

# *Protonibea diacanthus* (Lacepède, 1802)

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## IDENTIFICATION

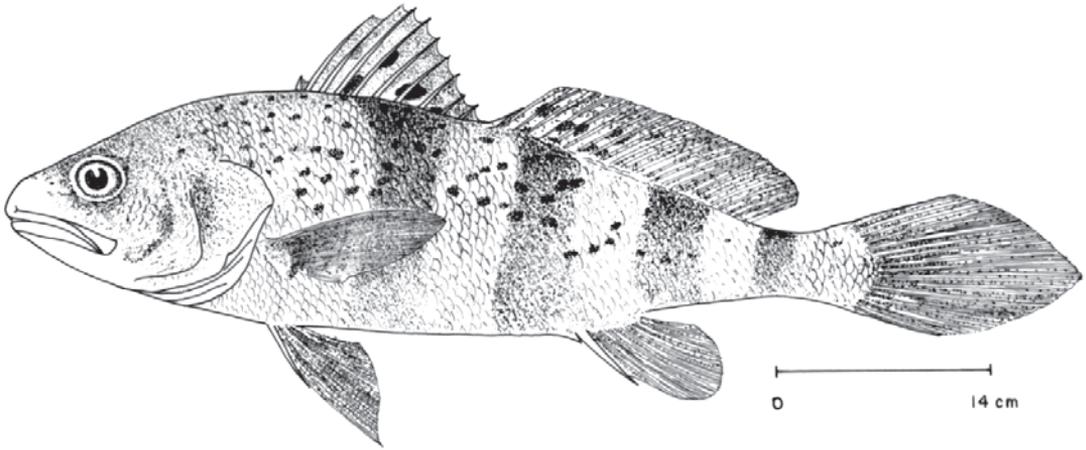
Order	: Perciformes
Family	: Sciaenidae
Common/FAO Name (English)	: Blackspotted croaker



**Local names:** Ghol (**Gujarati, Marathi**); Balde, Ghole, Goli (**Kanada**); Katla, Kora, Valiyakora, Varayan kora, Cherukora, Pallikora (**Malayalam**); Kathalai, Vellakathalai, Panna (**Tamil**); Gorasa, Nella-katchelee, Pullipanna (**Telugu**); Poma (**Bengali**)

## MORPHOLOGICAL DESCRIPTION

Snout is pointed with large terminal mouth forming a low angle to the horizontal. Teeth are differentiated into large and small in both jaws. No canine teeth present. Lower gill rakers are 7 to 8. Dorsal fin spines are 9-10 followed by low notch and are with 22-24 soft rays. Pectoral fin is fairly small, a little more than half of the head. Anal fin is with 2 spines and seven soft rays. The second anal spine is strong. Rhomboid shaped caudal fin. Cycloid scales are present on snout and eyes and elsewhere, scales are ctenoid. Five dark blotches are present along back with many small black spots on top of head, upper half of body and dorsal and caudal fins. Pectoral, pelvic, anal and lower part of caudal fins is black.



## PROFILE

### GEOGRAPHICAL DISTRIBUTION

It is distributed in the Indo-West Pacific, from western Persian Gulf, along the coasts of India, Sri Lanka, Philippines, Borneo, New Guinea, northern Australia and Japan.

### HABITAT AND BIOLOGY

It inhabits coastal muddy waters, off sea beds. It ascends tidal rivers and estuaries. It is a top predator (Trophic level > 3.5). The maximum reported length is 150 cm, with 100 cm size fishes common in the fishery. It feeds mainly on crustaceans and small fishes. It matures at an age of 3-4 years with peak breeding season from June-September. Fecundity ranges from few lakhs to few millions. The maximum recorded size and weight is around 1.5 m and 45 kg.

There is no documented information on production or rearing systems for the species. Information obtained from private sources reveals successful breeding in floating cages at Singapore, albeit without any other information.

### BREEDING IN CAPTIVE CONDITIONS

Information not available

### LARVAL REARING

Information not available

### NURSERY REARING

Information not available

### GROW-OUT

Information not available

### FOOD AND FEEDING

Food and feeding from confined environment has not been reported. In the wild, it is an opportunistic feeder, feeding mainly on fishes and prawns, but also on crabs, molluscs, and gastropods. The Malabar sole, *Cynoglossus macrostomus* and the penaeid prawns are its most preferred prey.

### GROWTH RATE

Information on growth rate in captivity is not available. In wild, it grows rapidly and reaches 60 cm in around 2 years.

### DISEASES AND CONTROL MEASURES

Information not available

### PRODUCTION

It forms a lucrative "ghol-koth" fishery along the north-west coast of India, off Maharashtra and Gujarat. It is caught with bottom trawls and bottom set gill nets. Bumper landings in individual hauls have been frequently documented. Aquaculture production has not been reported.

### MARKET AND TRADE

It is consumed fresh, fried, dried or salted, and is targeted for its swim bladders (maws). Maws are highly priced because of their medicinal and commercial values. It is exported to countries of

south-east Asia, such as Hong Kong, Singapore and Malaysia, where it is used to prepare isinglass, a form of collagen used mainly for the clarification of wine and beer in beverage industry and as traditional medicine (believed to prevent bleeding in patients with urinary problems) and cosmetics for women. Retail value of the fish in Indian market ranges from ₹ 450-600/kg and the dried air bladders fetches between ₹ 40,000-50,000/kg.

## CHALLENGES TO MARICULTURE

No basic information is available on the eggs, larvae and juveniles. Collection of live fishes for broodstock development in confined environment is difficult when compared to other fishes because of its habitat and the gear (trawls and bottom set gill nets) in which it is captured. It lives in large groups and the fishery is highly specific to certain habitats. A system of trapping and transferring live fishes to sea cages has to be developed. Technology for captive rearing, maturation and spawning also needs to be evolved. This requires a better understanding of the breeding and the feeding behaviour and the location of the aggregation sites.

## FUTURE PROSPECTS

Characters like large size, high meat yield, rapid growth rates and high value for air bladder makes it a very lucrative candidate for mariculture. As it is highly predatory, natural feeds would be more cost-effective than commercial feeds. Taking a cue from the techniques of captive breeding, seed production and culture developed successfully for other species of croakers, it is highly possible to achieve captive breeding, seed production and culture of ghol in near future.

## SUGGESTED READING

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