

Recreational fishers make fish happen!

Stories about fishers improving fish habitat and
making more fish ...*naturally*.

supported by

Steve "Starlo" Starling



To survive and thrive fish need ...

shelter



DID YOU KNOW that I spend most of my time within one metre of a snag?

But ... so much of what gives fish shelter like snags, has gone. In the Murray River, for example, over 24,000 snags were removed from a 200 km stretch alone!



Murray cod. Photo: Luke Pearce NSW DPI

food



DID YOU KNOW that in the summer most of what I eat has fallen from overhanging trees?

But ... the clearing of riverbank vegetation, wetlands and mangroves means there's less food for fish. In fact over 80% of river lengths in Australia have been affected by catchment degradation.



Australian bass. Photo: © Gunther Schmida

clean water



DID YOU KNOW that my babies live in seagrass beds until they mature?

But ... catchment clearing and development have increased erosion and sediment inputs in our rivers and estuaries smothering nursery sites such as seagrass beds.



Yellowfin bream. Photo: © David Harasti

room to move



DID YOU KNOW I can travel up to 2000 km in a single upstream migration?

But ... thousands of in-stream structures such as weirs, dams and causeways act as barriers to fish, preventing access to feeding and spawning grounds.



Golden Perch. Photo: © Gunther Schmida

What if all these habitat features could be improved... just imagine how many more fish there would be!

Every truly dedicated angler I've ever met has also been a genuine conservationist, with a deep and abiding passion for our environment, and for the creatures and plants that in turn depend upon those habitats for their survival.

The simple truth is that without healthy, balanced aquatic ecosystems, recreational fishing has no long-term future. Because, without sound habitat, there will be no fish!

The eight wonderful stories in this publication showcase some of the ways in which grass-roots anglers - people just like you and me - have rolled up their sleeves and

pitched in to do something positive to protect, defend or repair threatened aquatic habitats. In the process they have helped to make more fish for the rest of us to catch and enjoy!

These are good news stories in the truest sense, and they are also just the tip of a growing iceberg. More and more real conservationists like the local heroes profiled here are coming to realise that the best way to get things done is not to sit back and complain, or to expect someone else to do the work on their behalf. The answer is to pick up a shovel or a crowbar or a rubbish collection bag or a pencil

or a piece of chalk and to actually do something!

I commend these uplifting stories of self-help to you, and I implore you to be inspired by their message, and to become involved yourself. The future of this wonderful pastime we all share such a passion for ultimately depends on us. So get out there and make some fish happen!

Cheers & Tight Lines,

**Steve 'Starlo' Starling
FISHING WRITER & PRESENTER**



Opening up a habitat highway



Kevin, catching the rewards of improved access for fish! Photo: K.Clark

Name Kevin Clark

Number of years fishing 58

Favourite catch Australian bass

Keep or release? Release

Boat, beach or bank? Boat


Favourite spot The Clarence River, I fell in love with her when I was 16 years old

Kevin is heavily involved in what's happening on the river and is looking forward to the next project. For him, 'it's not just about fishing it's about bringing back the River to life.'

Over the years Kyogle based fisherman Kevin Clark has seen the Richmond River change dramatically and if there is one thing Kevin wants to do in his lifetime it is to *'fix up some of the things that have happened in the River'*, and he is doing just that.

The Richmond River, like many river systems in NSW, has a high number of structures, such as weirs, built across it. These provide water for local towns and pump pools for stock and rural domestic use. However, many of these structures restrict the natural migration patterns of native freshwater fish, such as large female bass and bull-nosed mullet which Kevin would see *'trapped at the base of the weir, making them easy targets for fishermen... we were losing our broodstock.'*

In 1992 Kevin worked with a team from NSW Fisheries (now NSW DPI) and Casino Council to install a Denil fishway onto the Jabour Weir at Casino, 105 km upstream of the river's mouth. Kevin saw the difference this modification made as *'people started seeing herring upstream in parts they hadn't seen them for 30-40 years.'*

Another major barrier to migrating fish in the Richmond River was the Norco or Old Butter Factory Weir at Casino. This weir was not needed for water storage any more and after years of planning and negotiation the weir was removed in 2007. Kevin has seen the weir removal make a big difference to the river system. *'For the first time in 14 years I can see small schools of, say, 100 mullet feeding on algae covered logs in the river behind my place ... I saw the fish migrate back in winter and now they are back again this year... and there are plenty of bass now too.'* 



The Richmond River where the Norco weir used to be.



The Norco Weir at Casino restricted fish migration up and down stream. It was removed in 2007.

It's not fishing - it's research!



Ernie (far right) with the winners of the research angler program's first fishing competition – the Ron Hawkins Memorial Trophy (named after Ernie's father). Photo: E.Hawkins

Name Ernie Hawkins

Program Research Angler Program

Number of years fishing Over 45

Favourite catch Murray cod

Keep or release? More release than keep, but now and then I give ones to the old fellas for a bit of a feed


Boat, beach or bank? Boat

Favourite spot Murray River

Ernie Hawkins knows snags, or large woody habitat, provide an essential home for many native fish and says *'the art of fishing is fishing around the snags.'* In the last century thousands of snags were removed from river systems in NSW, including the Murray River. Between Lake Hume and Lake Mulwala over 25,000 snags were removed during the 1970s and 1980s. This stretch of the Murray is now the site of a large-scale re-snagging project – putting the fish habitat back!

The project is the largest re-snagging project in Australia.* Involving local recreational anglers like Ernie Hawkins is an essential component of the project. Ernie *'agrees with everything they are doing. The re-snagging is a great thing; you can't have enough fish!'*

Ernie and a team of anglers form the Research Angler Program, which is part of a larger monitoring program to see how the re-snagging is actually having an effect on numbers of native fish in the reach. Every time Ernie and the others in the team, such as John and Barbara Bowdren, wet a line they fill out a diary to record everything about their fishing trip, including location, time, date, gear type, fish caught or even if they don't catch anything. As Barbara says *'anytime we're on the river we make a record – so we get a fair bit of data.'* The data goes to NSW DPI for collation and then onto the scientists at the Arthur Rylah Institute in Victoria for analysis.

The team were also trained in how to remove the fish ear bones (the 'otoliths') of the fish they keep. Scientists use these tiny bones to determine age and growth of the fish. The anglers also go out with the scientists to help tag fish in the reach. Between April and June 2007 over 3800 native fish were tagged. 



Re-snagging involves large machinery to place large hardwood logs.



John Bowdren is particularly adept at removing the fish ear bones (otoliths) and now teaches other anglers how to do it.

The program team are a dedicated crew who as Ernie says are 'interested and very keen, I love it – chasing the old Murray cod... it's just throwing out a line.'

* The project is funded through the Murray Darling Basin Commission's Living Murray program and implemented by a number of agencies including NSW DPI and Victorian Department of Sustainability and Environment (DSE).

Providing more food for fish



Joel with one of his prized bass. Photo: J. Price

Name Joel Price

Club/Association Hawkesbury Nepean Bass Anglers Association

Number of years fishing 25

Favourite catch Australian bass

Keep or release? Release

Boat, beach or bank? Boat or kayak

Favourite spot Somewhere in the Colo River wilderness

The members of the Hawkesbury Nepean Bass Anglers Association (HNBAA) are interested in fishing for Australian bass. Knowing the group's passion for this fish, the HNBAA were approached to assist in a tree planting day at The Retreat at Wisemans Ferry as part of the Tide to Table program* in the Hawkesbury-Nepean region.

The aim of the tree planting was to start restoring the natural riparian zone along The Retreat's Hawkesbury River boundary and in doing so, improve habitat for native fish.

One rain soaked December weekend saw eleven enthusiastic members plant over 200 native tube-stock trees. Despite the wet conditions, Joel Price from the HNBAA enjoyed the planting day by the river and sees it as something the Association would like to get involved with more.

As a result of this, he says, 'we will look for more habitat stuff to do, it's great and the kids love that kind of stuff. With money now available from the licence funds I can see us getting more involved in a few projects in our local area.'

Once grown, the plants will reward the HNBAA for all their hard efforts with increased catches of Australian bass in the future. 🐟

* An initiative between Ocean Watch Australia, NSW Department of Primary Industries, Hawkesbury Nepean and Hunter Central Rivers Catchment Management Authorities, NSW Farmers Association, NSW Food Authority and Local Government.



Native trees, shrubs and grasses on the river bank will provide a buffer and shade for the river and food source in the form of falling insects, leaves and fruits for fish.



Happy fishers doing their bit for their favourite fish.

Giving Guyah a go!

Mello Ferguson was taught to fish by her Mum and Aunties at a very young age *'by learning to fish it meant we could survive when times were tough.'* Mello is from the Ngemba people and her family have always lived on the River: it has provided them with a source of food, somewhere to cook and eat, to clean and *'just sit and have a yarn.'*

Since growing up catching black bream, catfish, yellow belly and Murray cod ('Goodo') Mello has seen the river change. *'Back then the rivers were nice and big and full and clean, we were pulling in catfish as big as our arms which could feed 5 or 6 of us ... now the Barwon River is much lower, it's little and doesn't even flow much any more. I think some of it may be something to do with a lot of water being pumped out upstream.'* Mello often helps out with projects in and around town on the river to improve the health of the river such as assisting school groups plant native trees.

Mello also sees less native fish these days but more carp and reckons they are part of the problem in 'wiping out our little fish'.

When a carp muster event was organised at Brewarrina* Mello didn't hesitate to enter a family team. *'The carp are taking over the breeding areas of cod, yellowbelly and catfish and are reducing the amount of edible fish that our people lived on for ever and a day, and still today.'*

Called 'Guyah', which is Ngemba for fish, Mello and her team of siblings, nieces and nephews were a formidable addition to the carp muster. 218 anglers participated in the event with Guyah taking out a number of the prizes. The event also helped raise awareness in the local community about impacts on the river, as Mello says *'we have to pass the knowledge on, it's their river too.'* 🐟

* The muster was part of the Brewarrina to Bourke demonstration reach project funded by the Western Catchment Management Authority and managed by NSW DPI.



Carp muster winners with their prizes.



Mello Ferguson accepting one of many prizes won by Guyah at the carp muster.

Name Helen "Mello" Ferguson

Number of years fishing Since I was knee-high to a grasshopper!

Favourite catch Yellow belly

Keep or release? We only keep enough for a feed and always let the ones with the big bellies (egg bearers) go

Boat, beach or bank? Bank

Favourite spot Boomerang Bend on the Barwon River



Aboriginal fish traps downstream of the Brewarrina Weir in this photo.

Cleaning up our fishing spot



A quick snap for the album before release. Photo: D.Steele

Name David Steele

Club/Association Windybanks Fishing Club

Number of years fishing 34

Favourite catch Bream

Keep or release? Aiming more towards release and educating others to do so too

Boat, beach or bank? All!

Favourite spot The Hawkesbury River

The Hawkesbury River, Pittwater and Broken Bay are the local fishing grounds of the Windybanks Fishing Club.

The club encourages sustainable fishing and is proactively seeking ways to assist the future of recreational fishing.

Disappointed by the increasing levels of rubbish in the waterways and catchment of the Hawkesbury and Cowan Creek areas and inspired by the annual Clean Up Australia day, the club decided to establish their own Clean Up day.

With other local fishing clubs and businesses in the area on board, the date was set for August 31, 2008. A winter date meant the clean up would disturb fewer recreational anglers and, being a traditionally unproductive time of year for fishing in the river, it allowed the club to have a social event too.

David said 'we basically put on this clean up day to benefit everyone using the river. We have some of the most outstanding waterways on our doorstep which are enjoyed by families as well the boating community and fishermen. We'd like to play our part in maintaining their appeal for everyone.'

Despite unpleasant conditions, the day was a great success. Following a hearty BBQ breakfast at the Windybanks bait and tackle shop, 20 members of the Windybanks, Hornsby and Kuring Gai and Galston and Glenorie fishing clubs split into groups and dispatched to three designated clean-up areas.

As David said 'It was pretty bleak first thing Sunday – the first heavy rain in months – however there was an excellent turnout. It was a very successful exercise and we ended up filling more than 30 sacks with rubbish.'



Over 3 cubic metres of rubbish was collected. Photo: D.Steele



Waste items included everything from bottles, hooks, fishing line and plastic bags to used syringes and rusty knife blades. The rubbish was disposed of by a local waste contractor. Photo: D.Steele

David is keen for the club to be more proactive in working for fish habitat. Only 'by working together can we make the river healthy and maintain it for the future.'

Clean water – the vitality for life


For over 30 years Rodney Tonkin has wanted to see Lake Canobolas in his home town of Orange returned to its renowned status as a thriving fishery. The lake's foreshores and feeder creeks were severely infested with crack willow and the waters teeming with redfin perch, however with hard work, determination and successful partnerships Rodney is realising his dream.

A passionate advocate of fish habitat conservation, a member of the NSW Fishcare Volunteers and a former president of the NSW Council of Freshwater Anglers, Rodney sought ways to clean up the lake which were both 'environmentally friendly and effective.' The NSW CFA partnered with Orange City and Cabonne Shire Councils and secured funding to clear the willows and work on ways to eradicate the redfin.

Over 7 years and with the support of many volunteer groups, the partners tackled the severe willow infestations on the foreshores of the lake and on the banks of Molong Creek, a total distance of 8 kilometres.

They used stem injection, cut the willows close to ground level and removed them. The cleared site was revegetated with plants native to the area and fish habitat, such as hollow logs, introduced. The 'environmental transformation has been remarkable.'

As Rodney says 'the project has lived up to the anticipated outcomes and expectations. Water quality and flows in the lake have improved, aquatic insect life is flourishing, wetland areas reinstated and water birds have returned.'

And as for the fish ... the habitat improvements have allowed NSW DPI (Fisheries) to stock the lake regularly with native species such as golden perch, Murray cod and silver perch. These fish naturally prey on the redfin perch whose numbers have declined dramatically. 

Right: The project attracted widespread media exposure, resulting in further action to map and eradicate willow infestations.



Lake Canobolas foreshore prior to willow eradication. Photo: Orange City Council



The same foreshore area, following willow removal and with new sedge growth. Photo: Orange City Council



One of Rodney's favourite catches is brown trout. Photo: R. Tonkin

Name Rodney Tonkin

Club/Association NSW Council of Freshwater Anglers

Number of years fishing 38

Favourite catch 10 brown trout weighing 42lbs in one evening (Lake Ellesmere, NZ)

Keep or release? Both, depending on location and occasion

Boat, beach or bank? Bank

Favourite spot Jindabyne or Tompson Creek Dam



Giving back to the environment



Cassie in her element with her one and only Mangrove jack... so far! Photo: C.Price

Name Cassie Price

Organisation WetlandCare Australia & Fishers For Conservation Inc.

Number of years fishing 25

Favourite catch I am torn between a 19kg Spanish Mackerel, a 4.5kg Teraglin and my one and only Mangrove Jack! Next on the list is a Barra!

Keep or release? Keep the really tasty ones, the rest get released

Boat, beach or bank? I am too impatient to fish from the beach or bank

Favourite spot It's a secret, of course! But it is near the town of 1770

Cassie was brought up on a farm in South Australia's Mallee region, where water is very scarce. An annual fishing pilgrimage every year after the harvest was what sparked a keen interest in fishing from an early age. Cassie spent many of her childhood holidays fishing with her Dad in the Coorong, Spencer Gulf and St Vincent's Gulf for King George whiting, squid, snapper, flathead and mulloway.

'My passion for fishing and the aquatic environment has led me to where I am now.' Today Cassie is based on the NSW north coast, working as a Senior Projects Coordinator with WetlandCare Australia (WCA). Cassie coordinates project teams in NSW and Qld on wetland projects ranging from education to on-ground restoration works. She is also a committee member of Fishers For Conservation Inc. In recognition of Cassie's dedication to her work she was selected as the non government organisation representative on the Australian Delegation to attend the Ramsar Convention in Korea.

Cassie's other great passion is farming which is a great asset in her work. *'Low-lying agricultural land is often notorious for issues affecting fish habitat. My work enables me to combine my passions to assist farmers to better manage these areas and improve habitat for fish.'*

When Cassie isn't working or chasing fish she's helping her husband run a spanner crab and line fishery, *'The business is all about sustainable fishing, we chose a fishery with improved management and little by-catch or habitat damage.'*

Through her work Cassie hopes to ensure that fishing will stay as good as (or better than) it is, for herself and her (future) children. *'It gives me the opportunity to ensure healthy fish stocks for future fishing enthusiasts.'* 🐟

Cassie representing Australia at the Ramsar Convention, Suncheon Bay wetland Korea



Below: Assessing a wetland can be dirty work! Photo: C.Price



Letting the tide in



Charlie out fishing on the Tweed River. Photo: C. Howe

Name Charles (Charlie) Howe

Club/Association Seagulls Fishing Club, member of the NSW Advisory Council on Recreational Fishing

Number of years fishing 54

Favourite catch Pearl perch

Keep or release? Keep, but I only target edible species and just catch enough for a feed

Boat, beach or bank? Boat

Favourite spot Somewhere out in the deep ocean

Charlie Howe has been a keen fisherman for as long as he can

remember. Living in and around the Tweed area all his life, he knows his local fishing spots inside out and when something changes – Charlie knows about it.

One such spot is Duroby Creek, a feeder creek of the Terranora Broadwater. The creek is tidally influenced and was originally lined with mangroves *'right up to the bridge.'* However, the extent of the tidal limit was restricted when a rock and earth weir-type structure for cattle to cross the creek was constructed across the whole breadth of the creek.

Charlie recognised this was a problem as it 'isolated the salt from the fresh and restricted fish, such as bass and mullet, getting to spawning grounds.'

It wasn't until the land use in the area changed from farming and grazing to rural residential that Charlie finally *'saw an opportunity to do something about it.'* He approached NSW DPI, who took on the project with Tweed Shire Council. No owner of the crossing could be located and because it was impacting the waterway and restricting fish to 6km of upstream habitat it was earmarked for removal. With funding from the NSW Recreational Fishing Trust a Council work team took 2 days to remove the structure and reinstate flow to the creek.

Charlie continues to address habitat issues such as seagrass protection and mangrove rehabilitation and wants to *'make people, especially recreational fishers aware that without habitat you won't have any place for fish to breed or spawn... without habitat you don't get any fish.'* 🐟



The original crossing stopped fish from accessing habitat in the creek.



Once removed, fish had greater access to better quality habitat.

Do any of these stories sound familiar?



Does your local creek have any weirs, road crossings, floodgates or block banks which may restrict fish passage?



Are the banks of the creek or foreshores of the lake infested with weeds?



Do livestock drink from the water's edge and pug up the banks?



Are you constantly picking up somebody else's litter or fishing tackle?



Are areas of the river bank eroding and lacking native vegetation?



Are aquatic weeds or stormwater high in nutrients contributing to poor water quality?



If you could say 'Yes' to any of these, then your fish habitat needs help!

If you would like assistance with a fish habitat issue or to find out more about being a Fisher for Fish Habitat, cut out the form on the next page and send it into the team: we're looking forward to hearing from you!



Fishers for fish habitat survey

Personal information*

Name: _____

Gender: Male Female

Address: _____

Phone number: _____

Email: _____

How often do you go fishing? (please tick appropriate box)

Daily Weekly

Fortnightly Monthly

Other – please specify

Preferred fishing location (please tick appropriate box)

Ocean Beach

River Estuary

Rock platform Dam/water impoundment

Other – please specify

Are you a member of a fishing club or association? If yes, which one(s)?

Have you been involved in any fish habitat projects? e.g. replanting riverbanks, working on a re-snagging project, clearing up litter at a fishing spot etc.
Please provide details.

If you answered yes to the previous question, have you contacted any local agency or authority about these issues? *Please provide details.*

Tick appropriate box

Yes - I would like to receive information about fish habitat rehabilitation initiatives in NSW

No - I would not like to receive information about fish habitat rehabilitation initiatives in NSW



Are there fish habitat issues in your local area you would like to see addressed? *Please provide details.*

* *Your personal details will be used only to contact you to confirm the details you provided. If you ticked 'Yes' above, you will also be contacted to provide you with more information about fish habitat rehabilitation.*

affix tape to seal edges

fold along this line

Reply Paid 71223

Fishers for Fish Habitat project coordinator
NSW Department of Primary Industries
1243 Bruxner Hwy
WOLLONGBAR NSW 2477

fold along this line

Habitat makes fish happen!



CONTACTS

For more information, please contact the Aquatic Habitat Rehabilitation Program:

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The Fishers for Fish Habitat project aims to bring recognition to fishers involved with habitat initiatives and inspire others to do so.

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Disclaimer

Legislation covering conservation of native vegetation and fish may regulate some fish habitat improvement practices. Inquire through NSW Department of Primary Industries or NSW Department of Environment and Climate Change or your local Catchment Management Authority (CMA) for further information.

Design and artwork by Molto Creative - Ph 02 6687 6465

IMPROVE THE HEALTH OF YOUR LOCAL FISHERY! START WITH THESE 5 EASY STEPS

- 1 — Talk with other local recreational or professional fishers, local council staff, Landcare, Rivercare or other local environment groups or your regional NSW DPI Conservation Manager to identify issues which need attention.
- 2 — Involve your neighbours and your neighbours' neighbours!
- 3 — Apply for funds and resources and encourage others to contribute (remember permits may be required).
- 4 — Plan well but start quickly – good progress encourages other people to help.
- 5 — Spread the word in your community and involve your local media.



NSW DEPARTMENT OF
PRIMARY INDUSTRIES

Natural Resources Advisory Council
NEW SOUTH WALES

