICAR-CMFRI in recirculatory aquaculture system (RAS). Successful spawning was observed with 95 % fertilization rate.

### LARVAL REARING

Information not available

### NURSERY REARING

Information not available

### GROW-OUT

Information not available

### FOOD AND FEEDING

No information is available on feeding in culture systems. However in the wild the species feeds on crustaceans and molluscs primarily.

### GROWTH RATE

Information not available

### DISEASES AND CONTROL MEASURES

Larvae of the cestode *Nybelinia bisulcata* and *Pseudogrillotia* sp. have been reported from *L. lentjan* from Yemen. Polymicrobial skin lesions causing mass mortality of this species was reported

from Kanyakumari. The digenean parasite *Orthodena tropica* has been reported from this species from New Caledonia waters. Monogenean parasites of this fish include *Calydiscoides duplicostatus* and *C. difficilis*.

## PRODUCTION, MARKET AND TRADE

### PRODUCTION

Information not available

### MARKET AND TRADE

Information not available

## CHALLENGES TO MARICULTURE

Mariculture of the pink ear emperor has yet to take off in India. Research on broodstock maintenance, their domestication, larval rearing, nursery rearing and grow out needs to be initiated. So far no reports are available on culture of this species anywhere in the world.

## FUTURE PROSPECTS

*Lethrinus lentjan* is a highly valuable fish in many parts of the world particularly in the Persian Gulf countries. In India it forms a minor fishery and commands a good demand in the domestic market. This is a good candidate for mariculture provided culture techniques can be developed and standardized for this species in India.

## SUGGESTED READING

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