



Kapiti Fly Fishing Club

May 2017 Newsletter



PRESIDENT REPORT

This will be my last report as President. For once I will not start off with talking about the weather! We are full on into the Winter season with members fishing all over the North Island with some great results. Read all about some of their trips in this newsletter.

I had the great experience of fishing in my first New Zealand National Championship in April. I was the last qualifier, only getting in to the competition when someone dropped out. What a great adventure it was. I spent night after night before the competition making hundreds of flies I thought I would need to cover every fishing possibility. I dreamt I was fishing constantly.

The day came and I drove up to Putaruru with Greg Anderson who was controlling for the event. We spent the first afternoon checking out the Waihou River and fish spotting. We also got some practice in. The Waihou is a crystal clear, spring-fed river and it is very easy to see the trout in their favourite spots. Catching them is a whole different matter.

Friday, we fished on Lake Kuratau and I managed to land six fish in two sessions. The best performance on the day was Dan Comer with 25 fish. Saturday, we fished Waihou and Waimakariri Rivers in the rain and I got a respectable (for me) seven fish. The best performance on the day was Sam Bourne with 59 fish.

Sadly, Sunday was rained off so the results were based on the four sessions fished on the Friday and Saturday. My aim was to NOT be last – which I achieved, getting 15th place overall. Full results are available on sffnz website. If you get the chance to take part in this competition, I would highly recommend it for the experience and fishing alongside internationally ranked competitors.

Our Annual General Meeting is on Monday 22 May and it would be great to see lots of our members there to vote on the next committee that will run the club. We also have a speaker Peter Wilson from Fish and Game. This should be an interesting talk. You will have seen the financials by now and know that we are in a healthy position. It is up to the members to say how we spend our money so make your voice heard and tell us what you think. I have enjoyed my two years as President and thank the other members of the committee for their support. I will continue to be an active member of the club and striving for a higher place next time in the Nationals.

Tight lines. Craig Gutry

Front cover: Autumn morning on the Otaki River photo by Malcolm Francis

Any newsletters success is influenced by the contribution of others so please pass on any truthful or Imaginative stories otherwise you may find 'yourself' as part of future tales from the river bank. Spider malcolmi@xtra.co.nz

***You are invited to the next KFFC Club Nigh on
Monday 22 May 2017 – Guest speaker is Peter
Wilson Fish and Game***

FROM THE TYRE'S BENCH AT SCHOOL ROAD –THE GREY GHOST



With the Whitebait season, just around the corner now is the time to heading out onto the Otaki River and have some fun during the winter months. Over the years, I have enjoyed some very productive days fishing and using the New Zealand Grey Ghost tied with the original silver tinsel body. Use a floating line with a 500 to 750mm leader, fish the shallow edges as that often where the fish are feeding and slowly work your way down stream.

Materials:

Hook:	size 2 to 12 Kamasan B830 , or Tiemco 5262
Thread:	Grey or White Danville 70 denier
Body:	White chenille or Clear dubbing, original fly used Silver Tinsel - Flashabou
Tail:	Orange and Red Hackle fibers
Wing:	Grey Neck Hackle
Ribbing:	Silver Ultra wire

Tying instructions



First step is to bind the hook with thread and tie in the tail.

Next lay the silver wire and body material along the top of the hook, then apply some glue. This will lock the body to the hook. To make the body even in diameter it's important to lay these along the whole body. Leave the wire and vinyl rib extending out the back.



Next is to attach the flashabou, again lay it along the whole body from the front to back, tie in.

Your finishing point should be as shown in the picture, thread at the front and wire brought around and along the body a fraction, ready to trap the wing hackle.



Select 4 nice even hackles from your cape. Using 4 give the wing enough bulk.

Because the hackles have a natural curve we need to use them in pairs. One pair presses against the other () like two brackets, this makes them lay straight and stops them splaying apart.



Prepare the feathers by stripping the hackle fibers off the bottom of the feathers where they will lay against the hook.

Remember you are using two pairs as you do this, so it will be the opposite side on the second pair.



Next part is the fiddly bit as aligning 4 feathers with minds of their own can be tricky, once you have them aligned on top of the body you need to apply two soft turns of thread followed by two tight turns.



You now need to wind the ribbing forward by split a gap through the hackle for the wire to pass through, take your time and keep the hackles on the top of the hook. Once trapped the feathers can be adjusted as required.

Take the wire to the front in even winds and wrap firmly around the hook and secure with thread. You can add a bit of flash by tying in 4 strips of flashabou or similar so they lie back along the wing. A spot of glue here would be a good idea.



Next take another hackle, strip the hackle off the forward side as shown in the picture so you can wind on the collar with the hackles facing backwards.

Tie off and trim, then fold the hackles back along the body with your fingers and wind the thread back over the hackle stems to make them lay down against the body.



This is the finishing point for the traditional pattern, just glue the head and you are done.

But I've left a slightly longer head to pop some epoxy eyes onto



The epoxy eyes are sticky so stick them in place, then using epoxy coat the eyes to provide an epoxy head.

I've used the [Loon UV Clear Fly Finish](#) here, it creates a very effective head and finish to the fly'. Once the Loon product is applied it's set in seconds using a [UV light](#), all very easy



And the finished fly ready for the Otaki River.

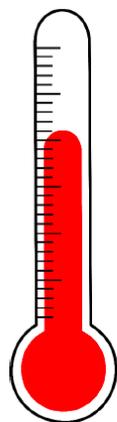
TEMPERATURE & TROUT BY DR JOHN MORRONGIELLO

Dr John Morrongiello reports on the latest research priorities and initiatives
by [FlyLife](#) Saturday, 25 March 2017



I have been fascinated with fish ever since I was a boy, fishing off the rocks at Apollo Bay with Dad. My passion only grew with age and I was lucky enough to study marine and freshwater biology at university, and then go on to work as a government scientist, for CSIRO, and now the University of Melbourne. I am particularly interested in understanding how fish respond to environmental changes such as river regulation, drought and climate warming, and how we can use this knowledge to better manage our fisheries and conserve our marine and freshwater biodiversity.

Through my fly fishing and research, I have realised just how remarkably hardy trout can be and the unexpected places they can turn up. Surprisingly, in Victoria, I've caught trout in the upper Rose River and in a little creek near Ararat when flow was reduced to a trickle. I've caught an amazing 3-pound brown in the Sevens Creek whilst surveying native fish and a rainbow in the heavily modified lower reaches of Cardinia Creek. I surveyed good numbers of browns in the remnant pools of the Lerderberg River at the height of the recent drought.



>24°C: potentially lethal

19°C: stop growing

12-14°C: optimal conditions for growth

<4°C: getting too cold

That said, trout really like cold (preferably 10–14°C), well-oxygenated and flowing water for optimal growth. Trout generally stop growing when waters get warmer than 19°C, and prolonged time above 24°C can be lethal. Cool flowing water is becoming increasingly scarce in Australia, and this trend will continue for the foreseeable

future, posing a real challenge to trout. Some of the facts around climate change can be quite sobering and confronting, but I believe we are in a unique position to explore a range of adaptation measures to help sustain our trout fisheries for future generations.

Trout and the weather

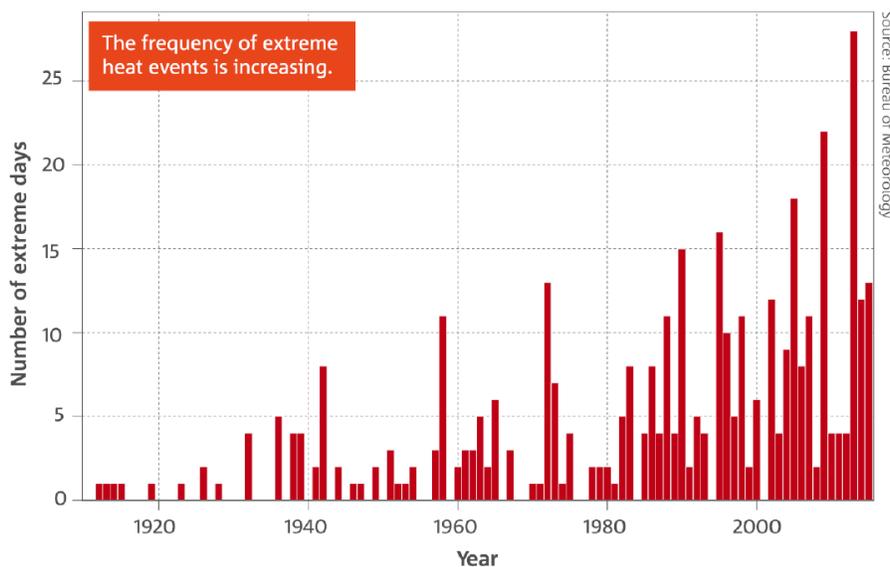
Trout fishing and the weather are intrinsically linked. Forecast blue skies raise hopes of spotting fish holding in the current or cruising a lake’s margin, not to mention a pleasant day with the sun on your back. Rain can literally put a dampener on the whole fishing experience. Solid rains at the right time are, however, vital to maintaining stream water levels, temperature and food for trout.

The spring of 2016 was one of the wettest on record for south-east Australia. A wet catchment promoted riparian vegetation growth and was a boon for terrestrial insects. Floods washed extra organic material (leaves and sticks) into streams and flushed sediment downstream, promoting aquatic insects. These conditions raise the promise of a bumper trout season.

I find, however, that my memories of the weather are often like my memories of fishing. I’ve spent many a day wandering around the lakes of Tasmania’s Central Plateau, bracing myself against the relentless wind, rain and even snow. When the weather is like this and there is no sign of trout anywhere, spirits can get low. It doesn’t take much for fortunes to change. Maybe I spot a murmur or bow wave in a backwater, catch a glimpse of movement out of the corner of my eye. Maybe there is a break in the clouds and I spot a trout cruising, or maybe I get lucky with a speculative blind cast near an undercut bank. With a fish in hand, I quickly forget about the cold and declare my trip a resounding success.

The big dry

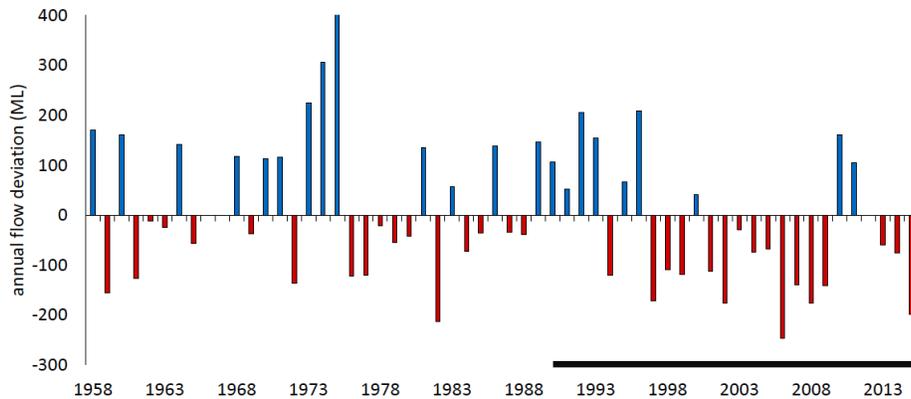
Similarly, it is easy to reflect on the here and now and think how wet conditions have been. To do so, however, is to ignore the hot and dry conditions of 2014–2015. For example, 2014 was the second warmest year on record for Victoria and rainfall was 17% below average. 2015 was the warmest year on record around the globe, Victorian rainfall was 23% below average and we sweltered through an extreme heatwave just before Christmas when it is usually much milder. These conditions spelt trouble for trout.



The Millennium Drought, that dreadfully dry period 1997–2009, is still fresh in many of our minds. This period of record low rainfall was a tough time for trout and trout-anglers alike as streams often shrank to a trickle. Further, the tinder dry Victorian bush was ablaze in major bushfires in 2003, 2006–07 and 2009. These fires not only resulted in large amounts of ash and silt being dumped into streams, choking all life, but also burnt valuable canopy cover that keeps water cool in the heat of summer. During this time, I led a state-wide project

investigating the response of Victoria's freshwater fish to the unprecedented big dry. Startlingly, I found that trout abundance and the number of locations with trout actually present declined by about 20%.

Delatite River flows



sources:
Department of Environment, Land, Water and Planning
Bureau of Meteorology

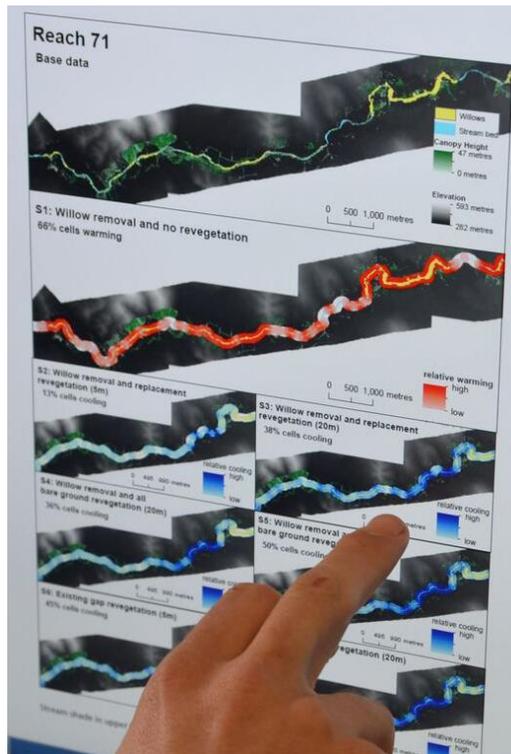
**Since 1990, Victorian flows 40-70%
below long term average**

Trout did return after the drought breaking rains of 2010–2011, but the Millennium Drought experience provides a valuable glimpse into what we can expect under a warmer and drier future characterised by more frequent and intense bushfire, drought and flood. Indeed, modelling suggests that the distribution of Victorian brown trout could decline by as much as 35–50% by 2030 under some climate scenarios. Sometimes it is hard to see change coming, and often harder to understand what it means. Climate change is one of the biggest challenges faced by Australia's trout, and we are collectively challenged to ensure something is done about it.

It is important to remember that this is a global issue, with equal concern in world famous trout fisheries such as New Zealand and across North America. For example, the angler-led organisation Trout Unlimited actively undertakes research, public awareness and real on-ground activities to help conserve North America's cold-water fisheries under a changing climate. Here in Australia, we need to change how we view and manage trout fisheries. Luckily, we have a number of practical options available that may help protect trout populations in key rivers and streams.

Shading our streams

What can we do to counter warmer temperatures that impact on trout? One option that we are actively researching at the moment in conjunction with Fisheries Victoria and Goulburn Broken Catchment Management Authority is the targeted revegetation of trout streams to maximise stream shade. In some circumstances, shaded pools can be up to 10°C cooler than pools with no riparian vegetation. Our approach combines a complex solar radiation model with fine scale vegetation mapping (20 cm resolution) from LiDAR imagery across the upper Goulburn catchment. We can then estimate how much sunlight currently hits the water surface, and explore the benefits of trees along the stream channel.



At the core of our work is the same logic you would use on your house to keep it cool: plant trees on northern and western banks to provide maximum shade from the hot summer sun and thus help keep streams cool. The challenge is how do you roll out this 'logic' across a complex landscape? It is important to remember that water temperature is not just determined by the nearest tree, but is also strongly influenced by what happens in the upstream catchment. All else being equal, trees upstream will have more of an effect on temperatures than trees downstream. This is where our models play a key role because they allow for the integration of local and upstream processes.

The findings of our work will directly contribute to a recent Victorian Government initiative called the 'Angler Riparian Partnerships Program'. We will help our catchment managers to prioritise where replanting should occur on our favourite trout streams to maximise the shading bang for buck. Riparian planting is not a short-term fix, but should have lasting benefit to our trout fisheries over the decades to come.

Restoring habitat

Trout, like all fish, love good habitat. Snags, boulders and undercut banks all provide refuge from predators and a lie out of the current from which a trout can dart out and grab passing food, not to mention an ideal home for trout food. Unfortunately, key habitat has been lost in many of our trout streams due to a range of agricultural and forestry practices.

Habitat restoration for fish is a major activity of our catchment and waterway managers. A recent review conducted by my research group found that returning snags to a river on average increases trout abundance by a massive 88%. Whilst restoring habitat does not directly deal with water temperature or river flow, it does play a vital role in maintaining fishery resilience. A trout is more likely to be able to cope with heatwaves and drought if it has a good place to live with lots of food.

Smart Stocking

Trout have adapted to an environment here in Australia very different from where they came from in England 150 years ago. Could we harness any natural selection that has allowed this adaptation to 'improve' the chances of Australia's trout persisting in a warmer future?

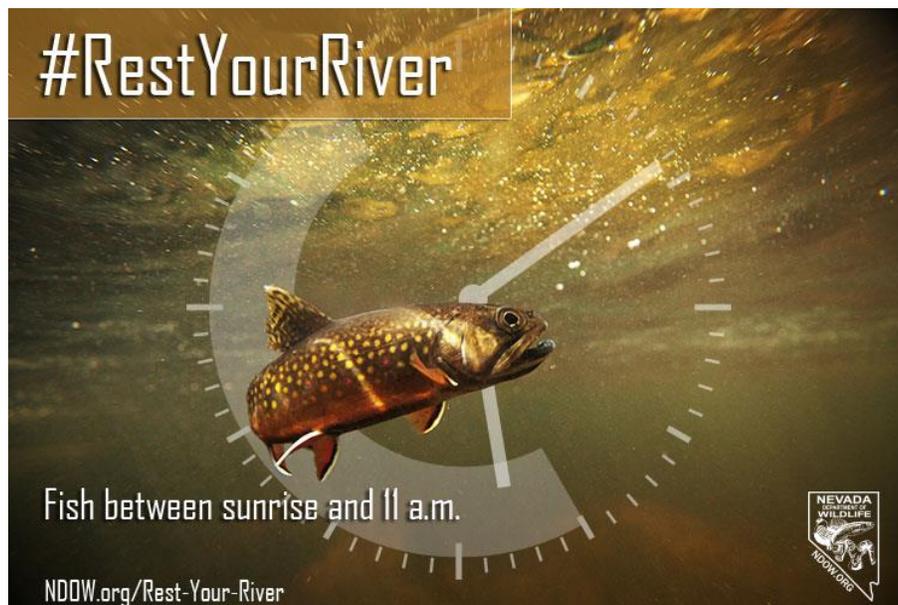
It is possible that the hardy trout found in the Lerderberg, Rose or rivers further north have undergone genetic change to allow them to live in more stressful conditions. Adaptation in fishes can begin immediately if the selective force (here thermal stress) is strong enough. There has been ample opportunity over the last 150 years for this adaptation to occur. Intriguing research in both Europe and the USA indicates this does indeed happen in trout, with some populations showing clear adaptation to warm water.

Preliminary work from my lab group has identified clear among-individual differences in metabolic rate, which we measure using specially designed respirometry chambers. Metabolic rate, amongst other things, determines how efficiently trout convert food to body mass and behaviour, and is strongly influenced by temperature. We are soon to begin building on these early findings to determine whether some wild populations have indeed become adapted to warmer waters.

More research is definitely needed, but maybe in the years to come we could be in a position to selectively breed trout from wild populations that are already 'warm tolerant' and selectively stock these into streams so that they could breed with the locals and make for a more resilient fishery.

Angler behaviour

We as anglers also have a key role to play in managing our trout fisheries. It is us who catch the fish, and it is our behaviour that plays a vital role in determining whether a trout lives or dies post release. For example, minimising the time it takes from hook up to hook out, reduces the time a trout is stressed. Being conscious of keeping the fish in the water as much as possible is also important.



Perhaps the most revolutionary idea stems from voluntary campaigns currently run in the USA. One, called 'Rest your River', encourages anglers to only fish between sunrise and 11 a.m. so that fish 'can rest' during the heat of the afternoon. This campaign is based on solid science indicating that the stress experienced by trout caught when the water is warm can be fatal.

We make decisions about where and when we go fishing. No one wants an overly regulatory fishing experience, so the success of these initiatives hinges on their acceptance and promotion by us the anglers.

We have a range of other options available including the identification and protection of key 'cool water refuges' in streams so trout can safely weather out tough drought years, an informed revision of fisheries regulation to ensure vulnerable trout populations are given a chance, maintaining our efforts to keep livestock out of streams, and managing dams to release cool water at critical times of the year.

We're living in a rapidly changing world. For many of us, trout fishing has been a mainstay in our lives — the cool push of the water against our legs and watching a dry drift down a run in the afternoon light must surely be

among life's pleasures. However, just as the world around us is changing, we too need to change our expectations of fisheries and adapt our behaviours and management to ensure they remain viable. With some careful consideration, pragmatism and action now, we can continue to enjoy our unique trout fisheries for many years to come.

References

1. State of the Climate 2016. Report prepared by the CSIRO and Bureau of Meteorology, www.bom.gov.au/state-of-the-climate/
2. Bond, N., J. Thomson, P. Reich, and J. Stein. 2011. Using species distribution models to infer potential climate change-induced range shifts of freshwater fish in south-eastern Australia. *Marine and Freshwater Research* 62:1043-1061.
3. Sievers, M., R. Hale, and J. Morrongiello. 2017. Do trout respond to riparian change? A meta-analysis with implications for restoration and management. *Fresh-water Biology*. www.morrongiellolab.com

SPECIAL REPORT: HOW POLLUTED ARE NEW ZEALAND'S RIVERS? BY TONY WRIGHT – PART TWO

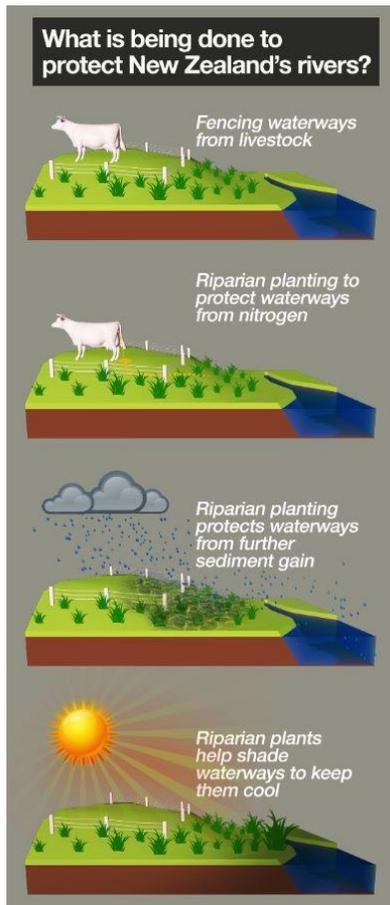


In [part one of our special Newshub investigation into the health of New Zealand's rivers](#), we looked at exactly what the main contaminants polluting them are:

- Sediment - fine materials from deforestation
- Nutrients - Nitrogen and phosphorus from livestock urine and fertilizer,
- Bacteria: E. Coli from livestock excrement.

DairyNZ, an organisation funded by New Zealand's 10,000 dairy farmers, implemented a plan entitled the 'Sustainable Dairying: Water Accord' in 2013 which it hopes will be the blueprint for protecting all Kiwi waterways on farmland. DairyNZ say its farmers have spent over a billion dollars protecting waterways from contaminants - so what exactly have they spent this money on?

1. Building modern effluent systems,
2. Fencing off waterways from livestock,
3. Planting riparian systems to protect waterways from sediment, nitrogen, phosphorus and heat from the sun.



Brian Gallagher has run a dairy farm in Patumahoe, south of Auckland for 25 years. He and his wife Pirkko didn't wait for the water accord to act – they began protecting their farms waterways by fencing them off from cows two decades ago.

“It was fenced off primarily because I didn't want my stock in a waterway. We have to use the water as a resource, as do the people downstream,” says Mr Gallagher.

He says he has spent a quarter of a million dollars to make his farm more environmentally friendly- and most of that money was used to build a high tech effluent system that he can basically control from his mobile phone even when he is of the property.

“It's paramount that not one drop of effluent gets into the waterway, so that the next generation coming through can go and fish in the Manukau Harbour, for example, or the Kaipara,” says Mr Gallagher.

“It's really, really important that they can go water skiing in the Waikato River like I did when I was a kid.”

Obviously, Mr Gallagher is an environmentally conscious farmer, but he can only protect one side of the waterway that borders his property. His neighbour, a beef farmer who doesn't fall under DairyNZ's Water Accord does not.



"As a farmer, we've a responsibility to look after the environment," says Mr Gallagher.

If there are any farmers in New Zealand that are flouting the laws, whether if that's internally through Fonterra or Auckland Council in our case, or any council around New Zealand, my personal opinion is that they should be prosecuted.

"There should be zero tolerance is far as I'm concerned."

These are strong words from a proud farmer, and they perhaps differ from the view that some Kiwis have of dairy farmers making millions with little regards to the health of the rivers running through their property.

When will the water accord bear fruit?

DairyNZ water scientist Dr Tom Stephens has played a major role in implementing and improving the water accord, including developing a world-first online riparian planting programme. The riparian area is the land immediately adjacent to a waterway.

"It promotes gold standard riparian management that allows you to map out your waterways, it then prompts you to do stuff to them like create a 3m set-back," says Dr Stephens.

"It then works out what it would cost you to put in a range of native species, or to put it into grass."



Riparian planting is one of the most useful measures any farmer - dairy or otherwise - can undertake to protect waterways on their land. It absorbs dangerous nutrients from cow urine that produces nitrogen, and phosphorus that can come from fertiliser.

Riparian planting also helps keep the ground and soil together, and can stop invasive sediment from entering the water.

"Planting is all about reinforcing those banks to prevent them from slipping, but it's also about intercepting all that run off, all that flow that's coming off the paddocks," says Dr Stephens.

Over 1000 dairy farmers are now using his riparian programme, but Dr Stephens says any significant improvements to water health will take time, largely because of New Zealand's immense deforestation and sediment issues.

"We're only four years in, it is a huge undertaking," he says.

"But it's going to take us years to see those effects actually come through, because sediment issues in particular are really long lived. Until they're flushed out of the environment, those sediment grains will still occupy the bed of the river, and if they do so you can't get the insect populations living in those gravels.

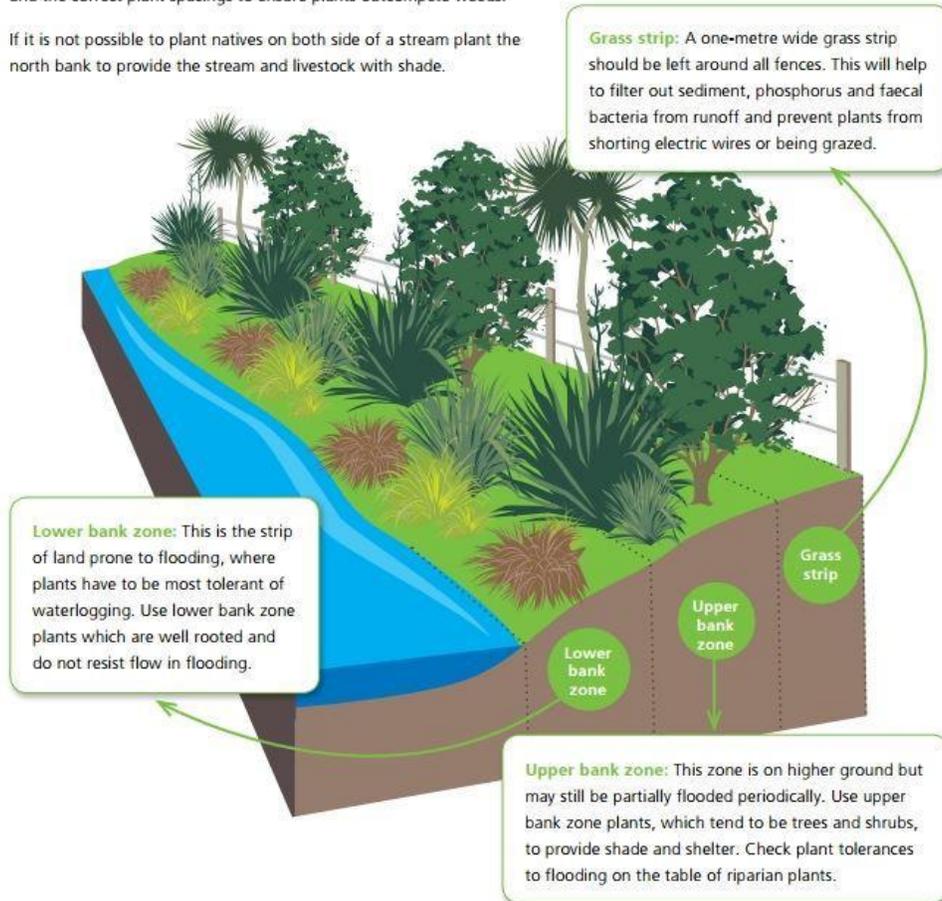
What to plant and where

The next step is to decide what to plant, where and at what spacing and the level of weed control required.

There can be up to three zones of plant types on a healthy riparian zone, as illustrated in the picture below. Planting your upper and lower banks will improve your water quality more than using grass strips alone.

Use the Table of Riparian Plants in this guide to find out which plants are recommended for each zone in the Auckland region and the correct plant spacings to ensure plants outcompete weeds.

If it is not possible to plant natives on both side of a stream plant the north bank to provide the stream and livestock with shade.



Insect populations are crucial

Without insect populations there's no food source for New Zealand's fish species, native or introduced, such as trout or salmon. This has been especially noticeable in some of Canterbury's rivers such as the Rangitata near Ashburton -where the fish stock has all but disappeared.

Some angry anglers are blaming the agricultural industries for using too much water from the rivers on the Canterbury plains to irrigate their businesses - but in some other New Zealand rivers such as the Waikato there is another problem - too much food for the insects to feed on

"The majority of algae that we see in our rivers aren't toxic, we're talking about the base of the food web," says Dr Stephens. "And the problem that we have with them in certain rivers and lakes is that there's just too much of them, and too much food results in too little oxygen, essentially, in this environment."

Farming practices are constantly changing

Adrian Brocksopp is a project manager for DairyNZ who grew up on a farm in Leicestershire in the UK. He says Kiwi dairy farmers are leading the world in protecting their waterways, but every farmer's situation is unique, depending on the amount of livestock they have and the slope of their land.

"We know the solutions just aren't going to be silver bullets, it's going to be a combination of a lot of things farmers can do, and it's not going to be one size fits all. We need solutions that are different for all farm situations," says Mr Brocksopp.

"Often, change takes time. Time, both financially, and time for skill sets to change on a farm. "How we farm now is different to how we farmed ten years ago because the challenges are changing all the time, and we now learn more all the time."

Changing what the cows actually eat

Dr Stephens says DairyNZ farmers have begun feeding their cows different types of feed that can reduce the nitrogen in their urine. "What we're trying to do is reduce the amount of nitrogen that we're losing, so that's feeding stock better sources of energy that have lower protein content because protein is rich in nitrogen," he says.



"The majority of the protein a cow consumes, it's not actually converted into milk, so we are trying to reduce that". DairyNZ scientists are also experimenting with different types of grass that can better absorb nitrogen before it seeps into the soil.

Is the dairy industry going far enough?

There is still criticism from some fresh water scientists that DairyNZ's water accord doesn't go far enough. Dr Kevin Simon teaches freshwater ecology at Auckland University. He says while the dairy industry is taking steps to fix the water pollution problem, it should be being done on a much larger scale.

"The fencing of waterways, replanting what we call riparian plants beside the streams is a fantastic, but it hasn't happened on a big enough scale to work very well," says Dr Simon. "The problem is a big scale problem that occurs over big chunks of the landscape, so we need solutions that are deployed on that same scale."

"I think they are also hard choices, especially the nitrogen issue."

"At the end of the day we're going to have to use less fertiliser more efficiently if we want to solve that problem. So, it's a combination of some hard choices mixed with some things we know that can work, but try and do that on a bigger scale."

While some rivers are in decline - many are actually improving

NIWA's chief scientist of freshwater and estuaries Dr John Quinn published a paper in 2016 on the state and trends of nutrients such as nitrogen and phosphorus in Kiwi rivers, using data from around 900 sites around the country.

He says 500 of those sites tended to show signs of improvement with regards to phosphorus, ammonia and visual clarity - while up to 50 percent of sites showed improving trends in the E. coli, the bacteria harmful to humans caused by livestock faeces.

However, Dr Quinn told Newshub nitrogen levels tended to be increasing.

"I don't know if we are in a state where things are turning to custard rapidly, but there are signs of a number of attributes that are actually getting better, although with nitrate, things seem to generally be getting worse," he says. "With nitrogen it tends to go through the ground water system, whereas with sediment and bugs - the things that make you sick, the pathogens and phosphorus - they tend to travel in surface run-off pathways, whereas the nitrogen tends to leech down through the ground water.

"Because it comes out through the ground water, the time it takes to get into the streams is determined by the residence time of the ground waters, and in some parts of the country those residence times are very short - a year or so, even shorter. "But in others, areas have 50 to 100 years' residence time, so of course it takes quite a while.

"What we're seeing now is actually farming practices from decades ago in those places, and other places it's much more."

Part Three to follow in next month's newsletter

PERCH IS A TRUE SPORTING FISH BY TONY ORMAN

The other day in Blenheim I sat in a meeting where a draft Regional Pest Management Strategy was presented by some Marlborough District Council officers. It was almost bizarre- perhaps it was. For instance, listed as a major threat was the wallaby. Now wallabies don't exist in Marlborough. But there it was- a major pest threat the bureaucrats said.

"Oh, they could be if they got here," was the response from the council woman. "Yes, the same might be said of rhinoceros, hippopotamus or cougars," I replied. Her reaction was open-mouthed but silent.

It lends strong weight to the growing public opinion that New Zealand's governments-central and local - is currently in the grip of a "pest phobia." But what caught my eye in the Marlborough District Council pest document under "noxious fish" was perch. I checked with Nelson-Marlborough Fish and Game.

"Closest perch populations to Marlborough are West Coast," came the reply. There are no perch in Marlborough or Nelson. Besides perch were regarded as a sporting fish, an acclimatised fish under the jurisdiction of Fish and Game.

Ignorant Bureaucrats

To place perch in a "noxious fish" category is ignorant and reinforces the "pest phobia" suspicion. Problem is the "pest phobia" activity gives rise to miss-spending of public money and a raft of bureaucrats all for a totally unjustified purpose.

My first steps as an angler about 1950 were on perch. They were in the Mangaone River that in those days flowed on the western side of Palmerston North and into the Manawatu River near Longburn. Today the curving course of the Mangaone of the 1950s is gone, destroyed by urban sprawl and straightening and channelising the once magical stream into a sterile ditch.

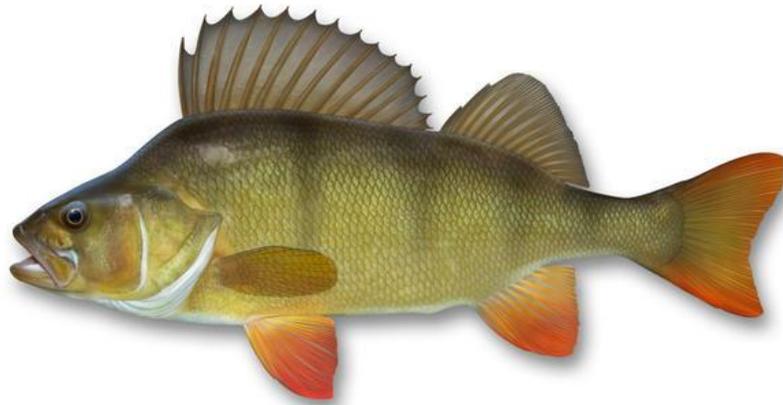
In the 1950s, my father and I used minnows, which we swung out on greenheart fly rods. Sometimes we used worms. The perch were mostly small but I did catch two or three monsters of 1.5 kgs and more. Those big perch were usually solitary or in pairs, the smaller in shoals. The minnows we used were names not found in sport shops today.

The Green Willestanden was a favourite but we also made minnow bodies from butterfly chrysalis hanging from tree branches.

Mr Crabtree

As a boy, I had a book written by a UK angling guru called Bernard Venables. In his book set out with text and “comic book” styled sequences of drawings, a Mr Crabtree was shown teaching youngsters how to fish for UK species such as tench, pike, chub and others that included perch. The art work was by Bernard Venables himself. The colour paintings were great, so skilfully done, and I would gaze for long periods admiring the perch one, because those were the fish I angled for in the Mangaone.

The perch is a handsome splendidly coloured fish, with a defiant, pugnacious air about it. The bottom edge of the caudal fin is bright red-orange, as are the anal and pectoral fins. Several dark bands run down their sides. These features make perch easy to recognize. Like myself, many a boy was set upon the road to becoming a lifelong angler by catching a perch.



From Tasmania

New Zealand perch were imported in the late 19th century, from Tasmanian stocks that before that came from England. They became well established in Otago and Southland, but also occur in many other parts of New Zealand, such as around Auckland, the Waikato and in west coast coastal lakes south of Taranaki, South Island’s West Coast, Canterbury, Southland and other places.

I’ve caught them in the Manawatu River, in ox-bow lagoons of the lower Manawatu such as south of Longburn, in the Wairarapa, Hawkes Bay, Otago and Canterbury. I’ve caught them in the better trout rivers such as the Pomohaka, Manawatu, Ruamahunga, lower Taieri and one or two others.

Perch have firm white flesh, that is sweet eating. Perch are ideal sports fish for youngsters because they are relatively easy to catch. Most perch in New Zealand are about 1 kg in weight, but not infrequently bigger. Perch prefer slow-flowing and still-water habitats.

Perch No Pest

Are perch damaging to trout fisheries? I doubt it. When I fished the Manawatu as a kid, perch were in the Manawatu and the Manawatu was chocker with trout, with incredible evening rises. And the Ruamahunga and Pomohaka where I’ve caught perch were when I fished them - both excellent trout rivers. The best evening trout rise I ever experienced anywhere, was on the Ruamahunga, near Gladstone.

Many years ago, somewhere about 1950, in response to angler claims that perch in Lake Maherangi, Otago, were eating trout, a study was done to examine the relationship. That became plural, i.e. relationships as shags entered the equation.

Basically, the findings were: - Shags fed on perch particularly perch fry, tending to divert the birds away from trout. Trout fed on perch fry. Perch lay eggs in massive clusters on underwater debris and thousands of fry hatch. Perch did occasionally prey on young trout.

In a few words, trout benefited from a co-existence with perch.

I read recently on google of an Otago University study where the authors attempted to describe perch as “invasive,” arguing they preyed on native fish such as whitebait. Now to me, that is absolute nonsense.

Remember perch were introduced back in 1870. So, they've had almost 150 years to evolve into the ecosystem and food chains, just as European humans and their associated sheep, cattle, potatoes and pumpkins, blackbirds and bumblebees have.

Perch here for almost 150 years can hardly be classed as invasive now. But beware terms like "invasive species", "predators" and "pests" are buzz words in some academic circles and certainly in the bowels of bureaucracy where often empires are spawned and jobs created around the "pest-predator" myths.

I don't know whether Fish and Game NZ and in particular the Nelson-Marlborough Fish and Game objected to the Marlborough District Council's classification of perch as a "pest fish". They should have. I would be disappointed if they didn't!

You see the perch is a great little sports fish and as stated earlier, especially for youngsters. Species like perch may become very important in the face of dwindling flows in rivers and warmer temperatures with the climate cycle.

There's perch in some of the sand dune lakes up Tangimoana, Bulls and Wanganui way. What's in the Forest Lakes just north of Otaki? What about those channels beside the Manawatu River near Foxton. Or the lower Tokomaru Stream down near Opiki?
Could be worth prospecting for perch?

***Editor note:** As a young lad, I used to ride my bike over to the Lakes just outside Canterbury in Kent and fish for Perch, at the end of a day's fishing I would select the biggest of the days catch and take them home for tea. My mother would poach the fish in sliced onions and milk, excellent eating.*

CODE BROWN: FLOTILLA OF INFLATABLE POOS LAUNCHED BY WATER PROTESTERS



Fifty inflatable poos have been floated on the Waikato River to protest against the Government's new freshwater standards. Campaign group Action Station organised the stunt in advance of a meeting of environmentally conscious National Party members.

The Action Station protesters yelled, "Cut the crap, National", as the poo emoji drifted on Lake Ohakuri. Action Station campaigner Laura O'Connell-Rapira said the proposed new water standards would not improve the quality and instead result in more E. coli from "poo and wee" in the water. "We decided to have some fun with the emoji to illustrate our point, but this is not a light-hearted issue," she said.

"The Government is being clever with words around water standards but we would rather they cleaned up our rivers. "We are now planning to do the same thing in Wellington Harbour."



A breakfast for the Blue Greens, a group of environment-concerned National Party members, is being held on Sunday morning at Wairakei Resort as part of a weekend long National Party conference. Action Station said the breakfast would be hosted by environment minister Nick Smith, conservation minister Maggie Barry and climate minister Paula Bennett.

The protest group believed the ministers needed to take some leadership on freshwater, which had turned to "crap" in the space of a generation. Action Station is now selling the inflatable poos on TradeMe.

Photos by Action Stations

SITUATION BAD AND GETTING WORSE, LATEST REPORT REVEALS

The Ministry for the Environment and Statistics New Zealand's latest national report makes very dismal reading *Our fresh water 2017* measures the quality of New Zealand's waterways, including water quality, biodiversity and cultural health.



Nitrogen levels at over half of monitored river sites are getting worse, according to the report, and 72 per cent of the 29 native fish species monitored are either threatened with or at risk of extinction.

The data compiled in the MfE report conclusively confirms that the overall quality of the freshwater environment is declining rapidly, University of Canterbury, Director, Waterways Centre for Freshwater Management Professor Jenny Webster-Brown says.

"This is consistent with all recent reports and research on our freshwater systems ... there is little evidence to the contrary," she observes. "In the last 10 years, we have begun to address the problem through policy changes and law amendments, but a greater investment of time, funding and effort is needed in action and innovation before we will be able to halt and, if possible, reverse this trend.

Consistent, rigorous monitoring data is vital to understand the freshwater environment's response to pressure but, on its own, will simply continue to chart the decline of water quality, quantity and ecosystem health.

The report highlights the ongoing and escalating problem of nitrogen leaching from land into the waterways, Webster-Brown notes.

“This compares with apparently improved control of phosphorous, from the same source, likely due to more fencing and planting of riparian strips on agricultural streams.” She concedes that nitrogen control is a “more difficult” problem to solve, particularly with the legacy of high nitrate in groundwater in agricultural regions of New Zealand, but this should act as an even greater incentive to find/fund solutions and ways to manage high nitrate concentrations (for example, in drinking water) in the meantime.

“The report also highlights the poor state of urban streams, something which is easily overlooked in the rush to blame dairy farmers for all of our freshwater problems. “There are already solutions available for preventing contamination of urban streams, a problem shared by all cities, and yet we still cling to the same systems of storm water control and choice of problematic building materials that have led to these issues and over-use urban water supplies that would otherwise recharge these systems.”

Remove obstacles

Webster-Brown says obstacles to uptake of sustainable urban water technologies need to be identified and removed. “So, by all means, collect more data to address the data gaps identified in the report ... this is essential. “However, it is vital that we also invest in, and otherwise provide incentives for, actions that will protect our freshwaters and change this scenario for the better.”

Human activities have affected groundwater quality at about 40 per cent of long-term monitoring sites across New Zealand, GNS Science Division Director – Environment and Materials Dr Chris Daughney adds. “At these sites, the main sign of human impact is in the form of nitrate concentrations that are above the natural baseline (i.e. the concentrations that are expected in the absence of human impact).

“At many of these sites the observed nitrate concentrations are not far above the natural baseline, but at some sites (about 5 per cent of the total number of long-term monitoring sites), the nitrate concentrations are much higher than baseline and can even exceed the drinking water standard.

GNS Science used its in-house expertise to evaluate the age of the groundwater and found that for groundwater’s that were recharged prior to about 1880 the nitrate concentrations tend to be low and at baseline levels. However, the nitrate concentrations increased slightly in some parts of the country for groundwater’s that were recharged from about 1880 to about 1955, while the nitrate concentrations in some monitoring sites have exceeded baseline by a significant margin in groundwater’s recharged since about 1955.

“Through this work, we have inferred that the increase in nitrate concentration from baseline to slight elevation around 1880 corresponds with the start of the meat export industry in New Zealand, whereas the transition to even higher nitrate concentrations at some sites after 1955 corresponds with the onset of industrialised agriculture.”

Ultimately, improving understanding of water resources in terms of quality and volume requires more monitoring and scientific investigation.

“The fact is that groundwater resources are very important for New Zealand, but they remain poorly understood,” Daughney believes.

For example, he explains that 3D geological models of aquifer systems are important for groundwater management to identify how much groundwater is likely to exist in the aquifer, where the groundwater is found and what flow paths it might take through the aquifer.

“So far, we only have such 3D geological models for about 30 per cent of New Zealand’s aquifers,” Daughney notes. “And that’s just one type of information we need to more effectively understand our groundwater system.”

Agricultural avoidance

Meanwhile Massey University Freshwater Ecologist Dr Mike Joy believes *Our fresh water 2017* features some “really obvious” attempts shift focus away from agricultural impacts. “Once again waterways in urban catchments are given the same prominence as pastoral even though urban make up less than 1 per cent of river length and pastoral are 40 per cent.”

He analysed some of the key findings to demonstrate some of the biases, observing that when it comes to nitrogen levels the report says 55 per cent of sites are getting worse and 28 per cent getting better. “But that’s for all sites,” Joy notes. “If, as would be logical, you look at landcover classes separately, looking at pasture sites showed 72 per cent got worse and 28 per cent better.”

Phosphorus is a “non-issue” because the algae can in most cases get all the phosphorus they need to cause problems from the sediment where levels are high, so don’t need it from water which is where it is measured. “For E. coli, the report inexplicably switches from the 20-year record for other parameters to 10 years, and as would be expected after removing most of the data then 52 per cent of sites have no trend because of this lack of data.”

However, 60 per cent of pasture catchments got worse and 40 per cent better – for urban one site got worse. “This sounds a bit different to the 22 times higher in urban and 9.5 in urban reported.”

A number of similar issues arise in the detail of the main report, Joy argues, apparently from “a lack” of freshwater ecological knowledge.

He cites the section on nitrogen, which features figures that used the banding from the National Policy Statement.

This approach is flawed for two reasons, he maintains. “As far as I’m aware the limits are still subject to public submissions so could and should be changed, and nitrate toxicity is a red-herring because we know that fish or invertebrates cannot die twice.”

Joy says, “much lower levels” of nitrate are well known to have algal blooms that cause fish deaths through oxygen depletion, so the amount of nitrogen that is toxic to them is a non-issue and only occurs in laboratory experiments and not real-life.

“The ANZECC guideline level is around 0.5 mg/l about one tenth of the toxic limit, thus using these toxic limits is disingenuous.” Similarly, he says the section on algal blooms starts with the statement that 83 per cent of the length of rivers is not expected to have prolonged algal blooms. “This statement misses the point because just one day of a bloom is just as lethal to fish and other life as any longer length of time – once again they can’t die more than once.”

PARADISE FOR EELS? GETTING TO KNOW THE SECRETS OF NZ'S NEW ICON BY SIMON O'CONNOR

As New Zealand's "Mr Eel", NIWA's Dr Don Jellyman has heard every tall tale. And some of them may be true. There is the classic one about the unlucky haymaker. Jellyman was told the yarn again by a commercial eeler friend. "It was hot mid-afternoon and the guy stripped off starker's, went to lay in the stream. An eel came along and grabbed hold of his 'old fella' – gave it the spinning treatment."

Yeah, that old urban legend, Jellyman replied. "But he said no. He had visited the guy in hospital himself."

Ouch. So maybe it did happen. Certainly, eels do scavenge animal carcasses by coiling in circles to rip off lumps.

Another is the reports of eel balls – claims of writhing masses of up to 100 eels tumbling together down streams

at night. "I've never seen it, but I've heard of duck shooters on the Waikato that have seen it. And there's one reference to it in the scientific literature – in Canada," says Jellyman.

Plausibly it could have something to do with eel migration – behaviour to synchronise their departure, or even mimic spawning behaviour, as the eels prepare for their 2000km trek to their distant ocean breeding grounds. But until someone gets a photograph, it remains another tantalising mystery of a still fairly mysterious creature



Eel eye view: Eels can congregate in large number where there is good daytime cover

Eels have a changing place in the heart and imagination of New Zealanders. While not quite yet ranking with kiwi and tuatara on the front of tourist t-shirts, they are becoming an iconic creature in being clearly the most impressive native species living in our lakes and rivers.

Jellyman – at 70, still a researcher at the National Institute of Water and Atmospheric Research (NIWA) in Christchurch – says it is amazing how much attitudes have changed if you think back to when he was a Pakeha kid growing up in Blenheim.

Then the natural king of the water was the trout. Eels had a bounty on their tails literally.

"The local fish and game council used to pay us. The prevailing wisdom was they didn't coexist well with trout. Anglers were encouraged to kill them. So, we would go out on a Friday night. And for small boys, tuppence an eel tail was not a bad little earner."

Jellyman says despite their abundance, eels were not valued even as food. The left-over carcasses were burnt or fed to the chooks. But then even whitebait was so plentiful in those days that the chickens got it by the bucketful. Now, he agrees, attitudes have done a 180. Eels have become a national bicultural symbol.

They are starting to appear everywhere in New Zealand art and sculpture. In post-quake central Christchurch, they have become a special feature of the Avon River's new landscaping. Terraced steps down to the water make the perfect overhang for eels to lurk and wait for a friendly feed – even if it is chips from a leftover takeaway.



Eels in central Christchurch are an attraction encouraged by better river landscaping

But how much do we really know about them, and how good a job are we doing to protect them? Is the new respect being matched by our deeds? I'm just a glorified technician, says Jellyman. What he loves is getting out in the wilds at night with a torch.

If he is not tagging migrating eels with local iwi at Te Waihora/Lake Ellesmere, he is tracking lampreys looking to spawn in the unlikely location of a Christchurch drainage culvert – another story he can talk about. Jellyman got into eels by accident. While working at Victoria University's marine department, he found he was good at field work. "But I soon learnt I was quite a poor sailor." This prompted a switch from saltwater to freshwater science.

Also, the late 1970s were when the commercial exploitation of New Zealand eels was beginning to take off, he says. The Japanese in particular were interested in exports of live glass eels – the young returning from the sea – that they could grow on in ponds. Jellyman was given a research budget to answer the basic aquaculture questions, like how fast eels would develop in captivity. The answer was that when fed in a tank, they could put on as much weight in a year as in a decade in the wild.

He says for various reasons, that trade never took off. But eels did become a new export commodity as adults, smoked or frozen. Europe, as well as Japan and Korea, still buy them. And so, he found himself becoming the go-to guy for eel fishery expertise.

So, what is our eel story? Why does New Zealand seem like some kind of eel paradise?



Silver disguise: Eels change from dull grey to reflective silver when they head out to sea to spawn

Jellyman says there are 19 species of freshwater eels in the world. They are all descendants of tropical marine eels living off Indonesia. And their extreme spawning habits have made them a real evolutionary puzzle.

Early naturalists knew that when adult eels went to sea on their one-time breeding trips at the ends of their lives, they couldn't be spawning just in coastal waters. Baby eel larva were never found there. So where did they go? Eventually in 1920, after years of trawling the oceans and tracking backwards along a trail of smaller and smaller specimens, a Danish researcher discovered that North Atlantic eels swim all the way to the Sargasso Sea near the Bahamas. The eel larva then get swept back homeward by hitching a lift on the Gulf Stream.

Jellyman says North American eels “detrain” from the ocean current early, it is only a short hop from the Bahamas for them. European eels must hang on much longer. To navigate this way, eels – like other migrating animals – use crystals of magnetite to sense the Earth's magnetic field. An in-built compass.

But even into the 1960s there were huge controversies. Jellyman says one UK researcher was more or less drummed out of his post at the British Museum for suggesting European adult eels could never actually make their 5000km trip to the Sargasso without feeding. In a paper to *Nature*, he argued it had to be the case that every year, they just swam to oblivion. The entire European stock would be replenished instead by the spawn of US eels carried across the Atlantic on the Gulf Stream's favourable tide.

Jellyman says genetics has confirmed the eels are different species. Also, laboratory experiments have shown the European eels could keep going for that long without being able to eat. "A colleague in the Netherlands put them in these swimming tubes and left them there for months. It turns out eel swimming – that long sinuous motion – is very efficient."

Anyway, one of the Holy Grails of Jellyman's own career was to find where New Zealand eels spawned. New Zealand has two species – the longfin and then the shortfin, a smaller, more lowland, species that also turns up in Australia. Or in fact, New Zealand is now known to have three species as the Australian or Speckled longfin was found to be widespread in small numbers north of the Waikato River in the 1990s.



Customary harvest: Catching eels at Lake Onoke lagoon in Wairarapa

At NIWA, Jellyman spent years tracking radio-tagged adults as they left New Zealand, then computer modelling ocean currents to prove the young could be returned to the right places. That has showed our eels head to warm, plankton-rich, waters between New Caledonia and Fiji.

Jellyman says a shared breeding ground would explain why Australian longfins would occasionally show up as a mottled-back interloper here. But it makes another mystery of how the species manage to maintain their distinct genetic identities.

The New Zealand longfin is particularly adapted to the colder alpine waters of the South Island and can grow to

monster size. On the wall of his office, there is a photo of Jellyman grappling an 18kg giant, about as long as himself, he found near Barrytown on the West Coast. A veritable taniwha. He says shortfins don't reach the same weight or age. The females are about 20 years-old when they head to sea as "silver eels" – turned from a dull grey to a reflective silver as their ocean-going camouflage for the spawning trip.

Longfin females are usually 40, and can be nearer 100 years-old, when they feel ready to go. A big longfin can carry 40 million eggs. But what about New Zealand being an ecological paradise for eels?

Jellyman says take away introduced trout and salmon, and eels are the apex freshwater predator. New Zealand doesn't have pikes, catfish, or even crocodiles, to compete. So, the eel is top fish and – by world standards – reaches high population densities. Jellyman says New Zealand's geological rawness and isolation means it has a unique freshwater story generally.

We have only some 35-fish species in total, most of them small like galaxiids. And almost all – again unusually – retain a life cycle connection to the sea. Galaxiids spawn in river mouths. Their eggs wash out on the tide and the fry return after winter as runs of whitebait. Most of the bully species and others, like the rapid-living torrentfish, do the same, Jellyman says. "The closest relative of the torrentfish is the blue cod."

So, what has happened is New Zealand has been colonised by marine species becoming adapted for freshwater as adults. It was too disconnected for true freshwater species to reach. And the marine ones have then kept up their original saltwater breeding habits.



Getting to grips with the "cold and slimies". Kids brave the eel tank at Whangamomona Republic Day

Also, the harsh nature of the New Zealand landscape explains why most of the native species are small and slippery in shape, he says – suited to living among pebbles and boulders. "It's a pretty hostile environment our freshwater rivers. They're fast and stony and have high bedload movements. You've got to be pretty robust to survive in that."

So eels, being sea-going, could get here where other more sleek and speedy predator fish – like trout – couldn't. And although being slow ambush predators – adept at sneaking up on prey under cover of darkness, using their keen sense of smell – they flourished because of their varied diet. Jellyman says as well as "inhaling" koura or freshwater crays, galaxiids, and baby ducklings with a sudden big suck, they spend the nights nosing for snails and water insects. They scavenge for dead possums and anything else lying limp in the waterways.

There is not a lot of food in New Zealand waterways, which makes eels slow-growing in the wild. But their versatility means they get everywhere and hundreds can turn up out when you bait a trap, Jellyman says. So, accidents of geography give New Zealand freshwater ecology it's quite particular character.

Getting back to the question of the changing place of the eel in our national identity, Jellyman says Pakeha used

to regard eels as a trash species. "They were the cold and slimies." He remembers the reverence with which he was once offered a pricey eel dish in Japan – taken from some special spring on the slopes of Mt Fuji. And the importance of eels – or tuna – to Maori is obvious. It is in so many place names like Waituna and Kaituna.

However now he thinks Kiwis are beginning to appreciate the dark mystery and slow-moving grace of eels. They are not flashy but do speak to an earthiness and spirituality. "Perhaps I'm biased, but there's an inherent beauty in the way they glide about in their very energy conservative way."

With wry amusement, Jellyman tells of one of the many TV nature documentaries he has consulted on – this one by a gung-ho game fishing type from the UK. "He wanted something dramatic. So that episode was called 'Flesh Ripper'." Jellyman's expression says it all.

The film crew team went down to Fiordland. "There's a sequence there where the guy got a chain mail glove and smeared it with paua guts. Of course, an eel came up, sniffed it, and grabbed hold of it. Then he's lifting it up shouting 'Look at this, look at this!'"

In another demonstration of the notorious aggression of these Kiwi river monsters, the crew threw a deer carcass in a stream and filmed it jiggling in the water as a host of eels spun to take off bits.



Unlikely habitat: NIWA's Jellyman thinks lamprey may spawn behind the wooden sides of these drains

The frothing water was meant to suggest piranhas in the Amazon. Jellyman shakes his head. Such is the power of the cultural imagination. But it highlights the quite different relationship bicultural New Zealand may be forging with its most impressive native freshwater fish.

Attitudes have certainly evolved. But how well are our eels actually being cared for?

A big part of Jellyman's job has been establishing the science for a sustainable fishery. He says in the unregulated 1970s, when an export market first became a possibility, people clearly thrashed the eel population. New Zealand was sending about 2000 tonnes abroad – not a great weight, but a problem when eels have such a slow breeding rate.

If it takes 40 years between generations of longfin, then it is only now that the full effects of removing those spawning females would be visible, Jellyman says. Eels were brought into fisheries' quota management system from 2000. The export volume has come down to around 500 tonnes. Longfin quotas were cut again a few years back on a precautionary basis.

Jellyman says eels still seem relatively plentiful – compared to our other endangered species. And as habitat generalists, they can survive even in some rather dank, low oxygen, water. "If your eels are dying, you know you have a real environmental problem." However, we have poor data about the actual number of baby glass eels returning each year, he says. We can't be sure about the current restocking rates.

And then for shortfin eels especially, lowland development is removing a lot of their wetlands and coastal streams. While for longfins, there is another source of population pressure that many don't want to talk too much about. Longfins like big rivers and inland lakes. Which means they have to mix it with the national hydro dam network.

The dams are good at providing eel races the young can climb. Or eelers are trapped at the bottom and lifted past the dam. But then there is the return journey as adults when they have to face the grilles and blades of the turbines. "They get munched. On the Manapouri, it would be 100 per cent mortality for the eels that get sucked in," Jellyman says bluntly.

It is an international concern for dam owners. All sorts of attempts have been made to steer adult eels towards safe races using strong lights, ultrasound or low-voltage electricity. None of it works, says Jellyman. Dams can stop their turbines and lower their spillways when eels are on the move. It is always a dark and stormy night they pick. Yet that is an expensive and unpopular option for a national power generator.

Jellyman says he can see in the future – as the longfin becomes more of a recognised taonga species – this turning into a bigger deal with the New Zealand public. A sombre thought. But Jellyman perks up. Another research project for him is Lampreys – piharau or kanakana to Maori who value them as a customary dish. Lampreys are also largely unloved. They are called the vampire of the seas because they live by attaching themselves to other fish with their circular rasping mouth, sucking blood and bodily fluids. Then in a reverse of the eel lifecycle, the adults swim far up rivers to spawn in freshwater.

Jellyman says most people never see them, but Maori knew how to catch them with traps of punga fronds draped over stony hollows where the migrating lampreys would collect to take a daytime rest. They were prized for being rich in oils – Jellyman's face says they might be an acquired taste. However, until 2013, no one actually knew where they spawned in New Zealand until it was found they preferred the safety of nesting under large boulders.

Using radio tracking, a male was found guarding eggs under a rock in the Okuti River, near Banks Peninsula's Little River. Now Jellyman has found another possible far more surprising site – behind the wooden frames of drainage ditches in Marshland, right on the suburban edge of Christchurch.

"That whole area is destined for some kind of development with the new motorways, so the council asked us to have a wee look. And it's hard to think of a less lamprey-oriented environment than these box drains. But they must be spawning somewhere."

So happily, Jellyman will be out with his aerial, keeping track of tagged adults to confirm if this is the case. It seems the more we learn about our native species, the more there is to learn. And so "Mr Eel" continues his research.

Stuff

Editor - I would like to thank the following people for their contribution to this month's newsletter:

Steve Gerard for use his instruction on tying the Grey Ghost
Dr John Morrongiello article "Warming Temperatures and Trout
Tony Wright – How Polluted are New Zealand's Rivers? • Part Two
Tony Orman – Perch a True Sporting Fish
The Water Protesters Group – Code Brown
Simon O'Conner – Paradise for Ells?

Your contribution is welcome so if you come across an interesting article then please forwarded to me at malcolm1@xtra.co.nz.



On the Monday 22 May, you are invited to attend the Annual General Meeting of the Kapiti Fly Fishing Club. During this meeting, we will be seeking nominations for the Management Committee.

THE CLUB NEEDS YOU

Club Activities – your participation on club trips is encouraged as it's your chance to explore new waters.

Date	Event	Contact person
Monday 22 May	AGM Kapiti Fly Fishing Club	
10 June	Ruamahanga River	Craig
24 June	Hutt River	
July dates to be confirmed	Tongariro River	

If you are interested in taking part in a workshop on Fly Tying can you please advise either Malcolm or Michael Murphy.

I would like to remind members that Sporting Life are our sponsor and you are encouraged to visit their website or contact them when you are next looking for a fly fishing item to purchase, Graham will give you a generous discount as a club member.



Please note: I if you have an item or items you would like to sell then please advise the editor and we can include your advertisement in the newsletter.

Kapiti Fly Fishing Club

Purpose:

- *To promote the art and sport of Fly Fishing.*
- *To respect the ownership of land adjoining waterways.*
- *To promote the protection of fish and wildlife habitat.*
- *To promote friendship and goodwill between members.*
- *To promote and encourage the exchange of information between members.*

Club meetings

You are invited to attend our club meetings that are held on the **Fourth Monday** of each month.

The venue is the **Turf Pavilion Sport Grounds**, Scaife Street, Paraparaumu,

Our **meetings start at 7:30pm** with fellowship followed by speakers of activities.

Club Committee meetings are held on the first Monday of each month and the meetings are held at various member's homes and start at 7:30pm.

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IMPORTANT NOTICE

Please remember that the club has two Five Weight 8'6" fly rods that members are welcome to use, just contact Malcolm Francis.

Newsletter copy to be received by Second Monday of each month, your contribution is welcome just send it to Spider malcolm1@xtra.co.nz
