

Discover of Tilapia in the Endeavour River Timeline of events



Current Status of Tilapia in the Endeavour River

The noxious Mozambique Mouth Brooding Tilapia is now established in the Endeavour River in a 3 km stretch of river above Jensen's crossing to at least 300m below the crossing. As of October 2008 fish were present in very low numbers.

There is considerable community concern that Tilapia poses a serious threat to the region's waterways. Concerns include:

- Impacts on the Endeavour River recreational fisheries
- Movement into the Annan River via the Coast
- Loss of fish biodiversity in the Endeavour River.

Tilapia survey and eradication in the Endeavour Catchment Cooktown from September 2004 to October 13, 2008

2004. A suspicious fish was caught by a Cooktown State School Student Kevin Schula in September 2004 somewhere in the Endeavour Catchment.

Malcolm Pearce DPI NQ Noxious fish officer 23/3/06 – “Believed that the sample collected from Jensen's crossing was sent to Port Douglas Boating patrol for a positive identification as a Mouth Brooding Tilapia”. He surveyed from Jensen's crossing down stream and also a pond on the Schula's property on 16th and 17th of September 2004. No Tilapia were recorded. DPI could not confirm the presents of Tilapia in the Annan & Endeavour Catchment.

Stephen.Pallard@dpi.qld.gov.au Boating and fisheries patrol. Took the Jensen's crossing sample to Northern Fisheries Centre where it was positively identified. Advice on Tilapia bash legal issues – can only use cast net where there is a tidal influence Fish must be killed and put on ice. Fish can be taken away from the water source for identification. He is willing to take samples to Cairns for identification. Bait 1/0 hook with worms. Inform Boating and Fisheries patrol when bash is on if worried about any legal issues.

2005 – 2007 The South Cape York Catchments (SCYC) was unsuccessful in their efforts to persuade agencies to resurvey Jensen's Crossing for Tilapia.

December 2007 - The South Cape York Catchments received funding from the Natural Heritage Trust to raise awareness of Tilapia and survey Jensen's crossing for pest fish. Australian Centre for Tropical Fresh Water Research was engaged to conduct an electro fishing survey of Jensen's crossing.

December 2007 Colton Perna from ACTFR and Jason Carroll from SCYC conducted an electro fishing survey downstream from Jensen's crossing. 1 juvenile Mozambique Mouth Brooding Tilapia was positively identified. The survey also found 13 species of native fish at the crossing. This was considered to be a healthy diversity of fish species for this system per comm. Colton Perna 2007.

ACTFR / SCYC Jensen's crossing survey

Results 6/12/07

15 25' 43.99''S 145 07' 06.76''E (300 m downstream from the crossing)



1 juvenile Mozambique Mouth Brooding Tilapia *Oreochromis mossambicus* was captured.

Common Name	Scientific name
Mozambique Mouth Brooding Tilapia	<i>Oreochromis mossambicus</i>
Eastern Rainbow	<i>Melanotaenia splendida</i>
Mouth Almighty	<i>Glossamia aprion</i>
Mangrove Jack	<i>Lutjanus argentimaculatus</i>
Jungle Perch	<i>Kuhlia rupestris</i>
Barramundi	<i>Lates calcarifer</i>
Roman-nose Goby	<i>Awaous acritosus</i>
Golden Goby	<i>Glossogobius aureus</i>
Empire Gudgeon	<i>Hypseleotris compressa</i>
Gudgeon	<i>Eleotris elanosoma</i>
Marbled Eel	<i>Anguilla reinhardtii</i>
Silver Bidy	<i>Gerreidae spp</i>
Flagtail Glassfish	<i>Ambassis miops</i>
Spangled Perch	<i>Leiopotherapon unicolor</i>

11/12/07 Finding of this fish activated a response from DPI to survey the area more extensively. With permission of local landholders The South Cape York Catchments Inc took the DPI to likely sites above and below the crossing.



Malcolm Pearce DPI&F Noxious fish officer came back on the 11/12/07 to survey 2 km above and below the crossing. No Tilapia was found. On the 12/12/07 back pack electro fishing at Jensen's crossing he caught 11 juvenile Tilapia.

Identification of the source of Tilapia to Jensen's crossing 17/1/08

While the aim of SCYC's project was to survey Jensen's crossing for tilapia and raise awareness of this species this project rapidly escalated with the discovery a single juvenile Tilapia at the crossing by SCYC staff and ACTFR fisheries Biologists (the first confirmed recording of this species on Cape York Peninsula). A front page article in the Cooktown Local news followed by a tip off from a member of the community lead SCYC to identify 2 dams in the Catchment containing huge populations of tilapia, during flood events these dams flow into Jensen's Crossing.



Infested Dams Jensen's Crossing

Farm Dam Eradication January 2008

SCYC worked closely with the DPI&F to eradicate over 6000 Tilapia from two farm dams near Jensen's Crossing. Poisoning efforts were only about 50% effective.

Stakeholder briefing N# 1 February 2008 DPI&F

- 2 farm dams were identified as containing tilapia, *Oreochromis mossambicus*, in the Cooktown area.
- DPI&F undertook an eradication program of these tilapia using rotenone. Great assistance was obtained from the South Cape York Catchment Group.
- A total of over 6000 tilapia were removed from these 2 ponds. Approximately 5000+ were between 5 and 40mm length. About 600+ breeders were removed from these ponds as well. Numbers and size break down was as follows:
 - Dam 4 (smallest dam) - 300+ @80-160mm length tilapia.
 - Dam 2 (Larger dam) -
 - 5-40mm length - 5000+
 - 40-80mm - 100
 - 80-160mm - 600+
- A press release has been issued today (Friday) from DPI&F in relation to this eradication event

A follow up survey of the area will follow the wet season



Successful Farm Dam Eradication September 2008 Jensen's Crossing.

In September 2008 SCYC staff used 4 pumps to completely drain the 3 infested dams at Jensen's crossing. Approximately 5000 Tilapia were destroyed and over 400 nests were discovered when the dams were drained. There were no survivors.



Farm Dam Eradication September 2008 Jensen's Crossing
With Kieran Ross



Fish Age samples taken at Jensens crossing Endeavour river December 2008

Hi guys,

Here is the Ageing data from Paul Thuesen. He sent this a couple of weeks ago to me and i apologise for the delay sending it to you. Due to Cooktown waters not having much seasonal temperature variation the banding in the otoliths is not obvious, hence the low confidence in the readings.

Regards,

Sam Hedge

From: Thuesen, Paul
Sent: Thursday, 5 February 2009 12:45 PM
To: Hedge, Samuel
Subject: Cooktown tilapia

Hey Sam,

Just read the otoliths from the Cooktown fish. Unfortunately the sections were fairly poor so the confidence on the age estimates below are not the best.

Fish ID	length mm	age yrs
6139	342	2.5
6140	280	2.5
6141	263	2

Cheers

Paul

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Paul Thuesen

Fisheries Biologist

(Delivery/Animal Science)

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