

Mary River Cod once lurked in abundance, in the deep, shaded waters of south-east Queensland's coastal streams, providing food for Aboriginal communities and then for early European settlers.

The Mary River Cod is an elongated fish with a large mouth, a slightly concave head profile and a protruding lower jaw. Colours vary from golden-yellow to green or dark brown with black to dark green mottling or spots. The fins have whitish margins. At the top of the aquatic food chain, it has a very important role in our ecosystem.

While closely related to the Murray Cod, the two fish are unlikely to be confused as they occur in different areas. Murray Cod occur naturally west of the Great Dividing Range. Today, the Mary River Cod only occurs naturally in parts of the Mary River system.

The largest confirmed record for a Mary River Cod is 23.5kg. The Cod lives mainly on a diet of shrimp, fish and crayfish. An opportunistic feeder, the Cod will eat water rats, water dragons and even small waterfowl.

Mary River Cod depend on submerged snags in our creeks and rivers for their survival. Large woody debris provides protection and cover as well as spawning sites.

Development of the river catchments, water pollution, fishing pressure and introduction of fish such as golden and silver perch all contributed to the Cod's decline.

**Queensland law prohibits the taking of any Mary River Cod from the Mary River system. To do so will incur a fine of \$75,000. Anglers may still take or possess one Mary River Cod greater than 50cm in length from eight stocked impoundments outside the Mary River system.**

Further information can be obtained from the following organisations:

Noosa District Hatchery Association	5485 2334
Sunshine Coast Regional Council	5449 5290
Mary River Catchment Committee	5482 4766
Lake Macdonald Catchment Care Group	5449 5266



**The Noosa District Community Hatchery appreciates support from the following organisations:**

**Sunshine Coast Regional Council  
Dept of Primary Industries and Fisheries  
Queensland Government  
Lake Macdonald Catchment Care Group  
Mary River Catchment Committee  
Noosa & District Landcare  
Tiaro & District Landcare  
Lake Borumba Fish Stocking Association  
The Burnett Mary Regional Group  
Somerset Wivenhoe Fish Stocking Assn  
Carp Busters Inc  
Brisbane Valley Anglers**



# Breeding for the future



Mary River Cod – *Maccullochella peelii mariensis*

## About the hatchery

In the 1960's, John Lake studied the breeding habits of important species endemic to the Murray/Darling system. This brilliant work was carried out at Narrandera and was completed without recourse to hormone inducement. At that time, the inland fisheries Research Station was not intended to be used as a production hatchery, and no plans were in place to carry out large impoundment stocking. This came later.

Experts at that time maintained that none of the major species would breed in a dam environment, and that they would be next to impossible to catch by the recreational angler. Clearly, with the vast amounts of money and effort being put into the construction of water storages, from small farm dams to public impoundments, there was an urgent need to carry this work forward and develop a productive freshwater recreational fishery, hence the establishment of a fish hatchery near Cooroy in 1968. In recent times, the hatchery was renamed in honour of Gerry Cook, who pioneered the original work.

Today, research is being carried out at the Gerry Cook Fish Hatchery to eliminate some of the problems associated with the breeding of Mary River Cod.

The success of the breeding program is due largely to the efforts of dedicated volunteers. The Noosa District Community Hatchery Association was established to oversee operations at the hatchery.

The Hatchery has now been rebuilt, offering improved access for research and community education.



*Above: Relocating brood stock*



*Left: Releasing cod fingerlings into waterways in the Mary Catchment*

## Breeding and Restocking

Discovering the secret of how Mary River Cod breed has not been an easy task for the hatchery team, and even now problems with the hatchery process remain.

The 16 Mary River cod broodstock currently held at the hatchery were collected from the Mary River and certain tributaries. New cod are collected each year to maximise genetic variability. After 3-4 years the cod are tagged and released back to their original locations.

Whole fish (e.g. trawl whiting) form the bulk of the diet of the broodstock with supplements of squid, marine crustaceans and beef liver.

The hatchery broodstock are transferred to outdoor ponds to enable them to spawn naturally. These ponds are drained in April to allow spawning pipes to be fitted, then filled with water from Lake Macdonald. Once eggs have been detected they are removed to a trough of running water in the hatchery. Eggs hatch after 4-7 days and the larvae feed on brine shrimp and other zooplankton. After 3-6 weeks, some fingerlings are stocked into plankton-rich outdoor ponds. The remaining fingerlings are left in the indoor hatching troughs. These fingerlings are fed on a diet of blackworms from Victoria and as much plankton as can be supplied from the hatchery ponds.

The larger fingerlings are released into Lake Macdonald and other waterways to alleviate the problem of overcrowding in the troughs. Since 1998 the hatchery has released over half a million fingerlings into the Mary and other rivers in south east Queensland.