Upper Condamine

Talking fish

Making connections with the rivers of the Murray-Darling Basin

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Aboriginal readers are warned that this publication may contain the names and images of Aboriginal people who have since passed away.

The rivers of the Murray-Darling River Basin

The rivers and creeks of the Murray-Darling Basin flow through Queensland, New South Wales, the Australian Capital Territory, Victoria and South Australia. The 77 000km of waterways that make up the Basin link 23 catchments over an area of 1 million km^2.

Each river has its own character yet these waters, the fish, the plants, and the people that rely on them are all different.

The booklets in this series tell the stories of how the rivers, fish and fishing have changed. The main stories in these booklets are written from oral history interviews conducted with local fishers in 2010-11, and relate individuals' memories of how their local places have changed. These booklets showcase three ways of knowing the Condamine River: personal experience, scientific research and historical research. Just as individual fishers do not always agree with one another, so their understanding might not necessarily agree with current scientific information or historical records. Similarly, specific items and events might be remembered differently by different people. These varied perspectives show the range in views about fishing and the rivers, each important in its own way. There are many other great stories out there about fishing in the Murray-Darling Basin. These booklets are just the beginning.

Acknowledgements – Upper Condamine

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Hamish Sewell (The Story Project) and Greg Ringwood (NFS Coordinator, Fisheries Queensland).

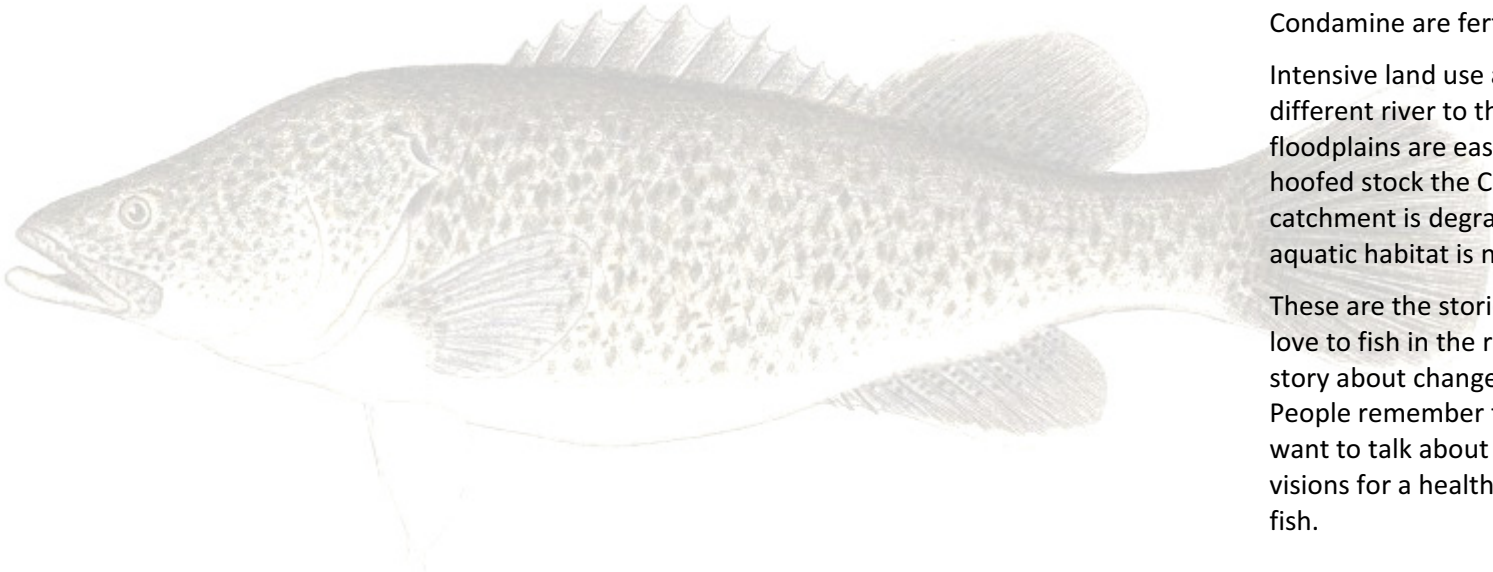
Front photographs – L-R

Source: Dessie Obst.
Source: Geoff Reilly.
Source: Greg Ringwood.
Source: Greg Ringwood.

Back page images

Goldfish and Hyrtl's catfish: Gunther Schmida. All other fish images: NSW DPI.

The Condamine- a river system not just a channel, much of its water is underground you only see its power after a sudden downpour reinvigorates it.[3]



The Condamine River rises in the Border Ranges then makes its way along the eastern part of the Darling Downs region in Southern Queensland, becoming the Balonne River near Glenmorgan. The 13 000km^2 catchment is one of the major tributaries of the Darling River System.

Twenty thousand years ago, the Barunggam, Bigambul, Giabal, Kambuwal, Githabul and Jarowair people knew a very different Condamine River: a cooler climate, different plants and animals and, most importantly, a river that flowed year round. With much of the water in the Condamine River flowing underground, spring fed creeks and waterholes were permanent water sources utilised by fish and traditional owners alike.

Nowadays the river waters one of the richest agricultural areas in Queensland. The average annual rainfall is in excess of 600mm, mainly falling during the summer months. Alluvial flats adjacent to and east of the Condamine are fertile and particularly suited to cropping.

Intensive land use and development has resulted in a very different river to that of years ago. The extensive floodplains are easily eroded and with the arrival of hoofed stock the Condamine River changed and now the catchment is degraded significantly. Over 60% of the aquatic habitat is now considered in poor condition.

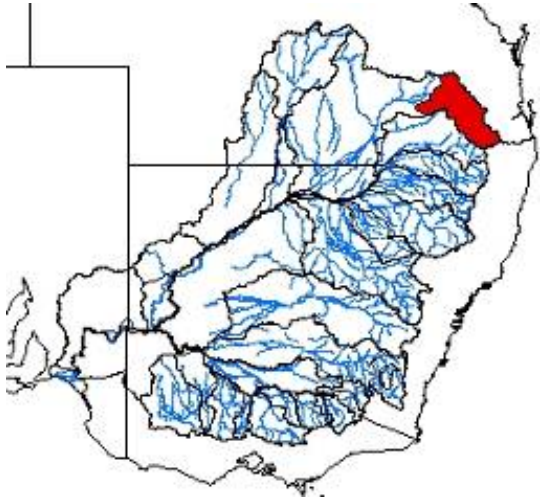
These are the stories of those who love the river and who love to fish in the river. Their stories are part of a bigger story about changes to the Condamine River and its fish. People remember the glory of the Condamine past and want to talk about a future for the Condamine and their visions for a healthy river that is, once again, full of native fish.

Introducing the river and its people

Once upon a time

Prior to the European settlement there were at least eight Aboriginal clans in the Upper Condamine catchment. These communities would gather every three years in the Bunya Mountains, north of Dalby, from May to November, for the bunya nut harvest. European records of multi-clan Aboriginal gathering goes back to 1866 when 400 – 500 individuals from Barunggam, Bigambul, Dalla, Giabal, Jagara and the Jarowair people gathered along Lake Broadwater near Dalby.

These Aboriginal clans have a strong spiritual connection with the Condamine River. The Barunggam people believe that the Great Rainbow Serpent called *Gaiwar* carved out the rivers, creeks and lakes during its journey across the earth. The Githabul people called the Rainbow Serpent *Mochel Mochel* and believe that it lived in the waterholes around Warwick. For the Githabul people swimming in the river was associated with strict rules. The genders were segregated and allocated separate times. Some water holes were also used for initiation ceremonies that were out of bound to the opposite sex[3].



The Upper Condamine was rich in fish, freshwater turtles, shellfish and waterfowl as well as a triennial bumper crop of bunya nuts. This led to the area being a regular gathering site for the surrounding clans[2].

Nardoo, a plant which grows in the shallow margins of billabongs along the Condamine, was ground to make a type of pancake. The bulbs of the native leek and water lilies were used as vegetables[3]. The banks of the Condamine River and its tributaries also provided the Aboriginal peoples with the fruits of ruby saltbush, native lime, winter apple and sandalwood.

The richness of the Upper Condamine allowed local clans to trade with the clans from other catchments.

Although there have been some changes over the years, traditions associated with the river are as vivid now as they were before the arrival of the Europeans. As Sam Bonner, Githabul Elder, points out:

> *In past times aboriginals were required to remove rubbish from the river leaving it clean and tidy as they found it.*

As in the past, the river continues to play a significant role in the lives of Aboriginal people today.

A creek in the Upper Condamine River catchment with intact riparian vegetation. Photo: Condamine Alliance.

The arrival of the Europeans

The first European explorer in the area, Alan Cunningham, travelled through the catchment in 1827, naming the Darling Downs after the governor of NSW, Sir Ralph Darling. During the 1840s, the early settlers established several grazing enterprises. More settlements were encouraged after Queensland became a state in 1859, and legislation was passed to subdivide large pastoral establishments into smaller blocks to increase population[2].

The area witnessed a significant increase in the region's agricultural economy as the cropping and dairy industries expanded.

The Leslie Dam, south west of Warwick, was constructed in 1964 with a water storage capacity of 47 000 ML. It was later modified to increase its water holding capacity to support the irrigation industry.

Water extractions and weirs have resulted in reduced high flows, minor changes to seasonality and variability and a reduction in annual water volumes within the Condamine. Reduced flows and nutrient runoff have also increased the incidence of blue-green algal blooms in the system.

Brian Kuhn has been a resident, fisherman, fish stocking club member and Fishcare volunteer. More recently Brian has been involved in river restoration projects. Photo: Greg Ringwood.

Sam Bonner, Githabul Elder, is passionate about the Condamine. Sam is keen to pass on his traditional and environmental knowledge on to the children, to show them what the river means to him and his people. Photo: Greg Ringwood.

Olive and **Ray Shooter** have lived on Dalrymple Creek for 48 and over 77 years respectively. In their younger years their lives revolved around the creek. Photo: Greg Ringwood.

Noal Kuhl is a keen fisherman and fishing journalist. He is involved in the local fish stocking club and has undertaken local historical research to guide many river restoration projects in his area. Photo: Greg Ringwood.

Brian Kuhn – *The passion of a farmer*

Brian Kuhn has been working as a farmer since he was 17 years old. He lives on a property that borders Kings Creek, a major tributary of the Condamine River. Brian has fished the Kings since he was old enough to fish.

Catfish and more

Fishing is a family past-time in this part of the world and the fishing skills have been passed down from generation to generation unchanged. Brian learned how to fish from his father who had an easy way to teach the kids when they'd caught a fish.

He had a float on the end of his line and the line was suspended about probably 3 or 4 feet under the water and, you'd sit there in the afternoon and when the cork started to bob up and down you knew you had a bite. So it was an easy way to learn to fish anyway.

Brian remembers catching many fish, but mostly catfish.

Well the majority of fish we caught were what we called the old eeltailed catfish. He was the most predominant fish we caught. We caught the odd yellowbelly or golden perch, even rarer, was the odd Murray cod. But since we have started stocking golden perch and Murray cod in these systems they have become more prevalent.

The silver lining

Everyone has a secret about fishing – Brian's father was no exception.

I remember back to when Dad taught me fishing in the creek years ago. We had a little fish called the bobby perch. Now they only ever grow to about 15cm. That's probably as big as they grow and once you got them on the bite there was a little feeding frenzy, Dad used to put a little piece of silver paper out of his tobacco pouch and they'd take that. So I mean if you run out of worms just put a bit of silver paper on the end and put it in the water and flick. Probably works like an early version of a lure.

Spangled perch

(*Leiopotherapon unicolour* - bobby, spangled grunter, nicky)

Photo: Gunther Schmida.

- Average length 15cm, maximum length 25cm
- Extremely hardy: recorded travelling up to 16km in 2 hours along wheel ruts during thunderstorms
- Upstream spawning migrations triggered by summer floods and temperatures exceeding 26ºC
- Highly predatory fish that will eat anything it can swallow
- Most widespread native freshwater fish in Australia
- River regulation, cold water pollution and reduced floods are threats to spangled perch
- Remains abundant across the northern Basin

Doing what young people do

To Brian, the river provided a lot more than just the fish.

Living on the creek, our house was less than 100 metres from the water. We'd just pop down in the afternoon and catch a fish. But as I grew older and started having friends we'd come out here, 15km out of Clifton, camp the night, have a fish and, you know, do what young people do.

The secret of preparing a fish

It seems regular fishing creates some practical ways of preparing and cooking fish, especially when the taste of the fish fillets is tainted with a somewhat muddy taste.

Gone are the old days of just throwing a fish on the BBQ, scales and all because you do get a very muddy taste out of the flesh. There are various recipes soaking them in milk or soaking them in salty water after you've filleted them. The best is to leave it overnight in the fridge and then next morning you will see all the fat areas on the flesh have solidified. All you do is cut that away and give that to the cat and the nice clear flesh it tastes fine. The Murray cod doesn't seem to have that problem as such.

Losing the banks

One of the major issues in relation to the habitat loss in the Upper Condamine is the removal of snags from the river channel. Brian remembers:

In the 1960s, there was a scheme going. It was run by the Condamine River Trust and their job was funded by the Government to remove all the trees and snags out of the streams. It was to let the water get away faster, to allegedly stop flooding down the streams. Well, I think it made it worse, because I think it made the water flow a lot faster and there was a lot more damage and erosion done to the banks.

Righting the wrongs

Brian notes how attitudes have changed over the years. He has worked with local authorities to improve this section of the Condamine River.

In the last three years, money was allocated here so we could start putting snags back in the water. In this general area of 500 metres 12 big, big trees were plonked back in the water.

The River Improvement Trust

The River Improvement Trust is a statutory authority constituted under the *River Improvement Trust Act 1940* to protect and improve rivers, repair and prevent damage to rivers and prevent or mitigate flooding of land by riverine flood.

The primary role of the Trust is to plan, design, finance, undertake and maintain stream improvement works for the benefit of the community within its river improvement area.

The Trust has the powers to undertake these functions including the ability to raise funds, enter land, occupy land, enter into contracts and carry out works[4].

In the upper Condamine River the Trust removed habitat, vegetation and snags, forming a channel with increased water velocities, leading to elevated erosion issues and increased down stream flooding in many cases. This impacted heavily on native fish populations.

Sam Bonner – *Traditional river connections*

Sam Bonner is a Githabul Elder who lives close to Emu Creek, one of tributaries of the Condamine River. He has a close connection with the river.

Sam points to a river red gum whose trunk still bears the deep scar from bark removed to construct a canoe over 160 years ago.

According to Sam, canoes were made by the local Aboriginals not for their own use but to trade with other Aboriginal tribes for locally unavailable products such as ochre for painting.

Here we are, in front of a scarred tree. See how they cut around that sappy part, and took all that out. They used to do that with wedges. They had special material to make wedges out of, you know, like special stone. And they cut them and mark them all the way around and then they wedge it. They wedge all that out. That is what they used to make the canoe out of.

An underground sea

The Githabul people maintained a close relationship with the river, using stories to convey the connectivity of waters above and below ground.

Sam Bonner and the canoe tree.
Photo: Greg Ringwood.

Since way back – I was told about it, back in the 1950s, they said 70 years before the animal thing was sighted here. Mum and the other elders told me every 70 or 80 years those things come back and show themselves. They come up from underneath here, because it's deep, so deep it was bottomless, it goes into the big underground stream. It's like a big sea of water, all this country, underneath there. There are passage ways, and these things might come up down Tweed Heads or somewhere, or they might come up out at Cunnamulla. So this is a sacred water hole, this place. We're never allowed to swim here on account of they said there's some prehistoric animal or something that's in here. No one knows what it is, you know. But it has been sighted back in them days. Some describe it as like a big overgrown wombat.

An Upper Condamine River waterhole.
Photo: Greg Ringwood.

Only take what you need

Sam learned how to fish from his aunties. They often went fishing to bring home a feed for the family, always catching what they needed and only what they needed.

They would catch about five or six each, and then start packing up and put the fish in the bags, and I couldn't understand myself. I used to say 'Aunty, what are we going home for? We'll get some more.' And she would reply 'No, you're only allowed to catch so many.' That's what they taught me. You only catch what fed the family, see. You're not to get anymore.

Sam, his family and friends always kept the river clean and tidy. For others, such care for the river was not always undertaken, especially when it came to catching fish.

People these days they fill their fridge right up to the top with fish. That's stupid. That's greedy. They're still doing it. They take big eskies out there and they bring home as much as they can catch – unbelievable - what do they do with it all? They can't eat all that.

Timber mills and bobbing

Sam's father was a tree-cutter, so most family members worked in the local timber mill. They used some of their free time catching fish in Emu Creek.

We worked in sawmills and things. We never had that much spare time. Weekends were the only time we had, and then if we were lucky we'd get to town. If not we'd come fishing to these places. We've fished all along here. We used to catch a fair bit of fish back in them days, 18 or 19 jew [catfish] *and yellowbelly. You'd get a good feed every time.*

Sam and his family used a variety of baits when they fished, attaching a cork to the line and using 'bobbing' techniques to attract the fish.

We used to use anything for bait. Maybe crayfish and frogs are number one, grasshoppers, crickets, and black crickets. We'd just lift up a log or cow manure to see and you'd see plenty of crickets. Use them, anything. Get the cork bobbing steady so it makes a big noise going 'pop' when it comes up. The bigger and wider the cork the better it makes that noise. The fish hear it and they come and they see the bait moving, and they just go and grab it.

Protecting the perch

Emu Creek flows straight into the Condamine River. It has Murray cod, yellowbelly and catfish that all breed in the creek's waterholes. Occasionally you can get silver perch, but they are very small in the creek.

Silver perch

(*Bidyanus bidyanus* - grunter, black bream, silver bream, bidyan)

Photo: Barry Porter.

- Medium to large fish growing to 50cm and 8kg, but usually 35cm and 2kg
- Found in similar habits to Murray cod and golden perch (lowland turgid, slow flowing rivers)
- Spawning can occur without a flood, but these fish seem to benefit from a rise in water level
- Will move through fishways
- Eat aquatic plants, snails, shrimp, and aquatic insect larvae
- Potential threats include river regulation, barriers to migration, altered flow regimes, cold water pollution and interactions with carp and redfin

Perch like a lot of protection, lots of trees, because they're fish that birds can get easily, especially Kingfishers and stuff like that, because perch are only small. You get silver perch here no more than about six, seven inches. Birds get anything that they can see. They can see out in the open, but around shade they can't see fish.

A silver perch in Oakey Creek. Photo: Noal Kuhl.

The importance of plants

Sam believes the river along Emu Creek has changed over the years. It is partly due to the clearing of vegetation in and around the river.

It's changed – there's not enough vegetation here now – timber and stuff. And you can see where it's gradually getting washed down and the banks on the creeks are getting narrower. That's because no vegetation is there to halt the erosion.

The water holes are getting smaller and shallower all the time because they haven't been allowed to revegetate themselves, now we've got to help them to revegetate. This is all part of the main catchment of the Condamine and definitely has to be looked after.

Riparian vegetation provides shade and is a source of snags, both of which are important aspects of healthy fish habitat. Photo: Condamine Alliance.

The revegetation of Myall Creek, a tributary of the Condamine River, was severely affected by the 2010 – 2011 floods. Photo: Condamine Alliance.

River vegetation

Water plants are important because they provide habitat, food, refuge, spawning and nursery sites for fish and invertebrates. They also stabilise and filter sediments and influence water quality.

Ribbon weed growing next to a snag. Photo: Scott Nichols.

The plants on the river bank ('riparian vegetation') are a key source of organic matter for the aquatic system. Many aquatic invertebrates feed on decaying material and these, in turn, provide a food source for other invertebrates and fish. Woody material which falls into rivers and streams provide fish with shelter and a substrate for food, such as algae, and breeding sites. Riparian vegetation provides shade, which reduces daily and seasonal extremes in water temperature, stabilises riverbanks, slows surface runoff and can act as a filter to pollutants and nutrients. It also leads to more diverse fish habitats through providing snags, undercut banks and variation in the channel bed.

Olive and Ray Shooter – *A lifetime on the creek*

Olive and Ray Shooter have been married since 1963. Ray has lived along Dalrymple Creek for over 77 years. Olive grew up a few kilometres from where they live today, moving to their current home 48 years ago.

When he was a boy Ray could not keep away from the creek.

> *Oh, it was very carefree and we used to swim and play in the creek. There were willows in the creek at that time, and they were lovely shady tree. It was good.*

Ray and his family also often had picnics along the river.

> *We used to – even when we were young, have a few picnics on the bank. We used to take the afternoon tea. It was lovely, it had the Condamine couch under the trees. It was a fairly nice little area. Mainly just us and other nephews and nieces that might come and stay. We'd just play around and maybe paddle a little bit, because you could get down into the creek very easily.*

Fishing is a family pastime

Ray did not fish much when he was young, but his father and brother were keen fishers. They caught yellowbelly, jewfish (catfish) and cod.

> *They used to fish in Dalrymple and the Condamine. In my boyhood days the cod weren't here, but I heard stories from my father, when he was a boy, that there plenty of cod in the creek. They disappeared for some reason or other, and they come back in 30 years ago, I suppose. And they – well they lasted up until the dry, I think, that that would have finished them off. But our son has caught a small cod recently; we had to throw him back of course, so they are still about.*

Although Ray does not fish, Olive is a keen fisher. She sees fishing as a relaxing activity.

> *I just love fishing. It's like looking for mushrooms, really. You never know when you're going to get one, do you? I used to always say, 'It doesn't matter whether you sit at the bank all day and you catch nothing, it's lovely.' The dragonflies, and everything that flits around the creek are there. Little wrens and kingfishers and all the other little bird life flittering around. It's beautiful.*

Mayflies are important parts of the aquatic ecosystem – and particularly loved by fish as food.
Photo: Luke Pearce.

Learning to fish

Olive's father was a fisherman, and taught Olive and her sisters how to fish. They used several different methods of fishing between them.

> *Dad used to set us a line with a cork on it and we'd sit with that when we'd go fishing. Mum never fished. She would always take the New Idea and have a day out at the river. It was a good family day.*

When we were kids and we'd go down to Kings Creek, my eldest sister had an idea that if you bobbed you'd catch more. She caught 48 spangled perch one day by just bobbing the cork all the time. We couldn't ever repeat that.

I never even use a cork now, and I don't like rods either. You can't feel what the fish is doing with a rod. If you just hold onto the line, you know what the fish is doing.

Olive with one of her catches. Photo: Ray Shooter.

Best thing you could ever get

When teaching her son to fish Olive loved the spangled perch.

Spangled perch are the most beautiful little fish you've ever seen. They're a dear little fish. For mothers introducing their sons to fishing, they were the best thing you could ever get, because as soon as the bait hits the water they grabbed it. You could catch them with a pin on a string. You could just throw it in, and whatever you had as bait, they would bite on it. I think they were the best fun for mothers and small boys.

Driven to distraction

When the fish are on the bite, not even a fear of the bait would stop Olive from catching a fish.

One time when I couldn't find any worms, my son said he'd get some willow grubs, something I don't like to handle. Anyway, I took the toilet paper with me, and I used to get a piece of toilet paper, and pick up the willow grub with that, and put it on the hook and bait up. I was going all right until they started biting, and then all of a sudden I didn't care if I picked up a willow grub or not. I picked up a willow grub and I put it on the hook, no trouble. I didn't need toilet paper after that.

Olive is now teaching her grandson Harry to fish the same way as she did her son.

Harry is 11 and a real fisherman. He can talk of nothing else but fishing when he's fishing. He comes up to me wanting to go fishing because he's not allowed to go to the creek on his own. He takes a lounge chair for me to sit on while he fishes.

A drier creek

Both Olive and Ray have noticed changes in the creek over the years. In the 1950s and '60s, Olive noticed that the local water hole dried out less often.

Just down here, where I always fished, the big hole. Well it's been dry on quite a few occasions lately and it never was dry in past years. We always had water in the creek. But those times are gone.

Some of the aquatic creatures have ways of coping with these changes, as Olive explains:

There's yabbies in the little hole down here. They're amazing really, 'cause the water hole goes completely dry and there's nothing there at all. Then as soon as it gets water in it there's yabbies and the little perch, spangled perch, in it.

Yabby

(Cherax destructor)

Photo: Greg Ringwood.

- Seldom over 250g
- Widely distributed in SE Australia
- Found in ponds, billabongs and slow flowing streams
- More active in the warmer months, less active when water temperatures are below 14°C
- Breed from September to March
- Fast growing: can reach 50g in first year
- Live for 6-7 years
- Reduction of backwaters, floodplains and billabongs biggest threat, overfishing leading to localised losses

Ray also says the river dries out more regularly than it has in the past.

I've lived on the creek all my life. I've noticed a big change in the creek. When I was a kid, we used to swim and play in the creek and it very rarely stopped running in those days. It's changed dramatically now. Partly I'd say because of the 16, 18 year drought that we've had, and the over-allocation of the irrigation water.

A changed creek

Removal of vegetation along the river has affected the flow and creek banks. Ray recalls:

In their wisdom, the River [Improvement] Trust decided to get rid of the willow trees, they were slowing down the stream too much. And they took them out, and as a result then, the stream ran much faster, and it scoured the banks and it made it into a different creek altogether. Instead of the nice sloped grassy banks, we finished up with a great scoured out steep bank. It used to take 24 hours for the water to come from the top down to here, and after that it came for 12 hours. Before the flow would get to the Condamine, it deposited all the silt.

In an attempt to address some of these problems, the River Trust carried out work on erosion effected areas, some more successful than others, as Ray explains:

They tried three different things to aid erosion control that I can remember. They battered the banks down and planted grass on them. That was moderately successful. They put a wall of tyres down the bank there; to hold the creek from washing back to the road. The tyres were successful. And then they put posts in and tied logs and brown saplings to them and they backfilled that then, but that wasn't a success because the saplings that they put in very soon rotted away and it washed away.

Denuded and eroding banks on the Condamine.
Photo: Brian Kuhn.

Noal Kuhl – *Angler, historian and fish habitat restorer*

Noal Kuhl has lived in Oakey area all his life. Restoring the local waterways to their former natural glory has always been an ambition.

All you saw was sewage

As a youngster growing up Noal saw how poorly the river was treated.

When I grew up in the 1970s, all you could see was sewage flowing down the creek and it was foamy, brown, and that certainly wasn't eye-pleasing. It certainly wasn't appealing as kids to come down to the local creeks for a fish. So it became a challenge to change all of that. With the Environmental Protection Agency in place, the local council were forced to clean up the creeks. The improvement in treated water flowing downstream became noticeable. The creek landowners tell us they noticed better quality water in the creeks around 1997 as it got a lot cleaner and a lot clearer.

Noal became interested in the health of the waterways so future generations could respect and know that waterways are important ecosystems to have in the community and not a water source to be abused. In 1994 he joined the Oakey Freshwater Fish Stocking Association.

Through his involvement with the fishing association Noal began interviewing the long term residents for historical records and started piecing together some of the changes that had occurred to the waterholes and headwaters of the Condamine River, including Gowrie, Westbrook and Oakey Creek.

The first settlers only needed the water for their domestic use, where they'd be washing clothes, or feeding livestock. There was no large scale irrigation like we have now. So now during dry times, you will probably see the creek run dry. Back in the 1960s Toowoomba City was expanding and housing estates started covering over the surrounding natural springs, so there's less water seeping out and filtering into the creeks now. Not a lot of people noticed because sewerage treatment water was replacing the good spring water, so the water level basically stayed the same but the water quality was reduced. Now the sewerage water is no longer being released into the creek, all the fish have to rely on is the rainwater that falls in the catchment zone. The creek is not as permanent as what it used to be.

Noal with one of the water quality samples from Oakey Creek, downstream from Gowrie Creek. The water in Oakey Creek contains treated waste water from the Wetella treatment plant in Toowoomba City as well as stormwater comes from the city streets and surrounding farmland.
Photo: www.nma.gov.au.

Carp country

It's not only the water flows that have changed in this part of the Condamine – many parts of the river and its creeks have had their vegetation cleared to the creek edge and removed from the creek channel.

This has led to areas so disturbed that they can no longer support a diverse range of aquatic life including the native fish that once thrived here. Despite carp only arriving in the Upper Condamine in the late 1990s, Noal describes these areas as 'carp country':

Basically, this is European carp country: if you fish here you will catch a lot of carp. There is basically no habitat here for native fish to live. There are no trees for native fish live under. It's just a 'glorified gully'. There's hardly any structure in the water, no logs in the water, or anything to hold native fish. It's also shallow, about four to six foot deep right through and that's what carp like.

Oakey Creek – habitat for carp. Photo: Noal Kuhl.

The disappearing silver perch

Along the Upper Condamine, the silver perch is considered to be the most vulnerable of all native fish. Although they are in abundance in stocked impoundments, they are not often found in the natural river system. Noal puts this down to habitat loss from past human activities.

Much of silver perch's habitat has been destroyed and wild populations of them are very rare. There was a lot of discussion in our stocking group about releasing these fish. Fishermen told us 'its very difficult to catch legal sized fish for the esky'. Our stocking group committee's response was 'It's our group's responsibility to make sure this species is kept alive and healthy in our waterways'.

A wriggly problem

There are many different types of bait used to catch fish in the Upper Condamine but, as Noal recounts, bloodworms are considered the best, especially the species that live in the black soil country of the Darling Downs.

The local fishermen come to the waterways collecting bloodworms for bait. The Darling Downs produces the best fishing bait on the Eastern Seaboard for catching native fish and this is because of the blood worms.

Because of the popularity of bloodworms, many fishermen regularly visit to dig for them. This is having a great impact on the riparian vegetation where the bloodworms are easily located.

Ground worked over for bloodworms. Photo: Noal Kuhl.

Some friendly rules have been developed to lessen the impact on the riparian zones.

Local fishermen have their own little beds made up and they continually dig them over for worms and look after them. That's what is needed: to limit the diggings and reduce the need to go into new areas and stuff up the riparian zones.

Ringtanks and catfish

Despite the numerous negative impacts that human activities have placed on the waterways, Noal believes sometimes man-made structures have had a positive effect by providing habitat to some native fish. One example is the role ringtanks (farm dams) play in the survival of eeltailed or *Tandanus* catfish.

Back in 1991, there were only three ring tanks on Oakey Creek. What happened is that fish get pumped through with the water. When the dams are nearing empty you can see all the round hollows at the bottom of the dams indicating eeltailed catfish nests. Eeltails collect little pebble rocks and place them in the middle which help the eggs to stick. The eeltailed catfish are a hardy native species that thrive in farm dams, as do silver perch. Other predatory fish are less adaptable to ring tanks so without the competition, catfish thrive.

Noal and his mates used to have great success fishing in the ring tanks.

All you'd catch was eeltailed catfish. But they were the plumpest, healthiest, fattest looking eeltails you're ever likely to see. Some were over 900mm long and you'd catch 14 or 15 in a session and take some home. Sometimes you'd put them in a hessian bag (especially if you knew they were female with a lot of eggs) and take them back down to the creek and let them go. Ring tanks are prolific sites for eeltailed catfish breeding on the Downs. Oakey Creek has a large population in comparison to the rest of the Murray-Darling Basin where they are pretty scarce. I'd say the ring tanks are one area to nurture eeltailed catfish to return them in big numbers elsewhere.

Catfish

(*Tandanus tandanus* – eeltailed catfish, jewie)

Photo: Gunther Schmida.

- Medium sized fish, usually 50cm or less
- Bottom dwellers that prefer slow moving waters of rivers or creeks
- Eat aquatic insects, yabbies, molluscs and small fish
- Eggs laid in a circular gravel nest which the male guards until the eggs hatch
- Listed as 'Endangered' in Victoria, 'Endangered population' in NSW and protected in SA

Photo: NSW DPI.

Pumping water, not fish

Irrigation pumps and drains are a problem for fish. Up to 200 fish can potentially be extracted daily from the river through high volume irrigation pumps. These fish are removed from the natural system with little chance to return to the river, effectively being 'lost' from the main river channel. This situation has a major impact on the health of native fish communities in the Murray-Darling Basin.[4]

Some of the more resilient native fish species, such as spangled perch and bony bream, are able to live in storages, but their ability to return to the rivers and contribute to their natural community is lost.

The issue is not new – back as early as 1928 the Inland Fisheries Officer of NSW recommended:[5] *Screens should be installed at all irrigation and other pumping plants having not more than half an inch perforation to minimise the destruction of fish life.*

Research is continuing into the effective use of screens.
Photos: NSW DPI.

Making connections

Being involved with native fish

During the early settlement, fishing was a necessity as it provided a vital food source. Those interested in fishing only had the time to catch a feed of fish. These days fishing has became a passion for many who not only spend time fishing but also observe the health of the river and the native fish populations. Brian Kuhn explains:

We started the fishing club at Nobby in 1988. It was a family orientated fishing club focused on putting fish back into the river. It became evident there was a need for an educational program to aid native fish in this area. The fishcare volunteer program, which was orientated towards sustainable fishing, was kicked off by the Qld Department of Primary Industries (Qld DPI). They provided us with brochures and general material to educate the fishing public on the correct way of caring for native fish. The program was proactive - not just saying they could not take a fish. Further extension was provided by the Qld DPI in Brisbane, training us about fish and fish habitat. Now, from time to time I come out here and just check the river in general and make sure that everything looks reasonably healthy. That is part of being involved with native fish.

Moving toward zero till

Tilling of the fields around Dalrymple Creek has contributed to the turbidity of the creek water as soil was eroded off paddocks and into the creek. Recently farmers have made changes to land management practices and zero till is gradually becoming more prevalent. Ray Shooter observed that this has led to clearing of the creek waters:

I think that a lot of the farmers now have gone to zero till. Well that certainly has cut down the silt entering the creek. When we used to plough, the water that ran off the paddock after a storm was quite dirty. Since we knocked off cultivating, the water runs off mostly clear. I suppose it would be 80% zero till in this area now.

Escape the rat race

The river is enjoyed by many people for activities including fishing and as a place to spend quality time with friends and family. Brian Kuhn recalls it is mostly a place to relax:

At busy times, typically at Easter time you come out here and there are lots of families that camp here for the Easter weekend. People come from all over to get away from it all. They set up their camp, their little dog and a fire, it's marvellous to be out here away from the rat race; just the river and nature to enjoy.

State of river: 'moderate'

The Sustainable Rivers Audit (SRA) is an ongoing and systematic assessment of river health for 23 major river valleys in the MDB. Environmental indicators include hydrology, fish and macroinvertebrates, which are monitored and will highlight trends over time.

The Condamine Valley was surveyed in 2005. The Condamine Valley fish community and Ecosystem Health were considered to be in Moderate Condition. 56% of predicted native species were caught from the "Slopes Zone". Alien fish were widespread, and comprised just over half fish biomass (55%).

Bony herring were numerous and carp gudgeons, Australian smelt, golden perch, Murray-Darling rainbowfish and spangled perch also were common. Three alien species, Eastern gambusia, goldfish and carp, were captured frequently during the survey[1].

Visions for the Condamine

The fishing people who contributed to this project have all talked about their hopes for the future of the Condamine. Many felt they had seen some improvements but most don't feel the river is as healthy yet as they would like to see it. Each of these fishers suggested ways to help the river and in turn help provide healthy habitats for fish.

Helping fish in tough times

Fishing clubs including Nobby and District Fishing Club and Oakey Freshwater Fish Stocking Association are very active - giving native fish a hand when needed. Between 2001 and 2009 the Upper Condamine was gripped by one of the worst droughts in history, resulting in a significant number of water holes drying out. The native fish required human intervention to survive, as Brian Kuhn recalls:

> *For the past 20 years the Condamine River has been in a pretty sad state with only occasional flow. More often than not it has been dry holes. Eighteen months ago, we walked some of the river, rescuing Murray cod and put them into more permanent waterholes. We've got a few very dedicated people who love fish.*

A combined approach

With the help the Condamine Alliance and Fisheries Queensland, these two fishing groups approach the issue of sustaining fish populations in the Upper Condamine more systematically than just stocking fingerlings into the water. Both clubs have also been closely involved in habitat restoration works on the Upper Condamine. As Noal Kuhl explains:

> *We asked the question: when we put fingerlings in the waterways, is it worth the effort? To answer this question we needed to understand what the creeks were like before and what we see today. Once the changes were identified we looked at if we could rectify the bad aspects. We found that a lot of the vegetation had gone. Most importantly ploughing the banks had reduced the riparian zone. That required fixing so the native fish would want to return. Once we started putting fingerlings into the creek in the '80s, we noticed an increase of native animals as well. The farmers started telling us that koalas, goannas and birds, were appearing on the creek quite noticeably. Once revegetation began, there's been major improvements from 1995 and what you see here today.*

Members of the fishing and stocking groups are involved in revegetating numerous creeks along with the local councils in the Condamine (above) as well as fish monitoring (below). Photos: Noal Kuhl.

You have to take the time

Sam Bonner believes it's important to teach his young relatives to respect the river and their history. Sam explains:

> *They used to come here to swim. It took me two or three seasons to stop them. Because this is my area where I was brought up, I know all about it. I had to do my job, do my duty. You've got to keep them legends alive, see. In our days, we had to listen. These days it's different - they're brought up different culture now. You've got to get through – you've got to take the time to get through them now.*

Noal Kuhl releasing a Murray Cod caught amongst reintroduced snags. Photo source: Condamine Alliance.

One of the interpretive signs explaining the work that is being done to improve the health of the creeks and rivers of the Condamine catchment. Photo: Greg Ringwood.

Bringing back the fish

a) The Dewfish Demonstration Reach

The Condamine Alliance Natural Resource Management Group is undertaking the Condamine River Rescue Program to rehabilitate and protect the Condamine River catchment. Native fish are used as an indicator to gauge the health of the river system.

The Murray-Darling Basin Authority funded Native Fish Strategy 'Dewfish Demonstration Reach' is located within the Condamine catchment. This rehabilitation site is over 100km long.

The River Rescue Program and the Native Fish Strategy are working in partnership with landholders, local governments and stakeholders to deliver improved river health through improved land use practices like riparian fencing, off stream watering, erosion and weed control. Instream works include re-snagging, fishways and carp control.

You can get involved with this program by volunteering or providing financial support. For more information contact Kevin Graham or Condamine Alliance on 0418 411 351.

Resnagging at Bowenville Reserve. Photo: Noal Kuhl.

b) Restoring fish migration

Two weirs along the Condamine River were identified as major barriers to fish passage: Loudoun Weir and Reilly's Weir, a historical private weir. Both weirs have prevented fish passage since their construction. In 2009 both weirs had fishways retrofitted to improve fish passage. The improvements to Reilly's Weir allow fish movement along the Condamine River during flows for the first time since the weir was constructed in 1936.

For more information contact the MDBA Native Fish Strategy Coordinator on (07) 3239 0727.

The construction of Reillys Weir. The recent installation of a fishway on this structure is giving fish access to habitat that have not had since 1936. Photo source: Geoff and Sue Reilly.

c) Condamine Headwaters Landcare Group Inc

Condamine Headwaters Landcare Group's initiative 'Love My River' aims to engage the community to better understand the catchment and the river environment. It includes story telling, a catchment crawl, water-bug testing, waterway monitoring and more. The initiative covers the Upper Condamine Area around Killarney, Dalveen, Leyburn, Maryvale and Allora. For more information contact Elspeth Cooper on (07) 4685 2096.

River resources -

- Native Fish Strategy Coordinator, Southern Queensland, Greg Ringwood: (07) 3239 0727 / 0423 829 028
- Condamine Alliance, Kevin Graham: 0418 411 351, http://condaminealliance.com.au
- Condamine Catchment Management Association, Mary-Lou Gittins: (07) 4666 6290
- Condamine Headwaters Landcare Group Inc.: (07) 4661 9909, landcare@chlgroup.org.au
- Chinchilla and District Amateur Fishing Club Inc.: PO Box 342 Chinchilla Q 4413.
- Chinchilla and District Landcare Group Inc: chinchilla_landcare@bigpond.com
- Crows Nest Historical Society: (07) 4698 1776, suepechey@skymesh.com.au
- Oakey Freshwater Fish Stocking Association PO Box 262, Oakey Qld 4401
- Nobby and District Fishing Club Inc.: brian.kuhn@bigpond.com.au .
- North east Downs Landcare Groups Inc.: 0427 024 921, krausebuilder@bigpond.com
- Toowoomba Historical Society: (07) 4638 7362, history@icr.com.au
- National Library Australia: www.nla.gov.au
- Warwick District Recreational Fish Stocking Association: kemp3@dodo.com.au

Abbreviations

DEEDI	Department of Employment Economic Development and Innovation (Qld)
DPI	Department of Primary Industries
MDBA	Murray-Darling Basin Authority

About the Talking Fish project

The *Talking Fish* project arose from an increasing realisation that many different groups of people, including fishers, Indigenous communities, tourists and landholders have developed unique relationships with the rivers of the Murray-Darling Basin. There is also the growing recognition that the health of the Murray-Darling Basin is at risk. By accessing and recording different people's stories about their experiences of a river, its fish and how both have changed will contribute to our collective knowledge and help shape future management decisions. These stories also have the potential to give people a sense of just what these magnificent rivers and their fish were once like - and could be again with ongoing rehabilitation efforts.

The *Talking Fish* project focussed on 12 reaches within the following rivers: Namoi (NSW), Upper Condamine River (Qld), Katarapko Creek (SA), Upper Murrumbidgee River (NSW / ACT), Culgoa - Balonne Rivers (Qld / NSW), Paroo River (Qld), Goulburn River (Vic), Lower Darling and Great Anabranch (NSW), Ovens River (Vic), Mainstem Murray River (NSW / Victoria), Darling River (NSW) and The Coorong and Lower Lakes (SA).

The *Talking Fish* project is a starting point to share local knowledge and learned experience with others to improve the health of the Murray – Darling Basin. Project information is available at: www.mdba.gov.au.

Note: The term *Talking Fish* is also being used by the Australian River Restoration Centre as a way of sharing knowledge about people's connection to fish and waterways.

References

1. Davies, P.E., Harris, J.H., Hillman, T.J. and Walker, KF 2008 *SRA Report 1: A Report on the Ecological Health of Rivers in the Murray–Darling Basin, 2004–2007*, Canberra: Murray–Darling Basin Ministerial Council.

2. Biggs, A. and Carey, B., 2006. *The Condamine Catchment*. Queensland Natural Resources and Water Catchment Series Fact Sheet. QNRM05066, 2 pages.

3. Potter, C.; Moles, S.; Connors. L, and Postle, Pam, 2002. *Conversations on the Condamine – An oral history from the Queensland Murray-Darling Basin*. Envirobook, Australia, 128 pages.

4. http://www.derm.qld.gov.au/water/regulation/river_improve_trust.html

5. http://www.epa.qld.gov.au/wetlandinfo/resources/static/pdf/conceptual-model-case-studies/Dewfish.pdf

All fish fact boxes: Lintermans, M. 2007 *Fishes of the Murray-Darling Basin: An introductory guide*, Canberra: Murray-Darling Basin Commission.

Some fish of the Upper Condamine region

Native (Not to scale)

Golden perch / Yellowbelly / Callop

Hyrtl's catfish / Moonfish / Yellow-finned catfish

Spangled perch / Bobby cod

Catfish / Eeltail catfish / Jewfish

Yabby / Craybob

Silver perch / Murray bream / Grunter

Murray cod / Cod

Introduced (Not to scale)

European Carp / Common carp

Goldfish

Australian Government | MURRAY–DARLING BASIN AUTHORITY | NSW GOVERNMENT Industry & Investment | UNIVERSITY OF TECHNOLOGY SYDNEY | RURAL SOLUTIONS SA | Queensland Government | Victoria The Place To Be