

# Newstreams

A NSW DPI email newsletter for recreational fishers and others interested in improving fish habitat to build native fish stocks

**No 11. December 2007**

## **About Newstreams**

Newstreams is an email newsletter to keep people up to date about NSW fish habitat activities, and about important aquatic habitat developments in Australia and around the world. It is published electronically every two months by NSW Department of Primary Industries. In NSW many estuarine and freshwater habitats for juvenile and adult fish have been degraded or lost through urban, industrial and agricultural development. Communities around NSW are working actively to restore fish habitat.

## **NSW DPI NEWS**

### ***Carp muster attracts fishers***

Recent carp musters at Brewarrina and Bourke saw 246 fishers catch 205 carp weighing a total of 186 kg. The largest carp caught were 3.9kg at Brewarrina and 4.7kg at Bourke. Organiser David Cordina said participants had a good time and took home some great prizes for their efforts. While the musters probably have little effect on carp populations, they do raise awareness of the detrimental environmental problems carp cause in our rivers. The next musters will be organised for early in 2008. If you'd like to know more, contact David Cordina at Dubbo on 6881 1277 or [david.cordina@dpi.nsw.gov.au](mailto:david.cordina@dpi.nsw.gov.au).

### ***Carp numbers dropping because wetlands are drying***

DPI researchers at Narrandera have found that the drought is reducing carp numbers because the fish's wetland breeding grounds are drying up. The carp like to breed in shallow, swampy areas that are regularly inundated by water; the carp larvae then disperse via high water flows into adjoining river channels. Researchers estimate there are 20 major breeding hot spots, of which 10 have been identified, including four internationally recognised wetlands - Gwydir, Namoi, Barmah-Millewa forest and Macquarie Marshes. Targeting carp control at these major breeding locations could have a huge impact on reducing carp numbers throughout regional waterways. Carp became a major pest in Australia in the 1970s and now make up 80 to 90% of the fish in inland NSW. Source:

<http://www.dpi.nsw.gov.au/research/updates/issues/november-2007/drought-helps-control-carp>.

### ***Murray anglers help monitor fish response to resnagging***

Anglers in the Albury area are helping DPI check whether their resnagging program is building fish numbers in the Murray River. To date, 17 keen anglers have joined a monitoring program and in November were trained in otolith extraction and data recording. The participants also received a kit to assist in otolith extraction, shirts, measuring boards, caps, lures and log books. A tour of the resnagging sites on the River Murray was met with enthusiastic questions and further discussion followed over a cool drink and a steak sandwich. The anglers will maintain a log of their fishing effort and catches and retain otoliths and entrails of their mortalities. The effort, size, age, species, spatial and sex data captured will be built into the existing monitoring program over several years and anglers will receive feedback on the results of their efforts. The program is a cooperative initiative between NSW DPI Conservation Action Unit, Arthur Rylah Research Institute and Murray Darling Basin Commission. For more information contact program coordinator Matt Morrow at [matt.morrow@dpi.nsw.gov.au](mailto:matt.morrow@dpi.nsw.gov.au).

### ***Stop work order issued over removal of snags at Corowa***

In October NSW DPI issued a stop work order after the removal, with heavy machinery, of large woody debris along a 3-4km stretch of the Murray River and two nearby creeks, associated with the development of an eco-tourist facility at Corowa. Although development consent was issued by Corowa Shire Council in May, it included strict conditions that no snags were to be moved, relocated or removed without consultation with DPI, and that any such habitat should not be damaged or destroyed without contacting DPI. The developer could face prosecution if found to have breached the *Fisheries Management Act 1994*. Source:

<http://www.dpi.nsw.gov.au/aboutus/news/recent-news/fishing-and-aquaculture/stop-work-at-development-site>.

### ***Fishers plant trees at Wisemans Ferry***

As part of the first round of the Tide to Table program in the Hawkesbury-Nepean region, the 'Retreat at Wisemans' resort has obtained funding to restore the natural riparian zone along its Hawkesbury River boundary. A rain soaked Saturday on the first weekend of December saw eleven enthusiastic members of the Hawkesbury Nepean Bass Anglers Club (HNBAC) meet at the course for a planting day to get the trees in the ground. Despite extremely trying conditions, approximately 200 trees were planted, followed by a well earned BBQ and refreshments under the cover of the Retreat games room. This planting was then followed a few days later with another 120 trees planted by NSW DPI staff. The works undertaken by the HNBAC will hopefully reward them in the future with increased catches of Australian bass in the region. The Retreat wants to stabilise the eroding riverbank, filter water runoff, and provide shade and habitat for the many species of fish, birds and invertebrates in and around the river. For further information about the Tide to Table program contact Scott Machar on 8437 4914 or [scott.machar@dpi.nsw.gov.au](mailto:scott.machar@dpi.nsw.gov.au).

### ***Effects of irrigation practices on fish***

A NSW DPI study has found that fish are substantially impacted by irrigation activities, including diversions of water into irrigation canal systems, water extraction via pumping systems, and seasonal draw-down of canals. In some cases up to 200 fish per day were extracted at diversion points near dams and weirs, and up to 900,000 fish can be stranded in pools following draw-down. Fish extracted into pump systems were either killed or injured during passage. Any fish which survived received few opportunities to return to the source river because most irrigation systems were terminal. Download the report at

<http://www.dpi.nsw.gov.au/research/areas/systems-research/aquatic-ecosystems/outputs/2007/901>.

### ***Restoration works ordered***

A Tumut landholder who built a pipe crossing over a creek in 2006 was fined \$1000 in September and ordered to remove the crossing back to the original creek bed level to allow uninterrupted fish passage as shown below. The landholder contravened Section 201 (dredging & reclamation) and Section 219 (obstruct the free passage of fish) of the Fisheries Act.



An unauthorised retaining wall on the Shoalhaven River at Bomaderry has been removed and the site remediated under Section 201 (reclamation) of the Fisheries Act. The landholder was fined \$1000 and ordered to remove the concrete blocks shown below. The rocks were replaced with rocks keyed into the toe of the bank; geotextile fabric was placed on the slope and planted with grass and native trees as shown below; and mangrove seedlings planted. For more information contact Andrew Campbell, fisheries conservation officer, Shoalhaven at [andrew.campbell@dpi.nsw.gov.au](mailto:andrew.campbell@dpi.nsw.gov.au).



## ***Bass rescued from spillway waterhole***

### ***Stranded bass rescued***

Fisheries officers rescued 387 Australian bass stranded in a waterhole immediately below the spill way of the Brogo dam near Bega in October. The fish had been migrating up the Brogo River when the water level receded, leaving them facing death from lack of oxygen and overcrowding. A similar rescue of 1000 Australian bass occurred at the same location in October 2005, so DPI is now investigating a long-term solution to what appears to be a recurring problem. Source:

<http://www.dpi.nsw.gov.au/aboutus/news/recent-news/fishing-and-aquaculture/australian-bass-rescued>.

## **NSW NEWS**

### ***Call for comments on Clarence estuary reserve plan***

The Department of Environment and Climate Change is calling for submissions on its draft plan of management for Clarence estuary nature reserve at Yamba. The reserve has been set aside to protect a small remnant of the estuary foreshore in a largely urban landscape. Coastal wetland environments in the reserve are of particular significance, and the tidal mudflats constitute one of the major foraging habitats for migratory waders in NSW. Coastal wetland environments also provide important breeding habitat for fish species. Comments are due on 21 January. Find the draft plan at [http://www.nationalparks.nsw.gov.au/PDFs/Clarence\\_Estuary\\_Draft.pdf](http://www.nationalparks.nsw.gov.au/PDFs/Clarence_Estuary_Draft.pdf).

### ***Restoration of Narrandera wetland***

Murrumbidgee CMA has announced a half million dollar project to enhance Lake Talbot wetlands in Narrandera to improve biodiversity, water quality, and fish habitat. Project works include planting of native vegetation and willow control as willows in and around the lake are reducing water flow and water quality. Source:

[http://www.mdbc.gov.au/communications/s-scribe/eLetter\\_menu/e-letter\\_november\\_2007](http://www.mdbc.gov.au/communications/s-scribe/eLetter_menu/e-letter_november_2007).

## **AUSTRALIAN NEWS**

### ***Awareness campaign for Declared Fish Habitat Areas***

Queensland DPIF is undertaking a programme to raise awareness of Queensland's declared Fish Habitat Area (FHA) network. These areas protect inshore and estuarine fish habitats that are important for sustaining local and regional fisheries. Once a habitat area is declared, it equally protects all habitat types (vegetation, sand bars and rocky headlands) from direct physical disturbance and coastal development. More information at <http://www2.dpi.qld.gov.au/fishweb/13401.html>.

### ***Captive Galaxias returned to improved habitat***

Critically endangered native fish removed from Victoria's Alpine country after the 2006-07 bushfires have been returned to their natural habitat after several months in captivity at the Arthur Rylah Institute for Environmental Research. About 450 Barred Galaxias from seven populations were removed because they faced a serious threat from sediment, ash and reduced oxygen levels, as well as ongoing drought with some streams no longer flowing and some pools completely dried up. There are only 18 known remaining populations of Barred Galaxias in a small area of the very upper reaches of the Goulburn River system, all small in size and isolated from each other. Almost all the captured fish improved in captivity and in October about 70 of them were returned to their habitat near Mount Buller where streamflow and water quality have recovered. Remaining fish will be returned to their creeks when conditions are suitable. For more information, contact Tarmo Raadik at

[Tarmo.Raadik@dse.vic.gov.au](mailto:Tarmo.Raadik@dse.vic.gov.au).

## **INTERNATIONAL HABITAT NEWS**

### ***Conservation Success Index for salmon***

Trout Unlimited has developed a conservation success index for salmon. The index has 20 indicators grouped under in four categories: range-wide condition, population integrity, habitat integrity and future security. The habitat integrity indicators are land stewardship, watershed connectivity, watershed conditions, water quality and flow regime. Future security indicators include land conversion, resource extraction, flow modification, climate change and introduced species. Read more in

[http://www.tu.org/atf/cf/{ED0023C4-EA23-4396-9371-8509DC5B4953}/Fisheries\\_Article\\_October2007solo.pdf](http://www.tu.org/atf/cf/{ED0023C4-EA23-4396-9371-8509DC5B4953}/Fisheries_Article_October2007solo.pdf).

## **Trout Unlimited**

US group Trout Unlimited was established in 1959 to restore streams, watersheds and fisheries. Their activities range from installing habitat improvement structures and fencing out cattle to replanting stream banks and educating children about aquatic conservation. One of the primary functions of TU's large-scale watershed programs is to demonstrate innovative restoration techniques that both improve the condition of the watershed and fishery, and serve as a model for other similarly affected drainages. Find out more about Trout Unlimited's habitat work at [http://www.tu.org/site/c.kkLRJ7MSKtH/b.3083033/k.64AA/Watershed\\_Restoration.htm](http://www.tu.org/site/c.kkLRJ7MSKtH/b.3083033/k.64AA/Watershed_Restoration.htm).

## **FISH HABITAT RESOURCES**

### **New DPI PrimeFacts**

Lowland Darling River aquatic ecological community

<http://www.dpi.nsw.gov.au/fisheries/habitat-protection/lowland-darling-aquatic-ecological-community>

Lower Murray River aquatic ecological community

<http://www.dpi.nsw.gov.au/fisheries/habitat-protection/lower-murray-aquatic-ecological-community>

Seagrasses - contact Gaie Hall for a copy on 6626 1269.

### **Clarence Floodplain Project newsletter**

The Clarence Floodplain Project continues to find innovative ways to improve fish habitat and water quality in the lower Clarence. Read the December newsletter at

[http://www.clarence.nsw.gov.au/cmst/cvc009/view\\_doc.asp?id=4225&cat=211](http://www.clarence.nsw.gov.au/cmst/cvc009/view_doc.asp?id=4225&cat=211).

### **Lowering environmental stress on the Great Barrier Reef**

This new report investigates ways in which changes to land use and land management practices could contribute to lowering the environmental stress on the reef system. Find it at

[http://www.aries.mq.edu.au/pdf/ReefWaterQualityReport\\_0907.pdf](http://www.aries.mq.edu.au/pdf/ReefWaterQualityReport_0907.pdf)

### **Hydrological consequences of climate change**

Several papers on Australian rainfall and streamflow projections were delivered at the CSIRO symposium on hydrological consequences of climate change on 15-16 November. Download the symposium abstracts at <http://www.csiro.au/files/files/phaw.pdf>.

### **Waterways on NZ farms**

This NZ booklet features case studies of farmers who have improved their waterways and benefited their production. Find it at <http://www.ew.govt.nz/projects/documents/fea2.pdf>. An associated brochure to help farmers work out the cost of managing their waterways is at

<http://www.ew.govt.nz/projects/documents/fea1.pdf>.

### **Online stream health monitoring kit**

This NZ kit is designed to help non-scientists collect consistent, scientifically valid information from small rural streams and to use that information to make assessments of stream health. Download information at <http://www.landcare.org.nz/shmak/>.

### **WetlandCare national art competition 2008**

WetlandCare Australia is seeking artworks and photographs for a national art competition on the theme of 'Healthy wetlands, healthy people'. Closing date for entries is 21 January 2008. The competition is acquisitive, with the winning works to be used by WetlandCare Australia to promote wetlands and the work of WetlandCare Australia. For more information go to

[www.wetlandcare.com.au](http://www.wetlandcare.com.au)

## **HABITAT DATES**

- 2008 is the International Year of the Reef to promote awareness, conservation action and strengthen long-term constituencies for coral reef conservation. Details at <http://www.iyor.org/>.
- 2 February 2008 World Wetlands Day  
This day celebrates the signing of the Convention on Wetlands on 2 February 1971, in the Iranian city of Ramsar on the shores of the Caspian Sea. Further information: [www.ramsar.org](http://www.ramsar.org)
- 19-23 May 2008 International symposium on the effects of climate change on the world's oceans  
[http://www.pices.int/meetings/international\\_symposia/2008\\_symposia/Climate\\_change/climate\\_background\\_3.aspx](http://www.pices.int/meetings/international_symposia/2008_symposia/Climate_change/climate_background_3.aspx)

## **ABOUT NSW DPI AND FISH HABITAT**

NSW DPI is responsible for management of, and research into, fish habitat in NSW.

### **NSW DPI's on-ground work:**

map, prioritise and modify structures that block fish passage

map and rehabilitate aquatic habitat such as wetlands

reintroduce snags (large woody debris) into streams

revegetate streambanks to provide habitat and improve the quality of water running into streams.

### **NSW DPI's research work:**

document the fish communities associated with different aquatic habitats

understand the basic biology of key fish species – what they eat, when they breed, what their habitat requirements are

evaluate management actions to see how effective they have been and what improvements may be possible.

### **NSW DPI's legislative, policy and planning work:**

review developments that may impact on fish habitats and negotiate impact reduction and/ or compensatory works

incorporate aquatic habitat protection requirements into land use planning, water management, and estuary and floodplain management

help developers, local councils and other state agencies understand the importance of aquatic habitats for fish and options for ensuring their protection and rehabilitation.

### ***Aquatic Habitat staff***

Sydney (Cronulla) 02 9527 8411

Sydney (Wollstonecraft) 02 8437 4909

Batemans Bay 02 4478 9103

Huskisson 02 4441 8969

[Port Stephens](#) 02 4982 1232

Wollongbar 02 6626 1200

Tamworth 02 6765 4243

Dubbo 02 6881 1270

Tumut 02 6947 4188

Narrandera 02 6959 9021

Albury 02 6042 4200

### ***Research staff***

Port Stephens 02 4982 1232,

Narrandera 02 6959 9021

Cronulla 02 9527 8411

### ***Website***

[http://www.fisheries.nsw.gov.au/aquatic\\_habitats](http://www.fisheries.nsw.gov.au/aquatic_habitats)

### ***Send us your news***

If you have news about fish habitat activities in your area, we'd like to hear from you. Email Rebecca Lines-Kelly at [rebecca.lines-kelly@dpi.nsw.gov.au](mailto:rebecca.lines-kelly@dpi.nsw.gov.au) with your news items and suggestions.

### ***Subscribe to Newstreams***

Newstreams is a free newsletter available to anyone interested in fish habitat. To subscribe to Newstreams, email the editor, Rebecca Lines-Kelly, at [rebecca.lines-kelly@dpi.nsw.gov.au](mailto:rebecca.lines-kelly@dpi.nsw.gov.au). If you no longer wish to receive Newstreams, email the editor with 'Unsubscribe Newstreams' in the subject line.

### ***Back issues***

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<http://www.dpi.nsw.gov.au/aboutus/news/newsletters/newstreams>