

The beauty of Bass

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The lure had only just cleared the snag when in a flash of mighty silver and bronze it disappeared into a welter of foaming water. After a see-saw battle and swift removal of the barbless hook and smooth release, the magnificent fish back to the depths to fight again.

Just another nerve-wracking strike from *Macquaria novaemaculata* or as we know it - Australian bass.

At this time of year adult bass are living in upper freshwater reaches of coastal rivers. Largely active in the seasonally warm waters, the fish thrive in deep snag-lined holes, rocky pools overhung with dense vegetation and food-rich weed beds.

Although mainly living and feeding close to the bottom, the warm temperatures and heightened activity of insects overhead bring the bass to the surface to feed.

Their summer diet largely consists of insects, such as cicadas, crickets and beetles, and the occasional spider, which have fallen onto the water's surface from overhanging trees. This abundant prey is an easy target for the voracious bass and adds variety to the usual feed of shrimps, small fish or unexpected treat of a fallen nestling bird.

The profusion of terrestrial insects eaten by bass in the warmer months highlights the importance of making sure riverbank vegetation is looked after or replanted.

As water temperatures slowly fall and winter rains bring flooding, sexually mature bass begin a downstream spawning run. The bass must migrate to where the fresh and salt waters meet in the estuaries in order to spawn, this is known scientifically as 'catadromy'.

Recent tracking work by I&I NSW in coastal rivers such as the Clarence River has found that some bass travel remarkable distances to get to their winter spawning grounds. One fish was first picked up by listening stations above The Gorge and then did a bit of waterfall surfing over a nine metre drop and continued downriver to brackish waters around Maclean, a journey of about 140 kilometres!



A bass tagged by I&I NSW scientists. The dart tag allows anglers to recognise it as a tagged fish to encourage release.

For the bass angler, the breeding season river closure from June to August inclusive is a time to get the gear ready for next summer. For the bass, it's a critical time.

In the brackish water, about 30 % of the salinity of sea water, groups of bass feed on small crabs, shrimps and small fish. But the importance of feeding is largely overshadowed by the task in hand – spawning.

Flooding provides more areas of brackish habitat for the bass to use and also brings higher levels of nutrients to the estuary. The extra nutrients mean more food, increasing both the likely success of the spawning run and the survival chances of the small bass larvae.

From September onwards the fun is over and 'spent' fish start making their way back upstream. The juveniles follow later.

In many ways these are journeys of epic proportions, made no easier by many structures which span our coastal river systems. Weirs and poorly designed road crossings act as barriers to the keen upstream travellers and may only be passable with adequate flood waters.

Sometimes the only hope bass and other migrating fish have of reaching their upstream feeding habitats is for us to remove these barriers or construct specially designed fish ladders, or in some cases, highly engineered fish lifts..

Bass have a strong sense of survival but it is how we look after rivers, their catchments and fish habitat which will ensure the smash of the lure and the trembling excitement of the battle is something future generations can also enjoy.



Stroud Weir, a 1 m high structure on the Karuah River, restricted fish migration to over 70 km of upstream habitat.



Access for fish was reinstated at Stroud Weir with the construction of a rock ramp fishway.