

Bring Back the Fish to Noosa

Oyster Reef Restoration Newsletter

April 2017



What's been going on?

The Bring Back the Fish team of the University of the Sunshine Coast has been hard at work constructing oyster reefs for the Noosa River. Several tonnes of oyster shells have been filled into 135 'Oyster Reef Sausages'. The team thanks the staff at Koorungal Oysters and Mooloolah River fisheries for their keen support of this project!

With the sausages now constructed, we are eagerly anticipating final approvals, and are ready to deploy the reefs. Keep your eyes out on the river banks for the oyster reef deployment team, and your new Noosa River Oyster Reefs in the coming months. We anticipate that they'll start to attract new fish to the river almost immediately!

Oyster reefs provide homes for fish, and filter the water column. Together, these functions help improve our estuaries!



An 'Oyster Reef Sausage' made of biodegradable coconut mesh and filled with waste oyster shells from commercial leases. Baby oysters will grow amongst the shells and glue them together, before the coconut mesh degrades away, revealing a newly formed oyster reef within the Noosa River! Each new oyster reef will be made of nine of these 'sausages'.

The USC team was recently visited by the globally-renowned oyster restoration specialist Professor Charles Peterson from the University of North Carolina. Prof Peterson selected the USC collaboration based on global leadership in coastal and estuarine science. Professor Peterson described the Noosa oyster project as "world leading in its approach and scientific robustness" and gave an insightful talk to the Noosa Council on oyster reef restoration approaches globally.

USC students *Nick Yabsley* and *Tom Brook* have begun mapping the distributions of fish throughout the river. The boys are both keen anglers, and were surprised by counting 96 different species of fish in the lower Noosa River. Studies globally suggest that this number will rise even further once the reefs are installed.

Where are the fish?

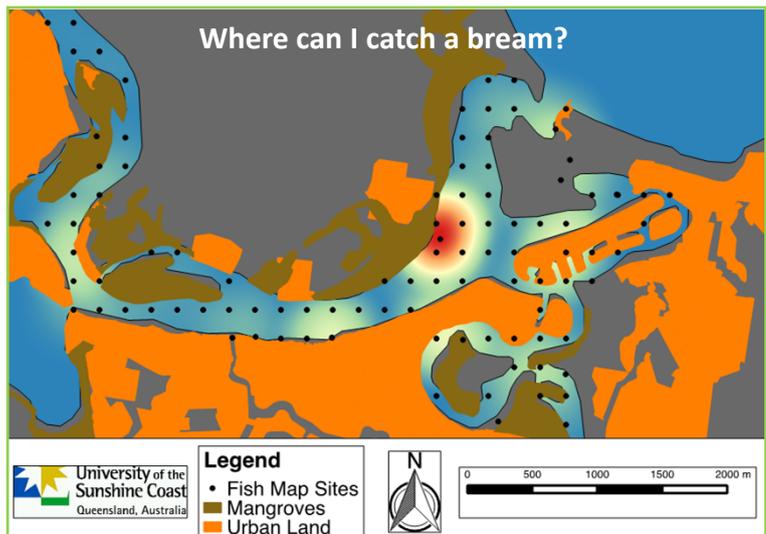


The near-threatened reticulate whipray, spotted on a camera near the mouth of the Noosa River during 'Fish Map' surveys.



Grouper caught in the Noosa River, 1935. Source: Courtesy of Picture Noosa/Noosa Library Service, And Thurstan et al 2015. Grouper love hard structures; juvenile grouper are likely to be one of the first fish to use our restored oyster reefs. Many of these species are currently listed as threatened.

The USC team uses dozens of GoPro video cameras to monitor fish populations. We can use this data to make high resolution maps of fish in the River. It's critical to establish these baseline figures for fish in the river; it means we can determine exactly how many fish we've brought back, and how we can best manage their stocks.



Map representing the current distribution of bream in the Noosa River. In this map, each black dot represents a fish monitoring site that we will survey every 6 months for at least the next four years. Parts of the river in red indicate high bream abundance, whilst blue areas represent very low bream abundance. As we are restoring oysters throughout this entire stretch of the river, and because bream love to chomp down on baby oysters, we expect the red areas to expand greatly throughout the study region once reefs are installed.

To see our video work in action, search 'USC Fish Ecology Research' on YouTube

Did you know?

96% of oyster reefs have been lost globally- almost all due to disease, or overharvesting.